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ADDRESS ON MEDICAL SCIENCE.*

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BELIEVE me, it is a difficult thing for a stranger, even at your invitation, to address you on an occasion like the present. So many significant events crowd in upon him, and time for reflection is needed to weld into a connected whole the impression he would wish to offer to you. Not that the growth and doings of this University have not been followed and watched with interest by us in the Old Country. On the contrary, your activity has been felt, not only as a matter of mutual congratulation, but as a spur to arouse us to effort in our own similar pursuit of educational aims. But the stranger coming among you necessarily feels the shortcomings of his acquaintance with the details of these academic enterprises you have taken in hand. One advantage, however, is his. His view, gained from a distance, necessarily has freedom and truth of perspective that may give it a value in your eyes.

Some things lose by perspective. Some things, large when at close to hand, dwindle when viewed from afar. Not so Canada. The perspective given by the width of the Atlantic is but an appropriate setting across which to view her greatness and her far-reaching activity. And this event, this academic celebration, this *dies festus*, in your University to-day, retains from afar off all the significance of a great event. It loses no tittle of its dignity and import when viewed across ocean from the crowded

* Delivered at the official opening of the New Medical Building of the University of Toronto, October 1st, 1903.

turrets of the older Cambridge, or the hoary spires of Oxford. It shines, I assure you, like a beacon to the new University whose buildings are as yet unfinished on the hill above the port of Liverpool.

Coming from a region where history is long and the land little, to this where written history is short and the expanse of land incomparably great, one realizes how relative is size. And in regard to the event of to-day the largeness of this country rises in my thought not as a matter of mileage, but--that with you more than with us in the Old Country, the size of to-morrow is vaster than the size of to-day. Each step of progress here, more than with us, has to be measured by its ample consequences in a more rapidly widening horizon of the morrow. These new laboratories have a field already demanding them, and a still larger lies before them in an immediate and historic future.

Biology is the study of life in regard to growth and organization. Every medical man is a biologist, and as a biologist it may be but natural if I regard to-day's event from a biological standpoint, and the community as an organism, and the university as a living organ, essential to the healthy life of the community.

MEDICAL SCIENCE.

Science—especially medical science—is growing in importance to the community. We must have organization in science as in industry. This University to-day makes provisions of first-rate importance for the organization of medical and allied sciences in the region which centres here. Capacity to rear and support men constitutes the extent of a country, and population is the biological measure of the social organism. The ceaseless energy of the race has begun to plant a great population in this land. Growth, great and rapid, is inevitably before it. The growth of nations as of individuals requires the vigilance of guiding hands. Growth, for it to take its course rightly towards perfection, requires that provision for the security and expansion of the liberal arts and sciences forerun rather than halt behind the actual requirement of the hour. Not only for their direct utilitarian service. They form a whetstone for man's most universal tool, his intellect; also a discipline for character in the pursuit of truth for its own sake. Scientific truth, when found, has often proved unpalatable to man—as when it dethroned him from his fancied seat at the centre of the whole perceptible universe, a universe which he had imagined simply subservient to his needs—or again as when it taught him that instead of being a creature altogether apart from brute creation, there are flesh and blood bonds between himself and them. Regardless of its cost to his cherished fancies, man strives for scientific truth. And, as the old Greeks said, this

purpose puts him further from the brutes and nearer to the gods.

In nurturing science, I would urge that a community cultivates more than mere utility. And even with regard to mere utility, as the fields of knowledge fall ripe under the ceaseless husbandry of the world's thought, those who would join in the great reaping, and not only glean where others reaped before them, must cultivate for themselves. To do this requires more than the devotion of individuals. It requires the intelligent co-operation of whole groups of individuals. Organized scientific inquiry becomes in advanced countries a conscious aim of the community as a community.

THE VARIOUS WORKERS.

That society may draw due benefit from wells of natural knowledge, three kinds of workers have to stand side by side. First, the investigator, who, pursuing truth, extends discovery, with little or no reference to practical ends. He constitutes the fountain-head of the knowledge that is for distribution. Other hands may reap the harvest, but his sets and rears the seed.

After the investigator comes the teacher. To him it belongs to diffuse the knowledge won. This honorable and difficult task receives its best reward in seeing the small spiritual beginnings of the pupil widen out into the spiritual beginnings of the master. Thirdly, there is the applier of natural knowledge. His part consists in making scientific knowledge directly serve practical needs. It is this work which, to the popular idea, often represents the whole of science, or all of it that is commonly termed "useful." The practical results of this work are often astounding to those ignorant of the steps by which they have been reached. The greatest of these steps, however, is usually the first one, made in the laboratory of the investigator. These three co-workers are co-equal in the priesthood. Science and the applications of science are one growth, united together even as the fruit and the tree. The proper hearthstone round which the community should group these laborers, laboring for a common end, is the University. There the sacred flame of learning is fed from many sides by many hands.

VALUE OF SCIENCE.

It is sometimes said that pursuit of science renders a man deaf to the appeals of practical life—that it tends to withdraw him from the everyday interests of the people. That I do not believe of any science, certainly not of biology and the medical sciences. Why, from their very outset these subjects draw the mind toward study of an organization the most complex and the most perfect it can examine. The ancient simile that our old

school classic, Livy, drew between the human body and the body politic, the State, has not lost but won significance as the centuries have run. The achievement of the microscope has been the discovery that living things, whether plant or animal—all living things of more than minutest size—are commonwealths of individually living units. These cells, as they are called, are living stones that build the house of life. In that house each stone is a self-centred individually living microcosm individually born, breathing for itself, feeding itself, consuming its own substance in its living, and capable of and destined for an individual death. Each cell lives by exchanging material with the world surrounding it. In other words, its bulk depends upon its surface. Hence surface increasing as the square, and volume, as the cube, cell-size, is circumscribed by tiny limits—microscopic limits. Had the dependence been greater than it is, and the average size of the cell less, and too small for resolution and discovery by the microscopes of seventy years ago, it is hard to imagine where biology would stand to-day. For two generations every biologist has been accustomed to think in terms of the cell-theory. Every shred of the body he knows as an intricate interlacement, embodying co-operation and mutual support of associate thousands of individually existent cells. Division of labor has gone on, and with it differentiation of function; while this group of cells combines with its own inner life some special function subservient to the needs of the great commonwealth, as a whole, another group is specialized for another duty again subservient to the general needs. Each organism, however complex, each one of ourselves here, is built up of living myriads of cells. Each such organism consisted at outset but of a single cell, and from that in his life's growth have arisen the countless myriads composing him to-day. The blood relationship is close between all the cells of each one individual body. The cells of our nerves, or our muscles, of our time-hardened bones, are all blood relations through one common ancestor. Yet, so far has specialization of these unit lives gone on, yet so far does function reflect itself in microscopic form, that there is greater likeness between my nerve cells and the nerve cells of a fish, than between my nerve cells and my muscle cells—acspite the blood relationship of these latter. And in the commonwealth of cells that constitutes each one of us, goes forward day long, night long, as in the body politic, the birth of new units to replace the ones outworn, the subordination of many individual purposes to one, the sacrifice and destruction of the individual life for the benefit of many.

Trained in study of such an organism, surely the biologist and the medical man will be the last to underrate the importance of organization to the community for the common weal. There-

fore, I am rejoiced, but I am not surprised, that it is your faculty of medicine which to-day, in its public-spiritedness, erects and installs these fine laboratories, this potent addition to the organization of your community, for its activities in medicine and biological science. I would also, as a friend among you, offer my congratulations on the consolidation of your two schools of medicine. Union means not only greater strength, but the more effective application of strength. I need not to this assembly extol medicine. Many of her votaries are here; I venture to count myself as one. But to-day the relation toward her of education is a matter on which our minds are naturally set. Am I wrong if in regard to this it rises saliently to me that from the educational standpoint medicine, like Janus of old, in a good sense, bears a double face? On the one hand, she is an empiric. She has learned to cure by what the comparative psychologist calls the "method of trial and error." Conquests over sickness acquired purely as result of experience, without help either from *a priori* or from inductive reasoning. And great and glorious is the roll of her achievement on these lines. Of her humanitarian triumphs probably still—certainly a generation ago—the greater share is assignable to this part. The use of quinine in malaria, the curative effects of the iodides and various metals, and the discovery of chloroform and ether as anesthetics, these and the names of a long line of famous physicians from the Renaissance down to some as justly famous as the past, and with us now to-day, suffice to certify the inestimable gifts that medicine as empiric has given to mankind in his suffering. This face of medicine well may wear a garland.

MEDICINE A SCIENCE.

In her other aspect, medicine is not an empiric, but a scientist. Who will refute me if I assert that medicine is as well an art as a science? Somewhere it is said that woman is the last thing man will ever civilize. So the scientific aspect, the male face of two-visaged medicine, thinks that of female face, the empiric, with whom his lot is linked. He feels sometimes that his other half is the last thing science will ever render wholly rational. By dint of patient toil he improves her practice by showing her a reason now and then. No sooner that than she is off on a fresh flight into the inexplicable, and he must cudgel his brains anew to find her a fresh logical position.

The feminine, ever youthful, trait in medicine has to the student an undying charm. But on the whole, the countenance of medicine has of recent-years, for the student, become masculinely severe. This head of medicine has indeed become the larger. Hydrocephalic in appearance though it may be, it is filled, not with water, but with reasoned facts. The development proceeds

in the main from certain data acquired in the century just passed. For instance, the chemist, in discovering that all the million-sided chemical diversity of the perceptible universe is composed from a few—some seventy—substances, therefore called elemental, discovered also that living matter, instead of containing elements different from and subtler than those of the dead world, consists of just a few of those very same ones. Further, the doctrine of the indestructibility of matter was demonstrated in a new form, namely, as the indestructibility of energy, and the convertibility of any one form of energy into other forms. Thus dead and living matter become united as subject material for study. It became really possible to consider the living body as a chemical and physical machine, a machine to which the laws of chemistry and physics can be applied.

But this scientific progress in medicine, fruitful of benefit to the community, lays on the community a burden of obligation. The empirical part of medicine is at once the most easy and the most difficult thing to teach. The preparation for learning it requires but little training in other subjects. Its facts lean on nothing but themselves.

HISTORICAL SKETCH.

With the scientific part of medicine it is different. That is based upon initiatory studies. Medicine, historically traced, we find first drawing help from the simplest and nearest at hand of these adjuvant studies. First she bent to the study of the gross form of the parts and organs of the body. The gross form of these is significant chiefly where they are machinery for application of mechanical powers. The greater part of the corporeal machinery is, however, not destined for such work, but has its purpose in processes chemical, thermal, and electrical, to which—marvellous appendage—mentality is adjunct. Medicine in the course of the seventeenth and eighteenth centuries sucked dry for the most part what the study of the gross form of the body's parts could yield her. She then turned to study of microscopic form—examined what Bichat first named the tissues, the fabric of the body. In so doing, she came upon a great generalization, the cell-doctrine, discovering an essential and visible similarity of microscopic structure in all that has life, differentiating it from all which has not life.

But even before the advent of the cell theory, medicine had begun to ask of chemistry what it could give her. With the discovery of oxygen and of the nature of combustion the links between biology and chemistry began to be tightly drawn. The young Oxford physician, Mayon, had performed the fundamental experiments on respiration and had discovered oxygen more than

a century before Priestley and Lavoisier, but the time was not ripe until the stupendous work of Lavoisier had founded modern chemistry. The cell-theory was from the first not only morphological, but physiological. It meant for the application of chemistry to biology that the chemistry of the body or one of its organs was a chemistry resultant from a thousand tiny living furnaces, individual seats of oxidation, deoxidation, polymerization, hydrolysis, and what not.

