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Original Communications.

RUDOLF VIRCHOW—AN APPRECIATION.*

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The object of this address, the invitation to deliver which is an honor for which I am profoundly grateful, is to express, in some measure, an appreciation of the life and labor of Rudolf Ludwig Karl Virchow, a deceased Honorary Fellow of the Medical Society of the State of New York.

In approaching this task we become at once impressed with the fact that the influences which develop greatness are subjects of speculative inquiry not less interesting and important than the momentous question of what constitutes greatness itself. When, therefore, we for any reason examine into the facts relating to the evolution of a given historic character, we at once think of the conditions and forces concerned in its production—we think of ancestry, of domestic surroundings, of scholastic opportunities, of personal associations, and of the forces that were at the time dominant in the social, political and intellectual atmosphere. We are prone, also, as we turn to greatness itself, to measure it, not alone by the standard of its own time, not alone by the rule of personal achievement, but to estimate it with reference to both its immediate importance and its final influences. Thus, as we glance over the vista of history, and our fancy nestles naturally enough about the most imposing figures of the ages, we discover, for instance, that we would like to know more of John and Mary Shakespeare, who blessed mankind with the Bard of Avon—the man of sympathy: and we yearn for an acquaintance with the

* Delivered before the Medical Society of the State of New York at Albany, January 23th, 1903.

farmer of Woolsthorp and his wife, who begat the illuminating genius of Newton—the man of mind. We feel, also, that full as are the annals, we would like to know even more of the actual political forces of the Roman Empire, directly concerned in developing the world's greatest soldier and statesman; that, notwithstanding its rich literature, we would like to feel the sentient throbs of the Elizabethan epoch that made possible the world's greatest poet and dramatist; that, voluminous as is the record, we would like to be more familiar with the trend of scientific thought during the century that followed and that produced the world's greatest philosopher. We search for the reason why each of these names has been engrossed upon the scroll of immortality, and as we search we discover that everywhere lies the unknown; that in atom and planet, in germ and genus alike, is law, natural law—inherent and integral—whose essence is not and cannot be of the record; that these men have delved and found and revealed laws—laws of war and statesmanship, laws of human emotion, laws of the natural universe—and that man is stronger and better and happier because they lived. We discover, furthermore, as we glance over that immortal scroll, that each name inscribed thereon has been placed there because its possessor, whether Pythagoras or Euclid, Copernicus or Kent, Galileo or Herchel, Hippocrates or Harvey, whether Dante or Goethe, each has been recorded because each has torn away the veil and revealed somewhat of the law that was hidden; for the law is in all, and of all, and he is the greatest among men who reveals the most of law unto man. In this spirit let us approach a discrimination of the great savant whose demise was the melancholy event in the medical, the scientific, and the political world during the last year.

The Second Peace of Paris had been signed but a few years when, in 1821, Virchow was born in the little hamlet of Schievelbein in the flatlands of Pomerania. The Baltic breezes that swept inland on that fifteenth day of October were not, however, sufficient entirely to cool the political atmosphere of that northernmost Prussian province, or, for that matter, of the thirty-nine petty States that then comprised the German Confederation. Napoleon's exile had terminated with his death at St. Helena but six months previously, and Europe—Germany in particular—relieved of the depressing shadow of his overlordship, was busying itself with the always serious problem of reconstruction. The intellectual world was not less perturbed than was that of politics. The great universities, then as now, exercised a powerful influence upon the trend of events. It was in them that the battle for constitutional rights, as a remedy against the despotism of the petty Princes,

was waged with intensest vigor. A constitution had been granted and revoked in Wurtemberg; the Duke of Weimar had granted a constitution to his subjects, the celebration of which event, at Jena, had led to patriotic demonstrations and to a revival of the influences of Luther's great struggle for liberty of thought. The movement thus engendered had become so formidable as to invoke the oppressive antagonism of the tyrannous Metternich, and the promulgation of the infamous Carlsbad Decrees, which provided for the rigorous censorship of the universities and newspapers by Government commission. Their provisions involved the suppression of any newspaper and the exile of any man who might express opinions inimical to the policy of the Government. The same interference with free thought existed in Austria and in Lombardy. The students of the University of Turin had been massacred because they appeared at the theatre in red caps. France and Spain were in a state of unrest, and the countries of Europe—the people—from the Mediterranean to the Baltic. The effort was being made to conform human life to those inherent laws of the social fabric that most make for happiness. The effort to reduce these laws, natural, inherent laws, to definite terms; the effort to adjust habits and customs to new ethical rules and to new constitutional provisions, produced a state of mental activity and of moral daring in every part of Continental Europe. This, then, was the social, political and intellectual atmosphere that prevailed in every German home, and even in the homes of Karl and Johanna Virchow, as they rocked the cradle of him, the formal appreciation of whose long and illustrious life is the object of our solemn reunion at this hour.

The clamor against absolutism was heard in childish murmurs at the public school at Schievelbein, to which young Virchow went at a tender age. There, in the little town in which the Reformation had long been the dominant force; there, in the little school beneath the shadow of the church, its synagogue, and the Castle of Malta,—a combination that in its catholicity was almost prophetic—the youth encountered forces that were potent in fashioning his subsequent illustrious character. It is in this fact that we, in free America, where the schoolhouse stands as the temple of rational belief, where it stands as the safeguard of the Republic, may take peculiar satisfaction.

The political agitations of the times, the little rivalries, the little hatreds, the fierce combats of the public schools, were not, however, sufficient to divert the youthful pupil from the successful prosecution of his studies; for, we learn, that he went, under age and with a particularly advanced knowledge

of Latin, to the gymnasium of Koslin, where he was a source of surprise to the director. Here, at Koslin, again was the spirit of the Reformation, with its inspiration of truth and liberty, and its yearning for happiness. The fact was recognized even as far north as Pomerania that, in the Rhenish provinces, previously ruled by French officials, there was a higher idea of human rights than obtained in the other provinces of the Confederation; especially in those ruled by the powerful house of Brandenburg. There was, therefore, a clamorous appeal for the recognition of all that was attractive and great in the principles of the French Revolution, and the outcry for a constitution embodying those principles came from no province with more emphasis than from Pomerania, and from nowhere in Pomerania with more insistence than from Koslin and from Schievelbein. The Revolution of 1830 had brought coveted charters of liberty to Brunswick, Hanover, Saxony and Hesse-Cassel, while to Prussia it had brought only the farcical concession of a system of triennial provincial diets with merely consultative powers. In spite of these distracting influences, however, influences that are always alluring to the enthusiasm of youth, young Virchow passed from the gymnasium, 1839, first on the list of the Abiturienten. The independence by which industrious and ambitious youth refuses to be restrained within the confines of an arbitrary curriculum, is always the prophecy of a broad manhood. The child, in this instance, and by this rule, was, indeed, father to the man, for we find that he presented himself for his finals, not only in the required branches, which were difficult enough, but in Hebrew, which he had mastered from pure love of philologic research. It was this same impulse that prompted him, during the succeeding few months, to master Italian without a teacher, just as years later we find him resting himself from his scientific labors by delving into the charms of modern Arabic poetry.

A few months after leaving the gymnasium he set out for Berlin, a journey which, in those days, before the introduction of railroads, had about it more of adventure than is involved in the two hours' run of to-day. Of his career in the Frederic Wilhelm's Institute, it is sufficient to say that he was an arduous student. In the faculty then were Dieffenbach, the foremost surgeon of the day; Schonlein, who had come from Zurich the same year to join, not only the teaching body but to act as reporting council for the ministry, and to serve as physician-in-ordinary to the King; Froriep, who was in charge of the Pathological Museum at the Charité, and who, in addition, served the Government as medical counsellor; Caspar, who was also medical counsellor, with a seat in the medical deputation for medical affairs in the ministry; but,

towering above all, was the intellectual figure of Johannus Müller, the Professor of Physiology. He was an original genius with daring, actually engaged in winnowing the wheat of demonstrable truth from the then prevailing chaff of egoistic opinion—to divorce a physical science from speculative philosophy. Prompted by the inspiration which he had derived in turn from Bichat and the French school, this professor of physiology was busily engaged in retesting in the laboratory truths previously elaborated by Haller, Whytt, Spalanzani, Cullen, Prochaska, John Hunter, the Bells, Magendie, Berzelius and Bichat himself. My fancy likes to dwell upon the almost dramatic moment when the shopkeeper's son from Schievelbein, the little keen-eyed, yellow haired stripling of nineteen, was ushered into the presence of this, the great founder of the modern school of physiology. There was in that meeting an intellectual impact that resulted in the transference and the perpetuation of great thoughts, great methods, which, perfected by the pupil, lead to still greater results. It was from this great professor that Virchow, during the next four years, was to derive those habits of investigation which, coupled with the spirit of daring, was to make him, in turn, the leading investigator in the realm of biological research. It must be remembered, however, that with all of the social and political disturbances, Germany was at that time thoroughly impregnated with a wholesome ferment. It consisted of the spirit of rational investigation, and was infused by Liebig in chemistry; by Humboldt, who was promulgating his discoveries leading to the publication, five years later, of his *Cosmos*; and by Froebel, who was establishing his marvellous principles of education derived from Pestalozzi, and which have since borne rich fruit the world over in every department of human instruction. It is not surprising, therefore, that with these antecedent influences, with these present surroundings, with these dominating forces, and with his marvellous insight and industry, Virchow should make such a record as a student, that upon his graduation he should be given the assistantship to the Prosector of the Charité Hospital. It was his first recognition, and it came with deserved promptitude. He was actuated at this time, as in his entire subsequent career, by the broadest principles of catholicity. During his student career, in addition to the prescribed lectures, he had gone into logic and psychology; in his busy, energetic way, he had mingled with the political organization among the students, and there were already manifest tendencies which, a very few years later, brought him before the German public as a scientist, a philologist and a social reformer, and a democrat. Promotion came without undue delay. Froeier resigned as Prosector in 1846, and

Virchow was elected to the succession. His work with Müller, however, had brought him in contact, not alone with that great man's scientific method, but with his habits of publicity as a scientific writer. *Archiv f Anatomie Physiologie u wissenschaft Medicin*, long issued by Müller, soon found an imitator in the Department of Pathology in the periodical issued jointly by Virchow and Reinhardt, and which, on the demise of the latter, Virchow continued to edit until his death. The political and economic conditions were fashioning themselves into the Revolution of 1848, when Virchow, already in influential touch with the Prussian Government, was delegated to investigate an epidemic of typhus fever which was then raging in Upper Silesia. The work was done with his characteristic thoroughness, transcending the prescribed limits of his instructions. He investigated not alone the pathological and clinical phases of the disease, but he entered freely into a discussion of the hygienic, economic and social conditions underlying the epidemic. He even went so far as to indicate a number of social reforms, essential to the prevention of such epidemic, and tintured his science with considerable democracy, his outspoken utterances, in these particulars, causing a distinct sensation in the ministry.

The trip to Silesia seems to have been a very important experience in Virchow's career. His previous tendencies as a reformer in the direction of popular liberty were now fully confirmed, and he became an active participant in the great revolutionary movement of that year. He unhesitatingly promulgated his platform as that of full and unrestricted Democracy, on which theme he made violent speeches to the Berlin populace, by whom he was elected a member of the National Assembly. His political ambitions, however, were destined to be temporarily curbed by the fact that he was under the parliamentary age, and was, consequently, not permitted to take his seat. His energy, however, found a compensatory outlet; for, with Leubuscher, he founded a journal which they called *Die medicinische Reform*, through which he advocated the establishment of a Ministry of Health, and insisted, among other measures, that medical education should be made free. These suggestions, not originating with the Government, were scarcely less distasteful to the Ministry than was his report from Silesia, or than were the political harangues which he continued to pronounce to the plaudits of his fellow burghers. He seemed at this time to be largely dominated by the spirit of iconoclasm, not, however, that form of iconoclasm which is merely an expression of the spirit of destruction, but that better iconoclasm by which old gods are destroyed that newer and better ones may be erected. He invaded the realm of

theology, and proclaimed, not a mere agnosticism, but a positive disavowal of the existence of a hell, insisting that "only a benighted Mecklenburg pastor could be so foolish as to believe in a devil." The Government, committed not only to the task of maintaining the national order, the national laws, but the national religion, looked upon the young orator as a dangerous polemic. He was compelled to resign his appointment as Prosecutor for the Charité, where, in spite of all his political agitations, he had conducted epoch-making researches on leukemia, embolism, thrombosis, phlebitis and other phases of morbid anatomy. He had already become a teacher of ability, and his researches had attracted widespread attention. These facts, quite as much as the influence of his colleagues at the Charité, probably saved him from the decree of exile issued at that time against many participants in the revolutionary movement. He was, however, banished from Berlin to Würzburg, where, in May, 1849, he accepted a chair in the faculty of the University. There was here less opportunity for effective participation in the political movements, and his energy found fuller exercise in the prosecution of his original researches and in the exercise of his philological tastes. During the seven years that he remained here he kept up his study of Italian, Arabic, and acquired a knowledge of English. His scientific researches at Würzburg embraced the subjects of phthisis, tuberculosis, typhoid fever, cretinism, hydronephrosis, adipocere, echinococcus of the liver, amyloid degeneration of lymphatic glands, the corpuscles of bone, cartilage and connective tissue, and he thoroughly investigated the anatomy of the nails and the epidermis. While *Die medicinische Reform* was discontinued shortly after he went to Würzburg, the young professor, instead, edited a *Handbuch der speciellen Pathologie*, and, in connection with J. Vogel, issued a manual of general pathology.

