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Original Contributions.

CASE OF SEPTAL ABSCESS*

BY J. PRICE-BROWN, M.D., TORONTO.

HISTORY: Toward the end of January, Cecil S., age ten years, was struck on the nose by the head of a boy while at play, producing free hemorrhage, much swelling and pain. He had always breathed normally until the accident. After this, nasal breathing was almost impossible. The external swelling and pain gradually became less, while, according to the mother's account, the nasal stenosis increased.

At last, although not until the twenty-fifth day after the accident, the parents of the boy became alarmed, and consulted the family physician, who referred the case to me.

On examination, I found the septum very much distended on both sides. Although both were red, the right was a little paler in color than the left, and also a little fuller. On pressure, both sides of the bridge seemed to fluctuate a little. There was very little soreness; the skin was pallid, the system anemic, but otherwise the boy felt well.

Under cocaine anesthesia, I at once removed with a narrow knife a perpendicular ridge of septal cartilage from the right side, at the same time freely opening the abscess. Discharge of pus and blood was very free, the abscess extending backward as far as the vomeric union. The cavity was antiseptically treated, and the mucous membrane retained in position by a small absorbent cotton packing.

The following day, as the left side had not been relieved by the previous operation, I opened it freely. This was followed by

*Read before the Academy of Medicine, March 23, 1909.

profuse bleeding, but no pus. After the contusion subsided, a large ridge was discovered on the lower left border of the triangular cartilage, and several days later a portion of this was removed.

Improvement was uninterrupted. The two passages have healed and nasal respiration is normal again. There is still some curvature of the septum to the left—probably as the result of the injury—but it is not sufficiently marked to warrant further operative treatment.

Remarks.—1st. The fact that the development of the abscess was sub-acute instead of acute.

2nd. That in this fact lay the danger of delay in operating. It was not on account of pain or illness that the boy was sent for treatment, but simply for relief of the complete stenosis. From appearances, the abscess might have gone for another week before opening spontaneously, and in that week the triangular cartilage might have been destroyed, with depression of the septum as a result.

I know that the older writers do not refer to abscess of the septum as one of the causes of saddle-nose, but the modern writers do. Among these I might mention Kyle, Coakley and Richardson, all well-recognized authorities.

A FEW SALIENT POINTS IN THE SURGICAL TREATMENT OF GALL-STONE DISEASE*

BY C. F. MOORE, M.D., TORONTO.

Most of the conclusions I have arrived at in my brief paper were forced upon me during the time I spent at the Mayo clinic, where I saw a large number of gallstone cases and had the good fortune of following them in the hospital after operation.

The customary preparation of the skin in abdominal cases seems unnecessarily lengthy, as well as being a tax on the nervous system of the average patient.

The measure adopted at the Mayo clinic is quite simple, and has been proved to be thoroughly effective. It consists of a purgative dose of castor oil early in the afternoon, a general bath, and the abdomen shaved the evening previous to the operation. On the following morning an enema is given; after its action the patient is placed on the operating table and is anesthetized while the abdominal cleansing is being carried out, which consists of washing thoroughly with soap and water, followed by a 1-2000 bichloride solution, Harrington's solution for half a minute, then 75% alcohol, when the surface is ready for the knife.

The usual protracted and frequent scrubbing has been abandoned, as it causes an increased blood supply to the skin and favors the development and growth of the skin bacillus, which never can be destroyed by germicides without damaging the skin.

Upon entering the peritoneal cavity through the usual incision, the field of operation, including the appendix, should be inspected, for there is about 10% of chronic cases of appendix trouble, gastric or duodenal ulcer and gallstone disease in which a diagnosis is extremely difficult, or even impossible to make without an exploratory incision.

It would appear that the gall bladder should never be removed, unless it has lost its function from some pathological cause.

There is a percentage of cases of chronic pancreatitis caused by gallstone infection, also others by infection from without the biliary tract. The treatment of the former class is a temporary diversion of bile by means of cholecystostomy, and of the latter, a permanent biliary drainage carried out by cholecystenterostomy, so if cholecystectomy be performed, as a routine measure, we lose the readiest and probably the best treatment of an existing or subsequently developed chronic pancreatic inflammation.

A very simple and efficient drainage tube for the gall bladder is made of a rubber tube surrounded by a few layers of iodoform

gauze which is encased by rubber tissue. This is retained in position by two purse-string sutures of plain catgut in the walls of the bladder, taking a bite in the gauze and tied sufficiently tight to constrict the outer materials down to the rubber tube. In a week or ten days this tube is easily removed, and the inverted walls of the gall bladder fall together with the serous surfaces in apposition, when obliteration of the opening soon occurs.

Some surgeons stitch the fundus of the gall bladder to the peritoneum, but it appears to me better to allow this organ to fall into its normal anatomical position, when, after complete recovery, it will empty itself more readily by its physiological muscular contraction. In hollow organs, such as the stomach, urinary bladder and gall bladder, the neck is always placed at a higher level than the base, so that the contents do not constantly come into contact with the sphincter muscle to excite it to undue and prolonged contraction in order to over-balance the muscular action of the walls of the organ, which never empties itself by gravity. When the fundus is anchored complete and adequate muscular force is greatly interfered with, leaving a residual fluid that will cause this tonic contraction of the sphincter, above mentioned, with obvious results.

In common duct cases, in which calculi are milked into the supra-duodenal portion and removed through an incision at this point, an exploration of both hepatic and common ducts is made by the finger and gallstone scoop for hidden concretions, followed by a dilatation of the conical common duct by passing a gallstone probe and scoops through into the duodenum, thus relieving the duct that may be encroached upon by a thickened head of a pancreas, as well as favoring the escape of other calculi that may subsequently descend from the liver.

A plain rubber drainage tube, pierced by sterile catgut an inch and a half from the end is, after ascertaining its potency, passed up the hepatic duct for this distance and sutured in position, the remainder of the duct opening being closed by plain catgut. With a large split-rubber tube containing iodoform gauze placed to receive the duct-tube in a trough-like manner, and a similar one in Morrison's pouch, the abdominal incision is ready to be closed.

The period of disability, it appears, may safely be reduced to seven or ten days, as post-operative hernia in the upper abdomen is almost an unknown sequela. When a freshly-sutured abdominal incision withstands the occasional enormous strain induced by vomiting, etc., it is not unreasonable to assume that scar tissue a week old is quite capable of resisting the much lighter tension put upon it while the patient is in the sitting or erect position.

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THE URINARY BLADDER AS A COMPLICATING FACTOR IN OPERATIONS FOR INGUINAL AND FEMORAL HERNIA

BY W. J. HUNTER EMERY, M.D., TORONTO.

It is not the intention of the writer in this brief paper to consider at all the question of hernia of the urinary bladder proper, as this is fully dealt with in our ordinary text-books, but rather to direct attention to a somewhat neglected subject, viz., a class of cases in which some portion of the bladder wall is dragged into or through the hernial opening attached to the parietal peritoneum forming the hernial sac. When one considers the anatomical relations existing between the reflection of parietal peritoneum which cover the fundus and a portion of the anterior and posterior walls of the bladder, with that covering the hernial openings under consideration, one sees how readily the dragging upon the parietal peritoneum in the region concerned incident to the formation of the hernial sac may involve a portion of the wall of the bladder.

My attention was first drawn forcibly to this subject some eight years ago, when in a single week I saw two bladders opened by two different operators, while opening what was taken to be the hernia sac. In both of these cases the conditions were recognized at once, the wound in the bladder repaired, and no harm resulted to the patient in either case.

Two recent cases will serve to illustrate the particular class of cases which it is the object of this paper to consider.

Case 1.—About three months ago I was called to see in consultation a woman, aged 35, upon whom I had operated for radical cure of inguinal hernia on the left side some six years ago. I now found her suffering from a strangulated femoral hernia on the right side. I had her removed at once to Grace Hospital, where immediate operation was made; the sac was opened, contents returned and sac isolated for resection, when I noticed that the sac wall upon the inner side seemed perceptibly thicker than upon the outer side. I immediately thought of the possibility of bladder complication, but could not make out such to be the case by ordinary methods of inspection or digital examination. Not feeling fully satisfied, however, I passed a medium-sized male sound into the bladder, and this very readily passed up the side of sac for a distance of an inch and a half beyond the place selected for excision. Needless to say, a different point of excision was selected and all went well with the patient.

Case 2.—Within a week after the operation just cited I was asked by another surgeon to assist him in an operation for radical

cure of combined femoral and inguinal hernia on the same side in a woman about thirty.

The usual incision for inguinal hernia was made and the sac isolated and opened. The operator's finger was passed into the femoral sac through this opening, which was also drawn up so that the two sacs then presented the appearance of the diverging limbs of the letter Y.

When all was in readiness to ligate and excise, I drew the attention of the operator to a thickened portion of the wall of the inguinal sac, and in this case also careful examination failed to determine the true nature of the structure. Previous experience, however, had made me suspicious, and I asked permission to pass a sound into the bladder, which being done passed readily up into the suspected area at least an inch beyond line naturally chosen for resection.

In order to emphasize the fact of how easily such a condition may fail of recognition, I may mention that the operator in this case was a recognized anatomist.

As the chief object of this paper is to direct the attention of the profession to this important complication and elicit from the members present a free discussion of the same, I offer no apology for its brevity.

IN RESUMÉ.

Three points which I desire to emphasize in connection with this subject are:

- 1st. The possible frequency of occurrence of this complication.
- 2nd. The readiness with which it may be overlooked, the passage of the sound into the bladder being the only positive means of diagnosis; and
- 3rd. The possibility of excision of small portion of bladder wall, with the hernial sac not being recognized at time of operation, with probable fatal consequences.

Selected Articles.

THE HUNTERIAN ORATION ON JOHN HUNTER AS A PHILOSOPHER*

BY HENRY MORRIS, M.A., M.B. (LOND.), F.R.C.S. (ENG.),
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May it please your Royal Highnesses.

Mr. Vice-President, your Grace, my Lords, Ladies, and Gentlemen,—My first duty is to request your Royal Highnesses to accept the grateful and respectful thanks of this College, and the surgical profession of England which this College represents, for the great favor you do us by honoring the memory of John Hunter, whose inheritors we are, by your presence here to-day. We shall ever remember with great pride that you, Sir, have deigned to accept the diploma and sign the roll of the Honorary Fellowship of the College; and the graciousness of this act has been deeply accentuated by its having been performed in the presence of Her Royal Highness the Princess of Wales.

I will also venture to add that your Royal Highnesses' visits of sympathy and compassion, such as those of the last few days, to several of the London hospitals, visits which give so much gratification and delight to the patients and so much countenance and encouragement to the management and staffs of the hospitals, tend to qualify you, Sir, for the diploma you have to-day received; for in the noblest spirit and in the best sense of the words you have thus been engaged in that most essential part of the surgical curriculum known as "walking the hospitals."

We are met in memory of John Hunter, who was born 181 years ago yesterday, who died on Oct. 16th, 1793, and is interred in Westminster Abbey.

Those who founded this oration designed that it should be expressive of the merits not only of the said John Hunter, but also of such persons deceased since the delivery of the last oration whose labors have contributed to the improvement or extension of chiralurgical science.

Two men of remarkably strong character—namely, Sir Joseph Fayrer, Bart., K.C.S.I., LL.D., F.R.S., and Mr. Timothy Holmes—died in 1907. The former, a fellow of this College, was distinguished for his public and private services in India and at home,

*Delivered at the Royal College of Surgeons of England on February 15th, 1909, in the presence of Their Royal Highness the Prince and Princess of Wales.

for the sound good sense of his teaching and practice, and for his standard work on the poisonous snakes of India. Mr. Holmes was noted for his scholarship and extensive learning, for the eloquence of his spoken and the pungency of his written language, and for his services in various capacities in connection with this College.

In 1908 death removed three others—namely, Mr. William Allingham, Mr. Reginald Harrison, and Sir Alfred Cooper. All three were men well known by their words and writings in their respective fields of surgery, and the last two will be remembered by those who knew them personally for their exceptionally genial characters and lovable natures. Mr. Reginald Harrison and Sir Alfred Cooper, like Mr. Holmes, were Vice-Presidents and members of the Council. Mr. William Allingham likewise had served for a term of years as a member of the Council.

By the death of Professor Charles Steward, LL.D., F.R.S., who was conservator of the Hunterian Museum for 23 years and who died in office in 1907, science lost a distinguished physiologist and this College a most able officer, a skilful draughtsman, and a very lucid and admirable lecturer.

An Italian poet has feigned that at the end of the thread of every man's life there hangs a little medal or collar stamped with his name, and that when Time with the shears of Atropos has cut the thread he throws the medals into the river Lethe; but that about the river there are many birds flying up and down who catch the medals, and, after carrying them round in their beaks a little while, let them fall into the river; only there are a few swans which carry off certain medals to a temple consecrated to immortality.

Though it may be that none of the names I have mentioned have been carried by the swans to the Temple alluded to by Ariosto, other birds have secured the medals, and sparing them from the waters of Lethe have deposited them with the records of this College. There they will not be forgotten.

Those are rare epochs in science which are marked by distinct progress due to some particular worker like John Hunter. Though his name is not associated with any very striking discovery like that of the circulation of the blood by Harvey, or the specialization of nerve function by Charles Bell, his influence upon many sciences was both far-reaching and profound. His contributions to knowledge in human and comparative anatomy, in the natural history of plants and animals, in vegetable and animal physiology, and in geology and palæontology, were of such signal value that progress was made in each of these sciences through his labors. In one of his papers to the Royal Society, Hunter, in referring to the light thrown on pathology by the then recent physiological discovery of the lymphatics as part of the absorbent system, wrote:

"A discovery in any art not only enriches that with which it is immediately connected but elucidates all those to which it has any relation." The truth of this is illustrated by his own investigations, which, by enriching physiology, illuminated the whole range of medicine and surgery, and may be said to have given birth to the "*Philosophy of Disease*," as pathology may well be named after what Hunter did for it.

John Hunter was the only man in England in the eighteenth century who took a really comprehensive view of the phenomena of nature; the only great natural philosopher between the date of Sir Isaac Newton's death in 1727 and the coming of those brilliant examples of our national intellect, Erasmus Darwin, John Dalton, Humphry Davy, and Thomas Young, all epoch-makers, whose works appeared immediately after Hunter's death in 1793. There was, however, in France an exact contemporary of Hunter whose life-work was very similar to his. This was Louis-Jean-Marie Daubenton (1716-1800), the rival of Reaumur as the leader of natural history in France; a considerable anatomist, who dissected and described 182 species of quadrupeds; a coadjutor of the great Buffon; a great authority in vegetable physiology, in mineralogy, and on fossils. It is highly probable that Hunter and Daubenton were influenced to some extent by each other's work; Hunter by Daubenton, more particularly in palæontology. Sir Richard Owen has styled Cuvier "the Founder of Palæontology," but the claim to that title really belongs to Daubenton, whose memoir on the application of comparative anatomy to the study of fossil bones was published in 1762, or 34 years before the writing of Cuvier on the subject.