Not only that, but the living laboratory of the cell itself manufactures even the medium in which the cells themselves exist: the saps and juices of the body. And we are beginning to know, thanks to pathology, that every species of animal produces an internal medium specific to itself. Further, your distinguished physiologist here, Professor Macallum, who has so revealed the distribution of the chemical elements within the cell, tells us that the internal medium which the cells of even the highest animal forms produce as appropriate for themselves, still approximates in its salts to the water of the ancient geologic seas in which their ancestry arose, and still reveal in fact the composition of that ancient ocean. In that respect these living cells, with all their influx of change, have been more durable and constant even than the ocean itself. The contrast brings home to us a deep distinction between dead matter and living—the latter a moving equilibrium, gaining stability from the very motion of itself.

The bond between Schwann and Pasteur has opened a new perspective, and chemistry and medicine were drawn still tighter by their discoveries concerning those subtle influences named "ferments." Pathology, the study of these processes of the body in disease, even more than physiology, as yet has drawn help from this part of modern chemistry. If the processes of health are in fact the resultant of the due co-operation of ten million little foci of healthy chemical action in the body, the processes of disease are similarly divisible, and have to be traced to the unhealthiness of certain of these minute centres of activity. How extreme is the importance of chemistry to modern medicine no single statement can perhaps emphasize so well as this—that is, I believe, acknowledged on all hands—that in virtue of his chemistry, a chemist, Louis Pasteur, during the latter half of last century, was able to do more to alleviate the diseases of mankind and animals than any single physician of his time.

APPEALS TO PHYSICIST.

Also medicine has made appeal to the physicist, and from him she has got understanding of the body's heat, the basis of the knowledge of fever; she has learned the intricacies of the mechanism of the eye and refined methods of examining that organ and

of remedying many of its defects; the laws that govern the circulation of the blood, and the subtlest means of detecting the forces liberated in the working of the nervous system. In some cases, as sciences grow, their discoveries seem to sunder them the further one from another. To-day we find physics and chemistry converging and conjoining within a field of physical chemistry. It early became convenient to have a specific name for living material, wherever found. The name given was Protoplasm. It might have been better to call it x or y , so far was it in many respects an unknown quantity. Instead of looking forward to this material as a chemical entity, we incline now to regard it rather as a field for chemical action, satisfying certain particular conditions. Probably discoveries regarding these conditions will fall to the physical chemist, perhaps in a future very near at hand. Probably such discoveries will be among the most valuable that medicine has yet received from any source.

I have said enough to remind us how interlocked with science medicine has become. She is applying sciences to her own problems, and they form a vast capital fund from which she can draw wealth. To give instruction in this part of medicine, to turn out men trained in it, is now one of the duties of a medical school. The earnest student has a right to expect such training from his *Alma Mater*. But for it the requirements are importantly different from those that suffice as an introduction to empiric medicine. In the first place, as Pasteur said, we cannot have the fruit without the tree. For scientific medicine the student must, perforce, be thoroughly trained in his sciences before he can really grasp instruction or truly profit from his medical teaching. One of the aims of his instruction in empirical medicine is to teach him to observe for himself, so in his instruction in scientific medicine, one of its aims is to enable him to apply science for himself. How small a fraction of all the realities of medical practice can be met in the few years of preparation of the student in the clinic as he passes through it in his school career. His teacher knows that well, and uses the cases as types whereby the principles of medicine can be fixed as a beginning. The rest must be accomplished by the man himself, as his life's work. The more necessary that the man go forth from his school equipped not only with the present applications of science to disease, but so possessed of the root principles of the sciences adjunct to medicine, that he may grasp and intelligently use the further developments of scientific medicine after he is weaned from his instructors and the school. That is the way to obtain enlightened progress in professional practice. What truer safeguard can a man have, alone it may be, and isolated from the centres of knowledge—what truer safeguard can he have against all the pseudo-scientific quackeries

of the day, than some real knowledge of the principles of the sciences, along whose lines the discoveries of medicine must develop?

BURDEN ON TEACHERS.

Therefore it is that the burden of obligation falls heavily nowadays upon the teaching resources of every Faculty of Medicine worthy of the name. There is, in the first place, the burden of increased intellectual labor. For the learner and the teacher this is true. To seize the proffered assistance of these great and complex sciences is not always easy. These studies are more difficult than those that were needed once, and they take longer to acquire. The mere instrumentarium of modern chemistry and physics, as applied to medicine, and of physiology and pathology, and bacteriology and of hygiene, of itself suffices to bring conviction of the increased difficulty and longer training due for these studies now preparatory to medicine.

Further, these initiatory studies have become vastly more costly than was all that formerly was required. Experts have to be found who can devote themselves heart and soul and undividedly to their particular subject. Laboratories have to be erected and equipped, and on a scale that makes them a distinct feature of the modern world. Those that we see now here are models of their kind; wise foresight has planned them; public-spirited enterprise has constructed them. Nor does the achievement end with their erection. The laboratories and their equipment are but the factory and the plant; both fail in their purpose if they halt for sustenance. And beyond that the likeness does not go. The factory, once started, if it be wanted, can expect to pay, to support itself. Not so the laboratory. The laboratory is both a school of instruction and a school of thought. Well; no higher instruction can be expected unaided to pay the expenses it involves; it can only do so at the expense of those who come to learn, and that is to put its teaching beyond all but the wealthier few. And the instruction is costly, for it has to be practical. And another source of expense is that the laboratory has not only to distribute knowledge, but to manufacture it. The duties of a university do not begin and end with the disciplinary and didactic. Besides schools of instruction, they must be schools of thought. To be this latter, the laboratory must pursue research. Even for the welfare of the class-teaching this is essential. Instructive lectures may be given by men of ability, the whole of whose knowledge is second-hand, but it is doubtful whether the real life of science can be fully felt and communicated by one who has not himself learnt by direct inquiry from nature. Nothing so augments the teacher's power of impressive and incisive teaching of

a subject than to have faced problems in it himself as an original enquirer. And, after rudiments have been once fairly acquired, there is for good students no training equal to that given by following even a small research under an experienced leader.

SCHOOL OF THOUGHT.

So truly does the laboratory become a school of thought. Your laboratories are arranged with admirable provision for research. The student should enter on his study of natural science through the portal of its fundamental experiments. The attitude his mind thus takes is the true one—the only true one—for further insight into his subject. Too often humanistic studies at school have tended to kill the natural philosopher within him—that innate curiosity for facts, the healthy heritage of childhood. He leaves school a little book-man. Even as to the phenomena of nature, he has been insensibly led to ask for statements upon authority, rather than to turn his own sense and observation to the phenomena themselves. To learn a science or acquire an art resting upon the sciences, the first thing to do is to look at the fundamental facts for yourself. Our great teachers of medicine teach upon this plan. They teach where they learned, not in the library, but from the bedside of the sick. In laboratories such as those raised here for pathology, physiology, and hygiene, students can learn these sciences as medicine is learned in the hospital ward, by direct enquiry into nature. The teachers you give them are men who have won widely-recognized distinction themselves as direct enquirers into nature. Worthy students will appreciate the double boon their *Alma Mater* gives them—the means of learning at first hand those secrets of his craft's skill—and to learn them under guidance by men who excel in unravelling such secrets.

ENGLISH ACTION.

Only by enabling men to continue their learning after their teaching is over can we secure the greatest advantage any educational system can afford. Your laboratories here will encourage post-graduate work. We look with keen interest to the researches that will flow from them. No subjects offer finer fields for research than do the progressive studies, physiology, pathology and hygiene, to which your new University buildings are consecrated. And of the functions of a laboratory, research is not the least costly. We in the Old Country find that. Our central government has done little to support research. Our nation, proud of its success in things practical, has been prone to despise the abstract and the theoretical. We do so foolishly; we do so at our peril. Behind all practical application there is a region of intellectual action to which, though our practical men have

contributed little, they owe the whole of their supplies. Theory, if a goose, is the goose of the fairy tale that lays the golden eggs. No more such eggs, if once you let her die. To speak of theoretic knowledge slightly is for the lips of the fool. The value of abstract research to a country is becoming more widely acknowledged among us than it was. Sir John Brunner said the other day, at Liverpool, that there was no better investment for a business man than the encouragement of scientific research, and that every penny of the wealth he possesses has come from the application of science to commerce and manufacture. And we find that munificent citizens have and do come forward among us and meet, by their individual gifts, the pressing needs, in this respect, of our community at large.

NEW ERA DAWNING.

But we welcome a new era dawning on us. Liverpool, Birmingham, Sheffield, and other great centres begin to regard the local university as an institution entitled to support from the public means: for instance, by subsidy from public rates. Such subsidies can be used also for studies which do not come within allotment from the smaller subsidy from the central government: medicine, for instance. Proud of the young universities—to which yours of Toronto is a time-honored veteran—communities and local governments are encouraging research within our universities. They do not expect such research to be able to pay its own way, but they recognize that indirectly it does pay the community that gives it a home. They feel it a duty which they owe themselves. Is not the university a part of their own life, and is not research a part of the university's life-blood? They feel it a right due to their own higher selves. It stimulates progress. Supported by the large-handed sympathy of the community and the local government, it means quicker advance, both material and mental; it means invention, and it means medical discovery. And *qui facit alnum facit per se* is a motto worthy of the State.

USES OF LABORATORIES.

What, then, are finally the uses of these laboratories now opened by your University? They will assist in training men for various honorable callings, especially for that most ancient one of medicine. They will assist, no doubt, also to render life by practical applications of science superficially still more different from what it was only a short generation ago. They will assist to bring home and distribute to your community treasures of knowledge from all quarters of the globe. They will assist—and it is a thought dear to a high-spirited people—themselves to add to the sum total of the treasures of knowledge of the whole human race.

"Noblesse oblige" appeals to chivalrous nations as well as to chivalrous individuals.

But their highest office seems to me, perhaps, not even these high ones, but a more difficult still. Genius cannot by any community, however wealthy and powerful, be made to order. In Biblical language, it is the gift of God. All a community can do toward obtaining it, be our riches and willingness a thousandfold what they are, is to ensure the rare and glorious plant a meed of freedom, light and warmth for blossoming upon our soil. Who can doubt that in this population here genius exists—not sown, it is true, broadcast, for nowhere is it thus—yet existent, scattered up and down? This it is for the community to foster, to discover.

By help of these finely built and finished laboratories this much in one direction can be done. The problem to which a wise country turns is the discovery less of things than of men. By these laboratories, adequately supported, your community can create opportunities for the exercise of powers which come from sources within itself, but are utterly beyond its power to produce at will. Their loftiest function is creation of this opportunity. For that aim the studies in them must be followed with no single narrow technical purpose, but must be wide of scope and full of access to every rank of students. So shall these laboratories prove a cornerstone for the upbuilding of a temple of knowledge, and a touchstone for the best ore of intellect within the bounds of this great land.

THE MASTER-WORD IN MEDICINE.*

BY WILLIAM OSLER, M.D., F.R.S.,

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I.