It seems from a careful study of Virchow's career that it was about this time that his observation of concrete facts had become sufficiently extensive to justify him in venturing upon important generalizations; for the little manual issued in connection with Vogel contained many of the fundamental principles which a few years later were elaborated into his famous *Cellularpathologie*, in 1858. He had been recalled to Berlin in 1856, under circumstances that invested the incident with the characteristics of a triumph. The chair of general pathology had become vacant through the resignation of his former teacher Froriep; in all Germany there was none so able to fill it as the young democratic professor. He was sent for, but paused to consider. When his reply came it brought his acceptance, based, however, upon the condition that an institute for practical work should be founded. His terms

were accepted, not only in this but in other particulars, and he at once entered seriously upon what must be recognized as his more distinctive life work. The museum at that time contained 1,500 preparations; at his eightieth birthday, as the result of his own individual labors, the number had increased to 23,000. In his work he was actuated by the view, expressed in his own words, that "the role of pathological anatomy as a dogmatic science is at an end, for each individual law we must have the proof clearly recognized and carrying personal conviction." He insisted that the whole of the then existing system must be abolished, and that a new philosophy, based upon observation and experiment, must take its place. This new pathology, he insisted, must come about gradually, and not as the mental product of individual enthusiasm. It must be achieved as the outcome of laborious research by many competent investigators, and, when thus evolved, and thus only, could it be accepted as the basis of scientific medicine.

The engrossing character of Virchow's labors at the Institute at this time, the absorbing enthusiasm involved in the promulgation of a new and revolutionizing philosophy, the exactness of editorial duty, all combined with the responsibilities of professorial work were not sufficient, however, completely to divert his attention from collateral and often apparently irrelevant studies, and from participation in the fierce political controversies that were then agitating the German people. William I. had ascended the Prussian throne in 1858. There was some hope of relief from the oppressive measures of his predecessors, and this very hope stimulated the activities of the Democrats or of the "Demagogen," as the party was appropriately designated by the Conservatives. Virchow, notwithstanding his unpleasant experiences that had resulted from his banishment to Wurzburg, immediately identified himself with the cause of popular liberty. In this he was actuated by a profound contempt for the reigning house, a contempt which, on occasion found expression in his famous observation on heredity. "I know a family, a very exalted one," he was wont to say, "in which the grandfather had softening of the brain, the son hardening of the brain, and the grandson no brains at all," the reference being to the three Frederics, the immediate predecessors of the then reigning monarch. The work of the mere agitator, however, was not sufficient for one of Virchow's temperament, particularly to one who, after a previous election to the National Legislature, had been denied his seat on account of his youth. He was, in 1862, older by fifteen years, and, accordingly, offered himself as a candidate for the Prussian Chamber, to which he was duly elected. It was in the same year that Bismarck became

Prime Minister, a coincidence which marked the beginning of an antagonism that continued throughout the political careers of the two men. Virchow speedily became the leader of the Radical party, and by his advanced views and cogent reasoning, and by his courageous insistence upon them, he speedily earned for his policy the opprobrious designation of "Professorismus," applied by the Iron Chancellor. While these debates were going on the duties at the Institute, at the Charité and in the editorial office were not neglected, although there is ample testimony that Virchow was often tardy in keeping his appointments. The famous Schleswig-Holstein episode diverted for a time the attention of the Legislature from internal to external affairs, and culminated in the war with Denmark in 1865. In this war Bismarck against Virchow's opposition used Austria as the cat with which to pull the chestnuts from the fire, and then, three years later, again over Virchow's opposition, he proceeded to kill the cat. As a result of this war with Austria in 1866, the Germanic Confederation of 1815 was terminated and the North German Confederation took its place. It may be premised that Virchow, who, with all his democracy, was always a Unionist and Nationalist, deprecated this segregation of the Germanic people. It was in the course of this long sustained opposition to the policy of the Government that he, as chairman of the Finance Committee, a position which he held for many years, succeeded in defeating an appropriation for naval purposes that had been demanded by Bismarck, who thereupon challenged his successful antagonist to mortal combat. Virchow, with no disposition, whatever, to give the Herculean warrior an opportunity to exercise his professional skill, and with moral courage to stem the tide of sentiment in favor of duelling that still disgraces Germany—a courage vastly excelling mere physical bravery—declined the cartel, but continued his opposition. This opposition was carried along through the days of the Franco-Prussian war, but when the first shot had been fired Virchow, always a patriot, and always the physician, took his son and joined the army, the two serving in the capacity of surgeon in the field. These men, father and son, did their full measure of duty, conspicuously upon the field of Metz, in alleviating the sufferings of their wounded compatriots. No sooner, however, had peace been concluded with the proclamation of William I. as Emperor of Versailles, than Virchow resumed his wonted activities in science, in literature, in politics at Berlin. It was then that probably for the first time in his political career he found himself *en rapport* with the leading features of Bismarck's policy, namely, the policy that involved the construction of the present German Empire. It may have been this particular fact, quite

as much as a general appreciation of Virchow's worth, that prompted Bismarck, before his own retirement, under the present Emperor, to apologize publicly for many asperities which had characterized his previous attitude toward the great savant.

About this time the widened scientific view of Virchow, a view which had come to embrace the whole science of man as comprehended in the then slumbering science of anthropology, began to be manifested in his contributions to literature. He was already accumulating facts which were to serve as the ground work of ethnology; yet, in spite of all this, acting in his capacity as a member of the Town Council, a position which he held for more than forty years, he was not oblivious to the fact that the sanitary condition of Berlin was deplorable. He, accordingly, became responsible for the establishment of those enormous hygienic reforms that have banished typhoid fever and other zymotic diseases from Berlin, and that have rendered that city one of the most salubrious in the world. Archæology also was at this time engaging his attention, and in the midst of the preparation of his valuable work on the Topography of Troy, he, in 1878, retired from active political life, only however to be elected, two years later, to the German Reichstag. In this body, however, he was always rather an interested spectator rather than an active participant, and never aspired to the office of party leadership. It is not to be assumed, however, from this that Virchow's intellectual activity was by any means at an end, or even upon the wane. The twenty years following his election to the Reichstag were among the most fruitful, intellectually, of his entire life. He amplified, in many particulars, his teachings of cellular pathology. He delved more deeply than ever into the hidden mysteries of ethnology, producing in 1882 his valuable work on "Old Trojan Graves and Skulls." At the very pinnacle of scientific fame he kept himself *au courant* with the whole trend of scientific thought, delivering an address before an International Congress at Berlin, at Paris, at Moscow or at Rome, laboring in an assemblage of scientists here, or in a hygienic congress there, or delivering a Croonian or a Huxley lecture in London. With his editorial labors always in hand, he still clung industriously to his old haunts in the Pathological Institute, in the Anthropological Museum, or in his ward at the Charité, for, be it remembered, Virchow was always a practical physician. It has been said of him that during these years he knew no such thing as vacation, in the ordinary sense of the word, for it was his habit rather to find recreation in a change of occupation, such, for instance, as visiting Asia Minor, and, pick in hand, to assist his friend Schliemann in his won-

derful archæologic researches. In the midst of it all he was very much of a man on the human side—a little wiry man, but a little over five feet in stature—sprightly, congenial, loving and lovable. His domestic life has been described as ideal. The many Americans who were present at the Berlin meeting of the International Medical Congress, will recall his active and whole-souled participation of the festivities of that occasion. He was given a Festschrift on his seventieth birthday, and again on his eightieth, on which latter occasion, in particular, delegates were present from practically every country, and festivities were held simultaneously in practically every leading city of the world. On January 3rd, 1902, he sustained a fracture of the neck of the femur by falling from a tram car. He died September 5th, 1902, mourned by the civilized world. The municipality of Berlin, which he had faithfully and efficiently served as a councillor for so many years, accorded him the distinction of a public funeral, which, in the midst of universal mourning, was participated in by many officials from the political and scientific world.

This, then, was the man upon whose work we are called, at this hour, to pronounce a formal appreciation. It is rare, indeed, that the occasion arises to attempt in even a desultory way, the estimation of a career that has resulted in the establishment of two distinct, although correlated sciences, and in the substantial advancement of human liberty. It would be quite out of the question in an address such as this, to attempt a *resumé* of his doctrines in pathology, a mere enumeration of his contributions to which would involve the employment of more than twice as many words as I shall employ in your hearing. We may, however, arrive at some estimate of his work in this great department by pausing for a moment to consider the state of medical science, or more particularly the conceptions of disease, that obtained in Germany when Virchow was made the successor of Froriep at Berlin. It is true that Rokitansky had introduced many of the revolutionizing doctrines of Bichat at Vienna, but even Rokitansky was busying himself to an important extent in promulgating the purely dogmatic doctrine of crasis. Oken, at Munich, was indulging in the glittering generality that life is the self-generation of individualized elements, that the principle of life is galvanism, and that vital force is galvanic polarity. Of him, Agassiz declared that he constructed the entire universe out of his brain. Dollinger, of Wurzburg, the father of the great theologian, belonged to the same speculative school, which a historian has designated as the "Romanticist or Tsutomaniacs." At Berlin Schonlein, who had been one of Virchow's teachers, and was yet his colleague, and who represented what was designated as the Natural

History school, taught that disease was an entity, a sort of parasite sojourning temporarily in the body, just as Paracelsus had once spoken of "a microcosm within a microcosm." Schonlein, more specifically, looked upon disease as a sort of equivocal infusoria, the existence of which he logically predicated, but never, of course, physically demonstrated. These infusoria, the existence of which were thus gratuitously assumed, were easily enough imagined to consist of genera and species, each producing different clinical phenomena—a sort of empirical prophecy of the germ theory which has since played so important a role in medical philosophy. It was against such theoretic doctrines, then dominant, that Virchow brought the evidence of the microscope and the revelations of the mortuary. He began in the truly scientific manner, which consists always, first in the observation of concrete facts, next in their classification, and third in their ultimate generalization. His labors at Wurzburg, supplemented by those conducted under more favorable auspices after his return to Berlin, enabled him to announce, as the seminal doctrine of his philosophy—and I employ the words he subsequently used at the Fiftieth Congress of Naturalists and Physicians—namely, that the new science was based "chiefly on the recognition of the fact that the cell is actually the ultimate, proper morphological element of every vital manifestation, *omnis cellula e cellula*, and that we must not remove the proper action beyond the cell." In the early elaboration of this doctrine, taking up the work where Schwann and Schleiden had left it, he proclaimed the importance of the nucleus to the maintenance and multiplication of the cell, and emphasized the fact that tissue growth implies cell multiplication, while the contents of the cell, and even the material deposited outside of it, are of controlling importance to function. He taught, furthermore, and as a necessary corollary of the preceding postulates, that tissues vary in function according as they vary in cellular construction. He insisted upon the existence of an inter-cellular tubular system that supplemented the recognized circulatory systems in the work of ultimate nutrition. As a result of his investigations of the circulatory apparatus and of the blood he taught that the walls of the blood vessels were impervious, and argued that blood, or even the nutrient elements of the blood, could not escape from them without rupture of the walls, which rupture was, however, rarely, if ever, demonstrable. It would seem that in this doctrine, which I believe is as near an approach to empirical dogmatism as could be found in all his teachings, Virchow laid a logical foundation for the new doctrine of Osmosis that to-day promises to take both physiology and pathology largely into the realm of physics. He directed his arguments speci-

fically against the then prevailing humoral pathology by insisting that the blood itself is not the proper and original cause of dyscrasia, as taught even by Rokitansky, but that instead these dyscrasie have their origin rather in a disturbed metabolism, the toxic products of which are merely carried in the blood. His laborious study of many phases of blood changes comprises the basis of our present accurate conception of the pathology of the circulatory medium. His study of inflammation, in the description of which he insisted that disturbed function should be added to heat, pain, redness and swelling, as one of the cardinal indicia of the phenomena, gave an accurate conception of the actual changes. His elaborate investigations of the nervous system resulted in the promulgation of doctrines whose parentage in the works of Brown and Haller is recognizable. His work on tumors, a distinct application of the cellular doctrine, stands to-day as the fundamental classic of the subject. His investigation of tuberculosis resulted first in his classification of the disease into neoplastic and inflammatory forms, but latterly he recognized the bacilliary forms. It would be impossible, however, as I have before stated, to give even an accurate *resumé* of this extensive philosophy, the application of which to the entire phenomena of disease must stand as his crowning achievement. It is interesting to hear him recount, as he did in a lecture delivered in London during the last years of his life, the general summarization of his work in the statement that "the law of continuity of animal development is, therefore, identical with the law of heredity, and this I was now able to apply to the whole field of pathological new formation." And it was especially interesting, in view of the ideas against which he had to contend, to hear him add with pardonable exultation: "I blocked forever the last loophole of the opponents, the doctrine of specific pathological cells from which types and ancestors were not forthcoming in normal life." The doctrines which he had thus established, and to which he thus alluded, became early in their history the actuating principles of the "Berlin School," which sooner or later embraced the names of Leyden, Von Rechlinghausen, Cohnheim, Waldeyer, Hoppe-Seyler, Kuhne, Rindfleisch, Klebbs, Liebrich Frederic, in Germany; Felix Simon, in England, and conspicuously, W. H. Welch in the United States. The principles taught by this school are, by common consent, those upon which modern surgery and rational therapy alike are placed.

The position that must be accorded to this doctrine in the light of further revelation of fundamental law cannot be foretold. Nothing could be further from the purpose of Virchow himself, than the assumption that his doctrine was the all-truth.

He viewed with great conservatism the doctrine of the infectiousness of disease based upon observations that were made possible only by a later perfection in optics and by later advancements in the technique of biologic research. The most that can be said of the relation of the germ theory of disease to that of cellular pathology is, that without invalidating the important conclusions embraced in the latter, it left Virchow's recorded observations unimpaired and undisputed. The new doctrine of the Ions, involving the principle of Osmosis, may bring other and important supplementary facts which shall serve to show that the discoveries of Virchow comprised in the aggregate a single but important link in the imploring chain of science.