Very different opinions concerning (1) John Hunter's early education and (2) his method of investigation as a philosopher have been expressed by his biographers, yet clear information is obtainable on these points. The impression to be gathered from much that has been written of him is that he was one of the class of untaught geniuses who have risen to the highest intellectual eminence by their own unaided powers; that up to his twenty-first year he was indolent, averse to study or to submit to being taught, idling his time in bird-nesting and low companionship, and that he finally took up the study of anatomy and entered the medical profession after failing to become, or tiring of being, a millwright or a cabinet-maker. I am satisfied, from the evidence of extant letters written by his relatives and contemporaries, that this description is wrong in nearly every particular. He was the grandson of Francis Hunter, who was the second son of Hunter, the laird of Hunterston in Ayrshire, whose family history goes back to the thirteenth century. F's father was the owner of a small estate at Long Calderwood in Lanarkshire, seven or eight miles from

Glasgow, which he farmed himself. John Hunter's mother was a Miss Paul, the daughter of the treasurer of the city of Glasgow. John was the youngest of ten children; but besides himself, only two brothers and two sisters lived to grow up. Both brothers received the usual school and university education. James, the eldest, became a writer to the *Signet*. William, who was ten years older than John, was celebrated as a teacher of anatomy and surgery and a leading London physician. Of the two sisters, Dorothea Hunter married the Rev. James Baillie, afterwards Professor of Divinity in the University of Glasgow, and became the mother of the famous physician, Dr. Matthew Baillie, and also of two daughters, one of whom, Joanna Baillie, was the highly gifted authoress of the *Dramas on the Passions*, and one of the closest friends of Sir Walter Scott. The other sister—Janet Hunter—died within a year of her marriage and immediately after John Hunter came to live in London in 1748. Her husband was a sociable, musical, but unbusinesslike young man, named Buchanan, of good family and good patrimony, who had settled in Glasgow as a partner in a large firm of timber merchants. At that date there were no upholsterers in Scotland and high-class furniture was made in workrooms in timber yards, where foreign and rare, as well as indigenous and common, woods were obtainable. It was here that John Hunter, who prided himself upon his manual dexterity, tried his hand at cabinet-making during a short visit which he paid to his sister, Mrs. Buchanan. Hence originated the statement made by his spiteful and disparaging biographer—Jesse Foot—that Hunter had served, and failed, as a millwright or carpenter.

John Hunter lost his father when in his fourteenth year, and having for some time before ceased to attend school continued to live at home under his mother's influence till he came to London in his twenty-first year to study anatomy under his brother William. He was fond of games, but passed much of his time rambling amongst the woods and braes and taking notice of every form of animal and vegetable life. Thus, without going to school and college and getting the same education as his two brothers, he was gaining the knowledge which he could best assimilate and laying the foundation of his future greatness in natural science and surgery. The constant companionship of his mother and the example set by his brothers and his sister Dorothea, was an education in itself. John Hunter might have said what Charles Bell wrote of himself: "My education was the example set me by my brothers. There has been a good deal said about education, but they appear to me to put out of sight example, which is all in all." And speaking of his mother Bell adds, "She was my only teacher."¹ One gets the impression from their biographies that

the home life of both Hunter and Bell had an elevating and an educating influence and was devoid of the superstitions and fanaticism then prevalent in Scotland.

Since the time of Demosthenes, who from his seventh year was brought up and educated by his mother, a great many men who have attained to greatness have ascribed their success to the instruction received from their mothers. Two of Hunter's most distinguished disciples, Sir Benjamin Brodie and Sir Charles Bell, did so very emphatically. Cuvier is another instance.

In reference to his lack of school and university training it is well known that there are those to whom this routine is insurmountably repugnant but who yet are eager in the acquisition of other forms of knowledge. To quote Sir Charles Bell again in reference to his own experience, he said: "The memory of verse or Latin rules, without intellectual comprehension of some principles, I was incapable of. This incapacity depressed me, and it was only when in professional education I found subjects more suited to my capacities that I began to respect myself, and favorably compare myself with my fellow students." Charles Darwin also has told us that school as a means of education was to him simply a blank. John Stuart Mill as a philosopher, Henry Thomas Buckle as a historian, and Robert Louis Stevenson as an essayist and writer of fiction may be cited from amongst many other distinguished men who had no regular school or university education.

As to the assertion that John Hunter was fond of low society, his association with the men whom he met at the house of his highly educated and highly cultivated brother William, and the fact that he married Sir Everard Home's sister, a charming and accomplished woman, all tend to contradict it. Mrs. John Hunter was very musical and wrote the words for Haydn's (1732-1809) English Canzonets, one of which—"My mother bids me bind my hair"—is among the best known. Hunter himself was fond of art and was a collector of prints and engravings and armor.

As to what was the philosophic method pursued by Hunter as a man of science, his writings tell in no uncertain manner. There are only two methods open to the intellect—Deduction and Induction. Deduction starts from a general proposition and reasons from this to individual cases. Induction starts from individual facts and reasons upwards to general propositions. For example, reasoning by Deduction from the major proposition "All men are mortal," and the minor proposition which I will put thus: "Mr. Brown possesses all the attributes of man," we arrive at the conclusion that "Mr. Brown also will in time die." Reasoning by Induction, on the other hand, we first ascertain (say, from reading innumerable biographies, from the records and histories of

nations, from tombstones and epitaphs, and from various facts in past and present experience) that everyone who has lived has died, and then we conclude that not only will Mr. Brown himself die but that all Brown's family, and all the families of Brown, of Jones, and of Smith, etc., in fact that all men are mortal, notwithstanding the miraculous disappearance of Enoch, and that Elijah "went up by the whirlwind into the skies." Did time permit I might illustrate the difference between Deduction and Induction by other but less simple instances than that I have just given, and at the same time show the difference between the Scotch and English national methods of inquiry—e.g., between Cullen and Hunter in their investigation as to whether all animal matter is originally vegetable matter; or between Hutton and William Smith who respectively were the founders of Scotch and English geology; or, again, between Watt and Cavendish who at the same time discovered, Watt by deduction and Cavendish by induction, that water is the component of two gases. Of each of these instances it may be truly said that the inductive philosopher (the Englishman) established the facts and the deductive philosopher (the Scotchman) established the ideas. Deduction and Induction have for the most part been employed separately, but by a few investigators they have been combined.

In the history of the world there have been three great intellectual movements leading to three great schools of philosophy—namely, the philosophy of antiquity identified with Greece, Scholasticism identified with Charlemagne and France, and the New Philosophy which is of English birth and identified with the name of Francis Bacon. Excepting the philosophy of Aristotle, which was largely inductive, the first two were chiefly deductive. The Baconian is known as the new inductive method. In reviewing the intellectual movement of the eighteenth century in England, Scotland, and France in its bearing on Hunter and his work, we find that each country adopted one of the two philosophic methods as the national method. To understand this movement better it would have been well had time permitted to take a brief glance backwards at the philosophy of earlier ages.

Up to the end of the fifteenth century first Greek philosophy and then scholasticism had monopolized men's thoughts, but during those 2000 years and more they had done nothing to mitigate human suffering, nothing to advance the public weal, nothing to extend the empire of man over the material world. Indeed, the application of science to useful practical ends was deemed by the old Greek philosophers to be unworthy of men of learning, degrading and debasing to philosophy and insulting to philosophers.

Scholasticism, which was a blend of Christianity and paganism, an "ill-starred alliance between the old philosophy and the

new faith," was in reality the logic of Aristotle associated with the teaching of the church, and by it reason became subject to authority and was made the mere handmaid of faith.

As men's interests ceased to be centred in ecclesiastical disputations and their attention became by degrees directed to art, science, and practical discoveries, they looked about for someone who would lead them to the dawn of a new philosophy. This leader was discovered in Bacon, who propounded a philosophical system essentially new and differing alike both in method and object from that of the Ancients and that of the Mediævalists or Schoolmen.

Bacon described with scorn the uselessness of the philosophy of the Platonists, the Peripatetics, the Stoics, and the Epicureans. Equally he scouted the system and dogmas of the Schoolmen. Whilst disclaiming to be himself the founder of a sect or school, and fully foreseeing that his method was by no means perfect, he gave a new and powerful impulse in a direction diametrically opposed to both the Greeks and the scholastics. Some who have never studied his works seem to entertain a very incorrect idea as to what it was Francis Bacon really did for science. Of course he did not invent Induction. The inductive method has been practised ever since the world began: by every infant before weaning, by every new-born mammal as it learns that it will get milk from its mother, and not from its father; by every farm laborer who finds by experience that he cannot gather grapes from thorns nor figs from thistles, and that if he sows tares he will not reap wheat or garner barley. We are all employing the inductive method daily, and many who have never read the rules laid down in the "Novum Organum" are conducting the process as well as, or better than, many who have. Bacon's great merit is that he "led forth the sciences from their house of bondage," that he directed the minds of men away from mere verbal disputations to the discovery of truth by observation and experiment, that he incited men to develop the industrial arts and to acquire knowledge and apply it "to the glory of God and the relief of man's estate."

The chief cause of this great reformation in philosophy was the great reformation in religion.

THE INTELLECTUAL MOVEMENT IN ENGLAND.

In England that enlightened scepticism and spirit of inquiry which in religion conduced to toleration, in politics to freedom, and in physics to natural science, came to the front in the sixteenth century with the Reformation, increased with the Rebellion of 1645, and was confirmed by the Revolution of 1688. The Reformation dissipated the notion of the infallibility of the Church. The history of different countries shows that as long as the govern-

ing power was in the hands of ecclesiastics there was no toleration in religion and little or no advance in science. It was in England during the reign of Queen Elizabeth that government for the first time in any European country was carried on without the active co-operation of ecclesiastical authority, and it was also during her great reign that there began the growth of that splendid literature which was to stimulate and increase the national spirit of liberty and inquiry and to spread its influence, in a generation or so later, first over France, then throughout Europe.

During the first half of the seventeenth century, which was a period of great superstition, there was an effort to reverse the enlightened policy of Elizabeth. The influence of this on works of learning is well illustrated by the two books of Sir Thomas Browne. His "Religio Medici" was published about 1634. In this book the author exhibits a superlative degree of credulity, expresses his belief in witches, and declares his willingness to assent to a proposition all the more because of its improbability, and his readiness to believe in a thing in proportion to its actual impossibility. But twelve years later (1646), when the civil wars of the Rebellion were raging and men's intellects were becoming more and more independent of authority, Sir Thomas Browne's second book, "Enquiries into Vulgar and Common Errors," appeared, and proved to be a systematic and elaborate attack upon most of the superstitions then prevalent. The striking inconsistency between these two works by the same author marks the growth of the vast social and intellectual changes which culminated in the overthrow of ecclesiastical intolerance and political persecution.

With the Restoration came an increased desire for knowledge. The period following the Revolution of 1688 forms one of the most important periods in the history of the world, because it was then, and in this country, that the human intellect was completely freed from subjection to authority; and it was then, and in this country, that the triumph of liberty over despotism, and of reason over blind and enforced credulity was permanently and completely accomplished. The suppression of superstition was further aided by the earnestness with which the physical sciences began to be cultivated during the Commonwealth and after the Restoration. The Royal Society was established in 1662 and Robert Boyle (1626-1691), who adopted the views and method of Bacon, was making discoveries of the very first importance.

When Hunter arrived in England he came amongst a people deeply imbued with the Baconian spirit, for if Harvey, Hobbes, and Newton be excepted, all English scientists for 150 years after the death of Bacon in 1626 were eminently inductive. Newton, who was born 16 years after Boyle, had been dead 21 years when Hunter came to London in 1748, and the only giant mind in Eng-

land to be likened to Hunter was Edmund Burke (1728-1797), the reflective and philosophic statesman who resembled him in the power of his intellect, in his marvellous capacity for thinking, and in his conception of general principles based on long-considered ideas. Hunter's rôle was the philosophy of life and nature; Burke's the philosophy of civilization.

Though during Hunter's life there was no one in England pursuing science who was at all comparable with himself, or with the great Scotch and French philosophers and scientists then living, still the period covered by Hunter's residence in London was one of great national brilliancy and renown in many branches of learning and culture, despite the depths of political and commercial degradation into which the country fell owing to the taxation of America and the American war and its consequences. The British Museum was founded in 1753 through the collections made by Sir Hans Sloane being purchased by the Government on his death. Sir Hans Sloane followed Sir Isaac Newton as President of the Royal Society. Like Hunter, he was led to study medicine owing to his intense love of natural history. He was the first person in England to attempt to form a museum; and it is interesting to note that the British Museum, the Glasgow Museum, and the unrivalled museum in this College owe their existence to collections made by London medical men of Scotch extraction—namely, Sloane, William Hunter, and John Hunter respectively.

In literature and art the eighteenth century was very illustrious. The Royal Academy was founded in 1768 at the instigation of Benjamin West, a Pennsylvania Quaker, who startled the Italians by likening their Belvidere Apollo to a Mohawk warrior, and who is said to have painted 400 pictures for King George III. With West three other artists were associated in obtaining the Charter of the Royal Academy, one of them being Penny, the son of a London surgeon, who was made the first professor of painting. Dr. William Hunter was appointed the professor of anatomy.

It has been said by one of the biographers of Sir Joshua Reynolds that there centred round him as the first President of the Royal Academy a "surprising and splendid constellation of genius such as never before his time and never since illumined this country." Reynolds lived opposite John Hunter on Leicester Fields, now Leicester-square, and his genius as an artist has pictured for all times on the canvas suspended behind me, the thought-inspired features of the famous surgeon. The "Marriage à la Mode," the "Rake's Progress," and the other "pictorial sermons," as they have been called, of Hogarth; the "Blue Boy," the "Celebrated Duchess," and the grand landscapes of Gainsborough; the character portraits of Lady Hamilton by Romney, and probably

some of the earlier paintings by Lawrence and Hoppner, must have been known to Hunter. So, too, the works of West, Cosway, Richard Wilson, Opie, and others of less importance. Now, for the first time in its history this country produced genius enough to establish its claim to the honorable distinction of having "an English school of painting." Bartolozzi, the Florentine, settled in London in 1764, and for 40 years was occupied here in engraving pictures—his reproductions being, as a rule, more beautiful than the originals. Angelica Kauffman, too, was delighting Londoners by her sentimental pictures, astonishing them by her cold-blooded and unsentimental marriages, and decorating with pseudo-classic paintings the interiors of houses in the Adelphi and of mansions elsewhere, built by the brothers Adam. Hogarth, Edmund Burke, Samuel Johnson, Oliver Goldsmith, David Garrick, Sterne, and others, all friends of William Hunter and his brother John, were meeting daily at the Literary Club, the Turk's Head, or Reynolds's house. Fielding, having published "Tom Jones" (1749) and "Amelia" (1751), was annoying Richardson by his burlesque of "Pamela," and worrying the Government and the Lord Chamberlain by his satires on bribery and the elections. Smollett's "Roderick Random," published in 1748, may have been read by Hunter during his first journey from Scotland to London. The Rev. Laurence Sterne created a great popular success by the gross innuendoes and indelicacies of "Tristram Shandy"; and the prim little Fanny Burney (Madame d'Arblay) became famous as a novelist of irreproachable propriety. "The Tragic Muse"—Sarah Siddons—had all but drawn tears from Hunter's eyes; and David Garrick as "Felix" in "The Wonder: a Woman Keeps a Secret," must on some occasion or other have made him laugh until he sobbed. Pope and Swift and Sir Robert Walpole died when Hunter was 16 or 17 years old. Alexander Pope was a friend of Cheselden, and Cheselden was Hunter's first surgical instructor. In this way, through Cheselden, perhaps, or perhaps from hearing the poems read aloud when a boy at home, Hunter must, I think, have been influenced or inspired by Pope. The "Essay on Man" was published in 1734, and it is impossible to read some of Hunter's statements or to follow his lines of thought without being frequently reminded of passages on nature and the universe and the relation of man to the rest of the universe which that poem contains. Lastly, as a collector of prints, pictures, weapons and armor, *et cætera*. Hunter probably encountered that personification of affectation—Horace Walpole—in some of the curio shops or sale-rooms of the town, when Walpole was buying for oddities and rarities to add to the molley collection for which he was notorious. Collecting was becoming quite a fashion at the time.