BEFORE proceeding to the pleasing duty of addressing the undergraduates, as a native of this province and as an old student of this school, I must say a few words on the momentous changes inaugurated with this session, the most important, perhaps, which have taken place in the history of the profession in Ontario. The splendid laboratories, which we saw opened this afternoon, a witness to the appreciation by the authorities of the needs of science in medicine, makes possible the highest standards of education in the subjects upon which our Art is based. They may do more. A liberal policy, with a due regard to the truth that the greatness of a school lies in brains not bricks, should build up a great scientific centre which will bring renown to this city and to our country. The men in charge of the departments are of the right stamp. See to it that you treat them in the right way by giving skilled assistance enough to ensure that the vitality of men who could work for the world is not sapped by the routine of teaching. One regret will, I know, be in the minds of many of my younger hearers. The removal of the departments of anatomy and physiology from the biological laboratory of the university breaks a connection which has had an important influence on medicine in this city. To Professor Ramsay Wright is due much of the inspiration which has made possible these fine new laboratories. For years he has encouraged in every way the cultivation of the scientific branches of medicine, and has unselfishly devoted much time to promoting the best interests of the Medical Faculty. And in passing let me pay a tribute to the ability and zeal with which Dr. A. B. Macallum has won for himself a world-wide reputation by intricate studies which have carried the name of this University to every nook and corner of the globe where the science of physiology is cultivated. How much you owe to him in connection with the new buildings I need scarcely mention to this audience.

But the other event which we celebrate is of much greater importance. When the money is forthcoming it is an easy matter to join stone to stone in a stately edifice, but it is hard to find

* An address to medical students on the occasion of the opening of the new buildings of the Medical Faculty of the University of Toronto, October 1st, 1903.

the market in which to buy the precious cement which can unite into an harmonious body the professors of medicine of two rival medical schools in the same city. That this has been accomplished so satisfactorily is a tribute to the good sense of the leaders of the two faculties, and tells of their recognition of the needs of the profession of the province. Is it too much to look forward to the absorption or affiliation of the Kingston and London schools into the Provincial University? The day has passed in which the small school without full endowment can live a life beneficial to the students, to the profession, or to the public. I know well of the sacrifice of time and money which is freely made by the teachers of those schools; and they will not misunderstand my motives when I urge them to commit suicide, at least so far as to change their organizations into clinical schools in affiliation with the central university, as part, perhaps, of a widespread affiliation of the hospitals of the province. A school of the first rank in the world, such as this must become, should have ample clinical facilities under its own control. It is as much a necessity that the professors of medicine and surgery, etc., should have large hospital services under their control throughout the year, as it is that professors of pathology and physiology should have laboratories such as those in which we here meet. It should be an easy matter to arrange between the provincial authorities and the trustees of the Toronto General Hospital to replace the present antiquated system of multiple small services by modern well-equipped clinics—three in medicine and three in surgery to begin with. The increased efficiency of the service would be a substantial *quid pro quo*, but there would have to be a self-denying ordinance on the part of many of the attending physicians. With the large number of students in the combined school, no one hospital can furnish in practical medicine, surgery and the specialties a training in the art an equivalent of that which the student will have in the sciences in the new laboratories. An affiliation should be sought with every other hospital in the city and province of fifty beds and over, in each of which two or three extra-mural teachers could be recognized, who would receive for three or more months a number of students proportionate to the beds in the hospital. I need not mention names. We all know men in Ottawa, Kingston, London, Hamilton, Guelph and Chatham, who could take charge of small groups of the senior students and make of them good practical doctors. I merely through out the suggestion. There are difficulties in the way; but is there anything in this life worth struggling for which does not bristle with them?

Students of medicine: may this day be to each one of you,

as it was to me when I entered this school thirty-five years ago, the beginning of a happy life in a happy calling. Not one of you has come here with such a feeling of relief as that which I experienced at an escape from conic sections and logarithms and from Hooker and Pearson. The dry bones became clothed with interest, and I felt that I had at last got to work. Of the greater advantages with which you start I shall not speak. Why waste words on what you cannot understand. To those only of us who taught and studied in the dingy old building which stood near here is it given to feel the change which the years have wrought, a change which my old teachers, whom I see here to-day—Dr. Richardson, Dr. Ogden, Dr. Thorburn and Dr. Oldright—must find hard to realize. One looks about in vain for some accustomed object on which to rest the eye in its backward glance—all, all are gone; the old familiar places. Even the landscape has altered, and the sense of loneliness and regret, the sort of homesickness one experiences on such occasions, is relieved by a feeling of thankfulness that at least some of the old familiar faces have been spared to see this day. To me at least the memory of those happy days is a perpetual benediction, and I look back upon the two years I spent at this school with the greatest delight. There were many things that might have been improved—and we can say the same of every medical school at that period—but I seem to have got more out of it than our distinguished philosopher friend, J. Beattie Crozier, whose picture of the period seems rather hardily drawn. But after all, as some one has remarked, instruction is often the least part of an education, and, as I recall them, our teachers in their life and doctrine set forth a true and lively word to the great enlightenment of our darkness. They stand out in the background of my memory as a group of men whose influence and example were most helpful. In William R. Beaumont and Edward Mulberry Ifodder, we had before us the highest type of the cultivated English surgeon. In Henry H. Wright we saw the incarnation of faithful devotion to duty—too faithful, we thought, as we trudged up to the eight o'clock lecture in the morning. In W. T. Aikins a practical surgeon of remarkable skill and an ideal teacher for the general practitioner. How we wondered and delighted in the anatomical demonstrations of Dr. Richardson, whose infective enthusiasm did much to make anatomy the favorite subject among the students. I had the double advantage of attending the last course of Dr. Ogden and the first of Dr. Thorburn on *materia medica* and therapeutics. And Dr. Oldright had just begun his career of unselfish devotion to the cause of hygiene.

To one of my teachers I must pay in passing the tribute of filial affection. There are men here to-day who feel as I do about Dr. James Bovell—that he was one of those finer spirits, not uncommon in life, touched to finer issues only in a suitable environment. Would the Paul of evolution have been Thomas Henry Huxley had the Senate elected the young naturalist to a chair in this university in 1851? Only men of a certain metal rise superior to their surroundings, and while Dr. Bovell had that all-important combination of boundless ambition with energy and industry, he had that fatal fault of diffuseness, in which even genius gets strangled. With a quadrilateral mind, which he kept spinning like a teetotum, one side was never kept uppermost for long at a time. Caught in the storm which shook the scientific world with the publication of the "Origin of Species," instead of sailing before the wind, even were it with bare poles, he put about and sought a harbor of refuge in writing a work on Natural Theology, which you will find on the shelves of second-hand bookshops in a company made respectable at least by the presence of Paley. He was an omnivorous reader and transmuter, he could talk pleasantly, even at times transcendently, upon anything in the science of the day, from protoplasm to evolution; but he lacked concentration and that scientific accuracy which only comes with a long training (sometimes indeed never comes), and which is the ballast of the boat. But the bent of his mind was devotional, and early swept into the Tractarian movement, he became an advanced Churchman, a good Anglican Catholic. As he chaffingly remarked one day to his friend, the Reverend Mr. Darling, he was like the waterman in "Pilgrim's Progress," rowing one way, towards Rome, but looking steadfastly in the other direction, towards Lambeth. His "Steps to the Altar" and his "Lectures on the Advent" attest the earnestness of his convictions; and later in life, following the example of Linacre, he took orders and became another illustration of what Cotton Mather calls the angelical conjunction of medicine with divinity. Then, how well I recall the keen love with which he would engage in metaphysical discussions, and the ardor with which he studied Kant, Hamilton, Reed and Mill. At that day to the Rev. Prof. Bevan was entrusted the rare privilege of directing the minds of the thinking youths at the Provincial University into proper philosophical channels. It was rumored that the hungry sheep looked up and were not fed. I thought so at least, for certain of them, led by T. Wesley Mills, came over daily after Dr. Bovell's four o'clock lecture to reason high and long with him

"On Providence, Foreknowledge, Will and Fate—
Fixed Fate, Freewill, Foreknowledge absolute."

Yet withal his main business in life was as a physician, much sought after for his skill in diagnosis, and much beloved for his loving heart. He had been brought up in the very best practical schools. A pupil of Bright and of Addison, a warm personal friend of Stokes and of Graves, he maintained loyally the traditions of Guy's and taught us to reverence his great masters. As a teacher, he had grasped the fundamental truth announced by John Hunter of the unity of physiological and pathological processes, and, as became the occupant of the chair of the Institute of Medicine, he would discourse on pathological processes in lectures of physiology, and illustrate the physiology of bioplasm in lectures on the pathology of tumors to the bewilderment of the students. When in September, 1870, he wrote to me that he did not intend to return from the West Indies, I felt that I had lost a father and a friend; but in Robert Palmer Howard, of Montreal, I found a noble step-father, and to these two men and to my first teacher, the Rev. W. A. Johnson, of Weston, I owe my success in life—if success means getting what you want and being satisfied with it.

II.

Of the value of an introductory lecture I am not altogether certain. I do not remember to have derived any enduring benefit from the many that I have been called upon to hear, or from the not a few I have inflicted in my day. On the whole I am in favor of abolishing the old custom, but as this is a very special occasion, with special addresses, I consider myself most happy to have been selected for this part of the programme. To the audience at large I fear that much of what I have to say will appear trite and commonplace, but bear with me, since, indeed, to most of you how good soever the word, the season is long past in which it could be spoken to your edification. As I glance from face to face the most striking single peculiarity is the extraordinary diversity that exists among you. Alike in that you are men and white, you are unlike in your features, very unlike in your minds and in your mental training, and your teachers will mourn the singular inequalities in your capacities. And so it is sad to think will be your careers; for one success, for another failure; one will tread the primrose path to the great bon-fire, another the straight and narrow way to renown; some of the best of you will be stricken early on the road, and will join that noble band of youthful martyrs who loved not their lives to the death; others, perhaps the most brilliant among you, like my old friend and comrade, Dick Zimmerman (how he would have rejoiced to see this day!), the Fates will overtake and whirl to destruction

just as success seems assured. When the iniquity of oblivion has blindly scattered her poppy over us, some of you will be the trusted counsellors of this community, and the heads of departments in this Faculty; while for the large majority of you, let us hope, is reserved the happiest and most useful lot given to man—to become vigorous, whole-souled, intelligent general practitioners.

It seems a bounden duty on such an occasion to be honest and frank, so I propose to tell you the secret of life as I have seen the game played, and as I have tried to play it myself. You remember in one of the "Jungle Stories" that when Mowgli wished to be avenged on the villagers he could only get the help of Hathi and his sons by sending them the master-word. This I propose to give you in the hope, yes, in the full assurance, that some of you at least will lay hold upon it to your profit. Though a little one, the master-word looms large in meaning. It is the open sesame to every portal, the great equalizer in the world, the true philosopher's stone which transmutes all the base metal of humanity into gold. The stupid man among you it will make bright, the bright man brilliant and the brilliant student steady. With the magic word in your heart all things are possible, and without it all study is vanity and vexation. The miracles of life are with it; the blind see by touch, the deaf hear with eyes, the dumb speak with fingers. To the youth it brings hope, to the middle-aged confidence, to the aged repose. True balm of hurt minds, in its presence the heart of the sorrowful is lightened and consoled. It is directly responsible for all advances in medicine during the past twenty-five centuries. Laying hold upon it Hippocrates made observation and science the warp and woof of our art. Galen so read its meaning that fifteen centuries stopped thinking, and slept until awakened by the *De Fabrica* of Vesalius, which is the very incarnation of the master-word. With its inspiration Harvey gave an impulse to a larger circulation than he wot of, an impulse which we feel to-day. Hunter sounded all its heights and depths, and stands out in our history as one of the great exemplars of its virtues. With it Virchow smote the rock and the waters of progress gushed out; while in the hands of Pasteur it proved a very talisman to open to us a new heaven in medicine and a new earth in surgery. Not only has it been the touchstone of progress, but it is the measure of success in everyday life. Not a man before you but is beholden to it, for his position here, while he who addresses you has that honor directly in consequence of having had it graven on his heart when he was as you are to-day. And the Master-Word is *Work*, a little one, as I have said, but fraught with momentous sequences if you can

but write it on the tables of your heart, and bind it upon your forehead. But there is a serious difficulty in getting you to understand the paramount importance of the work-habit as part of your organization. You are not far from the Tom Sawyer stage with its philosophy "that work consists of whatever a body is obliged to do, and that play consists of whatever a body is not obliged to do."