The next phase of Virchow's character as a scientist relates to his work in the department of anthropology. This, the science of man in its broadest conception, can scarcely be said to have had more than a mere beginning before Virchow, commencing with his work in biology, was led into it by the widening circle of associated ideas. It may be said, indeed, no valuable contributions were made to the subject during the first half of the 19th century. Blumenbach, Gottingen, had made his famous collection of skulls—his "Golgotha" as he called it—which was the basis of his own investigations, and which may be said to have been the starting point of systematic anthropological study. About the same time—that is the last years of the 18th and the first years of the 19th century—von Sommering, of Frankfurt, studied the eyes, not only with reference to their anatomical detail but with reference to their ethnic significance, while Camper, of Holland, made a careful study of the facial angles. This was practically all that was done with the subject until Darwin issued his "Origin of Species" in 1859. His "Descent of Man," his first contribution to the subject of ethnology, did not appear until 1872. Long before the latter date, however, Virchow had taken up the subject at two points of contact. The first point of contact was developed out of his philosophy of cell genesis, the doctrine that all cells are derived from pre-existing cells, which he promulgated in 1859, and which brought up as a natural corollary the question of variation of type. His antagonists—the believers in special creations—seized eagerly upon this declaration as a refutation of the then rapidly growing materialistic philosophy, and as a vindication of their own ontologic dogmas. If the cell is the vital unit, as Virchow declares, and if the individual is but the sum of cells, they urged then, variation in the individual cannot only occur as the results and commensurately with the variation in the constituent cells; if, they added, like cells always beget like cells, as Virchow declares,

then the individual, the sum of cells, cannot vary from his cellular type; and, finally, they insisted if all the cells in the individual have been derived through the generations from cells of the same type, then the original cells, at the beginning of things, must have been the products of a special and miraculous creative act. Unfortunately, however, for this specious logic, Virchow taught, in effect, that like cells beget like cells, only, however, under like circumstances, and that, as the circumstances vary, so does the cell type vary. This is, indeed, the point of departure from the standard of health, the very beginning of pathological phenomena. As a matter of fact, Virchow simply declined to discuss the origin of species until sufficient evidence to justify him in doing so could be derived from a careful search of the tissues. He recognized the mutability of the cells, and realizing, logically, that variations in type must begin in these vital units, he, without denying the truthfulness, or affirming the falsity of Darwin's hypothesis, simply awaited the demonstration of the actual changes within the cell. It is an interesting fact, and one bearing testimony to Virchow's scientific acumen, that this very variation was reduced to a physical demonstration in 1900 by Professor Guyer, of the University of Cincinnati, whose investigations are recorded in his valuable contribution on "Hybridism and the Germ-Cell." It is also of striking interest, at this time, and one bearing testimony to the reliability of Virchow's deduction, not only that these observations of Guyer's, but that Mendel's Law promulgated through an obscure periodical at Brunn, Austria, in 1865, seemed to cover the entire point. This Law of Mendel's or, as I believe we should call it, the Mendel Guyer Law, is in effect that, as the result of definite and demonstrable changes in the germ cell, the second and later generations of a hybrid possesses every possible combination of apparent characters, and that each combination appears in a definite proportion of the individuals, the whole reduced to the terms of a definite equation. This law, revealed by observations in both the animal and vegetable world, seems to be one of general applicability, and one that is calculated to invest the conclusions of Virchow with an increased value.

The next point at which Virchow was brought in contact with the general problem of anthropology, or more particularly that of ethnology, grew out of his studies of cretinism and of the causes of variations in the growth of the skull. It was precisely this study of the pathologic phases of craniology that enabled him to detect morbid changes in the celebrated Neanderthal skull, which, with its protruding supraorbital ridges, its low forehead, and its small cranial capacity, even the scientific world was too disposed to accept as the normal index of

a racial type that had long since passed away. Virchow further insisted that, even if it were normal, the existence of a single skull was not sufficient evidence upon which to predicate the existence of an entire race, and that conclusions should be withheld until further evidence was secured. It was this cautious utterance, thoroughly characteristic of Virchow, that gave the theologic polemics another opportunity falsely to proclaim that he was an antagonist of the doctrine of descent, as promulgated by Darwin. It seems that the utterance, seized upon for this particular misrepresentation, occurred in an address delivered in 1877 before the German Naturalists and Physicians, and was to the effect that the hypothesis of Darwin ought not hastily to be given the force of law—that it ought not to be placed in the category of law—without first waiting to gather and accumulate all relevant facts. It was just this scientific discrimination between hypothesis and law, and just this conservative tendency in the consideration of demonstrated facts, and in the formulation of conclusions based upon them, that gave to the judgment of Virchow the greatest possible weight in the scientific world. And it was this very weight which he himself, as late as 1900, with true scientific spirit, was disposed to deprecate; for he had spent his life in dethroning the power of personal influence, and in establishing the regnancy of demonstrated truth.

His work in anthropology, however, considered from its positive side, was very great. He was always an organizer—a valuable weakness in a man of brains,—and it was by this means that much of his work was brought to its full fruition. He organized, or at least assisted in the organization of the German Anthropological Society, and the *Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*; he helped to found the *Museum für Volkstrachten* and the almost invaluable *Archiv für Anthropologie*. He, with his colleagues, gave serious study to the physical characteristics of the early Germans. This was supplemented by statistical investigation of the present distribution of the color of skin, eyes, hair, in Germany, the whole being reduced to cartographic representation. His descriptions of American crania, based upon Morton's great work, opened that mine of information to German thought. He was the friend and promoter of Schliemann, in whose archaeological explorations he was at times a personal participant; he recorded the results of these labors in two books, "Contributions to the Topography of Troy," and "Old Trojan Graves and Skulls," each of which is recognized as a valuable contribution to the subject. Extensive, however, as were the researches, and important as were his recorded observations, it does not appear that he considered either of them sufficiently extensive to warrant him in arriving at important general conclusions. He felt

justified, however, in saying, as he did say, that physical types do not vary with variations in language and culture, and that different types may blend in the formation of a homogeneous people. This lesson was taught him by a study of the racial types in Germany, and is of extreme interest to us in the United States, where, at this moment, we are in the midst of the greatest ethnic experiment in the history of the human race. In viewing the entire scope of Virchow's labors in anthropology, it must be concluded that he did not carry them to the point of even relative finality that he did his labors in pathology; his researches, his discoveries in ethnology, must be recognized as fundamental, their true significance remaining to be interpreted in the light of rapidly accumulating evidence. It is sufficient, however, for the perpetuity of his fame that, by common consent, he is recognized as the veritable founder of this new science which promises so much for the interpretation of the racial types of men.

The third side of this great character was the human side, manifesting itself not alone as a husband and father, but conspicuously as a citizen. He early showed that the prevalent opinion that to be highly intelligent on one subject it is necessary to be correspondingly stupid on all other subjects is but a vulgar notion; and he speedily demonstrated that the viewpoint of the physician is eminently calculated to afford an intelligent insight into social, economic and political conditions. I must, however, leave it to the political historian and to the public economist to tell what good has been accomplished in Germany in the last fifty years by the Liberal movement, a movement that for many decades enjoyed the distinction of Virchow's leadership. A few things are certain—the hated Carlsbad decrees could not be re-enacted in Germany to-day. There is a greater freedom of thought, and what is more important, of expression in German universities, than ever before. The offence of *lese majesty*, strange sounding to Republican ears, has a less severe meaning in Germany than it had fifty years ago, and it is equally certain that, for the first time in history, the entire Vaterland has a reasonably liberal constitution, wrested from the tyranny of absolutism—a condition that leads to the hope that the German people may some time enjoy the same beneficent government that to-day blesses the great Republic. In the achievement of these results it cannot be denied that Virchow played a leading and an honored part.

What, then, are we to say in final review of this great man? His figure is that of a colossus, and it will require the prospective afforded by receding years to measure its relative height. Some things, however, we can now tell. He inherited honest

blood; he responded in the fullest and in the best sense to the formative influences with which his early life was surrounded; he had the independence to defy personal dictum and to give allegiance only to demonstrated truth; he had the intelligence to discern, and the human sympathy to appreciate that human happiness depended first and chiefly upon a knowledge of the laws underlying and governing human existence. He worked on independent lines and revealed laws of disease previously hidden; he by his observations and deductions, and by the elaboration of rational methods, laid the foundation of modern medicine. He established the study of racial man as a science. He fought the battle for human liberty, and won for others the boon that he had always arrogated to himself. He added years to the generation of man, brought happiness to his kind. Finally, let it be recorded, that above all he lived faithful to his ideals—and the greatest of these was Truth.

THE TREATMENT OF SEPTIC ABORTION.*

BY K. C. McILWRAITH, M.B., TOR., F.O.S., (EDIN.)

Mr. President and Gentlemen:

I wish to bring before the Association a method of treatment for septic abortion which has given uniformly good results in my hands.

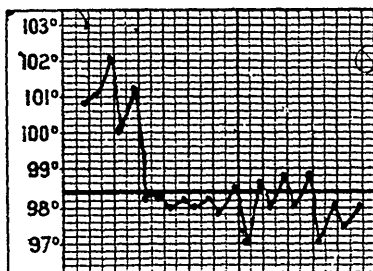
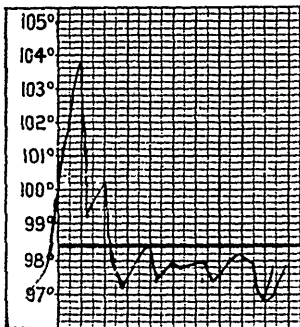
Briefly, I mean by septic abortions those cases in which, to the ordinary unmistakable signs of pregnancy and abortion, febrile symptoms are added.

The instruments needed are, two pairs of tenaculum forceps, and a Bozeman's intra-uterine douche nozzle of large size. These should be sterilized by boiling and placed ready for use in a one per cent. lysol solution. The patient is anesthetized, placed in the lithotomy position, and the vulva prepared by thoroughly scrubbing it with green soap and hot water, which is washed off with lysol solution, one per cent. The vagina is then scrubbed with green soap and the fingers, or a bit of cheese cloth, and douched out with lysol, one per cent. The uterus is then grasped by the left hand through the abdomen, to make counter-pressure, and the cervix is dilated, if necessary, by the fingers of the right hand, as much of the right hand being introduced into the vagina as is necessary to allow the fingers to thoroughly explore the whole uterus. If the whole hand has to be introduced, the vaginal orifice must be gradually

* Read at Meeting of Ontario Medical Association.

dilated by the fingers formed into a cone. I usually try to get the cervix sufficiently dilated to allow the passage of the first and second fingers together, though I have emptied a three-months pregnant uterus through a cervical canal that would only permit the passage of the forefinger and the tip of the second.

The fingers in the uterus are used to entirely separate the ovum from the uterine wall. The uterus is then anteverted by the hand on the abdomen, the fingers of the other hand being withdrawn from the uterus and passed into the anterior vaginal fornix. The fundus uteri can thus be squeezed between the inside and the outside hand, and its detached contents expressed into the vagina and withdrawn. The anterior and posterior lips of the cervix are then grasped with the tenaculum forceps, the cervix drawn down close to the vulva, and the uterus copiously douched out through the Bozeman's douche, with lysol solution, one per cent. Next, the uterus is snugly



packed with iodoform gauze, a little of which is also left in the vagina. I prefer for this purpose gauze put up in the form of a roller bandage, two inches wide, of a strength of 5 to 10 per cent.; and I use the Bozeman's douche nozzle as a packer. The gauze is removed the next morning.

This procedure, like all intra-uterine manipulations, is frequently followed by a chill in a few hours. I have used it many times during the last five years, and it has never failed to give the best possible results. By the end of 48 hours the fever has always disappeared and the patient made an uninterrupted recovery. I have here several charts which illustrate this.

I may perhaps be permitted to compare this form of treatment with other forms.

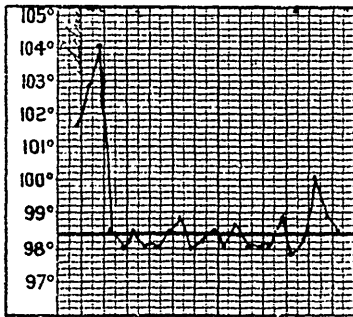
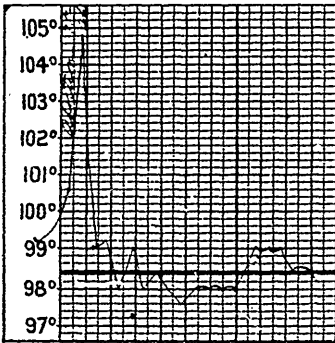
(1) Neglect. A few months ago a patient was admitted to the Toronto General Hospital suffering from septic abortion.

It had been going on for six weeks, no medical attendant having been called and nothing done.

Dr. A. H. Wright saw this patient with me, and we agreed that she was in too low a condition for operative procedure. She died. Septic abortion, then, will not right itself.

(2) Flushing curette. This is a favorite method with many. It is easier than the method I advocate. At the Rotunda Hospital I saw a patient who had been curetted for abortion two months previously. She had suffered from hemorrhage at intervals ever since. The cervix was dilated, a finger introduced, and a considerable portion of the ovum found which had been left behind by the curette.

In hospital practice in Toronto we frequently find portions of the ovum retained after it has been supposed to be removed by the curette. I remember one case in particular, which I



saw in consultation about a year ago, which had been curetted. Almost the entire secundines were found attached to the fundus by a small pedicle, which the curette had missed.

We must remember, too, the danger of perforating the puerperal uterus with the curette, especially when it is softened by infection.

Finally, it has been pointed out by a recent writer that to be sure of emptying the uterus with a curette, it is necessary to scrape the whole interior. This is never necessary, and in septic cases is very dangerous, as it opens up new avenues for infection.

Since this paper was read I have performed this operation twice with perfect success. Once in St. Michael's Hospital and once in a private house. In the latter case I had only one untrained assistant. I anesthetized the patient myself. I was, of course, able to use only one tenaculum forceps.

PLACENTA PREVIA.*

By HEWARD DAVID LIVINGSTONE, Rockwood, Ont.

Although the consensus of modern opinion regarding the treatment of this condition favors the induction of labor, authorities differ in many respects, not only with reference to the methods employed, but also as to the proper time for interference.

As the subject is one of such importance, and requires such early recognition and prompt treatment, I may be pardoned for reviewing the nature of the affection and offering a few suggestions, based partly on my own experience, and on that of my confreres who have encountered similar conditions in practice.