THE INTELLECTUAL MOVEMENT IN SCOTLAND.

The intellectual movement in Scotland differed widely from that in England in the seventeenth and eighteenth centuries. After the passing of the Acts of 1707 ratifying the union of Scotland and England good roads and canals connecting the chief towns and districts were made and manufactures and commerce were promoted. Hence it happened that just about the date of Hunter's birth Scotland, for the first time in her history, produced two classes of enterprising and thinking men whose aims were essentially secular—namely, an industrial class and a philosophical class. During Hunter's early manhood, commercial and manufacturing prosperity had fairly set in, and philosophers and scientists of the very highest eminence were beginning to make the name of Scotland famous by their labors. The number of original thinkers in Scotland in the eighteenth century is the more noteworthy because in all the previous centuries the country had only produced two authors whose works were of the least merit—namely, Buchanan (1506-1582), the Scottish historian and the greatest Latin scholar in his time, and Napier (1550-1617) the inventor of logarithms. But the most striking fact about Scotland in the eighteenth (and the first half of the nineteenth) century was the existence of so many philosophers and the creation of a noble and enduring literature, at a time when the Scotch were the most priest-ridden and superstitious people in Europe, not excepting even Portugal and Spain. Besides the influence of the Scottish kirk, another cause of the continuing ignorance and superstition of the people was the national method of inquiry. Centuries of ecclesiastical supremacy had influenced the nation in favor of the theological method of reasoning; and as the Church required the acceptance on faith of general principles and dogmas, and regarded it as heresy to doubt or question—this method was necessarily the deductive. Induction under such conditions is impossible. Paley, and the authors of the *Bridgewater Treatises*, and many essayists tried it and failed. When, therefore, the ablest minds in Scotland directed their thoughts and attention to philosophy and science, they without exception employed the deductive system with which they had been made so long familiar. Thus it was with Hutcheson and Reid in metaphysics; with Adam Smith and Hume in political economy and history; with Black in physics and chemistry; Cullen in pathology; Hutton in geology; and Leslie and Watt in chemistry. In all branches of science it was the same. All the discoveries made by Scotchmen concerning both the inorganic and the organic world were made by the deductive method.

THE INTELLECTUAL MOVEMENT IN FRANCE.

As there is reason to think that Hunter was acquainted with the scientific work going on in France, notably that of Daubenton, and as Hunter's work was not without effect on some of the great French scientists, such as Cuvier and Bichat, I propose to examine very briefly the intellectual movement in France just before and during Hunter's lifetime.

The spirit of intellectual progress for which France was celebrated during the age of Richelieu and Descartes in the first half of the seventeenth century did not continue. In the second half of that century, and during the rest of the reign of Louis XIV., it was thwarted and delayed by the despotic and protective spirit of Government which was an early but weighty cause of the French Revolution; just as liberty and reform in England were checked by attempts in the first of the seventeenth century to suppress the popular will and to reinstate in power the Catholic clergy. Immediately, however, after the death of Louis XIV. in 1715, the state of the popular mind in France, which was thirsting for inquiry and hungering for liberty, was as favorable to the reception of the Baconian system in that country as the popular desire for political intellectual freedom in England had been in the seventeenth century. When therefore, in spite of the natural vanity of the French people during Louis's lifetime, the eyes of France turned after 1715 to England as the only country where liberty was known, nearly every Frenchman of eminence in literature and in medical and other sciences either visited England or learnt the English language; many did both. Voltaire, Diderot, Buffon, and Montesquieu all took part in introducing English literature and English philosophy into their own country.

During the second half of the eighteenth century many of the best intellects in France were directed to physical science. A hundred years before Descartes had made it a fundamental principle of his philosophy that we must ignore the knowledge of the external world—i.e., of nature—and must depend on "thought." Now, Helvetius, the most celebrated French moralist, and Condillac, the most celebrated French metaphysician of their period, said "we owe the whole of our knowledge to nature." It was this latter view which led to the discovery of more new truths in science by Frenchmen between 1750 and the end of the eighteenth century than had been made in all previous periods put together. The names of Lavoisier, Foucroy, Berthollet, Fournier, Buffon, Daubenton, Cuvier, and Bichat bear testimony to this. The vast discoveries which were being made roused general interest and curiosity in France. Some acquaintance with science came to be considered essential to a good education. Lectures in all branches of science drew together persons of the highest rank as

well as of the several classes below them. Women of fashion attended lectures on chemistry, geology, mineralogy, physiology, and anatomy. Antoine Petit's lectures on anatomy (commenced in 1768) were delivered before overflowing audiences. Cuvier² tells that the anatomical descriptions which Daubenton wrote for Buffon were to be seen on the toilet tables of ladies. Oliver Goldsmith, who was in Paris in 1755, remarks with surprise that he saw "as bright a circle of beauty at the chemical lectures of Rouelle as gracing the Court of Versailles." It was the same at the public séances of the Académie Française in 1779 and at Foucroy's lectures on chemistry in 1784. Such was the condition of the intellectual life in France, and particularly in Paris, during the latter half of Hunter's career.

The same spirit prevailed in this country. The English democracy had just begun to enter eagerly into political life. There was also a great increase in the general desire for knowledge and this demand was augmented by the very steps taken to satisfy it. Now for the first time the public at large took some interest in the cultivation of the fine arts, and in 1760 there was held the first public exhibition of pictures by English artists. It was during the eighteenth century that booksellers first started shops in the provinces and that circulating libraries and periodical reviews were first introduced. The publication of the proceedings in Parliament against which the last standing order was passed in 1728—the year of Hunter's birth—and concerning which the Lord Mayor and an alderman of the City of London were sent to the Tower in 1771, became an established parliamentary institution from 1772. Before the second quarter of the eighteenth century printing establishments were almost unknown in provincial English towns and printing presses were only by degrees being set up in country towns in the latter half of the century. It was in the eighteenth century also that the earliest systematic attempts were made in England to popularize the sciences by lectures, to spread knowledge of physical truths through the medium of encyclopædias and simple treatises, and to give enlightenment by means of public addresses on such subjects as political rights of the people. It was in the latter half of the same century that Sunday-schools, reading clubs, and debating societies first came into existence.

This desire to learn and this rapid and widespread diffusion of knowledge amongst the peoples of France and England were in large measure attributable to the fact that both the French and English national philosophical method was Induction. The condition of the Scotch people at the corresponding period was in marked contrast.

By comparing countries whose national system is Deduction with those whose national system is Induction it is abundantly

proved that knowledge is never widely diffused amongst a people by the deductive method, which begins with ideas, but that it spreads by means of the inductive process, which begins with facts. The deductive process, by dealing with abstract ideas, appeals to the thinking faculty and not to the senses, and as ideas are more difficult to grasp than facts, and as there are more good observers than great thinkers, deduction influences the popular mind much less than induction. Hence it was that the Scotch people did not seek enlightenment and were content to continue in subjection to theological authority; hence it was that in England the overthrow of Scholasticism (i.e., of the purely syllogistic philosophy of the Middle Ages) by the Baconian system was followed by the general extension of knowledge and trade; and hence it was that in France in the seventeenth century the deductive philosophy of Descartes and the Cartesian philosophers did not lead to the general instruction of the people; whereas in the eighteenth century, after English literature, English opinions, and the philosophic views of Bacon and Locke were introduced into France by Voltaire and others, knowledge spread rapidly amongst all classes of the French people.

With increase of knowledge came unhappily a feeling of revenge for the political and social wrongs they had suffered for generations, and the French mind, bent on obtaining freedom, was fired by a deadly determination to resist oppression and defy absolutism which finally culminated (in 1789) in the revolting cruelties of the greatest and most ghastly revolution the world has ever known.

On October 16th, 1793, John Hunter died suddenly when attending a board meeting in St. George's Hospital. On the same day and about the same hour Marie Antoinette was beheaded in Paris.

HUNTER'S METHOD OF INQUIRY.

The study of Hunter's works shows that he combined to an exceptional degree the two philosophic methods—Deduction and Induction. There is no evidence that Hunter studied formal logic any more than Latin and Greek. He was essentially a thinker rather than a scholar, yet an experimental philosopher rather than a metaphysician. But Hunter saw that for a complete scheme of knowledge Deduction and Induction are supplementary to each other, and when the time comes, if ever it does come, when all the intellectual resources of man are fully developed and perfectly co-ordinated, then these two methods of reasoning will no longer be regarded, as they now often are, as hostile to one another but will be combined in a single system.

Though a great inductive philosopher Hunter employed the deductive method very largely, especially in pathology. He reasoned downwards from premises and hypotheses which he deliberately

invented, and in doing so arrived at conclusions, sometimes unproven, sometimes inaccurate, sometimes only approximately correct. Still, though it is true that some of his doctrines have had to be modified, some even set aside altogether, yet, on the other hand, it is astonishing how many of his speculative conclusions, both in physiology and pathology, formed at a time when microscopes were very inferior and chemical science was in a backward state, have been confirmed by his successors working with much better instruments and with additional and very superior aids to research. Thus did his genius often outstrip facts and anticipate discoveries.

His employment of the inductive method is illustrated by his attempt to explain congenital defects by a reference to transitory structures and the metamorphoses of fetal life, as in the case of congenital hernia, which arises from the failure of the peritoneal process to become shut off from the peritoneal cavity. Other instances of his use of induction are his scheme for the classification of monstrosities based on the disposition which every species of animal and every part of an animal body has, to deviate from nature in a manner peculiar to itself; his instructions to Jenner as to how he should ascertain whether color blindness is due to a general defect or to a failure to appreciate the usual impressions made by primary colors; his careful and patient anatomizing of so many hundreds of different species of animals and of so many animals of the same species; his numerous observations of plants; and his untiring investigation of the diversities of structures and organs in order to arrive at accurate conclusions as to what structures and organs are necessary for the performance of different functions. As a result of these dissections and observations he pointed out the conditions which characterized groups of animals, classifying them according to their hearts, their nervous systems, their stomachs. In this he anticipated Cuvier. Following the induction method he trusted to nothing but his own observations and to testing his ideas by the most varied and exact experiments. His "Treatise on Bees" is an admirable illustration of this. Yet in making inquiries before drawing his conclusions he is neither prodigal of facts nor wasteful of experiments. In reference to Swammerdam's minuteness of description of the particular structure of bees, he says that minutiae as such should be avoided, that they are only of value in so far as they elucidate principles, that notice need not be taken of things that are common to a bee and to other insects, "but only of its peculiarities which distinguish it from all others [animals] and constitute it to be a bee."

Hunter in his "Observations on Digestion," when criticizing Réaumur and Spallanzani, remarks: "I think we may set it down as an axiom that experiments should not be often repeated which

tend merely to establish a principle already known and admitted, but that the next step should be the application of that principle to useful purposes."³ And then he goes on to say: "But the application of principles requires more than simply the knowledge of the principle itself, and therefore those who cannot reason from analogy, or draw general conclusions from a few convincing facts, and who require to have every relative conclusion or inference proved by experiment, must be pleased with Spallanzani; but he must tire even those whom he informs and much more those who read his works in expectation of something new."⁴

He made great use in practice of analogy and comparison, of resemblance and of difference. Many arguments and inferences drawn from analogy occur in his writings, some of them amounting to the most perfect induction, but others, it must be acknowledged, leading him into error. Fallacies of analogy are to be found in his treatise on the teeth—e.g., he concludes from his experiments with madder on the teeth, as compared with others on bone, that the teeth have neither a vascular supply nor absorbents. Again, he argues from the existence and use in carnivora of canine teeth to their use in man as organs for tearing and the prehension of food; thus ignoring or overlooking the fact that canine teeth are far more developed in some animals which are exclusively frugivorous. Some of his analogies are indeed mere conjectures—e.g., he infers that the bicuspid is less useful than either the incisors or the molars, and he attempts to support this by saying: "In most animals, so far as I have observed there is a vacant space between cutters and grinders."

It was chiefly by induction that he concentrated the scattered facts of comparative anatomy and thereby advanced the progress of physiological science. But a considerable part of his pathology also is based on the inductive process. Notwithstanding his vast achievements in physiology he was even greater as a pathologist. If it be remembered what pathology was before his own time it must be admitted that in this science Hunter remains without a rival. It is in this science especially that his depth of insight, his profundity of thought, and his comprehensiveness of view mark him out as a genius. With Hunter pathology included the laws of disease not only in man but in the whole of the animal and vegetable kingdoms. His outlook was even more comprehensive still, for it embraced not only the whole of the organic world but the deviations from the typical form in the inorganic also. In the study of the obscure phenomena of disease there is more scope for speculative ideas than for experimental research, at any rate for the forms of research which were possible in Hunter's day. It is therefore in his pathology much more than in his physiology that Hunter employed the deductive method. Thus he lays it down "as

an axiom that two processes cannot go on at the same time in the same part of any substance."⁵ Two different fevers cannot exist in the same constitution; nor can two local diseases be present in the same part at the same time. Such names as rheumatic gout, which imply a combination of two diseases, suggest a possibility of a union which, according to Hunter's principle, cannot exist. Again, in his treatise "On the Blood, Inflammation, and Gunshot Wounds"⁶ he adopts the principle that the specific qualities in disease tend more rapidly to the skin than to the deeper-seated parts; and he regards this as a law of nature similar to the principle by which vegetables always approach the surface of the earth. The whole chapter on Sympathy in his "Principles of Surgery"⁷ is full of deductive reasoning. The doctrine of health and disease, as explained by him in his "General Principles of the Blood,"⁸ as well as in his "Principles of Surgery,"⁹ illustrates his desire to build arguments on principles which he spontaneously assumed.

Still another instance of deduction is his reasoning from the hypothesis that the immediate cause of action is the same in both animals and plants, but that whilst in animals there is a greater quantity and variety of motion, in plants there is more real power. He illustrates this difference by the horse and the vine. The vine can raise a column of fluid five times higher than the horse's heart can do, the energy or power of the animal being weakened by being directed to several different purposes.¹⁰ In his "Treatise on Venereal Disease" his arguments are based upon the too hasty generalization that affections which admit of cure without the use of mercury are not venereal. He thus made the remedy the test of the disease, and sought to substantiate this preconceived idea by facts. His attempts to prove that monsters are formed as monsters from their very beginning supplies another example of his use of deduction. When reasoning deductively he so much relied on his premises that he sometimes refused to accept any evidence by which they were impugned. In his inductive investigations, however, he never disguised or perverted facts to make them tally with his hypotheses. Instead of endeavoring to render facts and theories consistent with one another, when they evidently were not, he would adhere to his hypothesis without blinking the facts. Thus he asserted that teeth are extraneous bodies without either circulating vessels, absorbents, or nerves, but when after transplanting teeth he thought he had established the fact that they were "capable of uniting with any part of a living body,"¹¹ he explained this power of uniting by attributing to teeth what he called a "living principle."