A great many hard things may be said of the work-habit. For most of us it means a hard battle; the few take to it naturally; the many prefer idleness and never learn to love to labor. Listen to this: "Look at one of your industrious fellows for a moment, I beseech you," says Robert Louis Stevenson. "He sows hurry and reaps indigestion; he puts a vast deal of activity out to interest, and receives a large measure of nervous derangement in return. Either he absents himself entirely from all fellowship, and lives a recluse in a garret, with carpet slippers and a leaden inkpot; or he comes among people swiftly and bitterly, in a contraction of his whole nervous system, to discharge some temper before he returns to work. I do not care how much or how well he works, this fellow is an evil feature in other people's lives." These are the sentiments of an overworked, dejected man; let me quote the motto of his saner moments: "To travel hopefully is better than to arrive, and the true success is in labor." If you wish to learn of the miseries of scholars in order to avoid them, read Part I, Section 2, Member 3, Sub-section XV, of that immortal work, the "Anatomy of Melancholy," but I am here to warn you against these evils, and to entreat you to form good habits in your student days.

At the outset, appreciate clearly the aims and objects each one of you should have in view—a knowledge of disease and its cure, and a knowledge of yourselves. The one, a special education, will make you a practitioner of medicine; the other, an inner education, may make you a truly good man, foursquare and without a flaw. The one is extrinsic and is largely accomplished by teacher and tutor, by text and by tongue; the other is intrinsic, and is the mental salvation to be wrought out by each one for himself. The first may be had without the second; any one of you may become an active practitioner, without ever having had sense enough to realize that through life you have been a fool; or you may have the second without the first, and, without knowing much of the art, you may have the endowments of head and heart that make the little you do possess go very far in the community. With what I hope to infect you is a desire to have a due proportion of each.

So far as your professional education is concerned, what I

shall say may make for each one of you an easy path easier. The multiplicity of the subjects to be studied is a difficulty, and it is hard for teacher and student to get a due sense of proportion in the work. We are in a transition stage in our methods of teaching, and have not everywhere got away from the idea of the examination as the "be-all and the end-all;" so that the student has constantly before his eyes the magical letters of the degree he seeks. And this is well, perhaps, if you will remember that having, in the old phrase, commenced Bachelor of Medicine, you have only reached a point from which you can begin a life-long process of education.

So many and varied are the aspects presented by this theme that I can only lay stress upon a few of the more essential. The very first step towards success in any occupation is to become interested in it. Locke put this in a very happy way when he said, give a pupil "a relish of knowledge" and you put life into his work. And there is nothing more certain than that you cannot study well if you are not interested in your profession. Your presence here is a warrant that in some way you have become attracted to the study of medicine, but the speculative possibilities so warmly cherished at the outset are apt to cool when in contact with the stern realities of the class-room. Most of you have already experienced the all-absorbing attraction of the scientific branches, and nowadays the practical method of presentation has given a zest which was usually lacking in the old theoretical teaching. The life has become more serious in consequence, and medical students have put away many of the childish tricks with which we used to keep up their bad name. Compare the picture of the "sawbones" of 1842, as given in the recent biography of Sir Henry Acland, with their representatives to-day, and it is evident a great revolution has been effected, and very largely by the salutary influence of improved methods of education. It is possible now to fill out a day with practical work, varied enough to prevent monotony, and so arranged that the knowledge is picked out by the student himself, not thrust into him, willy-nilly, at the point of the tongue. He exercises his wits, and is no longer a passive Strassbourg goose, tied up and stuffed to repletion.

How can you take the greatest possible advantage of your capacities with the least possible strain? By cultivating system. I say cultivating advisedly, since some of you will find the acquisition of systematic habits very hard. There are minds congenitally systematic; others have a life-long fight against an inherited tendency to diffuseness and carelessness in work. A few brilliant fellows try to dispense with it altogether, but they

are a burden to their brethren and a sore trial to their intimates. I have heard it remarked that order is the badge of an ordinary mind. So it may be, but as practitioners of medicine we have to be thankful to get into this useful class. Let me entreat those of you who are here for the first time to lay to heart what I say on this matter. Forget all else, but take away this counsel of a man who has had to fight a hard battle, and not always a successful one, for the little order he has had in his life: take away with you a profound conviction of the value of system in your work. I appeal to the freshmen especially, because you to-day make a beginning, and your future career depends very much upon the habits you will form during this session. To follow the routine of the classes is easy enough, but to take routine into every part of your daily life is a hard task. Some of you will start out joyfully as did Christian and Hopeful, and for many days will journey safely towards the Delectable Mountains, dreaming of them and not thinking of disaster until you find yourselves in the strong captivity of Doubt and under the grinding tyranny of Despair. You have been over-confident. Begin again and more cautiously. No student escapes wholly from these perils and trials; be not disheartened, expect them. Let each hour of the day have its allotted duty, and cultivate that power of concentration which grows with its exercise, so that the attention neither flags nor wavers, but settles with a bull-dog tenacity on the subject before you. Constant repetition makes a good habit fit easily in your mind, and by the end of the session you may have gained that most precious of all knowledge—the power to work. Do not underestimate the difficulty you will have in wringing from your reluctant selves the stern determination to exact the uttermost minute on your schedule. Do not get too interested in one study at the expense of another, but so map out your day that due allowance is given to each. Only in this way can the average student get the best that he can out of his capacities. And it is worth all the pains and trouble he can possibly take for the ultimate gain—if he can reach his doctorate with system so ingrained that it has become an integral part of his being. The artistic sense of perfection in work is another much-to-be-desired quality to be cultivated. No matter how trifling the matter on hand, do it with a feeling that it demands the best that is in you, and when done look it over with a critical eye, not sparing a strict judgment on yourself. This it is that makes anatomy a student's touch-stone. Take the man who does his "part" to perfection, who has got out all there is in it, who labors over the tags of connective tissue, and who demonstrates Meckel's ganglion in his part—this is the fellow in after years who is apt in emer-

gencies, who saves a leg badly smashed in a railway accident, or fights out to the finish, never knowing when he is beaten, in a case of typhoid fever.

Learn to love the freedom of the student life, only too quickly to pass away; the absence of the coarser cares of after days, the joy of comradeship, the delight in new work, the happiness in knowing that you are making progress. Once only can you enjoy these pleasures. The seclusion of the student life is not always good for a man, particularly for those of you who will afterwards engage in general practice, since you will miss that facility of intercourse upon which often the doctor's success depends. On the other hand, sequestration is essential for those of you with high ambitions proportionate to your capacity. It was for such that St. Chrysostom gave his famous counsel, "Depart from the highways and transplant thyself into some enclosed ground, for it is hard for a tree that stands by the wayside to keep its fruit till it be ripe."

Has work no dangers connected with it? What of this bogey of overwork of which we hear so much? There are dangers, but they may readily be avoided with a little care. I can only mention two, one physical, one mental. The very best students are often not the strongest. Ill-health, the bridle of Theages, as Plato called it in the case of one of his friends whose mind had thriven at the expense of the body, may have been the diverting influence toward books or the profession. Among the good men who have studied with me there stand out in my remembrance many a young Lyeidas, "dead ere his prime," sacrificed to carelessness in habits of living and neglect of ordinary sanitary laws. Medical students are much exposed to infection of all sorts, to combat which the body must be kept in first-class condition. Grossteste, the great Bishop of Lincoln, remarked that there were three things necessary for temporal salvation—food, sleep and a cheerful disposition. Add to these suitable exercise and you have the means by which good health may be maintained. Not that health is to be a matter of perpetual solicitation, but habits which favor the *corpus sanum* foster the *mens sana*, in which the joy of living and the joy of working are blended in one harmony. Let me read you a quotation from Old Burton, the great authority on *morbi eruditorum*. There are "many reasons why students dote more often than others. The first is their negligence. Other men look to their tools: a painter will wash his pencils; a smith will look to his hammer, anvil, forge; a husbandman will mend his plough-irons, and grind his hatchet, if it be dull; a falconer or huntsman will have an especial care of his hawks, hounds, horses, dogs, etc.; a musician will string and unstring his lute,

etc.; only scholars neglect that instrument, their brain and spirits (I mean) which they daily use."*

Much study is not only believed to be a weariness of the flesh, but also an active cause of ill-health of mind, in all grades and phase. I deny that work, legitimate work, has anything to do with this. It is that foul fiend Worry who is responsible for a large majority of the cases. The more carefully one looks into the cause of nervous breakdown in students, the less important is work *per se* as a factor. There are a few cases of genuine overwork, but they are not common. Of the causes of worry in the student life there are three of prime importance to which I may briefly refer.

An anticipatory attitude of mind, a perpetual forecasting, disturbs the even tenor of his way and leads to disaster. Years ago a sentence in one of Carlyle's essays made a lasting impression on me: "Our duty is not to see what lies dimly at a distance, but to do what lies clearly at hand." I have long maintained that the best motto for a student is, "Take no thought for the morrow." Let the day's work suffice; live for it, regardless of what the future has in store, believing that to-morrow should take thought for the things of itself. There is no such safeguard against the morbid apprehensions about the future, the dread of examinations and the doubt of ultimate success. Nor is there any risk that such an attitude may breed carelessness. On the contrary, the absorption in the duty of the hour is in itself the best guarantee of ultimate success. "He that regardeth the wind shall not sow, and he that observeth the clouds shall not reap." which means you cannot work profitably with your mind set upon the future.

Another potent cause of worry is an idolatry by which many of you will be sore let and hindered. The mistress of your studies should be the heavenly Aphrodite, the motherless daughter of Uranus. Give her your whole heart, and she will be your protectress and friend. A jealous creature, brooking no second, if she finds you trifling and coquetting with her rival, the younger, early Aphrodite, daughter of Zeus and Dione, she will whistle you off, and let you down the wind to be a prey, perhaps to the examiners, certainly to the worm regret. In plainer language, put your affections in cold storage for a few years, and you will take them out ripened, perhaps a bit mellow, but certainly less subject to those frequent changes which perplex so many young men. Only a grand passion, an all-absorbing devotion to the elder goddess can save the man with a congenital tendency to philandering, the flighty Lydgate who sports with Celia and

*Quotation mainly from Marsilius Ficinus.

Dorothea, and upon whom the judgment ultimately falls in a basil-plant of a wife like Rosamond.