Normally, the placenta is located at the uterine fundus, that is in a situation in which uterine and placental development are equalized.

As usually defined, we understand placenta previa to refer to a condition in which the placenta occupies the lower zone of the uterus and infringes on the internal os.

It is, however, possible for the placenta to find lodgement on any portion of the uterine surface, the nearer it approaches the fundus the more marked being the disproportion between its growth and that of the uterus in the latter months of pregnancy, and the greater the risks of separation and hemorrhage.

Although some authorities confine the definition of placenta previa to its situation on or over the internal os, it seems reasonable to infer that the condition is subject to variations in degree, that the point of placental election may quite possibly be any place between the cervix and fundus, and that consequently placental hemorrhage may be divisible into two classes, depending on situation, both induced by malposition, and varying directly in severity as the site of attachment approaches the internal os. This theory, if acceptable, would materially influence our views regarding treatment.

Admitting the fact that the risk lessens as the placental situation approaches the fundus, we still meet with cases of hemorrhage at or after the seventh month, in which on examination no placental presentation can be determined, and which, for that reason, are commonly ascribed to accidental hemorrhage. Excluding those cases in which a history of traumatism is not a marked predisposing factor, it would seem reasonable to attribute the loss of blood to the same condition, which

* Read at Meeting of Ontario Medical Association.

obtains under placenta previa, namely, malposition, but in a lesser degree. Under such circumstances many favor the policy of temporizing, providing the initial hemorrhage has been slight, with the object of increasing the child's chances, although records show that pregnancy in any event is rarely prolonged under the most favorable conditions. Reasoning on the assumption that, in the latter months of gestation, the risk of hemorrhage increases, in direct ratio as the placental attachment approaches the cervix, and that the placenta may occupy a dangerous location and still be sufficiently high to escape the examining finger. I consider that in these instances we are justified in adopting radical measures and hastening premature delivery, particularly so when the case is not under immediate supervision.

Given the diagnosis of placenta previa, the question of treatment leaves only one alternative—emptying the uterus. I do not think a consideration of the child's viability should preclude prompt interference, the most important point being the adoption of that method which will ensure the minimum of risk to the mother.

If the os is not sufficiently patulous to allow turning, the decision remains between rapid and slow dilation, the former being preferable if the case is urgent. Slow dilation may be effected under favorable circumstances by packing the vagina thoroughly with dry aseptic gauze. After bringing down a lower extremity the chances of immediate bleeding are minimized, and labor should be allowed to terminate with as little assistance as possible.

Rapid extraction is to be avoided. It is probable that this procedure is responsible for more deaths than is generally supposed owing to the liability of rupturing the uterus and the sequence of shock and intra-peritoneal hemorrhage.

In dealing with the complete type of placenta previa we are confronted by a condition which hardly justifies the adoption of the methods cited for the treatment of the marginal form. The risk of bleeding is much increased by its circumscribed attachment, and we are warranted in seeking a course which, if still heroic, would tend to obviate the dangers of severe hemorrhage. It is still a disputed point as to the advisability of entering the abdominal cavity, but recent investigation is inclined to indicate Porro's operation as offering many advantages over other methods heretofore pursued.

I beg to submit for approval a suggestion, which, if feasible, should obviate the dangers attendant on placental separation, and also preclude the necessity for abdominal section. I refer

to the ligation of the uterine arteries per vaginam and the exclusion of the main source of hemorrhage. Providing the vagina is sufficiently roomy and the cervix within reach, the operation should not present formidable difficulties, and in consideration of the high mortality in the central insertion, it would, if successful, extend a hope for better results in an affection which frequently calls in vain on all the resources at our command.

MIRROR WRITING.

By ROBERT D. RUDOLF, M.D. (EDIN.), M.R.C.P. (LONDON).
Lecturer on Medicine and Clinical Medicine in the University of Toronto.

Mirror writing is that form of chirography in which the words look strange to the ordinary reader until they are reflected from a mirror, or are read *through* the paper on which they are written. When thus seen, the writing appears to be natural. On the other hand, when ordinary writing is viewed in a mirror it becomes mirror writing, and to most readers is illegible. When a page of ordinary writing is blotted, the impression left in the blotting paper is mirror writing.

The subject has from time to time attracted the notice of the profession, and there are a considerable number of cases of it on record. Perhaps the first writer to describe the condition was Erlenmeyer in 1879. Hughlings Jackson and Buchwald also early referred to it. Ireland, in 1881, brought it prominently before the profession by a paper in the *Brain* (Vol. iv, page 361), and most subsequent writers refer back to his article.

"According to Savage, mirror writing is met with in some forms of mental weakness and in conditions of mental disorder allied to the hysterical; occurring also in cases of moral perversion, where it may be only temporary and being observed more commonly among women than among men, and being most easily acquired in highly nervous people." (C. K. Mills, *Journal of Nervous and Mental Diseases*, 1894, page 88.) This, however, is, I believe, a very incomplete description of the conditions in which it may occur.

A slight form of mirror writing is possessed by almost anyone who likes to try, and no doubt by practice almost anybody could learn to do it well. In true mirror writers, however, this is the way in which they naturally write. Such people seem to be invariably left-handed. Right-handed mirror writing is a purely unnatural and artificial form of chirography.

A well marked, and in some ways very peculiar, case of mirror writing has recently come under my notice, of which the details are as follows:

A. B., a married lady, aged 29 years, is an American of French extraction. She is highly intellectual, and is an accomplished pianist and linguist. She is markedly left-handed, and, in spite of the fact that ever since childhood she has been most strictly educated to use the right hand, she now sews with the left, and holds her table knife in that hand. She cannot remember when she began to write in mirror fashion, but thinks that she did so the first time that she attempted to write at all. She did not copy it from other mirror writing, as we might copy a picture. At first she always did it with the left hand. With unusual difficulty she learned to write with her right hand in the ordinary manner. At present she can write with facility with either hand in either manner, and I show

*Just as steam by its gain
upon time over distance
has reduced the space
which separates countries,
so will commerce com-
mercial information from
the most effectual means
of diffusing knowledge
by its interchanging the
ideas of mankind.*

E. F. B.

RIGHT HAND.

here specimens of her four methods of doing so. Of all four ways the most easy and natural for her is left-handed mirror writing. She never had any tendency to mirror speech. She can read mirror writing quite easily, but not so quickly as the ordinary form; probably the want of practice explains this. There are no signs or symptoms of any disease.

What is the explanation of ordinary mirror writing? All the cases on record seem to be ones of writing done with the left hand, and one writer refers to "left-handed or mirror writing" (F. J. Allen, on mirror writing. *Brain*, Vol. xix, 1896, page 385), thus using the terms as synonymous ones.

In my case, the writing could be done with either hand, but this point will be again alluded to. Erlenmeyer, and most subsequent writers have claimed that it was the natural way for the left hand to write, and this seems to be the correct view. In writing the letter C, for example, with the right

hand and then with the left, in the latter case the same movements of similar muscles will produce C . The production of C with the left hand would involve quite a different set of movements to what are required for doing it with the right hand. A curious error has crept into the literature of the subject on this point, for which Professor C. K. Mills is responsible. He refers again and again [*Journal of Nervous and Mental Diseases*, 1894, page 85] to the image in mirror writing being upside down, and gives the example of C becoming C . This, of course, is a mistake. One does not see oneself upside down in a mirror—one's head still remains uppermost. In swimming the same curve is described by each arm, and if one carried a piece of chalk in either hand and performed the action against a blackboard, then, with the right hand, he would produce the figure C , and with the left the figure C , i.e., one would be the mirror image of the other.

B. F. S.

RIGHT HAND MIRROR.

In a recent discussion which has been going on in the *Lancet* upon right-handedness and left-brainedness (*Lancet*, Vol. ii, 1902, page 1658), Sir Samuel Wilks gives a good example of the same thing. He says, "If the hands and arms be rolled round one another in front of the body the movements are exactly alike, similar muscles are being used, and these are stimulated by corresponding nerves. Now, if the arms be separated and stretched out at the side, the rotary movement still going on, it will be seen that the right is making a right-handed spiral, and the left a left-handed spiral, so that if we put a pen into the hand to write a name it would be done in the usual manner with the right one, but written backwards with the left, as in so-called mirror writing."

It would look as if we got a double impression in the visual centres when looking at an object, that in the right brain being the inverse of that in the left. In ordinary people, the impression in the right brain is so poor that when their left

brain is thrown out of action by some lesion, or they are unable to use the right hand from any cause, then they cannot use the very faint impression in the right brain. Instead, when they endeavor to write with the left hand, they slowly and laboriously trace ordinary writing, and the result is usually very imperfect. With long practice, however, it may be improved.

In a naturally left-handed person, on the contrary, the impression in the right brain is good, and, although such an individual has always been forced to write with his right hand, when anything happens to prevent this, then he has the right brain and left hand to fall back upon, and the result is left-handed (or natural) mirror writing. Thus are explained to my mind the numerous cases recorded of right hemiplegia with development of mirror writing. This writing is not a diseased condition, but the (to the patient) artificial form of writing being rendered impossible by the disease, as it would

*Just as steam by its gain upon
 time over distance has reduced
 the space which separates countries,
 so will sound commercial in-
 formation form the most ef-
 fectual means of diffusing
 knowledge by its interchang-
 ing the ideas of mankind.*

E. J. R.

LEFT HAND.

be by tying his right hand behind the back, he reverts to his natural type of chirography. This is also the view taken by Professor F. J. Allen (*Brain*, Vol. xix, 1896, page 385), himself a mirror writer.

The best historical example of a change from right-handed to left-handed writing, (I quote from Ireland's paper,) "is that of the MS. of the 'Codex Atlanticus' of Leonardo da Vinci, in the Ambrose Library at Milan. It was generally said that in adopting this singular style of writing, Leonardo wished to preserve his work from the eyes of superficial readers; but we can give another explanation. There is a diary in the National Library at Naples of the priest Antonio de Beatis, who, in 1517, travelled in the train of the Cardinal of Arragon through Germany, the Netherlands and France. The Cardinal visited Leonardo da Vinci, who passed the last years of his life in the neighborhood of Amboise, in a villa given to him by Francis I. De Beatis remarks of the famous artist, in his

journal, 'that nothing more of value in painting could be expected of him, as he had paralysis of the right hand.' It would appear from this that Leonardo da Vinci, being unable to use his right hand, wrote with his left, and fell into the practice of writing from right to left." One may assume, I think, that Leonardo da Vinci was naturally left-handed.

If an enquiry were made about all cases of right hemiplegia with subsequent sudden adoption of mirror writing, I think it would be found that all these patients were naturally left-handed, or at least ambidextrous. Some interesting experiments were made by school teachers for Dr. Ireland in this connection. In one case the teacher made all his scholars write with the left hand, and five wrote in mirror fashion. These were all found to be left-handed, and they were the only left-handed children in the class of sixty. I had the same experiment made in the Victoria Hospital for Sick Children. Thirty-six

Left hand mirror writing
the reverse of mirror writing
knowledge by its interpretation
most effective means of obtaining
commercial information from the
country, as well as
direct the above which appear
from over distance
left as shown by the given paper

S. F. S.

LEFT HAND MIRROR.

children were instructed to write a short sentence with the left hand. All did it in ordinary writing, but enquiry showed that none of them were left-handed.

It is a curious fact that many individuals do not know that they are writing in mirror fashion. Thus Dr. Ireland mentions the case of a boy who, when told to copy the word "wonderful," wrote it with the left hand in mirror writing, and could not see that it was not correct. Evidently his right visual centre was the one that he habitually used and everything was by him seen backwards.

All our brains are dual to a certain extent, and would be more so if parents and teachers did not systematically oppose the use of the left hand. Our legs and the two sides of our faces act equally well because they have always been allowed to do so. I find that I can crudely write in the snow with either foot, and that with the left foot mirror writing comes quite naturally.

In the discussion in recent *Lancets* on right-handedness and left-brainedness already referred to, Sir William R. Gowers states that it is his opinion that "every child seems to be born either handed, one handedness comes with development, partly from inherited, partly from educational influences." In my opinion the educational influence is the important, if not the only influence. Dr. James Shaw, in the same discussion, states that, by way of counteracting the supposed inherent tendency to right-handedness as well as any uncontrollable external influences in that direction, he has in two instances "by putting articles into the left hand, taught children, who previously did not grasp by preference with either hand, to use it more and better than the right." Having given the start to the left hand, he found it difficult to keep the right hand up to the leader."

Dr. L. C. Bruce ("Notes on a case of Dual Brain Action." *Brain*, 1895, page 54) gives a very instructive history of a case of melancholia in which the two sides of the brain acted at different times. For a time the man would be melancholy, could speak and understand English, and would write in the ordinary way with the right hand. Then a change would occur; he would become noisy and excitable, could only understand and speak Welsh, and his writing could only be executed with the left hand, and would be of the mirror type. What better proof could we have that mirror writing is the natural writing of the left side?

In my patient, as left-handed backward writing was to her the natural form of writing, when she was forced to express herself with her right hand she was made to perform what was to her mirror writing. Having learned this, it was as easy for her to learn right-handed mirror writing as it would be for us to learn left-handed ordinary writing. Then she picked up left-handed ordinary writing as we might acquire right-handed mirror writing. Thus she became provided with four methods of chirography, in all of which she is proficient.

CASE IN PRACTICE.

BY S. McCALLUM, M.D., THORNBURY, ONT.

A short time ago a boy, aged 12 years, was brought into my office about 6 p.m., who a short time before had swallowed a Canadian fifty-cent piece. He had been running with it in his mouth and it happened to get beyond his control. When he came in his mouth was partly opened, the saliva flowing out freely, and his speech much impaired. He could not

swallow. On making an examination with a head-mirror and reflector the coin could not be seen, so I concluded it must be fast somewhere between the pharynx and the stomach. I passed a stomach tube down into the stomach. This was done without much difficulty apart from the resistance of the boy. Having succeeded in passing the tube I felt certain the coin was no longer in the esophagus, but in the stomach, although the boy still held it was in his throat. After the tube was passed the boy could swallow, and his symptoms seemed much better. The boy was sent home with his father, who accompanied him, with the understanding that if he developed any new symptoms to let me know at once. No medicine or purgatives were given, nor any directions as to diet. The next day at 4 p.m. the father returned and stated the boy had passed the money about one hour before.