His Croonian Lectures on Motion contained admirable examples of his employment of the combination of deduction and induction.¹²

Buckle, in his "History of Civilization,"¹³ attempts to explain the intimate union of Deduction and Induction in Hunter's intellect by the fact that he was born and remained till his twenty-first year in Scotland and afterwards passed the rest of his life in London, where he became socially and intellectually a native of England. "Hence," says Buckle, "the early associations of his mind were formed in the midst of a deductive nation, the latter associations in the midst of an inductive one. The country of his birth made him deductive, the country of his adoption made him inductive. As a Scotchman he preferred reasoning from general principles to particular facts; as an inhabitant of England he became inured to the opposite plan of reasoning from particular facts to general principles." And Buckle adds: "I make no doubt that one of the reasons why Hunter, in investigating a subject, is often obscure, is that on such occasions his mind was divided between these two hostile methods." Buckle's line of argument is here purely deductive and capable of being thrown into three or four strictly correct syllogisms—correct, that is, as to figure of syllogism, but not as to the ideas on which they are founded. Before accepting or rejecting Buckle's explanation, however, we must consider the premises on which he bases his conclusion. Like many deductive reasoners, he assumed the truth of his major premise without having explained the facts on which it rests. He, an Englishman, has argued like the Scotch he describes; his logic being good if we concede the general propositions from which he starts. But can we concede them? Is it true that philosophers who have passed their youth among a nation whose method is inductive, or *vice versa*, have their minds divided between these two hostile methods and, in consequence, are often obscure in their investigations? The conclusion will be proved to be false if it can be shown that a philosopher may pass his youth in a country without ever coming under the influence of the national philosophic method.

This was the case with John Hunter; he never did come under the influence of the ordinary Scotch teaching. In Scotland the clergy had the control of all centres of education, both public and private, throughout the country. They directed what should be taught, and how it should be taught, not only by village schoolmasters and masters of grammar schools, but by the professors in the universities, and even by private tutors. Had John Hunter continued at school and proceeded to a Scotch University he would of course have come under the influence of the deductive method. But even if his education had been of the usual Scotch type it does not follow that he would have adopted the Scotch philosophical method. His two brothers, James and William, who did receive such an education, did not adopt it, not even William, who was a resident pupil for three years and a life-long friend and corres-

ponent of so thorough-going and so able a deductive reasoner as Cullen.

The courage shown by John Hunter when a boy twelve years old, in a cottage scene described by his niece Joanna Baillie, justifies the assertion that he was not imbued with the clerical teaching and superstitions prevalent at the time in Scotland. In the eighteenth century the most popular divines in Scotland, as well as the clergy generally, taught that Satan frequently appears clothed in a corporeal substance, and that he seized persons and carried them away in the air. When the preacher mentioned the name of Satan the church resounded with sighs and groans, and the congregation were petrified with awe as they listened with gasping breath and hair standing on end. Such impressions were not easily effaced. Images of terror accompanied the ignorant people to their homes. No wonder therefore when a ghost in form of the devil appeared, whilst Hunter was chatting in a neighbor's cottage, that the cottagers, educated after this manner, were stricken motionless with fear, whilst young Hunter, brought up differently, attacked and drove away the apparition with the fire-tongs.

The second statement made by Buckle is that the conflict in Hunter's mind between Deduction and Induction darkened his understanding. I can no more accept Buckle's explanation of the occasional obscurities in Hunter's utterances than Buckle could accept Otley's—namely, that they resulted "from a deficient education." I agree with Buckle that a deficient education no more makes a man obscure in his statements than a good education makes him lucid. With educated and uneducated alike the power of clear expression depends on clearness of thought. When Hunter is obscure it is either owing to the complexity of his subject or to his own mind being in doubt. The adoption by Hunter of both methods—Deduction and Induction—was, in my judgment, the result of two causes: (1) the natural scope and bent of his mind; and (2) the nature of the subjects to which he devoted his life. Induction is largely the method required for the profession he chose. Locke and Sydenham had left it on record that in their opinions the medical sciences to be properly pursued ought to be approached by the Baconian method, and Hunter was one of a family several members of which showed a great leaning towards, and a marked aptitude for, these sciences.

James Hunter gave up his profession as a barrister and William, who was to have been a clergyman, abandoned the Church for anatomy, surgery, and medicine, and John of his own free will went directly into the medical profession. Their sister's son, Matthew Baillie, became the celebrated London physician and pathologist whose medallion portrait is stamped upon the cover of the Transactions of the Pathological Society of London. John

Hunter was also a disciple of Bacon in that he employed induction in the pursuit of truth with an ulterior regard to utility and the good of mankind. On the other hand, being a great thinker, he was naturally inclined to the deductive method. But the tendency in this direction was not so strong with him as with the purely deductive philosophers. He had not the deductive force of Descartes which could build up a profound philosophy with mathematical precision, and by introspective examination, starting from a single subjective principle, such as "*Cogito, ergo sum*"—" *Ego sum res cogitans.*"

It was not as a logician but as an observer and experimenter that Hunter excelled; it was not the beauty of his logic but the industry with which he collected facts, and the ability and honesty with which he reasoned from them, which made Hunter great. He naturally possessed the special requirements for induction, namely, a desire for knowledge, the love of inquiry, acuteness of observation, ingenuity in devising experiments, and the habit of taking nothing for granted which he could verify for himself. Had it been otherwise John Hunter might have become a deductive pathologist of the Scotch type like the only other great British pathologist of the eighteenth century, the illustrious Scotchman, William Cullen.

If it be true, and I do not think it is, that in Hunter's mind the two philosophic methods were in rivalry or conflict, and that this conflict led occasionally to confusion of thought and obscurity of language, the perplexity arose from the very comprehensiveness of his mind and the grandeur and vastness of its conceptions. If, on the other hand, as I believe was the case, he employed at will both Deduction and Induction but did not succeed in fully coordinating or completely combining the two methods, that was because, notwithstanding his wonderful genius, he yet fell short of being an absolute monarch of the whole kingdom of the intellect.—*Lancet*, London.

REFERENCES.

- ¹ Letters of Charles Bell, p. 10.
- ² Eloges, vol. i., p. 56.
- ³ Hunter's Works, vol. iv., p. 86.
- ⁴ Ibid., vol. iv., p. 87.
- ⁵ Ibid., vol. iv., p. 96; Ibid., vol. ii., p. 132; Ibid., vol. ii., p. 34.
- ⁶ Ibid., vol. ii., p. 285.
- ⁷ Ibid., vol. i., p. 317.
- ⁸ Ibid., vol. iii., p. 10.
- ⁹ Ibid., vol. i., p. 310.
- ¹⁰ Ibid., Croonian Lectures, vol. iv., p. 204.
- ¹¹ Ibid., vol. i., p. 18.
- ¹² Ibid., vol. iv., pp. 195.
- ¹³ Vol. iii., p. 432-5.

TROPACOCAINE IN LUMBAR ANESTHESIA

W. TOMASCHIEWSKI (*Deut. med. Woch.*, Dec. 19, 1908) records the results which he has obtained with lumbar anesthesia in the Military Medical Academy of St. Petersburg. In all, 104 patients were subjected to the procedure, of whom 87 were males and 17 females; 120 operations were performed on these persons under its means. During the period from October, 1905, to December, 1907, 60 per cent. of all operations on the lower half of the body were conducted in this way. Lumbar anesthesia was not applied in cases of definite spinal cord disease, when marked nervousness or hysteria was present, in operations for which no plan could be made beforehand and which were expected to last a long time, to entail great difficulty, and possibly create an unfavorable impression on the mind of the patient if awake, for operations which necessitated much raising of the pelvis, and for operations deep down in the peritoneum.

The ages of the patients varied between 14 and 63 years. In 6 cases—that is, 5 per cent.—no anesthesia was induced; in 6 further cases the anesthesia was incomplete. No unpleasant or threatening symptoms were met with.

In one case, in a small patient in whom 0.1 gm. of tropacocaine was injected, the anesthesia reached up to the line of the nipples. Two hours after the operation the patient complained of feeling of oppression, and there was pallor and cyanosis of the face and lips. This passed off after twelve minutes. The dose was obviously too high. In another case a large quantity of cerebrospinal fluid was accidentally allowed to drain away, and a severe headache lasting three days followed. Headache of short duration and some retching was seen in a few cases.

The average duration of the anesthesia was seventy-one minutes, while the average duration of the operation was forty-four minutes. In 15 per cent. of the patients affections of the vascular system or lungs were present, but in no case were these affections rendered worse in any way.

The author used tropacocaine exclusively, and injected from 0.05 to 0.09 gm. into the lumbar canal at first by means of Bier's syringe, and later by means of a syringe designed by himself. The drug was dissolved in the cerebro-spinal fluid. Scrupulous asepsis is required, not only with regard to the skin, instruments, etc., but also with regard to the tropacocaine itself.

In 40 per cent. of his patients no changes were found in the urine, while in 60 per cent. traces of albumin, detectable by means of Spiegler's reagent, were met with. The albuminuria cleared off in from one to three days. Severe nephritic changes are, according to the author, extremely rare. In this respect, tropacocaine applied

by lumbar injection is preferable to chloroform inhalation. He regards tropacocaine as the safest and best lumbar anesthetic.—*British Med. Jour.*, May 8, 1909.

STROPHANTHIN IN PURE FORM

THE desire to standardize accurately potent heart tonics, such as digitalis, has led to the introduction of the term "frogunit." This refers to the amount necessary to cause systolic rest within thirty minutes of the heart of *rana temporaria*, weighing 30 to 40 Gm. Since the various preparations are not, however, absorbed equally fast from the lymph-sacs of the frog, it is a much better plan to employ principles known to be chemically pure. Strophanthin has latterly been employed for intravenous use, where quick action is desired.

Most specimens of this glucoside are impure and amorphous, but recently Thoms has succeeded in isolating the principle in pure, crystalline form from the seeds of *Strophanthus gratus*. This *gratus*-strophanthin Thoms, manufactured by Merck, was employed in 32 patients by P. Fleischmann and E. Wjasmensky. The dose given for strophanthin is usually $\frac{3}{4}$ to 1 mgm., but with the pure, crystalline preparation no more than $\frac{1}{2}$ mgm. should be injected. The results of an injection are very evident: Very soon the pulse will slow, the pulse amplitude rise, and within three hours diuresis begins. The lowest pulse-rate is noticed between six to eight minutes up to several hours after the injection. The duration of action varies with the case; sometimes it is also desirable to give digitalis or other heart tonics. The best results are always seen in cardiac decompensation; less effect is evident in pneumonia, scarlet and other infections, while the tachycardia of phthisis, carcinoma, etc., is usually not reduced. In one case of Basedow's disease the pulse even increased in frequency. Untoward effects are seen very rarely, but the dose should not be too high in cachexia. Cumulative effects should be guarded against, particularly if the patient has been taking digitalis.—*Deutsch. med. Woch.*, 1909, No. 21.

Proceedings of Societies.

THE NIAGARA PENINSULA MEDICAL ASSOCIATION

The regular meeting of this association was held in the Clifton Hotel on the 31st day of August, Dr. Wilson, of Niagara Falls, presiding.

Among those present were: Drs. J. G. Sutherland, John Sheahan, MacDonald and McMahon, of St. Catharines; Dr. Binns and Dr. Colbeck, of Welland; Dr. Brewster, of Ridgeway; Dr. Campbell and Dr. Herod, of Thorold; Dr. Duggan, of St. Davids; Drs. Wilson, Thompson and Logan, of Niagara Falls South; and Dr. N. Walker, of Niagara Falls, Secretary of the Association. Drs. H. B. Anderson and J. N. E. Brown, of Toronto, were guests.

The first portion of the programme was luncheon, following which the paper of the day was read by Dr. H. B. Anderson, of Toronto, on the subject of Neurasthenia.

The attention of the medical world has been called to this disease just about the same time as it was to bacteriology and other laboratory investigations; attention of the medical world being directed thus the very existence of this "American disease" was questioned for years. The traumatic variety had led to much litigation in which it was not difficult to find medical men to confirm the legal contention that the traumatic form was a thing purely imaginary, which seemed to be supported by the sudden cure which followed a settlement on a \$5,000 basis.

Too long had the neurasthenic gone from physician to physician unhelped, and finally wound up with the quack, the Christian Scientist, or the Emanuelite, who had cured him.

It was true the profession faced the situation and made a study of the scientific principles underlying the treatment of this disease.

Nerve tissue was subject to over-work, toxic influences, perverted nutrition and hereditary weakness.

Neurasthenia was a complaint out of all proportion to the organic change to which symptoms could be referred.

When one remembered that the disease affected the psychic, sensory and vaso-motor systems one could readily see why there should be a manifold symptomatology.

The recognition of the disease was often difficult, but when weighed in the light of the etiological factors, the complex tangle could be readily unravelled.

The diagnosis was important and demanded often a high degree of clinical skill. Clinical manifestations were to be found associated with the digestive, genito-urinary, cardio-vascular and other systems. A large majority of the cases of digestive disorder are caused by nervous exhaustion.

The disease may be associated with gastric ulcer, gall-stones, carcinoma, ovarian disease, latent tubercle, etc. symptoms of which mask the primary condition.

In dealing with neurasthenia it was necessary to consider the patient and not the disease. Some persons were born with a capacity to stand strain easily; with others the tables were turned with little trouble. The hereditary influence was beyond the control of the physician. The variable factor was environment—physical, mental and moral—which required close study.

Dr. Anderson does not agree with Dubois' dictum that "Nervousness in all forms is a pure psychosis." If the nervous system, weak by heredity, is exposed to excessive demands, worry, domestic or religious troubles, intemperate use of tea, coffee, etc., need it be wondered at that evidence of exhaustion develops? One could not look upon all these as psychic. Dr. Anderson then cited two typical cases which illustrated the fact that there are many factors beside the psychic to consider.

During the clinical progress of cases of neurasthenia, morbid conditions appear; the interference with nutrition leads to loss of weight and anemia. There is constipation, oxyluria, indicanuria, menorrhagia, which complicate the picture, and produce a vicious cycle. This must be broken both for the original disease and the epiphenomena as well.

Dr. Anderson then went rather fully into the *symptomatology* of the disease. He laid stress on muscular weakness, mental depression, irritability, lack of resolution, morbid introspection, occipital headache, insomnia, painful spots along the spine, iliac pains. Dr. Anderson made special mention of pain to the left of the umbilicus accompanied by aortic throbbing. He reported some cases in which this was a prominent symptom which had led to a suspicion of aneurysm.

A second class of cases showed a disturbance of function, cardiac and gastric. Three-fourths of the dyspeptics were suffering from nervous exhaustion and recover when treated for this condition. Hyperchlorhydria, intestinal fermentation, irritability of the bladder were often observed. Menorrhagia in many cases. Dr. Anderson thinks, is only a sign of defective enervation. He had had several cases where operation had been advised, which had recovered by treatment for the nervous exhaustion.

The essayist alluded to some of the physical derangements which may produce neurasthenia, and also alluded to the related disorders

of hypochondriasis and hysteria, and the possibility of an overlapping one of the other. The main points in the differentiation between hysteria and neurasthenia, was the contraction of the visual field in the former, a simple, though rough, method of detecting which he explained. In all suspected cases the thyroid should be examined.

Therapeutically, some cases require specialists and special hospitals and other facilities. Owing to the length of treatment and expense these can only be indulged in by the well-to-do. But a large majority of these cases look to the general practitioner for counsel. The rest cure and such are beyond the grasp of most people.

If the management of this disease is to be the province of the general practitioner he must: 1. Have a thorough acquaintance with the disease in all its bearings, its etiology and manifold clinical manifestations. The physician must be truthful, have tact, sympathy and firmness, confidence born of knowledge, kindness and resourcefulness. He must obtain the confidence of the patient in order to have his instructions carried out absolutely. His grip of the situation must never be relinquished. To vacillate or show doubt or make trifling changes at the suggestion of friends is to invite failure. The physician must be quiet, firm, clear-cut and specific.