And thirdly, one and all of you will have to face the ordeal of every student in this generation who sooner or later tries to mix the waters of science with the oil of faith. You can have a great deal of both if you can only keep them separate. The worry comes from the attempt at mixture. As general practitioners you will need all the faith you can carry, and while it may not always be of the conventional pattern, when expressed in your lives rather than on your lips, the variety is not a bad one from the standpoint of St. James; and may help to counteract the common scandal alluded to in the celebrated diary of that gossipy old parson-doctor, the Rev. John Ward: "One told the Bishop of Gloucester that he imagined physicians of all other men the most competent judges of all others' affairs of religion—and his reason was because they were wholly unconcerned with it."

III.

Professional work of any sort tends to narrow the mind, to limit the point of view, and to put a hall-mark on a man of a most unmistakable kind. On the one hand are the intense, ardent natures, absorbed in their studies and quickly losing interest in everything but their profession, while other faculties and interests "rust" unused. On the other hand are the bovine brethren, who think of nothing but the treadmill and the corn. From very different causes, the one from concentration, the other from apathy, both are apt to neglect those outside studies that widen the sympathies and help a man to get the best there is out of life. Like art, medicine is an exacting mistress, and in the pursuit of one of the scientific branches, sometimes, too, in practice, not a portion of a man's spirit may be left free for other distractions, but this does not often happen. On account of the intimate personal nature of his work, the medical man, perhaps more than any other man, needs that higher education of which Plato speaks—"that education in virtue from youth upwards, which enables a man eagerly to pursue the ideal perfection." It is not for all, nor can all attain to it, but there is comfort and help in the pursuit, even though the end is never reached. For a large majority the daily round and the common task furnish more than enough to satisfy their heart's desire, and there seems no room left for anything else. Like the good, easy man whom Milton scores in the *Areopagitica*, whose religion was a "traffic so entangled that of all mysteries he could not skill to keep a stock going upon that trade," and handed it over with all the locks and keys to "a divine of note and estimation," so is it with many of us in the matter of this higher

education. No longer intrinsic, wrought in us and ingrained, it has become, in Milton phrase, a "dividual movable," handed over nowadays to the daily press or to the hap-hazard instruction of the pulpit, the platform, or the magazines. Like a good many other things, it comes to a better and more enduring form if not too consciously sought. The all-important thing is to get a relish for the good company of the race in a daily intercourse with some of the great minds of all ages. Now, in the spring-time of life, pick your intimates among them, and begin a systematic cultivation of their works. Many of you will need a strong leaven to raise you above the level of the dough in which it will be your lot to labor. Uncongenial surroundings, an ever-present dissonance between the aspirations within and the actualities without, the oppressive discords of human society, the bitter tragedies of life, the *lacrymæ rerum*, beside the hidden springs of which we sit in sad despair—all these tend to foster in some natures a cynicism quite foreign to our vocation, and to which this inner education offers the best antidote. Personal contact with men of high purpose and character will help a man to make a start—to have the desire, at least, but in its fulness this culture—for that word best expresses it—has to be wrought out by each one for himself. Start at once a bed-side library and spend the last half-hour of the day in communion with the saints of humanity. There are great lessons to be learned from Job and from David, from Isaiah and St. Paul. Taught by Shakespeare you may take your intellectual and moral measure with singular precision. Learn to love Epictetus and Marcus Aurelius. Should you be so fortunate as to be born a Platonist, Jowett will introduce you to the great master through whom alone we can think in certain levels, and whose perpetual modernness startles and delights. Montaigne will teach moderation in all things, and to be "sealed of his tribe" is a special privilege. We have in the profession only a few great literary heroes of the first rank, the friendship and counsel of two of whom you cannot too earnestly seek. Sir Thomas Brown's "Religio Medici" should be your pocket companion, while from the "Breakfast Table Series" of Oliver Wendell Holmes you can glean a philosophy of life peculiarly suited to the needs of a physician. There are at least a dozen or more works which would be helpful in getting that wisdom in life which only comes to those who earnestly seek it.

A conscientious pursuit of Plato's ideal perfection may teach you the three great lessons of life. You may learn to consume your own smoke. The atmosphere of life is darkened by the murmurings and whimpèrings of men and women over the non-essentials, the trifles, that are inevitably incident to the hurly-burly of

the day's routine. Things cannot always go your way. Learn to accept in silence the minor aggravations, cultivate the gift of taciturnity and consume your own smoke with an extra draught of hard work, so that those about you may not be annoyed with the dust and soot of your complaints. More than any other the practitioner of medicine may illustrate the second great lesson, that we are here not to get all we can out of life for ourselves, but to try to make the lives of others happier. This is the essence of that oft-repeated admonition of Christ, "He that findeth his life shall lose it, and he that loseth his life for my sake shall find it," on which hard saying if the children of this generation would lay hold, there would be less misery and discontent in the world. It is not possible for anyone to have better opportunities to live this lesson than you will enjoy. The practice of medicine is an art, not a trade, a calling, not a business, a calling in which your heart will be exercised equally with your head. Often the best part of your work will have nothing to do with potions and powders, but with the exercise of an influence of the strong upon the weak, of the righteous upon the wicked, of the wise upon the foolish. To you as the trusted family counsellor the father will come with his anxieties, the mother with her hidden griefs, the daughter with her trials, and the son with his follies. Fully one-third of the work you do will be entered in other books than yours. Courage and cheerfulness will not only carry you over the rough places of life, but will enable you to bring comfort and help to the weak-hearted, and will console you in the sad hours when, like Uncle Toby, you have "to whistle that you may not weep."

And the third great lesson you may learn is the hardest of all—that the law of the higher life is only fulfilled by love or charity. Many a physician whose daily work is a daily round of beneficence will say hard things and will think hard thoughts of a colleague. No sin will so easily beset you as uncharitableness towards your brother practitioner. So strong is the personal element in the practice of medicine, and so many are the wagging tongues in every parish, that evil speaking, lying and slandering find a shining mark in the lapses and mistakes which are inevitable in our work. There is no reason for discord and disagreement, and the only way to avoid trouble is to have two plain rules. From the day you begin practice never under any circumstances listen to a tale told to the detriment of a brother practitioner, And when any dispute or trouble does arise, go frankly, ere sunset, and talk the matter over, in which way you may gain a brother and a friend. Very easy to carry out, you may think! Far from it: there is no harder battle to fight. Theoretically, there seems to be no difficulty, but when the concrete wound is

rankling, and after Mrs. Jones has rubbed in the cayenne pepper by declaring that Dr. J. told her in confidence of your shocking bungling, your attitude of mind is that you would rather see him in purgatory than make advances towards reconciliation. Wait until the day of your trial comes and then remember my words.

And in closing may I say a few words to the younger practitioners in the audience whose activities will wax, not wane, with the growing years of the century which opens so auspiciously for this school, for this city, for this country. You enter a noble heritage, made by no efforts of your own, but by generations of men who have unselfishly sought to do the best they could for suffering mankind. Much has been done, much remains to do; a way has been opened, and to the possibilities in the scientific development of medicine there seems to be no limit. Except in its application, as general practitioners, you will not have much to do with this. Yours is a higher and a more sacred duty. Think not to light a light to shine before men that they may see your good works; contrariwise, you belong to the great army of quiet workers, physicians and priests, sisters and nurses, all over the world, the members of which strive not neither do they cry, nor are their voices heard in the streets, but to them is given the ministry of consolation in sorrow, need and sickness. Like the ideal wife of whom Plutarch speaks, the best doctor is often the one of whom the public hears least; but nowadays in the fierce light that beats upon the hearth, it is increasingly difficult to live the secluded life in which our best work is done. To you the silent workers of the ranks, in villages and country districts, in the slums of our large cities, in the mining camps and factory towns, in the homes of the rich and in the hovels of the poor—to you is given the harder task of illustrating in your lives the old Hippocratic standards of learning, of sagacity, of humanity and of probity. Of learning, that you may apply in your practice the best that is known in our art, and that with the increase in that priceless endowment of sagacity, so that to all everywhere skilled succor may come in the hour of urgent need. Of a humanity that will show in your daily life tenderness and consideration to the weak, infinite pity to the suffering and a broad charity to all. Of a probity that will make you under all circumstances true to yourselves, true to your high calling, and true to your fellowmen.

THE MEDICAL TREATMENT OF DISEASES OF THE NOSE AND THROAT.*

BY JOHN HUNTER, M.B., TORONTO.

MORBID conditions present themselves in far clearer outline, and can be much more successfully treated, when the physician is familiar with the normal structure and functions of the organs involved in the disease. This fact suggests a division of my paper into two sections: (1) A reference to the structure and functions of those tissues in the nares, pharynx, and the larynx most frequently affected by disease; (2) The medical treatment of these diseases. Time and space are despotic masters, and their limitations only permit of something like a "flash-light" picture of the first division.

The vast expanse of mucous membrane in the upper portion of the respiratory tract challenges special attention to its structure and functions on account of the frequency with which it becomes the seat of disease. The most superficial layers consist of epithelium—either the pavement, columnar or ciliated variety, according to location and function. The cilia wave in a thin fluid. The epithelial layer is very vulnerable to disease, and when disorganized, permits the passage of bacteria and other morbid elements into the deeper structures. It is reproduced, nourished, and abundantly supplied with serum and mucus. This supply comes from the submucous layer through innumerable little canals or perforations in the basement membrane, on which the epithelial layer rests. The submucous layer is composed of a number of elements, and varies greatly in thickness. The component parts are a network of connective tissue—lymphoid or adenoid cells, leucocytes, serous and mucous glands, vascular channels, blood-vessels and nerves. The submucous layer is so distensible in some places, *e.g.*, over the inferior turbinate, as to constitute practically an erectile tissue. The vascular channels and blood-vessels are very susceptible to vaso-motor disturbances, hence the tumefaction, hyperemia, or anemia, so frequently present. "The circulation of the nasal mucous membrane is very complex. There are three systems of capillaries—first, periosteal; then those forming a network around the mucous glands and finally those supplying the surface of the mucous membrane. The veins are everywhere large in calibre, while the lumen of the arteries is unusually small." "When the veins of the erectile tissue dilate by reason of relaxation of their muscular coats, a large amount of blood is

* Read at meeting of Canadian Medical Association, London, August 25th to 28th, 1903.

retained in them, which in cooling warms the respired air. This warming of the air is supposed by some to be the function of the erectile tissue." (Ingals.) The serous and mucous glands are embedded in the submucous layer, and they supply an abundance of serum and mucus for the epithelial layer. The quantity may be a pint or more in twenty-four hours. Beneath the submucous layer we have the dense, firm membrane, the perichondrium, covering the cartilages, and the periosteum, covering the bones. These may be involved in disease, and give rise to intense pain.

The cartilages (triangular) forming the anterior portion of the septum naris, the epiglottis, and the arytenoids, may be perforated or disorganized by pyogenic bacteria, or by the virus of syphilis or tuberculosis. The bones—ethmoid, sphenoid, vomer and turbinates—may be attacked by the same morbid elements, and caries or necrosis produced.

The functions of this portion of the respiratory tract are twofold: (1) respiratory; (2) vocal. When the act of inspiration begins, the air vesicles dilate; a negative pressure is produced in the bronchi, and thus a current is established towards the lungs. The air, on entering the nostrils, passes upward behind the nose, and backwards along the upper portion of the nasal chamber. The current of inspired air passes through the choanæ, or posterior orifices of the nares, and enters the naso-pharynx at a right angle. From the course the air takes it will be readily understood why polypi or other obstruction, in the superior or middle meatus, constriction of the choanæ, adenoids in the vault of the pharynx, or enlarged faucial tonsils, so seriously interfere with respiration. The air, in its passage through the nares and pharynx, is warmed, moistened, and purified. The vocal cords in the larynx, by approximating their edges, and becoming more tense, can produce in the expired air series of vibrations, that give rise to what is technically known as pitch of voice. The pharynx, mouth, and nares act as resonance chambers producing the various modifications of tone.