GLIMPSES FROM THE HISTORY OF MEDICINE.

BY H. S. HUTCHISON, M.B., TORONTO.

II. HIPPOCRATES THE GREAT.

Before an intelligent view of the life of the great "Father of Medicine" can be obtained, the task must be engaged in of studying the conditions which existed previous and leading up to his time.

Alike with other peoples of antiquity, the Greeks commenced with a system based on theurgic principles. It seems strangely fantastic and quite confusing the way in which human personalities and deities were intermingled in daily life, and it is hard to make out in what light during his life the principal figure in early Greek medicine, Æsculapius, was regarded. On the whole, however, he seems to have been quite human, and to have been raised to the rank of a god after death. His mother, Corona, being pregnant of Apollo, was condemned to be done away with, and the child was removed by Cesarian section at the very funeral pile. He was, the story goes on, nursed by a goat, and pediatricians delight in referring to this as the first instance of artificial infant feeding.

Æsculapius, though accustomed to use charms freely, was possessed of a knowledge of both internal medicine and surgery, and in this his greatness must have rested. For after his death the famous places of worship, the Asclepeia, were erected to him, and much knowledge culled from experience and observation underlaid the clever trickery that was practised within their walls. These temples were usually beautifully

situated near natural springs of health-giving waters, and while the onus of failure in treatment was laid at the feet of the patient himself, yet all manner of hygienic and therapeutic measures were adopted.

From these institutions emanated a class of men who, having learnt all possible, separated themselves from priestly offices to take up the regular lay practice of medicine. Thus was constituted the first of the famous series of "schools" of Grecian medicine, the Asclepiads. Fine colleges were erected by them and through their knowledge was kept to a great extent in families, yet by paying a fee, (of great size from our present day standpoint) outsiders were admitted. The teaching was handed down orally from teacher to pupil and was in verse, to help the memory. Boys began the study at the early age of twelve years. The completion of their education was marked simply by the administration of what was first committed to writing in Grecian medicine, the famous Oath.

The contents of this oath should be of exceeding interest, for at an epoch of great enlightenment in the world's history we have its clauses performing services which are accomplished to-day by the severe means of terrifying examinations. After containing much reference to the duty of pupil toward teacher, it passes on to more purely medical requirements. The candidate promises to do always what seems to be to the best advantage of the patient; to give no deadly medicine; to give no woman a pessary to procure abortion; to practice and live with purity and holiness; to do no lithotomies (these were to be left to a special class of workers not considered worthy of much respect); and to keep everything secret in connection with medicine and practice.

And now came the grand blending of philosophy with medicine, the entrance of many of the world's greatest minds into what was sincerely considered the art of healing, and the separation of medical work from its association with things religious to place it upon a pinnacle of independence. The natural result of this freedom of thought was the formation of the different schools. Amongst these the most noteworthy were the Italian school, to which belonged Pythagoras, who first taught the immortality of the soul and decay of the body; the Sophists, who eventually degraded philosophy into a matter of consulting personal advantage; and the Gymnasts, a well-known class who associated actual physical exercises with the treatment of even acute diseases. This latter school was looked down upon by the others, and it was considered by the pure reasoner, Plato, that the union of gymnastics with medicine was a nuisance.

Into this age of golden conditions of existence, into the time

of Demosthenes, Socrates, Plato, Aristotle, Xenophon, Aristophanes, Phidias, and many other immortals, came, not by any means solely as a product of the times, but as a unique individual to stand forth a tower of strength for all centuries, the great, yet simple character, Hippocrates the Great.

Of the man himself we have too little personal description. Born about 460 B.C., the son of an Asclepiad, taught by his father, then by Sophists, then by Gymnasts, he launched forth into some twenty years of travel to commence a career of respect and fame, to earn early in his life the title of "The Great." Of his private life we can know but little. An interesting point in this connection, however, was his belief in accustoming oneself to irregular strains on the system, and though he strenuously advised a control over the passions, yet for the above purpose he advocates the measure of becoming tipsy once in a while. (It is said of his disciples that they were more faithful in carrying out his teachings in this respect than were they in many others.) His professional bearing was of the highest order, and we have many practical bits of advice from him, such as never to expose those parts which should be covered, to avoid being officious, not to roll up one's sleeves like an athlete. His knowledge of human nature was keen, and here again we have much wisdom handed down for our use. Thus he tells us to win the admiration of patients and says that this is best done by good diagnosis and prognosis. He possessed a desire for pure knowledge and was anxious to do his duty by his fellow-men. "Where there is love for art there is love for man."

The knowledge of Hippocrates was underlaid by the following general belief. Four elements were the basis of all life, fire, air, earth and water. The reaction of these upon each other, with the help of innate heat, was the essential for preservation of life, while the evaporation of heat and consequent cessation of the above co-operation caused death. The circulation of air in the vessels was also essential to life, and the blood was supposed to run only from centre to periphery. Disease took a natural course of three stages, crudity, coction, crisis. Crudity corresponded to the degeneration of the body fluids, coction to their preparation for evacuation, and crisis to their evacuation. Failure of this last process to occur caused incurability or chronicity.

With this foundation of theory Hippocrates selected, as the practical opportunity for human skill to be brought to bear advantageously on disease, the period in a case immediately preceding crisis, and with a view of bringing about this phenomenon was able to use, through his own efforts, wisdom and an exact knowledge acquired through methods which have been the great pattern of all medical endeavor since.

Clinical Note.

HERPES GESTATIONIS.

BY HELEN MACMURCHY, M.D., TORONTO.

This is a somewhat rare disorder, "characterized by multiformity of lesion and excessive itching,"* which may occur at any time during the last six months of pregnancy, or may appear a few days after parturition has taken place. No reference occurs to it in many of the text-books on obstetrics.

Clinically, it bears a marked resemblance to dermatitis herpetiformis,† the eruption having a tendency to appear first on the limbs. There is usually little interference with the general health, although sometimes febrile symptoms are observed. The most troublesome symptom is the burning and itching from which the patient suffers, and the affection is usually difficult to cure before parturition but often disappears shortly after that event.

The following case occurred in the dispensary of the Woman's Medical College, Toronto, September 20th, 1902: Mrs. S., aged 38 years. The eruption first appeared in July, 1902, and was copious, multiform in character, but consisting chiefly of small vesicles, hot, irritable and itchy, placed upon an erythematous base. The lower limbs were almost covered with the eruption, and small ulcers had formed in many places. There were also areas where the healing process had occurred.

The patient's second child, a boy 2½ years old, was suffering at the same time from an attack of impetigo contagiosa, probably parasitic in origin, although a careful examination failed to confirm this opinion. It was at first thought that the two cases might have a common origin, but the difference in the character of the lesions (which in the child lacked the multiformity, the vesicular type, the erythematous base and the sensations of burning and itching), and also the difference in the clinical course, seemed to justify the diagnosis of herpes gestationis in the case of the mother.

The treatment given was for the child frequent bathing with boracic lotion and the application of weak sulphur ointment twice a day, and for the mother a lotion of linseed oil, carbolic acid and lime water, applied frequently. On October 12th the child was quite cured, and the mother somewhat improved.

On November 1st labor occurred, following a normal course, and almost immediately after labor the skin lesions disappeared. When I last saw the patient, on November 23rd, only some redness of the skin remained to mark the places where the lesions had been most numerous. The patient gave no history of similar attacks during the two previous pregnancies.

* Diseases of the skin. Malcolm Morris.

† Duhring and others consider Herpes Gestationis and Dermatitis Herpetiformis identical.

Selected Article.

THE LORENZ METHOD.

BY HENRY LING TAYLOR, M.D.

Professor of Orthopedic Surgery, New York Post-Graduate Medical School and Hospital.

There appears to be some danger that the scientific value of Professor Lorenz's recent demonstrations may be obscured by the exploitation of the picturesque and popular aspects of his trip, or at least that professional judgments may be influenced by matters having little to do with the actual merits of the method.

Personal observation of Prof. Lorenz's work in New York has convinced the writer that previous to these demonstrations, the Lorenz method for bloodless reposition of the congenitally dislocated hip was practically unknown among us. While many bloodless reductions have been performed and many successes reported, the writer has never seen so much force used as is applied by Prof. Lorenz, nor has he seen it applied in the same way, nor the correction carried so far. In order to properly judge of the method, it should be done as it is done by its originator. From the perfectly frank admission of Prof. Lorenz, as well as from some of his reported experiences in this country, the operation cannot be said to be entirely void of danger, though the shock is moderate and the lacerations are soon healed. Used with judgment by experienced hands, the dangers appear to be moderate, but in the hands of the inexperienced or incautious, they may prove serious. From this cause, as well as from imperfect after-treatment, a strong reaction from the present popularity of the method seems not improbable, for which the originator will be in no way responsible. The brilliancy of the operation in the hands of such a master of manipulative technique, and the good results expected should not blind us to some of the apparent defects of the procedure, nor make us forget that a detailed analytical report of ultimate results is still wanting.

"Dry surgery" or "bloodless surgery" is a mere catchword, the important point being that our surgery should be at once scientific and practical, safe and appropriate. Where these conditions are fulfilled it does not matter much in the present state of the art, whether the method be dry or wet, tearing or cutting, manipulative or incisive, and if this particular procedure is generally adopted it will not be because it is dry, but because

in spite of the great force and extensive lacerations necessary, it fulfils the indications. Extraordinary as are the immediate results of the operation within the limits prescribed, and impressive as are the genius and personality of its originator, one cannot help wondering whether this is the last word of surgery, or whether at least in the more difficult cases, it may not be found to be more workmanlike and no more dangerous to cleanly incise tendons, and to readjust by the open method the capsule and bone when necessary.

Prof. Lorenz's ideas in regard to this and other orthopedic problems are marked by boldness, thoroughness and originality, and his influence upon the work in this country will be profound and for good, whatever the fate of any particular procedure.

Those who come into personal contact with Prof. Lorenz are inevitably impressed with his directness, simplicity and courtesy. He has that indefinable something called charm. His mental equipment, experience and skill are of the highest order, and to these he adds a poise that is rare indeed. His method for the bloodless reduction of congenital hip dislocation is a great advance on the means previously at our command, and it has deserved the hearty and prompt recognition which it has received, but that it perfectly meets all the requirements of the case, or that no further advances will be made may well be doubted.—*The Post-Graduate*.

Progress of Medical Science.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

The Use of Paraffin for Sunken Noses.

Stephen Paget (*British Medical Journal*, January 3rd, 1903), in a lecture to post-graduate students, gives a *resumé* of the history of the use of paraffin in the treatment of saddle-nose since its introduction by Gersuny, of Vienna, in 1899. Prior to this, however, Gersuny had used it in four different cases in other parts of the body. In his first case, that of a young man, he injected melted paraffin into each side of the scrotum to assume the place of testicles removed by castration, and to enable the man to pass the medical examination required for admittance to the army. The second and third cases were to lengthen the soft palate after operation for cleft. The fourth was to raise a sunken cicatrix. Then came the fifth, the first one to raise the sunken nose. Each of these cases gave a good result.

Being so apparently successful in its use, many other men have followed his example, and have used it with more or less success in correcting deformities and restoring functions in different organs of the body.

Paget himself has confined his use of paraffin to correcting the deformity of sunken bridge of the nose, and has already treated twenty-six cases.

The only object of this treatment in saddle-nose cases is cosmetic—to improve the personal appearance of the individual; and it is claimed, when properly conducted, that the injection of melted paraffin beneath the skin of the depressed nose will accomplish much toward the desired end.

Paget's method of treatment is the following: The patient, instruments, etc., are prepared aseptically as for any other operation. Two assistants are required. An anesthetic is administered. Meanwhile the paraffin, in a suitable syringe covered by rubber sheeting, except the pointed half of the needle, is kept in a water bottle six or seven degrees higher than the melting point of the paraffin. The skin is nicked and the needle, first dipped for a second or two into boiling water, is passed well under the skin, a little to one side of the middle line, below the point where the bridge ought to be, and directed upwards. The injection—the instrument holding several c.cms.—should be at the rate of 1 c.cm. every ten

seconds. The assistant keeps up firm pressure all round the nose with his fingers, and by the use of a soft metallic ring. Cases differ in the amount of paraffin required, and surgeons differ in the melting point of the paraffin used. Paget prefers the melting temperature to be 110° to 115° Fahr.

The paraffin begins to set in less than a minute, but it remains doughy for about quarter of an hour. Hence the moulding to the required shape should be done at once and pretty vigorously, and must be continued until the paraffin has become hard and incompressible. The patient is put to bed, and a cold compress put lightly over the part. When consciousness is restored the patient is given a mirror, and while told to be quiet is instructed to gently mould the nose now and then for several hours in order to get as perfect a form as possible.

Sometimes the work is done at one operation, sometimes at two or more. Another thing, the paraffin invariably shrinks a little on cooling, so that a few drops may be required to be inserted later.

There is always a certain amount of soreness, and occasionally persistent redness after the operation. But both in the end subside.

The chief dangers to be guarded against are the possibilities of resultant embolism, and too large injections of paraffin.

Although the general results in a large majority of cases operated on have been satisfactory, and there have been no fatal issues; it has yet to be proved how well the treatment will stand the test of time. In closing, Paget says: "Only let nobody think that the method is so easy as it sounds. It is full of little difficulties; it wants experience, and it involves very grave responsibility."

Mucous Polypi of Posterior Naso-Pharyngeal Wall.

Lavrand (*Journal des Sciences Medicales de Lille*, October 18th, 1902) reports a case occurring in a girl aged 12 years. She was operated on for adenoids. The amount removed was small, which led to further examination, when a mass of mucous polypi were found hanging from upper part of post-pharynx. They were removed one by one. The condition is rare; no similar cases having been reported.

Treatment of Congenital Cleft of the Palate.