The examination of the patient is a most important therapeutic measure. It must be systematic, detailed and thorough. Complete notes should be taken at the time of examination. The details of the patient's past life must be secured, with special reference to known causes of disease. The possibility of secret worries must not be overlooked. Some incident the patient has forgotten or overlooked may be the cause of the trouble. The essayist reported a case in point.

A sub-conscious impression of some previous event may be the cause of the mental condition.

Freud studies the dreams of some of these patients.

Dr. Anderson recited two cases of his own in which a psycho-analysis was made by Dr. Ernest Jones, of Toronto, with happy results. One case was that of a man who had lost all idea of his own personal identity and of time—knew absolutely nothing. Dr. Jones was able to get the patient's tangled ideas straightened, and the man made a good recovery.

Psycho-therapy is very useful in those cases. It has been practised by successful physicians in all ages. In recent years it has been studied more systematically, has been more elaborated and more definite rules for its application have been formulated. Dr. Anderson, in this connection, referred to the work of Dubois, Mitchell and Barker along this line.

For cases showing irritability, a short course of bromides may be prescribed. Strychnine and glycero-phosphate do harm except in atonic cases. Mild aperients should be used. Sulphonal in 15 to 20 grain doses, taken in hot water, often acts admirably—often showing its effects the third or fourth night after. Diet should be plain and nutritious. Encouragement, personal suggestion and re-education, are the psychic influences commonly resorted to, and are at the command of the general practitioner.

The plan of treatment adopted should be within the patient's means, or an extra source of worry is added.

Medicines take a secondary place. Digestive introspection should be discouraged. Dr. Anderson cited the case of a woman who, not doing well at home, went to Germany, which meant a complete change. Here she was put practically on sausages, which she took remarkably well. She returned home fat and greatly improved. Fluids at meals should be limited, but sufficient between meals, in the morning and at bed time. Cold baths and cold affusions to the spine, followed by thorough rubbing, are helpful. As to electricity, its influence is largely psychic.

These patients should visit their physician two or three times a week, ostensibly for a change of medicine, but really for the benefit of a helpful interview. Patients must not discuss symptoms with anyone except the physician. Extravagant promises should not be made to the patient. In severe cases treatment may be protracted over a year or more. Bad cases should leave home for a fortnight or a month. Travel has a bad effect. The excitement of hotels is to be avoided. Sanitarium treatment is applicable to the wealthy classes. In severe cases in women good results follow the Weir-Mitchell treatment. Treatment in the wards of a general hospital is usually unsatisfactory.

The paper was well received and discussed heartily by most of the doctors present.

The Canadian Journal of Medicine and Surgery

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

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Editorials.

SYPHILITIC AFFECTION OF THE LIVER

As Thomas Bryant, F.R.C.S., remarks in his admirable Practice of Surgery, when discussing the pathology of syphilis: "The node on a bone, the nodule of lymph on the iris, the indurated, gummy tumor on the cellular tissue, or on a muscle, the puckered nodule of fibrous tissue beneath the peritoneal covering of the liver, the

mass of fibre tissue poured out in a syphilitic testicle, are all alike. They differ only in their symptoms and effects, according to their position, but whether they occur soon or late after the primary inoculation is a matter of no clinical importance."

Wilks observes, in "Guy's Reports," 1863: "The internal organs may be affected by syphilis equally with the external; not only the cranium, but the brain within it or the nerves; not only the muscles of the limbs and tongue, but the heart; not only the pharynx, but the esophagus; not only the larynx, but the trachea, bronchi and lungs, also the liver, spleen and other viscera. Professor Pel, of the University of Amsterdam, who has recently published a book on diseases of the liver, thinks that syphilitic affections of the liver are more common than is generally supposed, and that they are confounded with cirrhosis on the one hand and cancer on the other. He claims that gummata are generally situated on the left lobe and give rise to pain that is worse at night. He does not think that the existence of high temperature and cachexia should be held to exclude syphilis.

A case now receiving treatment from the writer of this note presents some of the characteristics of syphilitic affection of the liver denoted by Professor Pel. The patient, a man of 45 years, began to suffer from pain and distress in the epigastrium, December 25th, 1908. Ascites began to appear shortly afterwards; he lost 10 lbs. in weight in two months' time, and was not relieved by medical treatment given for dyspepsia and liver disease. Coming under the writer's care May 30th, 1909, examination revealed a hard, flat mass on the left lobe of the liver, moving downwards and upwards during respiration, which was tender on pressure, though not to a marked degree. Ascites was well marked, no edema of feet; temperature was normal; auscultation and percussion revealed no abnormal conditions of heart or lungs. His pulse was intermittent. He also complained of slight asthmatic breathing in damp weather. His urine was normal in amount and character. His history showed that at fifteen years of age he had had a chancre for which a treatment of two months had been given. Since then he had been in the habit of taking a glass of whiskey before breakfast, for several years back.

The small daily amount of liquor taken by this patient and the absence of hematemesis or piles did not warrant a diagnosis of

alcoholic cirrhosis, although he had ascites. There was no cachexia or involvement of other organs and no jaundice, so that cancer of the liver was excluded. Hepatic abscess usually occupies the right lobe of the liver, and no pain in the right shoulder was complained of. There was a history of a chancre, a hard nodular condition of the left lobe of the patient's liver, with, however, a fair preservation of the patient's general health.

The patient's diet was arranged; alcohol and smoking forbidden; $\frac{1}{2}$ oz. magnesium sulphatis in 4 oz. water ordered before breakfast and the following medicines prescribed:

℞ Mass. Hydrarg.....
 Pulv. Digitalis.....
 Pulv. Scillæ $\bar{m}\bar{m}$ gr. xx. M.
 Ft. in caps. xx.....
 Sig: 1 sumat t.i.d.
 et ℞ Potassii Iodidi gr. 480
 Aque..... \bar{v} vi M.
 Sig: \bar{z} i in \bar{z} ss lactis t.i.d.

These medicines were taken 'ring June, 1909. By July 15th the ascites had completely disappeared. He was then taking a dessertspoonful of the KI mixture, equal to 60 grains of KI a day. The pill was withheld on several occasions, but the KI mixture has been steadily given.

The result at present is satisfactory. The patient feels well, eats well, sleeps well and has returned to work. The hard nodular condition in the left lobe of the liver is still observable, on deep pressure, but not to the same extent, and there is little, if any, tenderness, and no ascites. The bowels move without a purgative. The pulse is not intermittent. There has been no ptyalism. There is a soft bruit with the first sound of the heart, which may be due to anemia. The treatment with the above-mentioned capsule is still continued, but iodide of sodium has been given instead of iodide of potassium.

The diagnosis of syphilitic disease of the liver seems justified, as success in such a disease depends on treatment with mercury and iodide of potassium.

J. J. C.

A PRIEST LOWERS THE DEATH RATE IN QUEBEC

IN Vol. 9 *Bulletin Sanitaire*, published by the Provincial Board of Health of Quebec, we notice that a certain parish priest of one of the best parishes in Quebec was successful in developing sound hygienic ideas among his people. Remarking one day the large mortality among infants in his parish, he came to the conclusion that the ignorance of their mothers and lack of proper care were principally responsible for the sad results. Speaking from the pulpit, he drew the attention of the mothers of children to their duties towards their offspring and enlarged on the proper care of infants. This effort was crowned with an immediate success; the mortality of new-born children in this parish fell to the half of what it had been before the sermon on hygiene was preached, and it is even remarked at the present time, that there is a marked emulation among the mothers of families in preserving the health of their children.

As indicative of the success which has followed the hygienic instruction given by the parish priest, the following statistics will be of value: Before the sermon was given to the mothers 19.78 per cent. of new-born children died in that parish; since then 8.53 per cent.; a saving of 18 lives in one parish in two years (1907-1908). Putting the monetary value of a human life at \$1,500, this would mean a saving of \$27,000 in two years. The editor of the *Bulletin Sanitaire* remarks that, though Quebec has the highest birthrate in the world, it loses by death more new-born children than any other civilized country. Now in France, the ancestral home of the French-Canadian people, the late Dr. Pierre Budin, of Paris, organized and carried out, under a Committee on Milk and Baby Hygiene, a series of consultations with the mothers who obtain milk for their babies from the committee's stations, and these consultations are still operative in France, saving the lives of thousands of children every year. In France there is, of course, more urgency to save every infant life than in Quebec, the birth rates in these countries being antipodal, the races identical. However, if French Canada is to keep in the front rank of progress in Canada, which essentially means a large voting population, her parish priests do well to exercise their enormous influence in enlisting their flocks under the

banner of hygiene. Only one would say, for the honor of scientific medicine, that such a noble tentative, so enlightened a departure from ancient neglect of life-saving, should emanate from, and be operated by, the physicians of the parish, instead of the parish priest.

J. J. C.

A PREMIUM ON FECUNDITY

PROFESSOR RICHERT, the distinguished physiologist, of Paris, suggests that a premium should be placed on fecundity, the State giving \$100 for a second child and \$200 for each further addition to the family. He estimates that the result of this measure would be an increase of births to a million to twelve hundred thousand, instead of seven hundred and fifty thousand, which is the present rate in France. The cost is estimated at \$60,000,000 for the first year, and the amount would rise with the number of births. In four years Professor Richet looks for an increase of a million in the population, which he thinks would be cheaply purchased at the price of a thousand millions of francs. He proposes to raise the money by loan, or by taxing estates inherited by collateral relatives, to the amount of 50 per cent. or more, while a tax of 25 per cent. would be levied on that inherited by an only son. Professor Richet concludes his proposal by a statement that a premium given by the State for every child after the first is the *only* remedy for decrease of population by a low birthrate.

This is a serious indictment of the French people. Reduced to its last analysis, it means that a great number of married couples in France begin married life with a brake ever ready to be applied to prevent an undesirable number of children; that the application of this brake is influenced by economic conditions—in other words, the difficulty of getting three meals a day, the comforts of a home, a provision for old age, a dowry for the daughter, and some capital wherewith to start the son in business, a trade or a profession.

Professor Richet, who visited Canada in 1897, knows that the French race in Canada has been and is extremely prolific, probably the most prolific of any civilized race in the world. He knows that the proportion of children taught in Public Schools in Quebec is as high as it is in France. He knows that in Canada labor, industry, good sense and good will are prerequisites of economic success, as

well as in France. He is also aware that the people in Canada regulate the output of children and that the government in Canada does not, and is not called upon to, offer a bonus to the procreator of a large family. Then why the marked difference between the birthrate of Quebec and that of France? Professor Richey thinks a monetary consideration will fill the hiatus in the family of the French citizen and provide for a higher birthrate in France. We do not think Professor Richey's business-like proposal will meet with a favorable reception either from the legislators or the people. It would not be adopted by the legislature unless the bonus were called for by the people, or unless it were supported by the government. It is not likely to receive the active support of a pleasure-loving people, by whom two children are considered the utmost limit of provident parenthood. The bribe is not large enough. It is not likely that it will be dragged in against public opinion by the government of France, as its adoption would call for an increase in taxation. There are French men and women, who turn with disgust from the materialistic doctrine of a regulated paternity, and who leave to Providence the regulation of the number of their children. The masses of the French people are not of that mind. So much the worse for France as a nation. If French married couples have not the true paternal and maternal instincts; if they pin their faith to the utmost gratification of sense, with a regulated output of one or at most two children, it is time for the Franks from beyond the Rhine to take their places and root out their marital customs.

J. J. C.

A CANADIAN ELECTED PRESIDENT OF THE AMERICAN MEDICAL EDITORS' ASSOCIATION

THE American Medical Editors' Association, in electing, at the Atlantic City meeting, Dr. W. A. Young, of Toronto, as their President rendered justice to a worthy member of the medical press of Canada, and, by the same act, gave a convincing proof of their own liberality of sentiment. The compliment to Dr. Young was all the greater, as he was travelling in Europe at the time when his election took place.

At the next meeting of this Association, which will take place at St. Louis, Mo., in June, 1910. papers of interest to medical

editors and to the profession at large will be read. It is certain that Dr. Young will speak with no uncertain voice on those matters which are now agitating the profession in America and the independent medical press of Canada and America. His experience as a practitioner, as well as his close acquaintance with medical journalism, will lend additional importance to his utterances on such questions. We do not anticipate, but we hope that the wisest thought and hardest effort of the members of the American Medical Editors' Association will be given to the settlement of these matters. The grain is plentiful, but it wants winnowing. We feel confident that Dr. Young, as President of the American Medical Editors' Association, will merit the applause of that Association and the good-will of the medical profession of both countries.

J. J. C.

WHAT WILL THE MEDICAL COUNCIL DO?

ON going to press we believe that an important meeting is being held at Banff, composed of representatives from Manitoba, Saskatchewan, Alberta and British Columbia, for the purpose of arranging the details for a Central Examining Board for the four Western Provinces. Would it not be well for our Council to awaken from its Rip Van Winkle slumber to a sense of its responsibility and join with the Western Provinces in a Federation? Would it not be well for the profession at large to arise and insist that its Council either awake or else that it enter into its eternal rest and let better men with a wider range of vision direct the destiny of the medical profession of Ontario?

If this Western Federation becomes an accomplished fact—and it will at a very early date—Ontario may whistle long and lustily before she will be allowed to federate with them. The effect in Ontario will be great overcrowding in the profession, for it is the intention, we are told, to build a very high wall about the Western Provinces, and, with three large medical schools turning out graduates in this Province, it is only a question of time until almost any occupation in Ontario will be preferable to that of the family doctor.

The question will be asked, "But what can our Medical Council do?" It can do one or both of two things. A special meeting of the Council may be called to pass a resolution favoring a scheme of

reciprocal registration with the four Western Provinces, and it can also seek legislation at the coming session of the Provincial Legislature, asking that an "enabling clause" be added to the Medical Act in order that the Roddick Bill (The Dominion Act of 1902) may become effective for Dominion registration. s.

"ABOLISH THE TOAST HABIT"

In a witty editorial in a recent issue of *Saturday Night*, we read with genuine pleasure, as far as amusement went, a description of the "Tap Water Toast" at the Director's Luncheon at the Exhibition, when Sir Charles Beresford was guest of honor. The editorial writer referred to maintains that it were better to abolish the toast habit, than to disgrace it by substituting water, instead of conforming to the old custom and honoring it in the good, old, strong, sparkling way. If Sir Charles Beresford were being entertained by our Governor, as the representative of Royalty, assuredly his host would conform to the "way of our grandfathers;" if a Canadian in his own home were entertaining, he certainly, too, would accede to custom; but, by a Board of Directors of a Public, yet National, Institution, who had (after considering the "pros and cons") at least an unwritten law about the serving of intoxicating drinks, they surely paid Sir Charles Beresford a graceful compliment by not breaking a rule on his account, and perchance arousing public criticism, bringing his name into unnecessary newspaper notoriety, thus causing a discordant note in his memory of their harmonious entertainment. Sir Charles Beresford accepted the usual hospitality of the Directors of the Exhibition, honored it, and was honored by it.

A guest at public or private functions always shrinks from the "especially you" kind of entertainment.

The Exhibition Directors, in our humble opinion, are to be congratulated on their true measure of the mind of a gentleman.

As for the toast habit in general, at public dinners in this land, if it is our pleasure why should we not abolish it, as far as the raising of the glass is concerned? In this new country, let us reach out and lead, the old paths are not necessarily for our feet. Let the liquid element of our after dinner speeches be in the tones of the

voice of the speakers, the sparkle in their witticisms, the pop of the corks—the laughter at their stories. Of course this is only a doctor's prescription, which, true to its type, must contain—
"Aqua ad."
W. A. Y.

COLLIER'S "PRIZE" FOR A CANADIAN NATIONAL ANTHEM

MERCY E. POWELL M'CUULOCK.