MEDICAL TREATMENT.

Treatment of diseases of the nose and throat is governed by the simple principles that govern the treatment of other forms of disease. Heredity endows each individual with a special form of organs, and with tissues of a specific type. Environment furnishes the conditions for the development and perpetuation of life, and habits are the "bundles of ways" we have of doing things. All of these are potent factors in the etiology of diseases of the nose and throat, and any treatment undertaken without a thorough investigation of them is both rash and reprehensible.

Morbid conditions elsewhere are exciting or predisposing

causes of disease in this portion of the respiratory tract, hence the imperative necessity for a careful and intelligent examination of the patient. The diseases of the nose and throat most frequently found in general practice are the acute and chronic inflammations known as acute or chronic rhinitis, pharyngitis, or laryngitis, or to the laity as catarrh. The conditions to be met are two-fold: first, general; second, local. General treatment involves the removal or mitigation, if possible, of any morbid conditions present anywhere in the body; the provision of a proper dietetic regimen, and the elimination of waste products by the bowels, kidneys, and skin. Baths are very valuable prophylactic and curative aids in nose and throat cases. The temperature and duration of the bath must be suitable for the individual. Most people can quickly acquire the mental and physical stamina that will enable them to take cold baths, and be immensely benefited by them. My advice to such patients is, on arising, to drink copiously of cold water, then immerse themselves in the cold water, and, whilst the body is submerged, to briskly rub the surface, and after getting out, to rub as much of the water into the skin as possible, before drying with the bath towel. One of my patients facetiously remarked, that by drinking the water and bathing he was washed both inside and outside. After the bath, some form of gymnastic exercise is prescribed. A simple form is to have the arms brought to a horizontal position before the face, then, during a very deep inspiration, carried backwards or upwards; the hands with thumbs forward, placed along the crest of the ilium, and the body bent as far back as possible. It is scarcely necessary to add that sunshine and pure air are our best auxiliaries in the treatment of these diseases.

Local Treatment.—The conditions to be met by local treatment are: (1) The removal of morbid secretions; (2) The removal of morbid conditions, *e.g.*, hyperemia, hypertrophy, or atrophy of the mucous membrane. In regard to the removal of morbid secretions, several methods are in use: The nasal douche, by which the fluid passes along one nostril, around the posterior border of the septum, and returns by the other nostril. Special precaution must be taken if the douche be used. A long, flexible probe, the end of which is wrapped with absorbent cotton and moistened by some oily fluid, is passed backwards through each nostril into the naso-pharynx, to find out if there be any obstruction to the return current, lest infectious material be forced into the Eustachian tube, and very dangerous trouble be set up in the middle ear. The vessel containing the fluid should be held on a level with the nostril, until the return current is established, then gradually raised a few inches. The head should incline forward, the mouth kept open, and no attempt made at swallowing while

the current is flowing. The following are examples of fluids or solutions that may be used for cleansing purposes, as douches or sprays: Warm milk, with a teaspoonful of salt to the pint, is a valuable sedative. Alkaline mixtures for dissolving mucus: potassium, or sodium bicarbonate, gr. v.-xx. to the ounce. Astringents and antiseptics: sulpho-carbolate of zinc or sod., gr. v.-xx.; Listerine, borolyptol, hydrastis, etc. I need not extend the list, for every general practitioner should have a special work on "Diseases of Nose and Throat," and one of the very best of these is by our own Canadian author, Dr. Price-Brown.

In addition to the douche, the cleansing can be very efficiently done by means of an atomizer. In using the atomizer the patient should direct the spray first toward the vault of the nares, then toward each side, and lastly wash out the nasal floor. A very valuable and convenient instrument is a soft or hard rubber catheter, the end of which is closed, and a few perforations made in the surface near the end. This irrigation tube may be attached to any form of syringe. The curved end of a post-nasal syringe is passed upward behind the soft palate, and the spray directed against the vault of the pharynx. In spraying the larynx, a syringe with a long curved tube may be used. The laryngeal mirror should be used to direct the spray. After the cleansing process, the physician dilates the vestibule by the aid of a nasal speculum, and with a head-mirror and suitable light inspects the nasal chambers. A flexible probe, the end of which is wrapped with cotton, is used to dry the mucous surfaces. The cotton is removed from the end of the probe, and the consistency of any hypertrophied tissue is ascertained. The field is now clear for special treatment. Sensitiveness, or hyperemia, can be removed by swabbing with a solution of cocaine, or hydrenaline. Stronger astringents, directly applied, or a bead of chromic acid fused on the end of the probe, if an escharotic be required, or the galvanocautery used. The nostrils are now sprayed with menthol and alboline solution, and the patient instructed to use this solution once or twice daily until he returns for further treatment. The physician must insist on his patient returning regularly to his office while under treatment. The results are extremely unsatisfactory when the patient is advised to get an atomizer and use a prescribed solution. The disgusting array of quacks and quack medicine for catarrh is an opprobrium to our calling, and very largely due to our gross carelessness in managing these cases. It is just as true in medical practice as in business or industrial pursuits, that the degree of attention to minute details spells success or failure.

Laryngeal cases require the aid of the laryngeal mirror, and very great care must be exercised in using strong astringents,

escharotics, or galvano-cautery. In acute laryngeal cases, and in chronic ones where there is much irritation, inhalations of medicated vapors are valuable curative agents. These hot vapors contract the blood-vessels, stimulate the circulation, and thus remove hyperemia, or edema. Their antiseptic and astringent properties serve very useful purposes.

In the preceding paragraphs the writer has endeavored to briefly outline a method of treatment for the ordinary inflammatory conditions met with in the upper portion of the respiratory tract. It is the purport of the paper to only mention such treatment as can be carried out efficiently by the general practitioner everywhere. I would like to suggest to the younger members of our profession, that in this field successful treatment becomes very apparent to the patient, and much more widely discussed than the successful management of typhoid fever or pneumonia. Few of us who have been in practice for a quarter of a century, who do not look back with deep regret to the injury we have done, both to our patients and to ourselves, by neglecting these cases. Nose and throat work can be made a very interesting and profitable department of general practice.

In addition to the acute and chronic conditions already referred to, we have, apart from surgical cases, three diseases that fall especially within the province of general practice, viz., atrophic, syphilitic, and tubercular lesions.

In atrophic rhinitis the mucous membrane becomes thinner, and all its tissues undergo retrograde changes. The nasal chambers become more roomy. The normal serous secretion is diminished, and crusts adhere to the dry surface. These crusts may decompose, and emit a very offensive odor known as ozena. The indications for treatment are: (1) Thorough cleansing of the secretions and offensive crusts; (2) The use of stimulating applications to the mucous membrane. The nares should be sprayed with an oily solution to dissolve the hard offensive crusts, then the irrigating tube, already mentioned, should be introduced and the mucous membrane thoroughly cleansed with a warm solution of permanganate of potash, quarter grain to the ounce. Dilate vestibule with nasal speculum, and with the aid of head-mirror, remove with a swab of cotton any fragments that have been left; then moisten a swab in a solution like following: menthol, gr. v.; oil of cloves, min. v.; acid carbolie, min. iii.; albolene, one ounce; and brush the mucous membrane by a rapid to and fro movement. The patient must return regularly for treatment. At home he may use an antiseptic spray for cleansing purposes, and use the following kind of snuff: acid boracic, grs. 75; aristol, grs. 23; menthol and thymol of each one grain.

Syphilis may be present in the primary, secondary, or tertiary

form; hence the imperative necessity for a very careful search for syphilitic lesions elsewhere. In the tertiary form, ulceration and destruction of tissue may be both rapid and extensive. The excessive secretions and crusts are to be removed, and the mucous surfaces inspected, as in atrophic rhinitis; the ulcers cleansed and brushed with Churchill's tincture of iodine. In tertiary form the constitutional or specific treatment must be promptly and boldly pushed to physiological tolerance—20 to 120 or more grains of iodide of potash in a glass of milk or water, an hour or so after meals, and continued until the disease is arrested. The physician must keep a very close supervision over these cases. The congenital form can be treated with mercury and chalk mixture, inunctions, etc., with careful attention to the general condition of the patient.

Tuberculosis in the upper portion of the respiratory tract calls for help from every available source to keep up general nutrition. Local treatment consists in the use of the cleansing processes already mentioned—hot or cold inhalations of medicated vapors, antiseptic and anodyne. The ulcerations should be brushed with a fifty or seventy-five per cent. solution of lactic acid, after an application of a cocaine solution.

All treatment in the larynx should be guided by the aid of a laryngeal mirror. Oily solutions, such as menthol and albolene, may be thrown into the larynx by means of a syringe with a long, curved nozzle. The lip of the nozzle should be guided into the upper aperture of the larynx by the aid of reflected light, and the patient asked to inspire deeply as the warm solution is being forced from the syringe. Violent coughing may immediately follow, the intra-laryngeal injection, so that when there is danger of hemorrhage, sprays or inhalations should be used instead.

Selected Articles.

MUCOUS MEMBRANES: THEIR PATHOLOGIC CONDITIONS AND TREATMENT.

BY ARTHUR W. YALE, M.D.

For the past three years clinical observations in the many uses of picric acid, especially in the female genital tract, have engrossed the writer's attention. Its usefulness in the treatment of pelvic inflammations has become an established fact. Experiments with the drug in the treatment of gonorrhoea in the male, however, did not yield the satisfactory results anticipated; and from the literature of this prevalent disease, it would appear that silver is the only drug which has stood the test of time. The idea at once suggested itself of a combination of picric acid and silver. Consulting the pharmaceutical chemists who have been making picric acid suppositories for me, they very kindly consented to carry on experiments in the combining of the two drugs, and the result has been a definite salt, containing 30 per cent. of silver. This trinitrophenolate of silver, to which the manufacturers have given the trade name of *Picratol*, is a flocculent, golden-yellow, crystalline substance soluble in water to the extent of 2 per cent., in alcohol 1 3-4 per cent., and also in glycerin, ether and chloroform. It should be noted that this is the first true organic salt of silver to be placed before the profession. Numerous albuminates of silver; some of them claimed to be salts, have been placed upon the market; but there is a vast difference between an albuminate and a salt. The former may contain any proportion of the metal—one, two, three, four, five, ten, twenty, or even thirty per cent.—the proportion varying according to the manipulation of the process employed, while a salt is a definite combination of the silver with an acid, forming a new compound, the medical properties of which are usually a combination of the physiological action of the acid and base employed. This is especially true of the trinitrophenolate of silver, as the silver is held in loose combination, being freed when the salt comes in contact with organic substances. While this is characteristic of other combinations of silver, few possess it to such a marked degree as does *Picratol*.

Believing that in *Picratol* we have a new and valuable addi-

tion to our armamentarium, the writer desires to bring it to the attention of the medical profession. The following are two or three pathological conditions in which it has been found useful.