J. F. McKernon (*Transactions of American Laryngological Association*, 1902). The writer differs somewhat in operative technique from many authorities upon this subject. Prior to operating on the cleft he invariably performs tracheotomy, and the tracheal tube is worn continuously for ten or twelve days

after the palate operation; or until food can be taken by the mouth. During the whole of this period the patient is sustained by nutrient enemata. Still, from the third day onwards, at the time of dressing this throat, a glass of warm peptonized milk is given, to be followed by another of sterilized water to cleanse the parts.

In operating, chloroform is the anesthetic preferred, to be administered through gauze over the tracheotomy tube, after the throat pad has been placed in position. The Smith's gag is used, as it contains a tongue depressor and is self-retaining. A large thick wad of sterilized gauze, with a string attached, is then placed below the base of the tongue, covering the entrance of larynx and esophagus. This prevents blood, solutions, etc., from getting into these passages. Several similar pieces of gauze should be held in readiness in case of emergency. The next step is to thoroughly cleanse the face, nasal passages and mouth, with warm boric acid or common salt solution.

The operation itself does not differ materially from the one ordinarily followed. After the operation is over the mouth is washed again with saline solution, and the throat pad replaced by a new one. A strip of sterilized gauze is placed between the palate and the post-pharyngeal wall, the lateral incisions are also packed with the same material; and finally, the whole operative field, including the mouth to the teeth, is carefully filled with the gauze, pressing rather firmly against the under surface of the new palate, and the jaws closed with bandages.

By this means the patient breathes through the tracheotomy tube, and being fed by enemata, the wounds are kept as still as in any other region of the body.

The packing should be removed for the first time at the end of twenty-four hours; the parts washed with a hot saline solution or sterilized water, and then repacked as before. After this the dressing should be repeated daily while required.

The routine followed after operations has been to place the patient in bed in a room with a constant temperature of at least 80 Fah. for three or four days at least. A steam kettle is kept constantly going, and over the end of the tracheotomy tube is placed a piece of gauze, moistened with a saline solution, which is changed every two hours.

Of twenty-four cases operated upon in this manner sixteen were closed by primary union in both hard and soft palate. The remaining eight were more or less failures. Still, the results were far more satisfactory than in cases where mouth breathing and oral alimentation had been allowed, as in these, efficient support and packing of the palate had to be dispensed with.

Successful Removal of Epithelioma of Soft Palate.

J. F. McCann (*New York Medical Journal*, August 1902) gives a report of the successful treatment of this case by a combination of methods. The growth was very large, involving the uvula and nearly the whole of the soft palate. A portion of the tumor was removed under anesthesia by the electro-cautery knife, stripping it as much as possible from the posterior pillars and soft palate. Then the ulcerated areas on the pharyngeal wall were curetted.

On subsidence of irritation the Roentgen rays were used three times a week, the sittings varying from twelve to fifteen minutes. They were continued for seven weeks. Improvement in condition commenced at once; but owing to smarting which the rays occasioned, accompanied by dizziness, the treatment had to be suspended for a time. The parts had all healed but a small spot on posterior surface of the palate.

Three weeks later the growth had commenced to extend. Under chloroform it was again curetted and cauterized with the electric knife. After this the Roentgen ray treatment was resumed. The applications, as before, were made three times a week and continued for five weeks.

On final examination the ulcer was entirely healed; scar tissue was almost unnoticeable, and the restoration of the freedom of the palate perfect.

Large Laryngeal Myxoma.

Delobel (*Jour. des Sciences Medicales de Lille*, Nov. 15th, 1902) reports the history of a case occurring in a woman aged 27 years. The tumor was easily removed under local anesthesia, with complete relief to the asphyxia. Examination proved the growth to be a myxoma—a very rare condition to be found within the laryngeal cavity.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF J. T. DUNCAN AND J. O. ORR.

Care of Eyesight of School Children.

G. C. Eggers (*Medical Age*) has an instructive article on the Care of Eyesight of School Children, which may be thus abstracted. The faculty of vision is, without doubt, the most valuable and highly prized of all the senses. A child who is suffered to grow up with a defect of vision suffers much in its mental development. Many apparently dull pupils are such only because they are victims of defective eyesight.

The Illinois State Board of Health deemed it essential that some action should be taken to protect the sight of the school children of the State, and a committee was appointed to consider the matter. On inquiring into the condition of the children in Chicago schools it was found that 32 per cent. of the boys, and 37 per cent. of the girls had defective vision. The committee strongly urged, in its report, that the eyes of the children in every school in the State should be examined in a similar manner to the Chicago plan. By this plan a brief and simple examination is made of each child's eyes and ears once a year by the teachers. The proper test cards are furnished to the teachers, and they are instructed how to use them. If the child's eyes or ears are found to be seriously defective a printed card of warning is sent to the parents, who will generally see that the defect is remedied. Children will frequently return from school complaining of headache, and upon inquiry we learn that they can with difficulty see the work upon the blackboards. Some, who can see the work in the early part of the day, can not see it later in the day, because the ciliary muscle is overtaxed, causing symptoms of eye strain, and, in some cases, squint. Most of the cases spoken of could be detected by the simple tests above mentioned.

Ocular Manifestations in Chronic Bright's Disease.

G. E. DeSchweinitz (*Medicine*) discusses the Ocular Manifestations in Chronic Bright's Disease. He recognizes seven of these conditions. They are:

1. Complete blindness; without ophthalmoscopic lesions, or at least without the presence of lesions more or less suggestive of disease of the kidneys, generally called uremic amaurosis, and most often seen in acute nephritis, but also in acute exacerbations of chronic renal disease.

2. Various types of retinitis and neuroretinitis, to which the descriptive term "albuminuric" is commonly applied, and which are most often seen in association with chronic forms of kidney disease.

3. Alterations in the calibre and relation of the retinal vessels owing to sclerotic changes in their walls, with or without hemorrhages and exudates in the retina, seen in association with those forms of renal disease in which vascular changes are evident elsewhere in the body; also isolated hemorrhages and exudates, without marked vessel-wall changes.

4. Alterations in the uveal tract, particularly in the choroid and iris.

5. Some varieties of cataract.

6. Paresis and paralysis of the ocular muscles, particularly the superior oblique and the external rectus.

7. Recurring subconjunctival hemorrhages.

The Prevention of Blennorrhœa in the Eyes of the Newly Born.

Prof. G. Leopold (*The American Journal of Ophthalmology*) discusses the question as to whether Crede's method (the use of nitrate of silver) should be made obligatory.

It seems to me, he says, it is high time this should be done. Its benefits should be given to every one.

There will be hardly any serious objections to its introduction into private practice. If in any case the infant's father should object, it can, of course, not be enforced; yet the statements as to the possibilities of a serious eye disease will in some cases be sure to overcome the objections, while, in others the method must be omitted. Then the law under which the midwives must report all infected cases, must see to it that the quickest and best possible aid is furnished the diseased eyes.

As to the bitterly-contested point, whether nitrate of silver should be retained for these instillations or another and less irritating remedy be substituted, I, with Runge, Fehling and Gusserow, maintain that nitrate of silver—and in order to remove its irritating qualities, in a 1 per cent. solution—leaves nothing to be desired with a view to safety, innocuousness and simplicity.

In 191 infants $1\frac{1}{2}$ per cent. silver nitrate solution was used, it gave brilliant results, no irritation, no blennorrhœa. I intend from now on to employ a 1 (one) per cent. silver nitrate solution, and I expect no irritation and certain prevention.

Postscriptum. From April 2nd to July 31st, 1902, silver nitrate solution of 1 per cent. was instilled into the eyes of 698 infants. No early infection was observed, and but one late infection. No irritation appeared.

J. T. D.

Editorials.

TESTIMONIAL TO DR. RICHARDSON.

The old students of Dr. Jas. H. Richardson, of Toronto, are making arrangements to hold a banquet in his honor some time in April next. They hope also to have ready at that time a portrait in oil of Dr. Richardson, which will be presented to the University of Toronto. The following committee have the matter in charge: Drs. Bascom, Oldright, Ellis, Wright, Cameron, Ross, Aikins, Cotton, Cleland, Duncan, King, Caven, Peters and Amyot. A circular letter has been issued on behalf of the committee by Dr. Amyot, the Secretary-Treasurer, to the graduates, asking for subscriptions of five dollars each which will include admission to the banquet, or three dollars towards the portrait fund alone.

Dr. Richardson was born at Presqu' Isle in 1823. He commenced his medical studies in 1841, with Dr. Rolph, then living in Rochester, N.Y. In 1843 he attended the first course of lectures in the new medical faculty of King's College. In 1844 he went to England and studied in Guy's Hospital for three years, with the exception of a part of 1846, when he studied in Paris. After obtaining the diploma of the Royal College of Surgeons, England, in 1847 he returned to Canada, and commenced practice in Toronto. In 1848 he became M.B., King's College. In 1850 he was appointed Professor of Anatomy in the Medical Faculty of the University of Toronto, and held that position until 1853, when the Medical Faculty was abolished. A few years later he accepted the Chair of Anatomy in the Toronto School of Medicine, and the same Chair in the University of Toronto Medical Faculty in 1887. Three years ago he gave up active work as a teacher, and was made Emeritus Professor. Although now in his eightieth year he is hale and hearty, and still a lover of out-door sports, being actively engaged in bowling and fishing in summer and curling in winter. We hope to see a very happy reunion between "the boys" and their beloved teacher in April.

THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association has prospered to such an extent during recent years that it now worthily represents the medical profession of the United States. That this was not the position of the society from ten to fifteen years ago is generally recognized in this country. We in Canada rejoice with the physicians of the American Republic in the growing prosperity of their great national medical association. The present happy condition is due largely to the increased harmony existing amongst medical men in all parts of the Union, the great executive ability shown by its officers, and the excellence of the official journal of the Association.

The next meeting of the Association will be held in New Orleans, La., May 5th to 8th, under the presidency of Dr. Frank Billings, of Illinois. Special addresses—called orations—will be delivered as follows: Medicine, Dr. J. M. Andus, of Philadelphia; Surgery, Dr. A. F. Jones, of Omaha; State Medicine, Dr. Wm. H. Welch, of Baltimore. It is quite needless to tell our readers that Canadians who attend this meeting will receive the same sort of kindly and hearty welcome which has invariably been extended to our countrymen in the past.

MEDICAL LEGISLATION IN MICHIGAN.

A bill has been introduced in the State of Michigan Legislature with the object of giving the Board of Registration greater authority in passing upon the qualifications of physicians who seek to practice in Michigan. It is said that the physicians of that State wish to build around them a wall similar to that which has so long surrounded Ontario. They have found that on account of the high standard of examination in the Ontario Medical Council a number of Canadians, educated in Ontario and frequently graduated from Ontario universities, have not passed the Council examinations, but have commenced practice in Michigan, becoming enregistered there as licensed physicians on presentation of their *parchments*.

When the proposed Act is passed (as expected) the Board of Registration will probably have the power to enact regulations

compelling outside graduates, especially those from Canada, to spend at least one year at a recognized medical college before being allowed to go up before the State Board of Examiners. We in Canada have no cause for complaint even though such legislation be chiefly directed against us. We should be sorry, however, to see each State of the Union legislate for itself alone without arranging for some sort of reciprocity, or the granting of a license which would cover the whole of the United States. Americans should have some central body with power to grant a license for their whole country. We want a similar condition in Canada, and shall have it if Dr. Roddick's Dominion Act, as passed last session, is accepted by our different provinces.

A LECTURER ON MEDICINE FOR FIFTY YEARS.

Dr. Uzziel Ogden, of Toronto, completed his fiftieth year as a lecturer on medicine at the end of 1902. The Dean of the Medical Faculty of the University of Toronto gave a dinner in the Faculty Union to do honor to Dr. Ogden on account of this remarkable record. It was purely a private function, with a limited number of guests. There were present some of his former colleagues in the Toronto School of Medicine, including, in addition to the Dean, Dr. R. A. Reeve, Drs. Jas. H. Richardson, Wm. Oldright, Wm. Ogden and A. H. Wright; many of his former students, including Drs. Jas. White (of Hamilton), Albert Macdonald, Irving Cameron, George Peters, Alexander McPhedran, Charles J. Hastings, Jas. F. W. Ross, Wilberforce Aikins and W. H. Ellis. Drs. Daniel Clark, James Thorburn, Moses Aikins, Cassidy, Jas. M. MacCallum, and some others were unable to attend. A very enjoyable evening was spent and very interesting speeches were delivered by the Dean and Dr. Uzziel Ogden, Richardson, Wm. Ogden and others.

Dr. Ogden commenced to lecture in the Toronto School of Medicine in January, 1853. He held the Chair of *Materia Medica and Therapeutics* from this time until 1870, when he was transferred to the Chair of *Obstetrics and Gynecology*. At the time of the re-establishment of the Medical Faculty of the University of Toronto in 1887, he was asked to take either

obstetrics or gynecology. He chose the latter, and was Professor of Gynecology from 1887 to 1903. After completing fifty years as a teacher of medicine, he decided to give up active college work, and tendered his resignation to the University authorities.

In his younger days Dr. Ogden was considered somewhat delicate. Since he commenced practice, however, in 1849, he has done an immense amount of work. He has always been in the harness, and had a laborious and remunerative practice for more than forty years. Although he gave up a portion of his work a few years ago, he still has a fairly large practice. As a lecturer he shone especially as a teacher of midwifery—being undoubtedly one of the best on the continent. He was always a great reader, both of medical and general literature. It may surprise many of our readers to be told that he was the first editor of the medical journal now called the *CANADIAN PRACTITIONER AND REVIEW*. When it was first published in January, 1876, under the title of the *Canadian Journal of Medical Science*, Uzziel Ogden was the editor, and Richard Zimmerman the corresponding editor. We tender our hearty congratulations to Dr. Ogden for his record in the past, and our best wishes for his welfare in the future.

MEDICAL FACULTY UNIVERSITY OF TORONTO.