O Canada! in praise of thee we sing,
From echoing hills our anthems proudly ring,
With fertile plains, and mountains grand,
With lakes and rivers clear,
Eternal beauty thou dost stand
Throughout the changing year.
Lord God of Hosts! we now implore,
Bless our dear land this day and evermore,
Bless our dear land this day and evermore.

Dear Canada! for thee our fathers wrought,
Thy good and ours unselfishly they sought.
With steadfast hand and fearless mind
They felled the forest domes,
Content at last to leave behind
A heritage of homes.
Lord God of Hosts! we now implore,
Bless our dear land this day and evermore,
Bless our dear land this day and evermore.

Blest Canada! the homeland that we love,
Thy freedom came a gift from God above.
Thy righteous laws, thy justice fair,
Give matchless liberty;
We thank our God that we may share
Thy glorious destiny.
Lord God of Hosts! we now implore,
Bless our dear land this day and evermore,
Bless our dear land this day and evermore.

It is with pleasure that we tender congratulations to Mrs. Powell McCulloch upon attaining the "Collier" Magazine Prize, for her strong and effective words written as a "suggestion" for a Canadian National Anthem.

The restriction in the competition was to write words suitable

for an anthem and yet in harmony with the music of "O Canada," composed by a French-Canadian called Calixa Lavallee, who departed this life in eighteen hundred and ninety.

Mrs. McCulloch had a difficult task, and has succeeded so well that her words decidedly call for better music. While the song ripples along like soft breezes through forest and glade all is well, and as a hymn the music fulfils its mission perhaps. It is when the words strike broadly, grandly, we look for a strong sharp chord filled with, not only hopefulness, but courage, even the strength of battle—and we hear—an Amen. Canada is young, yet laughing in its morning, and throwing kisses to the rising sun, even its noon-day guerdons not yet won. Surely true Canadians will not be content to chant a vesper hymn.

Mrs. McCulloch is a real Canadian, the gifted daughter of our esteemed confrère, Dr. Newton Albert Powell, and the wife of a Canadian physician, Dr. McCulloch. Long may Mrs. McCulloch sing the songs of her own land, twining her "lily work" around its strength.

W. A. Y.

THE CANADIAN MEDICAL ASSOCIATION

THE 1909 meeting of our National Association will go down in history as the most largely attended, up-to-date, and one of the best, also from a scientific standpoint. It was the 42nd Annual Meeting, and was held from the 23rd to the 25th of August at Winnipeg. Nearly 350 members registered and paid their fees, now amounting to \$5.00 per annum. The Local Committee of Arrangements are to be congratulated upon their work, as everything turned out most satisfactorily. Everyone present, with few exceptions, took part also in the social end of the meeting and enjoyed the entertainments to the full. The Addresses in Medicine and Surgery were delivered by two well known Montreal physicians, Professor Adami and Dr. James Bell, and those on Obstetrics and Ophthalmology by two equally good men in the persons of Drs. Adam H. Wright and R. A. Reeve, of Toronto. The addresses can be best described as masterpieces, each one showing careful study and research. The Symposium on the Kidney and the discussion on Interprovincial Registration both called for free expression of opinion before good audiences.

The resolution re Dominion Registration, which was unanimously adopted, reads as follows: "Therefore I (Dr. R. W. Powell) move that this Canadian Medical Association, now in session, urge upon Dr. Roddick the great importance of impressing upon the Government and Parliament of Canada the desirability of so amending the Canada Medical Act of 1902 that when five or more provinces agree to the provisions and pass the necessary legislation to make it effective, the bill may become law, and apply to those provinces which have so legislated. That in order to strengthen Dr. Roddick's hands a committee be formed of representatives from each of the provinces to consult with him on the provisions of the bill and as to the amendments necessary or desirable, and finally that the various colleges of physicians and surgeons or Provincial Licensing Boards in the Dominion be respectfully invited to nominate at least one of their own number to serve on such committee."

We take the opportunity of congratulating Dr. C. J. C. O. Hastings, of Toronto, Dr. Westbrook, of Minneapolis, and Messrs. McGill and Rutherford, Chief Analyst and Veterinary for the Dominion respectively, upon their work in connection with the Milk Commission, though we feel sorry that these gentlemen were not favored with better audiences when this subject came up before the meeting. The question of the publication of an official journal for the association came up, and the Finance Committee were instructed to go ahead and publish *The Journal of The Canadian Medical Association*. We have taken the opportunity of expressing ourselves in these pages before on this particular topic and do not feel called upon to say anything further, beyond the fact that, as a business proposition, it is all wrong. It might be wiser if the association were to be content to wait for a sufficient length of time to permit of their having the necessary funds to their credit in the bank before launching a scheme that will, we fear, end in signal failure. It is hardly right to entail a personal financial responsibility upon the officers of our association in future years, something that may crop up unless the treasurer has in hand some thousands of dollars in order to carry the journal to success, a work that cannot be done inside of several years.

The election of Dr. A. H. Wright to the Presidency was indeed a good choice, there being no gentleman in the profession who commands greater respect than Dr. Wright.

The officers elected for the ensuing year were: President, Dr. Adam H. Wright, Toronto; General Secretary, Dr. George Elliott, Toronto; Treasurer, Dr. H. B. Small, Ottawa; Vice-Presidents and Local Secretaries, the presidents and secretaries of the provincial medical societies *ex officio*; Vice-President for the Province of Quebec, Dr. Normand, Three Rivers; Local Secretary for Quebec, Dr. R. P. Campbell, Montreal; Finance Committee, Dr. J. T. Fotheringham, Toronto (Chairman), Dr. F. N. G. Starr, Toronto, Dr. S. J. Tunstall, Vancouver. Dr. Murray MacLaren, St. John, N.B., Dr. James Bell, Montreal, and the President and General Secretary; Chairman of Committee on Medical Legislation, Dr. A. T. Shillington, Ottawa; Chairman of Committee on Medical Education, Dr. R. A. Reeve, Toronto; Chairman of Committee on Hygiene and Public Health, Dr. A. T. Shillington, Ottawa; Chairman of Committee on Amendments to Constitution and By-Laws, Dr. H. B. Small, Ottawa; Chairman of Committee on Reports of Officers, Dr. E. Ryan, Kingston; Chairman of Committee on Necrology, Dr. J. H. Elliott, Toronto; Chairman of Milk Commission, Dr. C. J. Hastings, Toronto.

Dr. R. A. Reeve, Toronto, was elected Chairman of the Executive Council, and the following members thereof were in attendance: Elected by the Association—Dr. R. W. Powell, Ottawa; Dr. A. T. Shillington, Ottawa; Dr. Murray MacLaren, St. John, N.B.; Dr. R. A. Reeve, Toronto; Dr. John T. Fotheringham, Toronto; Dr. J. H. Elliott, Toronto; Dr. Chas. J. Hastings, Toronto; Dr. J. C. Mitchell, Brockville, Ont.; Dr. Ingersoll Olmsted, Hamilton; Dr. J. George Adami, Montreal; Dr. Edward Ryan, Kingston; Dr. H. A. MacCallum, London, Ont.; Dr. H. G. McKid, Calgary; Dr. James Bell, Montreal; Dr. R. A. Kennedy, McLeod, Alberta. Representing Nova Scotia Medical Society—Dr. John Stewart and Dr. George M. Campbell, Halifax. Representing the Ontario Medical Association—Dr. D. J. Gibb Wishart and Dr. F. N. G. Starr, Toronto. Representing Manitoba Medical Association, Dr. Harvey Smith (President), Dr. R. S. Thornton, Deloraine, and Dr. S. W. Prowse, Winnipeg. Representing British Columbia Medical Association—Dr. S. J. Tunstall, Vancouver.

The 1910 meeting will take place in Toronto next June.

EDITORIAL NOTES.

What is Beauty.—Dryden, the poet, once said, in response to a question as to the most beautiful piece of writing he had seen, that it was the signature on a cheque for one hundred pounds. It may be that the poet needed the money badly and his impecuniosity may have enhanced his admiration for the handwriting of the writer of the cheque.

One would say that doctors, more hard-headed than poets, should be able to look after their monetary concerns, and so skirt financial pitfalls, that any remarks about collections would be uncalled for. To practice medicine successfully one must be well equipped mentally—we were going to say physically—but let that pass. The last generation loved a good-looking doctor, one who filled the eye and could charm the ear—the present one goes to an hospital and is put under the skilful scalpel of an ordinary-looking gentleman, who has the reputation of doing good surgical work. Does he get large fees? Rumor hath it that he groweth wealthy—but the anesthetist in one case had to recover his own fee in the Division Court.

Etiology is a noble study; diagnosis a bewildering puzzle which bothers us as long as we practise medicine; treatment, something to learn and much to avoid. But do not forget, my brothers, to look after the dollars. Just as one of the most glorious objects in nature is, not the wheat, but the seventy, eighty, ninety cents a bushel it brings, delivered at the elevator, so is the almighty dollar to the practising doctor. Earn money, and see that you get it.

Dr. Harrower's Test for Acidity of the Urine.—Excessive acidity of the urine may be due to uric acid and hippuric acid or an increase in the diacid phosphates of sodium and potassium. But little attention appears to be paid to the estimation of the amount of the acidity of the urine. Litmus paper is used as a test for acids; but the change of blue litmus to red is of course merely a qualitative test.

Dr. Harrower, Chicago, describes, in a pamphlet entitled "A Study of the Urinary Acidity and its Relations," a method of obtaining the urinary acidity. A measured quantity of urine, say 10 grammes, is treated by adding to it 3 drops of tr. phenolphthalein,

and then, drop by drop, some of the decinormal solution of sodium hydrate is dropped into it, until a pinkish color appears and remains after the urine is shaken--thus proving that the acid of the urine has been neutralized. The quantity of the decinormal solution used in this test is then multiplied by ten to reduce the figures to terms of 100 cc. This is the acidity in degrees or percentage, but must not be taken for the percentage of acidity in the sample of urine. This figure multiplied by the number of cubic centimeters of urine passed in 24 hours gives the number of acid units passed.

It is an arbitrary standard, but may serve as a guide to a practitioner, showing deviations of the acid content in the sample from the normal, and it will thus be useful. As an instance of increased acidity of the urine, due to a dietetic cause, Professor Carriere (*Journal de Médecine et de Chirurgie*, March 25, 1909) describes the case of a girl aged 6 who suffered from dysuria for 3 or 4 days, having to strain 20 to 25 minutes before emptying the bladder. Analysis of the urine showed it to be 4 or 5 times the normal acidity (4.55 instead of 1.1 or 1.2). The excess of acidity was found to be due to excess of oxalic acid, and analysis showed its presence in five times its normal amount. The patient had eaten a considerable amount of the leaves of sorrel. Under milk diet the dysuria ceased in 48 hours, and, four days later, the oxaluria had disappeared.

Dr. Cook Discovers the North Pole.—North America, South America, Europe, Asia, Africa, Australia, and the continent of Greenland will rise to doff the hat to the gallant American doctor, who has discovered the North Pole. Dr. Cook, like his namesake, Captain Cook, who first circumnavigated this globe, will leave a deathless name. We feel proud to belong to a profession which can breed such men as Dr. Cook, whose motto has been, "Ever Onward!" who meets difficulties only to overcome them, who, almost alone and single-handed, has done what the science, bravery, endurance and wealth of some of the greatest nations of the world have in vain tried to do.

Transmission of Variola to the Calf.—E. Mader has reported (in *Munch. Med. Woch.*, April 30, p. 810) a case of successful transmission of human variola to the calf.

Lymph was taken from an unvaccinated infant suffering from smallpox, before the stage of suppuration, rubbed up with glycerine and immediately used for vaccinating a calf. The calf was isolated from other calves which had been vaccinated with vaccinia. On the fourth day a typical pustule had formed. Five days later lymph was taken from the pustule, and 13 days later was successfully used for vaccinating a second calf. Fourteen days later the first calf was vaccinated with calf lymph without result, that is, the inoculation with human variola protected against vaccinia. A third calf was then vaccinated from the second one and the lymph obtained from it utilized for vaccinating over 70 children, without any untoward result, such as the appearance of generalized vaccinia. The pustules produced in the calf by the human variola matured much later (2 days) than did those produced by the usual strain of calf lymph.

Should a Lacerated Perineum or a Lacerated Cervix Uteri be Sutured Immediately?—In the address on Obstetrics at the British Medical Association Meeting this year. Sir John Byers endorsed the immediate suture of any laceration of the genital canal, if such had occurred during labor. For this teaching he is taken to task in an editorial which appeared in the *British Medical Journal* (August 7th, 1909, p. 334). Far be it from an humble colonial editor to fall foul of the arguments in this editorial of the *British Medical Journal*, but they do not commend themselves to our judgment, particularly that one in which it is said that a "perineal laceration is useful in shortening the duration of subsequent labors." We know not if this argument will be accepted as conclusive by ladies in Great Britain and Ireland, but we think it will not be accepted graciously by the ladies of Canada. From the standpoint of esthetic surgery it is defective. The best that can be said for it, is that if an obstetrician has done his duty, inspected the genitalia after labor, found a lacerated perineum, and decided to let it go unstitched, the subsequent drainage of the birth canal would be easier, and the chances of sepsis less than if it had been sutured.

The teaching of Sir John Byers is upheld at the Rotunda Hospital, Dublin, and is accepted by many obstetricians in private practice the world over. Sewing the lacerated perineum is, of course, painful to a woman who is not placed under the influence

of an anesthetic, and as an unchloroformed primipara with a torn perineum naively remarked when the sutures were being introduced, "It would be just as well to sew up the passage entirely, and so prevent the recurrence of the stitching."

From the standpoint of obstetrics, immediate suturing of the lacerated perineum is the best course to pursue; but the operation should be done when the patient is under chloroform and her vagina should be carefully douched with antiseptic washes during the subsequent lying-in period.

If the patient has been chloroformed during the second stage of labor, the stitches may be inserted while she is yet unconscious. Salmon gut, a large, curved needle and a needle-holder should be placed ready to the hand in a basin before the birth of the child.

In rare cases, when, after the birth of the child, a hot vaginal douche fails to stop bleeding from a torn cervix uteri, it may be necessary to introduce sutures. Salmon gut, passed through either lip of the torn cervix, is used as a tractor to pull down the injured part out of the vulva. The rent is then sewed up, by sight, with catgut sutures. This method was first described by Veit.

J. J. C.

PERSONALS.

DR. R. J. WILSON recently spent two weeks in Muskoka.

DR. AND MRS W. B. THISTLE spent the month of August in the West.

DR. N. A. POWELL enjoyed a few days in the Adirondacks last month.

DR. A. J. JOHNSON holidayed in New Brunswick, returning home early in September.

DR. HELEN MACMURCHY has returned to town after spending a pleasant holiday in the West.

DR. and Mrs. W. A. Young returned from Europe a month ago after spending three months abroad.

DR. W. E. GALLIE, Dr. Stanley Ryerson and Dr. Geo. S. Strathy removed on the first instant from 169 College Street to 143 College Street.

DR. F. A. CLELAND announces that he has opened an office at 134 Bloor Street West, Toronto, and that he will devote his attention to gynaecology.

AMONG the members of the profession in Toronto who have been in Europe during the past summer are Drs. H. A. Bruce, Brefney O'Reilly, A. H. Garratt, E. H. Adams, T. S. Webster, Mayburry, Alex. Primrose, W. J. Greig, Alex. McPhedran, R. A. Reeve, Oswald Dinnick and W. H. B. Aikins.

Obituary.