The first of these is gonorrhœa, for which the salt was primarily made. Here it may be used with a Valentine irrigator, starting with one ounce of the saturated aqueous solution to the quart of water, and increasing the strength to the limit of the patient's endurance. It may also be used in the small hand syringe, the patient injecting it himself several times a day. Here the strongest solution which the patient can tolerate is advised. In chronic cases, the urethral suppository has been most efficacious, the patient being directed to insert a long or short suppository, according to the requirements of the case, night and morning, directly after urinating. The following cases are appended as illustrative of the action of Picratol upon the urethral mucous membrane:

Mr. P., aged 19, had contracted gonorrhœa six weeks prior to first visit, which was made on August 28th. A previous attack, two years before, had only yielded to several months of treatment. When first seen, there was a yellow discharge, thick, offensive, and profuse; also a bubo upon the right side. A treatment, consisting in irrigation with 1-2 per cent. solution of Picratol, was given on August 28th, 29th, 31st, September 1st, 2nd, 3rd, 4th, 5th, 6th and 7th. On the 9th the discharge had entirely ceased. Picratol paste was applied to the bubo on August 28th and 29th. On the 31st, the swelling had entirely disappeared, and the application was therefore discontinued.

Mr. C. Gonorrhœa was contracted one year previous. From the first physician whom he consulted, he received no relief whatever. Under the treatment of the second, discharge was lessened after fourteen weeks' treatment. It ceased entirely for two weeks, only to reappear at the end of that time. The patient then had recourse to one physician after another without obtaining relief. Picratol suppositories were first used on November 15th, the patient being directed to insert one night and morning, directly after urinating. In four days the discharge had entirely ceased, and up to the present time has not reappeared.

Mr. H. Contracted gonorrhœa two years prior to first visit, the discharge having been almost continuous during that period. The first treatment consisted in an irrigation of 1-10 per cent. solution of Picratol, after which a 1 grain suppository was used. Six of these suppositories were given the patient, with instructions to use one night and morning, directly after urinating. As a result, the discharge disappeared in three days; and although six months have passed since cessation, it has not reappeared.—
Abstract from *Medical Council*.

HAY FEVER.

BY HENRY W. COE, M.D.

THE doctor who has not felt the distress of a good vigorous, protracted attack of hay fever and the pleasures of relief, cannot after its departure while yet upon this mundane sphere, have fully comprehended the joys of Heaven, where all is peace, and where one's nostrils are only employed for the purpose of inhaling celestial ether, and where sneezing, wheezing, blowing, and wiping are absent attributes of the olfactory appendages.

A change of air, if one knows where to go, is a great thing, but a climate which this year may prove advantageous to a sufferer may next season prove unavailing, while a region which will promptly relieve one patient will fail to ease the distress in the case of another.

Again, with most people, business, family, or other causes must always interdict a change of location just at the time of the year when it would be most desirable, even in case it is known that residence in any certain locality would cause the cessation of this distressing malady.

It has been said that he who causes two blades of grass to grow where one formerly grew is the benefactor of his race, but the editor of the *Medical Sentinel* feels that he who can make one sneeze appear where two formerly existed in hay fever sufferers is doubly a benefactor of his race, and in saying this the editor speaks from personal experience extending over several years. He desires to mention by name this benefactor, none other than Professor Charles Marchand, of New York City, the discoverer of that incomparable preparation of H₂ O₂, known as Hydrozone.

The *Medical Sentinel* is perfectly willing to stand sponsor for this preparation for the relief of hay fever and to say that sufferers, after its use for a few days, can begin to realize what the joys of Heaven are to be, although still bound by temporal things to this present world of ours. What we say is not an advertisement, nor fulsome praise of a liberal advertiser, but the spontaneous and irresistible tribute of a G. P.—a grateful patient.

There is a good deal in using this preparation in the right way. It should be used early in the attack if the sickness is to be aborted for the season, but even after the ailment is well upon the sufferer the relief upon its use is prompt and extremely marked.

A few minims only of Hydrozone should be dropped into the Hydrozone douche cup already nearly full of tepid water, and when thus diluted, the solution should be poured into one nostril,

allowing it to come out of the other, and then reverse the process with another portion. If irritating, reduce the strength. A shade under is better than a shade over blood heat for the solution. Avoid all force. Much blowing must certainly be avoided. It should be used the first thing in the morning and the last thing at night and the relief for the sufferer, which is certain to follow, will raise up another prophet in the land, proclaiming the virtues of Hydrozone, the good sense of Professor Marchand, and blessing the doctor, whoever he be, who at last found in Hydrozone something which would remove the distress of hay fever.—*Medical Sentinel.*

THERAPEUTIC VALUE OF IODIPIN.

PROF. H. WINTERNITZ, the introducer of iodipin, contributes a paper on the physiological principles of iodipin therapy, in which he gives his opinion of the therapeutic value of the drug as based on years of observations. The external application of iodipin is condemned; even on brisk inunction day after day no iodine appears in the urine.

The rectal administration is also but little satisfactory, for only 10 per cent. of the iodipin seems to be absorbed into the system. The addition of pancreatin to the enemata increases the amount taken up some, yet this method of administration is very inaccurate. For internal use the 10-per-cent., and for subcutaneous the 5-per-cent. preparation, are recommended. Iodipin is not acted upon by the saliva or the gastric juice, even where pathological conditions of the stomach are present, nor does any absorption take place from the gastric mucous membrane. An absorption into the lymph-channels finally occurs from the intestines; the greater part of the drug is taken up unchanged, only a small percentage being split up by the intestinal contents. In the blood, iodipin circulates in small amounts and in finest subdivision, and free iodine is constantly split off, to unite with the alkali salts present. As soon as this occurs, iodine can be detected in the urine and saliva. The time which elapses between the ingestion of 1-2 to 5 gm. of iodipin and detection of iodine in the saliva is generally ten to forty-five minutes if the stomach functionates properly. It requires four to six days till 10 gm. of iodipin are eliminated, while the same amount of potassium iodide is excreted in from two to three days. The fat, which is not at once utilized by the body, is stored up chiefly in the muscles, liver, bone-marrow, and subcutaneous tissue. The slow assimilation explains why intoxication is not likely to occur. The amount of drug lost through the feces is very small; in one case where the feces were analyzed for many days it amounted

only to 4 per cent. It also appears in the milk, both as such and as iodide. As for the subcutaneous administration, it was found that after long-continued use, iodine could still be found in the urine 402 days after the last dose was given. Here also the various internal organs and the blood gave positive iodine reactions. Massage, bodily exercise, and baths will invariably hasten absorption and excretion.

The author concludes from his observations that iodipin is indicated where a prolonged effect is desired, especially since loss of weight and cachexia do not develop; and in bronchial asthma, syphilitic endarteritis, and lead colic considerably more can be accomplished than with the alkali iodides now in vogue.—*Munch. med. Woch.*

SHE FOLLOWED INSTRUCTIONS.

A young nurse in one of New York's largest hospitals had a lesson in literal obedience the other day which gave her a great shock, and caused endless amusement to the rest of the hospital staff.

The nurse was a probationer and, consequently, somewhat limited in her experience; but one thing had been impressed on her mind very strongly—that she should faithfully and exactly carry out the orders of the hospital doctors.

The first patient who was put in the care of the young probationer was what in hospital slang is called a "whisky case," in other words, a man on the verge of delirium tremens. He came to the hospital in the ambulance, was put to bed and quieted by the doctors, and, for the moment, was peaceful. But, anticipating that this state might not last long, the doctor filled a hypodermic syringe with a morphine solution and told the young nurse if the man got violent to use the morphine.

"If he sees snakes," was his parting injunction, "give him that."

Not long after the doctor had gone the persons in that part of the hospital were aroused by frightful yells and terrific screams. The noise was kept up, and the head nurse rushed to where the probationer and her patient were, to find the "whisky case" carrying on dreadfully.

"What's the matter?" said the head nurse to the probationer. "Didn't the doctor tell you to give him something?"

"Yes, he left some medicine."

"Well, why didn't you give it to him?"

"Because the doctor said to give it to him if he saw snakes, and so far he has only seen cats and white rats and spiders."—*N. Y. Times.*

The Canadian Journal of Medicine and Surgery

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

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NO. 5.

Editorials.

THE TREATMENT OF AGITATION AND INSOMNIA IN THE INSANE.

At the thirteenth congress of French-speaking alienists and neurologists, which met last August at Brussels, Dr. Trenel, Medical Superintendent of the Asylum of Saint Yon presented a report on the treatment of agitation and insomnia among the insane. This paper, abstracted by Dr. Laignel-Lavastine, appears in *La Presse Medicale*, August 29th, 1903. The author stated that the treatment of agitation and insomnia represented in reality nearly all the active therapeutics of mental alienation.

This therapeutics is multiple, and includes medicinal and physical agents.

Dr. Trenel reviewed the hypnotics—chloral, chloralimid, croton-chloral, chloral-urethan, somnal, hypnal, chloralose, chlore-tone, urethan, hedonal, methylal, hypnone, amylen hydrate, dormiol, sulphonal, trional, paraldehyde, opium, morphine, codein, narcein, papaverin, heroin, dionin, atropin, hyoscyamin, hyoscin, scopolamin, duboisin, cannabis indica, pellotin, ergotin, and bromide of potassium. He discussed the therapeutic value of each of them, its mode of action and indications. He afterwards described physical means of treatment, such as confinement to bed and baths of various kinds, viz., prolonged and permanent baths, cold baths, and the wet sheet. He showed that confinement to bed was efficacious, especially in simple mania. He did not think clinotherapy was to be depended on in precocious dementia, at least as a continued treatment. On the contrary, in the cases of patients affected with mental confusion, confinement to bed is obligatory; a similar practice is followed in the infectious psychoses.

The practice of giving prolonged baths, lasting six, eight, ten, or twelve hours, which was first employed in France, has been reintroduced into current practice, particularly in Germany, during the last five years. A practitioner can form an idea of the action of the prolonged bath by an examination of the blood pressure of a patient before and after immersion in the bath.

In agitated patients the blood pressure is generally lowered. During the bath it falls fifteen millimetres in fifteen minutes, after which it rises twenty millimetres in thirty minutes, and remains at that level for nearly two hours. It appears, therefore, that the bath produces an elevation of blood pressure in patients who are in a state of motor agitation. Cold baths are used in cases in which the mental disorder is manifestly of toxic origin, particularly in delirium tremens, according to Fereol and Letulle. Envelopment in a sheet wet with water of the same temperature as the air of the room and then wrung, has been recommended as a general treatment in mania and conditions of maniacal fury; but it exercises a very depressing effect on the heart, and cases are recorded in which the wet sheet has caused fatal collapse in patients, who did not have any organic lesion of the heart. Re-

plying to remarks made by gentlemen who discussed his paper, Dr. Trelat said that he had not referred to alcohol in the treatment of insomnia in the insane, because the literature of that subject was not sufficiently extensive for a complete study. He agreed with Richet that chloralose was capable of producing attacks similar to those resulting from the use of strychnine. He had given up electro-therapy as a general means of treating the disorders referred to in his paper. He favored the confining of insane patients to bed, from a theoretical standpoint, but had not a large enough staff to apply it in practice.

From an hospital point of view, the confinement of insane patients to bed is marvellous; to apply it in practice the number of attendants is generally insufficient. To carry it out it would be necessary to organize a special corps of attendants to watch the patients. Confinement to bed should not be continuous, because patients confined to bed lose weight. The solitary confinement of the insane has been discredited in France. In Germany, after four years of prolonged discussions, an eclectic system has been adopted. Continued solitary confinement is bad; practised for a time it is good. The suppression of the solitary cell would be absurd, because patients ask for it. "They feel their agitation." The solitary cell has not only changed its name, but its character as well. It is now a room, and not a dungeon.