At a meeting of the Faculty, February 6th, the following resolution was passed unanimously:

“In view of the announcement recently made of the resignation by Dr. Uzziel Ogden, after fifty years of continuous medical teaching, of the Chair of Gynecology in this University, this Faculty deems it fitting to commemorate in perpetuity upon its minutes the interesting fact of this unusually long period of active service in the cause of medical education. And although during the greater part of this time Dr. Ogden was a teacher in the Toronto School of Medicine, (whose career was, for the most part, closely identified with this University) yet for the last seventeen years his labors have been expended solely within these halls, and it affords the members of this Faculty much pleasure to record their deep appreciation of his

indefatigable industry and untiring zeal in the discharge of the duties of his Chair. They owe him, also, a debt of gratitude and thanks for his solicitous care and skilful management of the affairs of the Faculty during his occupancy for three years of the office of Dean, the notable progress of the Faculty during which period he may perhaps regard as a satisfactory reward for his labor of love. While Dr. Uzziel Ogden's immediate connection with this University was through the Chair of Gynecology, yet in view of the fact that a majority of his recent colleagues had been in the past students of his in the Departments of Midwifery and Materia Medica and Therapeutics, it is not inappropriate in testimony of his versatility and attainments to make mention here of his well recognized success as a lecturer and teacher in these branches also. To impart many of the facts and theories of medical science to successive generations of students for half a century, and to impress upon them the indelible, though unconscious, stamp of high example in life and character is an opportunity for usefulness and a sphere of influence vouchsafed to few, and in saying 'farewell' to Professor Uzziel Ogden his colleagues in the Faculty of Medicine in the University of Toronto extend to him their heartiest congratulations upon the attainment of his Jubilee, their sincere appreciation of his faithful service, their kind remembrance of his comradeship and leadership, their deep sense of his high example, and their earnest hope that his great improvement in health may long continue, so that his days of the lengthening shadows may be passed in well earned rest, peacefulness and happiness.

"The Faculty also ventures to record the hope that the Senate and the Governor-in-Council may be graciously pleased, in acknowledgment of his long, arduous and faithful service, to call Professor Uzziel Ogden to the *otium cum dignitate* of the Emeritus Professorship."

Personals.

Dr. W. F. McKay, of Beaverton, has commenced practice in Arnprior.

Dr. J. G. McKee has removed from Chicago to Sturgeon Falls, Ont.

Dr. F. J. C. Fitzgerald has removed from Woodstock to St. Catharines.

Dr. Bryce McMurrich, of Bothwell, spent his Christmas holidays in Toronto.

Dr. Houston Irwin has removed from Warren, Algoma District, to Pembroke.

Dr. Thomas S. Cullen, of Baltimore, visited Toronto during the Christmas holidays.

Dr. W. H. B. Aikins, of Toronto, spent a week in New York early in January.

Dr. A. Primrose, of Toronto, paid a short visit to Nova Scotia early in January.

Dr. J. E. Elliott has been elected chairman of the Toronto Collegiate Institute Board.

Dr. John T. Fotheringham, of Toronto, spent a week in Ottawa, January 5 to 12th.

Dr. Thos. B. Hewson, of Colborne, has recovered from his recent attack of pneumonia.

Dr. R. J. Wilson, of Toronto, has recovered after an illness of six weeks with typhoid fever.

Dr. A. C. Bowerman, at one time practising at Bloomfield, Ont., has removed to Brentwood, Cal.

Dr. Charles N. Laurie, formerly of Pottersburg, County of Middlesex, has removed to Port Arthur.

Dr. Wm. Oldright, of Toronto, and his son, Dr. Harry Oldright, of St. Catharines, returned home, January 23rd, after a cruise among the West India Islands.

Drs. Gibb Wishart and Harold Parsons, of Toronto, recently spent a holiday in St. Catharines, being domiciled in the Welland Hotel.

Dr. George W. Badgerow, of Toronto, has passed the examinations for the double qualification of M.R.C.S. Eng., and L.R.C.P. Lond.

Dr. George McDonagh, of Toronto, left home, February 9th, on a trip to the West Indies. He expects to return about the middle of March.

Dr. C. P. Jento, after practising for a time in California, where he became much improved in health, has returned to his former home, London, Ont.

Dr. Perry G. Goldsmith has been appointed Consulting Surgeon on diseases of the eye, ear, nose, and throat, in the Deaf and Dumb Institute, Belleville.

Dr. David Jamieson, M.P.P., of Durham, County of Grey, has quite recovered from his recent attack of appendicitis, for which an appendicectomy was performed.

Dr. A. H. Montgomery (Tor. '01) is practising in New York City. He is also acting as one of the assistants in Anatomy at the senior branch of Cornell Medical School.

Dr. James M. MacCallum, of Toronto, spent a short holiday in Hamilton, Bermuda, and returned to his home during the latter part of January, with health much improved.

Dr. Moore, of Brockville, and Sir James Grant, of Ottawa, visited Sir Frederick Borden, January 24th, and presented him with the parchment which certifies that he is now an honorary Licentiate of the College of Physicians and Surgeons of Ontario.

Dr. W. J. Bell, of Toronto Junction, is now surgeon to the C.P.R. Steamship *Empress of Japan*. Before leaving home his fellow-citizens of the Junction entertained him at a banquet on New Year's Eve and presented him with a handsome gold watch, chain and locket.

Dr. Gilbert Gordon, of Toronto, became seriously ill in the latter part of January from some obscure form of peritonitis. A laparotomy was performed early in February. At the time of writing he is improving and his physicians hope for a fairly speedy recovery.

At a recent meeting of the Trinity College Medical Society Mr. Brefney O'Reilly, the Secretary, read an address of welcome, presented by the Society, to Dr. Charles B. Shuttleworth, Associate Professor of Anatomy, who has just returned from England, where he obtained the Fellowship of the Royal College of Surgeons.

The Council of the Ontario College of Pharmacy at a meeting, February 6th, made the following appointments to fill the vacancy in the working staff through the death of Dr. A. Y. Scott: Lecturer on Botany, salary \$700, Dr. Paul L. Scott; Demonstrator of Practical Chemistry, salary \$900, Mr. George Evans, druggist, 832 Yonge Street, Toronto.

We learn from the daily press of Toronto that it was officially announced after a meeting of the Board of Directors, held February 7th, that it had been decided by an unanimous vote to appoint Dr. J. Orlando Orr, Secretary and Manager of the Toronto Industrial Exhibition, although he had made no personal application for the position. The salary during the first year will be the same as that paid to the last manager, \$3,000 per annum. Dr. Orr has for many years taken a very active interest in the exhibition, and largely contributed to the success of last year's meeting by his untiring work. There is a general consensus of opinion that the Board has been particularly fortunate in securing the services of Dr. Orr as manager at this important time in the history of the Exhibition.

Obituary.

THOS. McILWRAITH.

Mr. Thomas McIlwraith, the well-known ornithologist of Hamilton, and father of Dr. Kennedy McIlwraith, of Toronto, died January 31st, aged 79.

RICHARD S. MARKELL, M.D.

Dr. Richard S. Markell, a Canadian, and a graduate of McGill, 1867, died at Cloverdale, Cal., where he had practised, January 10th. He was a native of Cornwall, Ont.

COLIN McPHAIL, M.D.

Dr. McPhail, of Summerside, P.E.I., died December 3rd, aged 40. He received his medical education in Trinity Medical College, Toronto, graduating from Trinity University in 1892. He was Vice-President of the Canadian-Medical Association for his province.

ALEXANDER SCOTT, M.D.

Ontario lost two Alexander Scotts in January—Dr. Scott, of Toronto, who died January 3rd (as recorded in our last issue), and Dr. Scott, of Forest, who died January 20th. Dr. Scott, of

Forest, attended lectures in the Toronto School of Medicine, and graduated from the University of Toronto in 1872. After graduating he went to Edinburgh, where he received the double Physician's and Surgeon's qualification. After returning from Great Britain he commenced practice in Forest, and remained there almost without a holiday until the day of his death. He died suddenly in his office, January 20th, aged 62. He was successful in practice, and highly respected by all classes in and about the Town of Forest.

DAVID MUNRO, M.D.

Dr. Munro, of Perth, died suddenly February 6th, aged 61. He was graduated from Queen's University in 1867. He practised in Lanark village until 1882, when he went to Winnipeg. After remaining there a few months he returned to the East and commenced practice in Perth.

HENRY WRIGHT DAY, M.D.

Dr. Day, Registrar of the County of Hastings during the last ten years, was for a long time one of the most prominent physicians of Central Canada. He received his medical education in Kingston, and received the degree of M.D. from Queen's University in 1859. After graduating he settled in Trenton, and had a very large practice in that town for more than thirty years. He was a member of the Ontario Medical Council from 1869 to 1872, and from 1881 to 1895, and was President in 1884-5. He was always recognized as one of the ablest men in the Council. He possessed marked ability, great force of character and tremendous energy. As a citizen of Trenton he took a prominent part in all matters pertaining to the welfare of the community. He was for many years Chairman of the High School Board, for two years mayor of the town, and was once the Liberal candidate for the Dominion Parliament. In private life he was a lovable, genial and generous man—one of the biggest-hearted men the writer ever knew. After a stroke of paralysis about two years ago he never fully recovered strength. He had another attack January 9th, and died on the morning of the 11th, aged 72.

COUGHS AND THEIR TREATMENT.

By DRs. ALEX. DE SOTO AND C. W. CRIMPTON.
Of Wayside Mission Hospital, Seattle, Wash.

An intractable cough! What condition so persistently tries the patience of every physician? Careful examination has been made, the diet regulated, and one of the innumerable prescriptions for that ailment selected, but still the cough continues. Then more investigation, and more careful prescribing; but still after weeks that familiar cough re-echoes through your waiting room, and you wish Mrs. Smith would change her doctor. No such good fortune attends you, and that cough haunts you as dismal thoughts of phthisis do your patient, until you are almost determined to advise a change of climate.

It is not the object of this paper to go into details regarding the only too well known disadvantages of most of our familiar cough mixtures. Down to that household standby, "cod liver oil in every form," they have proven in the vast majority of instances discouraging failures. The above-mentioned remedy, which the patient considers proof-positive of the doctor's having made a diagnosis of consumption, may invariably be depended upon to disarrange the digestion at least. Cod liver oil, once begun, must frequently be continued throughout the entire winter season. Nor can it be shown that the ingestion of fats and oils into the system, to become oxydized when coming in contact with the oxygen in the lungs, ever does more than raise the local temperature by combustion. Although this may prevent cold in comparatively healthy lung tissue, its therapeutic (?) effect on the inflamed pulmonary structure may be described as positively harmful.

Cough is a symptom, varying in intensity and character according to its cause. Nor is that cause always situated within the respiratory organs themselves. Cough is essentially a reflex act depending upon an irritation of the respiratory centre. These sources of irritation may be subdivided as follows: Dropping of mucus from the posterior nares in chronic catarrh. Polypi, enlarged uvula or tonsils, defective closure of the glottis, irritations within the larynx from whatsoever cause, malignant or otherwise. Bronchitis, pneumonia and pleurisy. Gastric when due to derangements of the stomach. Cardiac disease, irritations of auditory canal and organic diseases within the abdominal cavity.

From the foregoing causes it may be readily estimated that to arrive at the exact nature of any given case may not always be an easy matter. Nevertheless, we must relieve the patient, without risk of disturbing either digestive or circulatory

systems. Any remedy which will attain this object in a goodly number of cases is, indeed, a Godsend to patient and physician, and in every sense an ideal remedy. Not until our attention was called to glyco-heroin (Smith) did we become acquainted with a remedy which we have used with a most unvarying success in coughs of every description, and in patients of all ages and conditions, without the slightest unfavorable effect.

The points which recommend glyco-heroin (Smith) are: (1) Palatability. (2) Economy (3 to 4 oz. being ample for a cure of the average case). (3) Its immediate action, soothing the most trying cases. (4) Its absolute freedom from unpleasant or unfavorable effects. (5) It is not only a palliative but a curative agent. (6) The hyoscyamus it contains reaches those trying cases of dry cough due to other causes than simple catarrhal irritation of the respiratory tract.

We are convinced that glyco-heroin (Smith) has no competitors in results, its action being almost specific. It will give satisfaction in every case where results may be reasonably expected, and in many cases its beneficial effects go beyond the most sanguine expectations.

The character of the cases coming to the Wayside Mission Hospital for treatment may be imagined when it is remembered that it is essentially a charity institution; that the vast majority of patients come to us after having tried everything else. These are worthy prospectors and miners, broken in health and pocket by exposure and misfortune. As proof of the above we submit the following cases:

1. D. McK., laborer, 22 years. Had typhoid fever, convalescence much impeded by severe coughing spells, frothy white expectoration, irritable stomach. This condition defies all treatment. There was marked dulness at apexes of both lungs to the third intercostal spaces. Morning temperature normal, resp. 28, pulse 104; evening temperature 101, resp. 36, pulse 120. This condition had persisted for nine days, with progressive loss of strength.

Dec. 16th—Glyco-heroin (Smith) teaspoonful every two hours; a.m., temp. normal, pulse 104, resp. 28; p.m., temp. 101, pulse 120, resp. 36.

Dec. 17th—Slight relief to cough, had some sleep; p.m., temp. 100, pulse 96, resp. 24.

Dec. 18th—Relief marked; p.m., temp. normal, pulse 80, resp. 20.

Dec. 19th—Expectoration free, appetite and spirits better, rapid improvement.

Dec. 20th—Improvement continued, sat up about two hours.

Jan. 8th—Dulness and cough gone, spirits and appetite good, gaining flesh rapidly.

Jan. 11th—Discharged cured.

2. Feb. 19th—Wm. M. Cook, 52 years. Has had severe cough for last three months, due to cold caught in a typhoon on the China Sea after three days' exposure to cold and wet. Has hardly any sleep, incessant dry night cough. Glycoheroin (Smith) teaspoonful every two hours.

Feb. 21st—Immediate relief, has had quite a little sleep.

Feb. 22nd—Improvement continued.

Feb. 24th—Slept all night.