DEATH OF DR. JAMES FULTON, OF ST. THOMAS

DR. JAMES FULTON, one of the most prominent physicians in St. Thomas, died on September 15th in Victoria Hospital, London, following an operation. Dr. Fulton attended the medical convention in Winnipeg, and on his return from the West went into the London Hospital for treatment and never rallied from the operation.

Deceased was born in Southwold 58 years ago and was the son of James Fulton, a pioneer of Elgin County. He received his early education in St. Thomas and graduated from Trinity Medical College, Toronto, and received diplomas from the College of Surgeons, of London, England, King's and Queen's Colleges, Dublin, and the College of Physicians, Edinburgh. The doctor also took an active part in the affairs of the city and was chairman of the Board of Health, President of the Amasa Wood Hospital, and was surgeon of the Michigan Central R. R. at the time of his death. A widow survives.

News of the Month.

THE QUEEN ALEXANDRA SANATORIUM

The Queen Alexandra Sanatorium (under Her Majesty's Patronage), which is to be opened early next Autumn, is destined to rank high in the list of the National Sanatoria of cosmopolitan Davos. But though national it will be unique in welcoming patients from all parts of the world and not only from the Empire, but from the States, as it was founded for the benefit of all English-speaking nationalities, the only qualifications needed being evidence of medical suitability, and of inability to meet the heavier cost of treatment at hotels or private institutions. The following notice, which appeared in the British Medical and other Journals, has been forwarded to us by the joint Honorary Secretary, Dr. William Ewart, as of special interest to some of those who may be visiting Europe from over the seas:

"The prospective opening of the Queen Alexandra Sanatorium at Davos for the reception of patients early in this autumn was announced from the chair at the sixth annual meeting of the Council, held at 11 Chandos Street, Cavendish Square, W., on July 16th, by the President, the Lord Balfour of Burleigh, Kt., P.C., who has laboured so long and successfully in the difficult task of raising funds. A splendid donation of £25,000 lately received from a munificent sympathizer, who desires that his name shall not be published, not only supplies the amount required to complete the work and to open the sanatorium free from debt, but provides means for its scientific equipment and for future extensions. It should be mentioned that Lord Stratheona, with his well-known zeal in the promotion of all charitable and useful works, not long ago gave a donation of £2,000 for the purposes of the sanatorium. For the present the sanatorium will accommodate 54 patients, all in single rooms. But the public rooms are designed for a full complement of 120 patients. The Davos Invalids' Home, the original foundation of the late Mrs. Lord, which for so many years was the only representative of our national charity in Davos, has now ended its task and fulfilled the purpose for which it was initiated—that of developing into a National Sanatorium. The Home had been granted Her Gracious Majesty's patronage as far back as 1899."

**REVISED LIST OF ASSOCIATE CORONERS FOR THE
CITY OF TORONTO**

Dr. W. H. B. Aikens, 50 College Street; Dr. Thomas Armstrong, 1 Cottingham Street; Dr. Clarence Wm. Brand, 1036 Bloor Street, West; Dr. Carson Henry Britton, East Toronto; Dr. Wm. Britton, 17 Isabella Street; Dr. W. P. Chamberland, 646 Bathurst Street; Dr. G. W. Glendennan, Dundas Street, West; Dr. J. M. Cotton, 218 Simcoe Street; Dr. Malcolm McL. Crawford, 22 Cottingham Street; Dr. Charles J. Currie, 175 College Street; Dr. John T. Clarke, 410 Bloor Street, West; Dr. J. T. Duncan, 165 Bloor Street, East; Dr. John E. Elliott, 69 Bloor Street, East; Dr. W. J. Hunter Emory, 14 Carlton Street; Dr. Charles H. Gilmour, Annette Street; Dr. George W. Graham, 249 Avenue Road; Dr. Wilmot A. Graham, 862 College Street; Dr. W. J. Greig, 493 Sherbourne Street; Dr. Walter P. Geikie, 52 Maitland Street; Dr. Richard R. Hopkins, Pacific Avenue; Dr. Arthur Jukes Johnston, 52 Bloor Street, West; Dr. Adam M. Lynd, 33 Melbourne Avenue; Dr. Homer D. Mason, Dundas Street West; Dr. Alexander C. Mavety, Annette Street; Dr. Alfred E. Morgan, 813 Lansdowne Avenue; Dr. William James McCollum, 92 Shuter Street; Dr. John Herbert McConnell, 625 Dundas Street; Dr. M. D. McKiehan, 673 Broadview Avenue; Dr. John Noble, 219 Carlton Street; Dr. Rowland B. Orr, 1596 Queen Street, West; Dr. Latimer Pickering, 37 Wilton Crescent; Dr. Edward Playter, 762 Broadview Avenue; Dr. Newton A. Powell, 167 College Street; Dr. George G. Rowe, 1329 Queen Street West; Dr. Solomon Singer, 194 Simcoe; Dr. George B. Smith, 92 College; Dr. R. J. Wilson, 20 Bloor Street West; Dr. Frederick Winnett, 525 Sherbourne Street; Dr. W. A. Young, 145 College Street.

**THE INTERNATIONAL CONGRESS OF MEDICINE AND
SURGERY AT BUDAPEST**

THE Canadians attending the International Congress of Medicine and Surgery at Budapest, Hungary, report that the Congress was a great success from a scientific point. Drs. G. Sterling Ryerson, Alexander McPhedran and W. H. B. Aikens, Toronto, were presented at a Court, held by order of the Kaiser, as official delegates from Canada. The other Canadians present at the reception were Drs. Bruce and Primrose, of Toronto; Dr. Casgrain, of Windsor; Drs. Meek and Drake, of London; Dr. Halpenny, of Winnipeg, and Dr. King, of Cranbrook, B.C.

THE MINNEWASKA

THE Minnewaska, the new health resort located at Gravenhurst, Muskoka, which is under the management of Mrs. E. G. Fournier, formerly Superintendent of Hope Hospital, Fort Wayne, Indiana, has now been open for the care of tubercular patients for the past six months.

That there was a great need of just such an institution has been amply demonstrated, for from the very first week of its existence it has taken care of all the patients it could possibly accommodate, both in the main building and in a number of tents erected on the beautiful and spacious grounds.

The management are gratified to know that their efforts to supply a long-felt want are being recognized by so many physicians throughout the country, who were anxious to place their tubercular patients under the care of Dr. C. D. Parfitt, the well-known specialist. That the patients and their friends all feel kindly toward the institution has again been lately demonstrated. The room formerly occupied by Miss Jean Heugh McKay, who was the first patient registered, has been beautifully furnished by her parents, Mr. and Mrs. Forrest McKay, of New Glasgow, Nova Scotia. The furniture, which is exquisite, is of white enamel and gold, and the decorative features are of Miss Jean McKay's favorite designs. A brass nameplate in her honor has been placed upon the door.

A Sanitarium for Alcoholic and Drug Patients.—Dr. Givens' Sanitarium for nervous and mental diseases at Stamford, Conn., has a separate department for alcoholic and drug patients, and the statute of Connecticut permits such patients to voluntarily commit themselves for a period not exceeding one year. The regular, systematic life under medical supervision is excellent. Write Dr. Givens, Stamford, Conn., for particulars.

The Physician's Library.

BOOK REVIEWS

Naval Hygiene. By JAMES DUNCAN GATEWOOD, M.D., Instructor in Naval Hygiene United States Naval Medical School, Washington; Medical Inspector United States Navy. Prepared by direction of the Bureau of Medicine and Surgery, and published by permission of the Navy Department. With eight colored plates and 105 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1909.

This excellent work on Naval Hygiene covers in all over seven hundred pages. As the author has occupied for some years a prominent position as Instructor in Naval Hygiene in the United States Naval School at Washington, it can be fairly assumed that anything proceeding from his pen will possess considerable merit. Though we have not as yet had the time to go through the work as we intend, our study of it shows that the book is one worthy of careful perusal. It contains eight colored plates and 105 other illustrations, and is dedicated to the memory of Dr. Geo. Balfour, who entered the Medical Staff of the United States Army in 1792. The title page contains the following epitaph to Dr. Balfour and which was written by himself:

“Long had my spirit wandered in this vale of tears,
Fearful, yet anxious still, to venture home,
Till trusting wholly in God's grace, it left its fears,
Then boldly cried—I come—I come—I come!
His blood as shed in Christ can wash the sinner white,
His blood can heal each raging, rankling wound!
'Tis His to raise the mouldering dead again to light,
Crowned with glory triumphant from the ground.”

The book consists of, in all, eight chapters, devoted to such subjects as “Naval Vital Statistics,” “Air Without the Ship and air within the Ship,” “Light without and light within the Ship,” “The Ship's Water Supply and Drainage,” “The Navy's Food,” “The Navy's Clothing,” “Disinfection of the Ship,” “Naval Re-

cruiting." Dr. Gatewood has certainly given to the profession a book that will be found valuable by all who are interested in the Naval Service. The health of the crew on board a ship is too important to be neglected, and, up till a few years ago, was not given the attention that it deserved. There is no reason why modern hygiene and up-to-date sanitation should not apply just as much to the ship as to the ordinary household, and we think that Dr. Gatewood's work, if placed in the hands of all ship surgeons, would cause the vessel in their charge to be very materially benefited and the health of the crew improved.

W. A. Y.

Physical Diagnosis. By RICHARD C. CABOT, M.D., Assistant Professor of Medicine in Harvard University. Fourth Edition, revised and enlarged. With five plates and two hundred and forty figures in the text. New York: William Wood & Company.

The fourth edition of Dr. Cabot's work on Physical Diagnosis is satisfactory, in the main. All his statements we do not accept. For instance, he thinks that in most cases the effects of pyorrhea alveolaris appear to be local. We know that a cure of pyorrhea alveolaris has arrested a gradual loss of weight and procured a gain of 10 lbs., no medicinal or dietetic agency, no changed habit of life being causative of the increase of weight.

Dr. Cabot's favorable notice of immediate auscultation is sound. It is a pity that this direct method of listening to lung or heart sounds is not generally used. One point in its favor is, that few physicians hear sounds equally in both ears. This reason would also be in favor of a stethoscope with but one ear piece, probably of the Bowles' pattern.

Dr. Cabot corrects an error in the text books—respecting the so-called blue line in the gums in lead poisoning—showing that the disposal of the lead sulphide is in the gums, not on them; that it is not a line, but a series of dots and lines; that the dots are gray-black, and that when there are no teeth, there are no such dots.

It would be a vain task in a book notice to endeavor to review or criticize the very numerous statements in this book. Dr. Cabot attempts no description of such methods as cystoscopy, ophthalmoscopy, laryngoscopy, while recognizing their importance and utility. All that he describes he knows by prolonged use, which is such as naturally falls to the skilled internist.

The author's plan of getting at an organ, e.g., the kidney—by palpation, thermometry, urinalysis—enables one to reach a safe conclusion in an obscure case.

The author's style is clear and scholarly. The study of his

book will enable a physician to be more observant of essentials, more rational in diagnosis.

Numerous diagrams and radiograms add to the value of the descriptions of cases. The book itself is creditable to the publishers.

J. J. C.

The Secret of Sex. The discovery of a new law of nature; How sex is caused. By E. RUMLEY DAWSON, L.R.C.P., London; M.R.C.S., England; Fellow of the Royal Society of Medicine; Late Member of the Council of the Obstetrical Society of London. New York: Cochrane Publishing Co., Tribune Building. New York.

This is a pamphlet of sixty pages, giving the views of the author on this subject, which is so little understood. Mr. Dawson's theory is that the sex of the fetus is not due in any way to the male parent, but depends on which ovary supplied the ovum which was fertilized and so became that fetus. He finds that a male fetus is due to the fertilization of an ovum that came from the right ovary, and a female fetus is due to the fertilization of an ovum that came from the left ovary. The pamphlet makes interesting reading.

Treatment of the Diseases of Children. By CHARLES GILMORE KERLEY, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Second revised edition. Octavo of 629 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00, Half Morocco, \$6.50 net. Canadian Agents, The J. F. Hartz Company. Ltd.

The second edition of this work is in every detail up to date. Mr. Kerley gives a full succinct account of the action of Flexner's antimeningitis serum—methods of use and technique thereof. He also in this chapter gives clinical tables showing results obtained from its use in different parts of the world. This chapter is extremely well written and it alone demands a new edition of his work, the serum and its properties having been proven since the first edition came out. We can only repeat our criticism on the first edition. It is eminently practical, no padding, just simple truths from a very practical man of vast experience and great power of observation. The chapters given to vaccine therapy are written in clear, easily digested, dogmatic language—he strongly advises its use, where applicable, as a diagnostic agent. Of course every man interested in children knows of the thorough work done by him amongst the children in New York, on the subject of summer diarrheas. This masterly article alone is worth the price of the

work. The print and illustrations reflect the highest credit on the well-known house, W. B. Saunders Co., of Philadelphia.

A. B.

Diet in Health and Disease. The new (3rd) edition. By JULIUS FRIEDENWALD, M.D., Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and JOHN RUTRAH, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third revised edition. Octavo of 764 pages. Philadelphia and London: W. B. Saunders Company. 1909. Cloth. \$4.00; half morocco. \$5.50 net. Canadian agents, The J. F. Hartz Company, Limited.

It seems but a short time since the second edition of this book came from the press, and that the third edition should be published so soon goes to show that the volume has met with the approval of the profession generally. We notice upon the title page that the volume is dedicated to William Osler "As a slight token of our appreciation of his personal friendship, of many favors, and of the encouragement he has always given the members of the profession." "Diet in Health and Disease" may be correctly termed "a practical hand-book for everyday use," and the authors have thoroughly revised their pages, bringing it in every respect up-to-date.

Semmelweis, His Life and Doctrine. A Chapter in the History of Medicine. By SIR WILLIAM J. SINCLAIR, M.A., M.D., Professor of Obstetrics and Gynecology in the University of Manchester, Manchester. At the University Press. 1909.

In reviewing this excellent volume, written in honor of a man who deserves every good word spoken of him, we feel that we cannot do better than quote the first three paragraphs of the author's introduction.

"In the history of Midwifery, there is a dark page and it is headed "Semmelweis!" What man could close his eyes to the powerful impression of his book? Even now at the present time there are whole pages of his deductions which might stand in the most modern work. And the annihilating logic of his statistics! We younger men for whom antipathies were unthinkable, to whom the reading of coarse tirades about "genius misunderstood," was only tedious, we often find it incomprehensible that the logical conclusions of the doctrine of infection were nowhere drawn; I mean the local treatment; it was the keystone of the arch, the crown of the whole structure. . . . The efficient application of disinfection midwifery owes without doubt to surgery: most certainly it ought to have been the reverse. If the conclusions and counsels of Sem-

melweis had been followed, then the truth of his doctrine would have been demonstrated in the compelling language of statistics, and so perhaps Obstetrics would have stood in the forefront of the greatest advance in medicine which has been made since physicians and physic came into existence.'

"Such are the generous but justly appreciative terms in which Fritsch, then of Breslau, referred to the author of the "Die Aetiologie, der Begriff, und die Prophylaxis des Kindbettfiebers" a quarter of a century since.

"The claim which Fritsch made for the Semmelweis doctrine and its practical applications must be conceded by all unprejudiced men, who are fairly well acquainted with the history of obstetrics. In the whole history of medicine we find a clear record of only two discoveries of the highest importance in producing direct and immediate blessings to the human race by the saving of life and the prevention of suffering. There were the discoveries of Edward Jenner and Ignaz Phillip Semmelweis."