Feb. 26th—Has not coughed in forty-eight hours.

Feb. 28th—No return of cough and discharged cured. Is now in charge of the culinary department of hospital.

3. Jan. 23rd—D. A. Coolie, laborer, 48 years. Marked dullness at base of left lung, severe pain and dyspnea. Temp. 102, pulse 104, resp. 40. There was daily chilliness at 11 a.m., followed by temp. of 103½ to 104. Expectoration muco-purulent. Emaciated, irritable, and appetite completely lost.

Jan. 26th—Glycoheroin (Smith) teaspoonful every two hours.

Jan. 27th—Some relief to cough, other conditions same.

Jan. 28th—Free expectoration, all conditions still unchanged.

Jan. 29th—No morning rise of temperature, p.m. temp. 102, pulse 96, resp. 32.

Jan. 30th—Seems somewhat better: had a profuse night sweat.

Jan. 31st—Temp. 101, pulse 88, resp. 24. Took considerable nourishment.

Feb. 1st—Temp. normal, pulse 88, resp. 24. Less dullness, no expectoration, cough disappearing. Spirits vastly improved. Said it was his third attack, and that in each former instance he was in bed eleven and eight weeks, respectively. Continued to improve, and was discharged Feb. 26th, well.

4. Feb. 17th—J. J., laborer, 19 years, pneumonia third day, dullness of entire right lung. Temp. 103½, pulse 120, resp. 60; expectoration prune-juice, very restless and thirsty, slight delirium, glycoheroin (Smith) teaspoonful every two hours.

Jan. 18th—Temp. 102, pulse 102, resp. 48, much easier.

Jan. 19th—Temp. 100, pulse 84, resp. 36.

Jan. 20th—Temp. normal, pulse 80, resp. 24.

Expectoration has changed, and is feeling much better. Absolutely refused to believe that he had pneumonia. Discharged cured.

5. Nov. 3rd—S. J., a diver, 34 years. Had just been discharged from another hospital where he had been treated for four months for typhoid-pneumonia. Had considerable dyspnea, cough dry, spasmodic, at times slightly frothy expectoration. Temp. normal, pulse 100, resp. 28. Right pleural

cavity filled to the fourth intercostal space with pleuritic fluid, which could be heard to splash on slight agitation of chest. Appetite poor, and is much dispirited. At five sittings three and three-fourths gallons of fluid were withdrawn by aspiration.

Nov. 6th—Glyco-heroin (Smith) teaspoonful every three hours, has much relieved the spasmodic cough, conditions in general seem to be improving.

Nov. 11th—Cough has almost disappeared. Continued in this condition to Jan. 14th, when two and one-half quarts of fluid were withdrawn.

Feb. 3rd—Complained of pain under scapula and was given a dry hot air treatment followed by violent cough, fever $104\frac{1}{2}$, pulse 124, resp. 28, glyco-heroin (Smith) every two hours.

Feb. 4th—Had a hemorrhage and was slightly delirious, the general condition unchanged.

Feb. 5th—Cough almost gone, temp. $101\frac{3}{4}$, pulse S2, resp. 21. Is eating some, and feels much better.

Glyco-heroin (Smith) has always relieved his cough promptly, and I believe he would have been dead but for its soothing influence. While we do not look to the remedy as a cure for hydrothorax, we appreciate the sedative effect, in which it is superior to morphine, and harmless.

6. Jan. 11th—W. McD., age 18, measles thoroughly developed, temp. $103\frac{2}{5}$, violent cough, yellow expectoration, cannot find rest because of the cough. Glyco-heroin (Smith) teaspoonful every two hours.

Jan. 12th—Cough is much better.

Jan. 13th—Has not coughed all night.

Jan. 18th—Discharged without return of cough. Entire quantity of glyco-heroin used was four ounces.

7. L. G., age 10 months, Jan. 29th, operated upon for radical cure of right inguinal hernia. On Feb. 6th, although doing well in every way, he was seized with violent paroxysms of coughing (probably due to dentition). The stitches threatened to tear out and the operation prove a failure. Glyco-heroin (Smith), xv guttæ every four hours, completely controlled the cough in five doses, and so saved the case. There were no visible unpleasant effects of any kind whatsoever from the medicine.

8. J. K., aged 22, in hospital one year for tubercular disease in the lumbar region. Jan. 15th, was operated on, and much diseased tissue removed. He developed a violent cough Jan. 16th, which caused him great pain and bleeding in the wound. Glyco-heroin was given, two teaspoonfuls every three hours, with splendid effect. Five doses removed the cough entirely.

9. *Outdoor Cases.*—Mrs. T., depot matron, had a cough that had defied the treatment of several physicians. It was a dry,

hacking cough, and she had had no sleep in five nights. Completely cured by four ounces of glyco-heroin (Smith).

Mrs. M. had been to several physicians; her case had been diagnosed as phthisis; she was taking one half bottle emulsion of cod liver oil per day. She was also using morphine freely; four ounces of glyco-heroin completely cured her, and she gained at the rate of one pound per day.

Miss E., 17 years, cough four months without relief, was immediately relieved by a few doses of glyco-heroin (Smith).

Mrs. D., distressing cough and some dulness at base of right lung. Her cough completely cured by less than one ounce of glyco-heroin.

McD., aged 36, policeman, had been coughing three weeks, and was getting worse. Four ounces of glyco-heroin completely cured him.

Mr. R., with all symptoms of pneumonia; temp. 104, pulse 126, respiration 40; four ounces of glyco-heroin completely cured him.

The Journal of Cutaneous Diseases for 1903.

Beginning with the issue for January, 1903, *The Journal of Cutaneous Diseases* will be under the editorial management of Dr. James C. White and Dr. John T. Bowen, of Boston; Dr. James Nevins Hyde, of Chicago; Dr. Henry W. Stelwagon, of Philadelphia; Dr. Prince A. Morrow, Dr. Edward E. Bronson, Dr. George T. Jackson and Dr. John A. Fordyce, of New York.

Dr. A. D. Mewborn, of New York, will be the acting editor. The editors will take an active interest in the *Journal*, and by their united efforts hope materially to improve the quality of its contents. It is their desire to present a monthly review of all important advances in dermatology and syphilis, both in this country and abroad.

The *Journal* has been made the official organ of the American Dermatological Association, and will publish in addition to its transactions, the proceedings of all the local societies throughout the country devoted to this specialty.

All communications relating to the editorial department should be addressed to Dr. A. D. Mewborn, 224 West 52nd Street, New York.

The *Journal* will be published by the Grafton Press, 70 Fifth avenue, New York, where all inquiries relating to subscriptions, advertisements, etc., should be directed. The subscription price will be hereafter \$3.00 a year in the United States, and \$3.50 to other countries in the Postal Union.

Miscellaneous.

ENGLAND'S DRASTIC TEMPERANCE LAW.

The late Archbishop Magee used to declare that—were the choice given to him—he would prefer England free to England sober.

Parliament evidently prefers England sober. Consequently the public must be prepared to find the Licensing Act, 1902, which came into force January 1st, a very drastic measure.

First and foremost, if a person is found drunk in any highway or other public place, whether a building or not, or on any licensed premises, and appears to be incapable of taking care of himself, he may be apprehended and dealt with according to law.

There is a penalty—either a fine or a month's imprisonment—for being found drunk in any highway or in any place, whether a building or not, to which the public has access, whether on payment or otherwise, or on any licensed premises while having charge of a child apparently under seven years of age.

These provisions are a great advance on the law as it stands, which says that a drunken person shall in no case be interfered with by the police, unless he is disorderly and likely to do himself or others injury, or is drunk while in charge of any carriage, horse, cattle, or steam engine. The existing law says nothing about children.

Married Drunkards.—Life is henceforth to be made impossible for the habitual drunkard. And, first of all, it may be worth while to point out what a habitual drunkard really is.

“A ‘habitual drunkard’ is a ‘person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquors, at times dangerous to himself or herself, or to others, or incapable of managing himself or herself and his or her affairs.’”

By the new act, where such a person is a married man, his wife can apply for a separation order—which order while in force will have the same effect as a decree of judicial separation on the ground of cruelty.

She will be entitled to retain the legal custody of the children of the marriage under sixteen.

Her husband, the habitual drunkard, will have to pay her such weekly sum, not exceeding £2, as the Court shall, having regard to the means both of husband and wife, consider reasonable.

Where the wife is a habitual drunkard the Court may, instead of making a separation order, order the wife, with her consent, to be committed to a retreat licensed under the inebriates' act.

And now we come to the part of the act which will enable the police to deal more effectively with the lamentable Jane Cakebreads of a future generation.

The police belonging to the district where the Court is are so receive notice of the conviction of any offender under this act, where the court is satisfied that an order of detention could be made.

"If the convicted person within three years after the date of the conviction purchases or obtains, or attempts to purchase or obtain, any intoxicating liquor at any premises licensed for the sale of intoxicating liquor by retail, or at the premises of any club registered in pursuance of the provisions of Part III. of this (licensing) act, he shall be liable, on summary conviction to a fine not exceeding, for the first offense, twenty shillings, and for any subsequent offense, forty shillings."

Publican's Risk.—Pub'ans, wine and spirit merchants, and any persons "selling, supplying or distributing intoxicating liquors, or authorizing such sale, etc.," on the premises of a club registered under Part III. of this (licensing) act, are under an even more onerous liability than the habitual drunkard himself.

"If, within three years of the conviction of such a person, the publican or wine merchant or club manager knowingly sells, supplies or distributes, or allows any person to sell, supply or distribute intoxicating liquor to, or for the consumption of, any such person (habitual drunkard), he shall be liable, on summary conviction, for the first offense, to a fine not exceeding £10, and for any subsequent offense in respect of the same person to a fine not exceeding £20."

The friend who encourages the drunken person to go on drinking also comes in for attention. This section of the act is particularly clear:

"Any person who, being on any premises licensed for the sale of any intoxicating liquor, whether on or off such premises, shall procure or attempt to procure any intoxicating liquor for consumption by any drunken person, or who shall aid and abet any drunken person in obtaining or consuming any intoxicating liquor on any premises so licensed as aforesaid, shall be liable, on summary conviction, to a fine not exceeding forty shillings, or to imprisonment, with or without hard labor, for any period not exceeding one month."

It may be added that the police will be called upon to warn publicans of these convictions, and help, as far as possible, the publican in establishing the identity of convicted drunkards.

And last, but not least, under this part of the act, where a licensed person is charged with permitting drunkenness on his premises, and it is proved that a person was drunk on the licensed premises, the licensee must prove that he and the persons employed by him took all reasonable steps for preventing drunkenness on the premises.

Added Difficulties.—The act also contains some drastic amendments of licensing law which all licensed persons will do well to study.

Among the more important points to be noticed are :

A justice's license will now be required in the case of every excise license for sale of intoxicating liquor to be consumed off the premises. To this section there are certain exceptions.

Licenses are no longer to be indorsed for the purpose of recording convictions, but notice of the conviction is to be entered in a register, and on every application for grant, renewal or transfer regard is to be had for such entries, whether relating to the person or the premises.

The general annual licensing meetings are to be held during the first fortnight in February, instead of in the autumn, as hitherto.

Licensing justices asked to grant an "in" license may require a plan of the premises to be produced, and may order such alterations as they think reasonably necessary to secure the proper conduct of the business to be made in that part of the premises where intoxicating liquor is sold.

An occasional license will require the consent of a petty sessional court, and twenty-four hours' previous notice to the superintendent of police for the district.

The Check on Clubs.—So far as clubs are concerned, the act inaugurates an entirely novel mode of treatment.

First and foremost comes the matter of registration. Henceforward every club which occupies a house or part of a house or other premises which are habitually used for the purpose of a club, and in which any intoxicating liquor is supplied to members or their guests, must be registered.

The secretary of every such club must henceforth yearly furnish to the clerk of the justices a return, containing particulars as to the name and objects of the club, the hours of opening and closing, and the rules of the club.

A club may be struck off the register on the ground that the "number of members is less than twenty-five, or that it is not conducted in good faith as a club, or that there is frequent drunkenness on the club premises, or that illegal sales of intoxicating liquor have taken place on the club premises."

Other reasons for striking a club off the register are :

"That persons who are not members are habitually admitted to the club merely for the purpose of obtaining intoxicating liquor.

"That the club occupies premises in respect of which within twelve months preceding the formation of the club a license has been forfeited or the renewal of a license has been refused.

"That the supply of intoxicating liquor is not under the control of the members or the committee appointed by the members.

"That persons are habitually admitted as members without an interval of at least forty-eight hours between their nomination and admission."—*Commercial Tribune*.

Suicide of Doctors.

The *Chicago Tribune's* suicide record for last year shows that 8,231 Americans took their lives. The number who killed themselves in 1901 was 7,245, in 1900, 6,755, and in 1899, 5,340. The increase of 2,891 cases of self-destruction over the record for 1899 may properly excite grave apprehension. The causes alleged for last year's suicides were : Despondency, 3,150 ; unknown, 2,756 ; insanity, 309 ; ill-health, 433 ; domestic unhappiness 865 ; liquor, 136 ; disappointed love, 375 ; business losses, 67.

A feature of these suicides which cannot be deemed unusual, for it is corroborated by other statistics, but which possesses significance, was the large percentage of physicians among those slain by their own hands. In the list of prominent persons who killed themselves there are thirty-six doctors—nearly 5 per cent. of the total. Mulhall's figures for Europe show an equally high percentage. In a suicide record of 222 per 1,000,000 of population the number of doctors killing themselves was 472.

Why should the rate be so high ? Is the doctor more quickly disillusionized about life from his more intimate study of man than the ordinary member of society ? To begin one's career over a cadaver in a dissecting-room, and to spend one's lifetime studying forms of disease—does that induce a desire to shuffle off the mortal coil ?

Regarding the great increase of suicide in all ranks of society, these words of Skelton may be quoted :

"It is a disheartening thing to have to acknowledge that after the wonderful progress of mankind during the last fifty or sixty years the individual practically finds life less enjoyable and more difficult than before."—*New York World*.