The book is most interesting and gives the history of this wonderful man, his parentage and nationality, his life in Vienna, the spread of his doctrine during the Vienna period, his life in Buda Pesth, the spread of his doctrine in Great Britain and France, the publication of "Die Aetiologie" and his last illness and death. Buy the book and read it, it is well worth it.

W. A. Y.

The Malarial Fevers, Hemoglobinuric Fever and the Blood Protozoa of Man. By CHAS. F. CRAIG, M.D., Captain Medical Corps U. S. Army; Attending Surgeon New York City; late Pathologist and Bacteriologist to the Sternberg U. S. Army General Hospital, Chickamauga Park, Ga.; The Josiah Simpson General Hospital, Fortress Munroe, Va.; The Camp Columbia Hospital, Havana, Cuba; The U. S. Army General Hospital Presidio of San Francisco, Cal.; The Division Hospital, Manilla, P.I.; Late Member of the U. S. Army Board for the Study of Tropical Diseases in the Philippine Islands; Member of the Society of Tropical Medicine and Hygiene, London; The American Society of Tropical Medicine, and the National Association for the Study and Prevention of Tuberculosis. Illustrated by four colored plates, twenty-five clinical charts and twenty-eight photomicrographs and drawings. New York: Wm. Wood & Co., 1909.

Many of our readers will remember, and have no doubt read the author's work "The Aestivo-autumnal (Remittent) Malarial Fevers" published eight years ago. Such advances, however, have been made in the prophylaxis of malaria during the past decade,

that a new book from the pen of the same writer is a welcome addition to the literature on Remittent Fevers. The reader of this book will find that it contains all of the most recent theories and advances made in their treatment. The volume covers in all nearly five hundred pages and is divided into seven parts: Part one covers The Etiology of Malarial Fevers; part two, The General and Special Pathology of The Malarial Fevers; part three, The Symptomatology and Clinical Varieties of The Malarial Fevers; part four, The Sequelae, Complications and Prognosis of The Malarial Fevers; part five, The Diagnosis, Prophylaxis and Treatment of Malarial Fevers; part six, Hemoglobinuric Fever, and part seven. The Blood Protozoa of Man. As the author gives us his views and experiences as gained in the United States Military Hospitals, including Cuba and the Philippines, it will be seen that his book is one worthy of careful study.

Aids to the Analysis of Food and Drugs. By C. G. MOOR, M.A. (Cantab.), F.I.C., Public Analyst for the County of Dorset and the Borough of Poole; late Public Analyst for the City of Exeter; and WILLIAM PARTRIDGE, F.I.C. Third edition. London: Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1909.

This is a most trustworthy book for the use of students of chemistry and public health officers. The part dealing with dairying is particularly complete, and contains a vast deal of information not in the usual text-book, arranged in the most practical manner for facilitating study and reference. It cannot be surpassed as a chemist's working book.

Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By ANDREW BALFOUR, M.D., B.Sc., F.R.C.P., Edin.; D.P.H., Camb.; Director Fellow of The Royal Institute of Public Health, The Society of Tropical Medicine and Hygiene and The Society for the Destruction of Vermin; Member of the Incorporated Society of Medical Officers of Health, and the Association of Economic Biologists; Corresponding Member Société de Pathologie Exotique; Medical Health Officer, Khartoum, etc. Published for Department of Education, Sudan Government Khartoum by Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden, London. 1908. Depot for The Dominion of Canada: Toga Publishing Co., 101 Cristine Building, St. Nicholas St., Montreal.

The Third Report of The Wellcome Research Laboratories, as

carried out at The Gordon Memorial College at Khartoum, has just come to hand, and the editor is certainly to be congratulated upon the latest compilation of the work under his immediate charge. When it is mentioned that the patron of The Gordon Memorial College at Khartoum is His Majesty the King, and the President, Lord Viscount Kitchener, of Khartoum, with as Honorary Treasurer, The Right Honorable Lord Hillingdon, it will be realized that the work being done is of a highly scientific character. The Third Report contains a wealth of information which can be best described by our giving a summary of its contents as follows: Introduction. Trypanosomiasis in the Anglo-Egyptian Sudan. Hemogregarine of the Jerboa. Hemogregarine of *Rhamphiophis rubropunctatus*. Piroplasmiasis in the Anglo-Egyptian Sudan. Spirochetosis of Sudanese Fowls. Routine Work. Miscellaneous Notes. Sanitary Notes, Khartoum. Sleeping Sickness and the Bahr-el-Ghazal Province.

By the Director. Additional Notes dealing with Sleeping Sickness in Uganda, by R. G. Archibald. Kala-Azar in the Anglo-Egyptian Sudan, by S. Lyle Cummins. Observations on Kala-Azar in Kassala Province, by L. Bonsfield. Report of the travelling Pathologist and Protozoologist, by C. M. Wenyon. On some interesting Reptiles collected by Dr. C. M. Wenyon on the Upper Nile. The Poisonous Snakes of the Anglo-Egyptian Sudan, by Dr. Franz Werner. An account of some Helminthes contained in Dr. C. M. Wenyon's collection from the Sudan, by Robert T. Leiper. Report on Economic Entomology, by Harold H. King. New Mosquitoes from the Sudan, by Fred. V. Theobald. The Healing Arts as Practised by the Dervishes, by Hassan Effendi Zeki. The Native Methods of Treatment of Diseases in Kassala and Neighborhood, by L. Bonsfield. Additional Notes, by Sir R. Baron von Slatin Pasha. Medical Practices and Superstitions amongst the People of Kordofan, by R. G. Anderson. Report of the Physical Characters of some Nilotic Negroid Tribes, by D. Waterston. Notes on Ethnographical Specimens collected by Dr. A. MacTier Pirrie, by J. D. Vallance. Report of the Chemical Section, by William Beam. Notes on the Chemistry of Sudan Gums, by E. S. Edie.

Along with the Third Report we have received a supplement of the same, "A Review of some of the more Recent Advances in Tropical Medicine," by Drs. A. Balfour and R. G. Archibald. Amongst its contents will be found chapters on the following subjects: Ainhum, Air, Akatama, Animals, Ankyostomiasis, Anthrax, Bacteriology, Beri-beri, Beverages, Bilharziosis, Blackwater Fever, Blood, Bubo, Calabar Swellings, Cancer, Cerebro-Spinal Fever, Chickenpox, Chigger, Cholera, Climate, Clothing, Dengue, Dhoobie

Itch, Diarrhea, Diphtheria, Disinfection, Dropsy, Dust, Dysentery. Elephantiasis, Enteric Fever, Feces, Fevers, Filariasis, Filters. Flies, Food, Food Poisoning, Guinea Worm, Helminths, Heat Stroke, Hydrophobia, Ice, Infectious Diseases, Influenza, Insects, Leishmaniosis, Leprosy, Liver Abscess, Malaria, Malta Fever, Measles, Milk, Mosquitoes, Mycetoma, Myiasis, Onchocerciasis, Oriental Sore, Parasites, Paratyphoid Fever, Piroplasmiasis, Bovine, Canine, Plague, Scorpion Sting, Scurvy, Sewage, Skin Diseases, Sleeping Sickness, Smallpox, Snake Bites, Spider Bite, Spirochetes and Spirochetosis, Spruce, Staining, Syphilis, Ticks, Tropical Medicine. Trypanosomiasis, Tsetse Flies, Tuberculosis, Typhus Fever, Vaccination, Veterinary Diseases, Water, Weil's Disease, Whooping Cough, Yaws, Yellow Fever.

We appreciate the receipt of these volumes and we feel that they are scientific in the highest sense of the word, and worthy of a great deal more than the price charged by The Toga Publishing Company, of Montreal, who have been authorized, on behalf of The Department of Education of The Sudan Government, to undertake the issue in the Dominion of this report.

Golden Rules of Venereal Disease. By C. F. MARSHALL, M.D., F.R.C.S., Late Assistant Surgeon to the Hospital for Diseases of the Skin; Formerly House Surgeon to the London Lock Hospital, etc. "Golden Rules" Series No. xvii. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Company, Limited.

This is one of a series of "vest pocket" manuals on different subjects, and in a clear, terse way it certainly covers the main points of venereal disease in splendid style.

Hard and soft chancres and gonorrhoea are the subjects dealt with. In each case the etiology, pathology, symptomatology and treatment are well considered in a brief way. As far as it goes this little book is well worth reading, and many helpful hints are to be gained from it.

N. K. W.

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. WITTEHAUS, A.M., M.D., Professor of Chemistry, Medical Jurisprudence and Toxicology in Cornell University, and TRACY C. BECKER, A.B., LL.B., Counsellor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the collaboration of August Becker, Esq., A. L. Becker, Esq., Chas. A. Boston, Esq., Hon. Goodwin Brown, W. N. Bullard, M.D., G. C. Cameron, M.D., J. Clifton Edgar, M.D.,

Jas. Ewing, M.D., E. D. Fisher, M.D., A. S. Geysler, M.D., J. C. Johnson, M.D., D. S. Lamb, M.D., H. P. Loomis, M.D., W. B. Outten, M.D., Roswell Park, M.D., J. Parmenter, M.D., Irving S. Rosse, M.D., E. V. Stoddart, M.D., Geo. Woolsey, M.D., J. H. Woodward, M.D. Second edition. Volume Three. New York: William Wood & Co. 1909.

Volume Three of Witthaus and Becker is a fitting close to one of the most important works on medical jurisprudence that has been published for years. Besides containing an index of the three volumes, Volume Three opens with a table of the cases cited therein, enabling one to promptly refer to the subject under investigation. Amongst the contributors to Volume Three we find the names of such men as Drs. J. H. Woodward, E. D. Fisher, C. A. Boston, Goodwin Brown, A. S. Geysler, Jas. Ewing, in addition to Drs. A. L. and T. C. Becker. We take this opportunity of complimenting Dr. A. S. Geysler upon his chapter on "Medico-Legal Relations of X-rays and Skiagraphs." The half-tone illustrations of some fracture cases are among the best we have seen in some time. The contribution by Dr. Jas. Ewing on "Medico-Legal Examinations of Blood and Other Stains and of the Hair" is particularly good, as also that by the author himself on "The Medico-Legal Relations of Insurance."

Nouveau Traite de Chirurgie. Publie sous la direction de A. LE DENTU et PIERRE DELBET. Maladies Des Os. Pl. MAUCLAIRE. Paris: J. B. Bailliere & Fils, 1908.

A brief sketch of the history of bone pathology as here given is most interesting, recounting its development from the time of Hippocrates and Galen to the latest conclusions following from radiography and bacteriology.

The subject of bone disease is presented under the following heads:

- (1) Infectious lesions of bone.
- (2) Parasitic affections.
- (3) Those due to chemical poisons (phosphorus, mercury).
- (4) The trophic or nervous osteopathies—
 - (a) Atrophic.
 - (b) Hypertrophic.
- (5) Bone neoplasms.

Although information relevant to the subject has been garnered from many sources yet one is forced to conclude that the author has but little acquaintance with English or that very little has been added to the sum of our knowledge of bone diseases by men outside of the continent of Europe.

The illustrations are excellent and numerous and help greatly in elucidating a subject not always clearly apprehended by the student.

Although sufficiently full the text is not marked by the prolixity which frequently characterizes continental—especially German writers.

This volume is but one of a new treatise upon surgery, edited by Le Dentu and Delbet, and will be a very helpful addition to the surgeon's reference library.

B. E. M.

Text Book of Embryology. By FREDERICK RANDOLPH BAILEY, A.M., M.D., Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Medical Department of Columbia University), and ADAM MARION MILLER, A.M. Instructor in Histology and Embryology, College of Physicians and Surgeons (Medical Department of Columbia University). New York: William Wood & Co. Price, \$4.50 net.

The above text book is the fullest and most pretentious text-book on Embryology which has yet appeared in English. Like many American productions of a similar kind the criticism may be perhaps raised against it that it is largely a compilation and that in the sources from which the information is drawn a strictly critical spirit is not always preserved. On the other hand, however, equally characteristic of American book making, is the wealth of beautifully reproduced illustrations drawn from original articles. These add very much to the value of the book from the standpoint of the student and especially of the practitioner who has more or less lost touch with the modern advances in Embryology.

The work is divided into two parts. The first part, which occupies 165 pages, is devoted to general development. The second part, which occupies the remainder of the book, is much the larger, taking 464 pages, and is devoted to organogenesis. In this portion especially the illustrations are extremely valuable, many of them being from embryonic reconstructions, which have added so much to our proper understanding of the subject. The last chapter of this part is devoted to the interesting question of Teratogenesis. There is also a good appendix upon the general technic of Embryology.

The general tendency of the book is to devote most space to human embryology, but this is not done to the exclusion of comparative work when it is necessary to elucidate the human problems.

The general practitioner who wishes to know how our knowledge of human development is progressing will find this work most interesting reading, and it can be recommended to the student for

the clear way in which the subject is approached and especially because of its really excellent illustrations. J. J. M.

Bier's Hyperemic Treatment in Surgery, Medicine and all the Specialties. A Manual of Its Practical Application. By WILLY MEYER, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital, and Professor Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Second Revised Edition. Octavo of 280 pages. Illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$3.00 net. Canadian Agents, The J. F. Hartz Company, Limited, Toronto.

We reviewed this work rather fully a short time ago, and though this is a second edition there is very little that is new in it, except some rather interesting case reports. There is added, too, an index to the literature on the subject of Bier's treatment, which will be useful. Bier's treatment has a place in the therapeutic armamentarium of the up-to-date practitioner, and should be carefully and thoughtfully studied by all. F. N. G. S.

International Clinics. Volume I, XIX Series. A quarterly of illustrated lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, etc., etc., by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A. *International Clinics* is published by the J. B. Lippincott Company, Philadelphia.

The first volume of this well known work amply sustains the reputation which it has achieved, and contains much excellent matter dealing with various subjects.

In medicine an exceedingly interesting paper is furnished by Campbell P. Howard, M.D., of Montreal, on the diseased condition which is accompanied by painless symmetrical swellings of the lachrymal parotid and the other salivary glands. To this condition the name Mikulicz's Disease has been applied. The author reports a large number of cases of this rare disease. The author believes that this disease is to be grouped with leukemia and Hodgkin's Disease, and that it is due to an infectious process, which in this case gains access through the conjunctivae.

Acute Tubercular Rheumatism is the subject of a second paper by Foucet and Lencke.

A most instructive article is from the pen of Prof. Landowsky, of the Paris Academy of Medicine, on a tubercular condition, to which he applies the name Typhobacillasis. Typhobacillasis has a very close resemblance to typhoid fever, but is really a tubercular blood infection. The author was the first to point out this resemblance

twenty years ago. Fever, enlargement of the spleen and bacillary septicemia are the striking features in this disease. It is easy to understand that frequently it is mistaken for typhoid fever. In many cases where typhoid fever was thought to be followed by tuberculosis the case was really one of tubercular infection from the first.

Nerve Grafting in Facial Paralysis is the subject of a paper by Freeman, of Denver, with report of a case of anastomosis between the hypoglossal and facial nerves.

In the pathological section an extensive article is from the pen of W. G. McCallum, M.D., of Baltimore, on the Physiology of Absorption from the Peritoneal Cavity.

The volume contains many other articles, each with its interesting features. One might mention "Neurovascular Disturbances of the Nose," by Grayson, of Philadelphia; "Suppuration in Appendicitis," by E. M. Conner, M.D., F.R.C.S., Eng., London; Excision of Hip in Arthritis Deformans.

Progress of medicine during the year 1908 occupies one-third of the volume and briefly deals with the many advances in the various departments of medicine.

W. B. T.