J. J. C.

OPENING OF THE NEW MEDICAL BUILDING OF THE UNIVERSITY OF TORONTO.

THE new medical building in connection with the University of Toronto was opened with great ceremony on the 1st of October last. In honor of the occasion the University invited a number of distinguished men of the medical profession from Britain and the United States, as well as Canada, to inspect the new building. They were entertained to luncheon in the University Building by Dean Reeve, attended the formal opening in the afternoon, and in the evening listened to the opening lecture of the session by Professor W. Osler, of Johns Hopkins University. Among the distinguished physicians from abroad, who were present at a public meeting held in the afternoon in one of the theatres of the

new building, were C. S. Sherrington, Professor of Physiology, University of Liverpool; W. H. Welch, Professor of Pathology, Johns Hopkins University; R. H. Chittenden, Professor of Physiological Chemistry at Yale University; A. C. Abbott, Professor of Hygiene in the University of Pennsylvania; J. P. McMurrich, Professor of Anatomy in the University of Michigan; L. F. Barker, Professor of Anatomy at the University of Chicago; Roswell Park, Professor of Surgery in the University of Buffalo; William Osler, Professor of Medicine in Johns Hopkins University; W. W. Keen, Professor of Surgery, Jefferson Medical College, Philadelphia; Professor Townsend Porter, of Harvard University. McGill University, Montreal, was represented by T. G. Roddick, Dean of the medical faculty, and J. G. Adami, Professor of Bacteriology; Queen's University, Kingston, by Senator Sullivan, Professor of Anatomy.

Addresses of a congratulatory character were made by several of these gentlemen. The time-honored opening lecture, which was delivered by Dr. Osler, at the University Gymnasium in the evening, was a fine effort, fully equal to the reputation of the speaker. Among his more important recommendations, Dr. Osler favored the absorption of Queen's University, Kingston, and the Western University, London. He urged that they might be made clinical schools in affiliation with the Provincial University.

President Loudon showed his appreciation of the victory won over Trinity Medical Faculty, by asking their representative, Dr. Temple, to speak. The latter said that federation was a bitter pill to swallow, its redeeming feature being that it tended to the elevation of the profession.

The opening of the new building was certainly notable; for, to quote Dean Reeve, it was "a double consummation: the completion of a building which, for the first time, embodies certain new principles of construction, and the union of Toronto and Trinity Medical Schools." We hope that the new medical faculty will show they can do more than join hands. A university faculty, be it never so strong, cannot provide a student with intelligence and a love of science for its own sake. Success in study must ever depend upon the individual himself, and a medical genius may be said to be one who exhibits an extraordinary capacity for un-

flagging effort. Work always tells, particularly when the worker has brains to direct his energy. A richly-endowed university and a well-trained medical faculty can, however, render material assistance to clever students, enabling them to devote some time to research work before beginning the struggle for existence in the practice of medicine. Perchance such assistance may yet yield a rich return to Canadian medicine. Without derogating in the slightest from the usefulness of the professor who works exclusively in his laboratory, we confess to a closer kinship with the general practitioner, whose efforts in preventive medicine are inspired by actual friction with grave diseases. A good laboratory training, however, is useful to the general practitioner and often helps to bring to fruition such seeds of discovery as lie dormant in him. Laveran, Koch, and other lesser lights in the medical firmament of to-day, probably owe much to the habits of patient investigation formed in the laboratory during their student days. We heartily wish success to the new venture, and hope that it may be prolific in good works.

J. J. C.

EDITORIAL NOTES.

Importance of Teaching Cleanliness to School Children.—

In contending with communicable diseases, the school population counts for a good deal. In Toronto, where there is a Public School population of 34,488, and a Separate School population of 5,072, the aggregate is 39,560, almost a fifth of the city's population. To these might be added a considerable number of pupils attending various private academies and colleges. After a vacation of two months, they have been assembled in school buildings, not always the best suited for such a purpose, and with them, in some cases, they bring the seeds of the communicable diseases. The poisons of measles, whooping-cough, chicken-pox, mumps, and even diphtheria, scarlet fever, and tuberculosis, are present in the mouth or nostrils, and it is probable that in such cases one of the chief vehicles of contagion is the secretion of the mouth and nose. Much can be done to prevent contagion among scholars by teaching habits of cleanliness, and the teacher should notice and correct violations of these rules, as well as ordinary school regulations. School children should be taught cleanliness, decency, and good manners, as well as reading, writing, and arithmetic.

Smoke By-law in Toronto.—A smoke by-law was passed on the 5th ult. by the Toronto Council, and will go into effect on July 1st, 1904. The by-law reads as follows: "All manufacturers and others in the city of Toronto using combustible material to produce heat or power, and thereby creating smoke in such quantities as to foul the atmosphere, or that may be carried by the wind or otherwise to other shops, houses, or premises, to the inconvenience or injury of the neighboring premises or residents therein, shall have such chimney or other apparatus as shall consume the smoke, or prevent the same from fouling the atmosphere, or being carried by the wind or otherwise to other shops, houses or premises, to the inconvenience or injury of the neighboring premises, or residents therein." The penalty for infringement of the by-law is a \$50 fine, or six months' imprisonment. The only practical plan of preventing the black smoke nuisance is to compel stokers to use care and discretion in feeding the fires in the furnaces they attend; but, as stokers are only human and prone to negligence like the rest of mankind, it looks as if the enforcement of the above by-law would entail a large crop of fines. The by-law is well meant, however, and will certainly do good. Instead of polluting the atmosphere with black smoke without stint, the stoker will have to take some trouble in stoking his fire; but, if a fine is imposed on a stoker for discharging too much black smoke from the factory chimney, his employer will probably have to pay the fine.

Glycosuria and the Pituitary Body.—In "Archives gen. de Medecine," 1903, p. 1102, Drs. P. E. Launois and P. Roy study the relations of glycosuria with pituitary tumors. In a table these authors abstract reports of sixteen observations made on patients affected with acromegaly and diabetes, and upon whose bodies necropsies had been made. In these sixteen cases a pituitary tumor was invariably discovered. Proceeding further, they study the pathogenesis of glycosuria in patients who have a tumor of the pituitary body, and sum up as follows: (1) Dallemagne, Hausemon, and Pinely found concomitant lesions of the pancreas, and Dallemagne also found lesions in the endyma of the fourth ventricle; but these coincidences are rare and exceptional. (2) Glycosuria would seem to depend on a disorder of the internal secretion of

the pituitary body. Arnold Lorand says, that "diabetes is but a symptom of a disease of the blood glands," but the adenomatous nature of the tumor habitually causes hypertrophy and excess of function. On the other hand, the histological researches of Caselli and de Launois do not enable us to admit that a special glycogenic nervous centre exists at the site of the pituitary body. Without being as affirmative as Lœb and Caselli, the authors adopt the third hypothesis proposed by Lœb. (3) Glycosuria is the consequence of compression exercised by the glandular tumor on the neighboring parts of the encephalon: a compression exercised on a glycogenic centre situated in these regions, probably in the "tuber cinereum." Lœb's clinical cases go to prove the theory: disappearance of the pituitary tumor by retrogression and simultaneous disappearance of the glycosuria; alternate repletion and depletion of certain tumors, followed by alternate periods of glycosuria and non-glycosuria.

An Historical Study of Plumbism in its Physiological, Clinical and Prophylactic Aspects by Dr. G. Meilliere.—This author writes a thesis (abstracted by Leo MacAuliffe in *La Presse Medicale*, 9th September, 1903), which is not a mere compilation, but gives the results of several years of study of lead poisoning. It does not suffice, in his opinion, to discover the presence of a poison in an organ, after separating the foreign body from the tissues which hold it. The poison must be followed in its successive migrations, taking advantage of the assistance rendered by histology. A poison must be characterized not only by its physical and clinical reactions, but also by its physiological properties. Henceforth this is to be the main object of toxicology. Dr. Meilliere says that lead is very generally absorbed by the digestive passages, and that it afterwards passes into the circulation, but does not remain there, for it is soon arrested in the liver, if the functions of that organ are intact. The hepatic gland and all the annex glands of the digestive tube, absorb the poison, no matter how it is introduced into the body and eliminate it through the bile and the other secretions. If the digestive function is normal, or is used at the proper time, the greater part of the lead eliminated by the digestive tube is carried off by the feces, but a portion of it is always absorbed. "In this respect," says Dr. Meilliere, "the analogy between lead and mercury is complete." Lead

localizes itself for a brief period in the blood-forming and lymphoid organs. It fixes itself in a stable fashion in the bony skeleton, and on the gray substance of the encephalon, a fact which appears to confirm the theory based on the central origin of nervous disorders provoked by lead poisoning. Visible parts of the body retain lead from the beginning of the intoxication, and its localization enables the practitioner to discover doubtful or misunderstood impregnations with this poison. Lead is eliminated in small quantities by most of the secretions: urine, saliva, sweat, and the bronchial mucus. Dr. Meilliere thinks that the organs of all persons contain slight, but discoverable, traces of lead. He does not think that lead, like arsenic and iodine, is a constant element necessary for existence, but that it is an element accidentally introduced into the organism, and tolerated more or less by it according to conditions which are not yet understood.

A Campaign against Ankylostomiasis.—Ankylostomiasis, which is not unlike idiopathic anemia, is due to the presence in the intestine of a nematode worm, *Ankylostoma duodenale*, which sucks the blood from the duodenal walls. The disease occurs chiefly in bricklayers, miners, and navvies. The extract of male fern and thymol are the best specifics. As these preparations have to be administered in rather large doses in order to secure curative effects, the patients taking them require medical supervision. Besides the excreta of the patient should be examined for the parasite. All who have studied the subject agree that the greatest watchfulness and a rigid control of the patient are necessary if a cure is to be effected. In order to obtain the necessary conveniences for making a microscopic diagnosis, and applying scientific treatment in cases of ankylostomiasis, Dr. Malvoz, of the Bacteriological Institute, Brussels, has succeeded in interesting the Provincial authorities, and the powerful industrial association, "The Union of Coal Mines of the Province of Liege," in a project for organizing an hospital for the treatment of ankylostomiasis. This plan works more satisfactorily than the dispensing of vermifuges to the miners, who used to take the medicines at their own homes. The Liege Hospital, which has now been in operation for several months, is established in a villa situated in a large garden in the vicinity of coal mines, where ankylostomiasis has been very frequently observed. It differs from anti-tubercular sanatoria

in that the patients are only kept in the hospital during the time necessary for the administration and the subsequent supervision of the operation of the medicines required in the treatment of the disease. Already nearly a hundred patients have been treated in this hospital. Not only is it an indispensable institution for the scientific cure of ankylostomiasis, but it also exercises a prophylactic action as well. As each female ankylostoma lays every day several thousands of eggs, each of which becomes a larva at the bottom of a damp mine—a larva which is capable of becoming an ankylostoma in the intestine of him who swallows it—one understands that in these conditions the isolation of the patient until he is cured is an important preventive work. During their stay in this hospital, the patients learn the nature of the ankylostoma, how the disease is acquired, and, in particular, what measures of cleanliness and what precautions are necessary for them to take in order to be protected against it. After leaving the villa, they naturally become propagandists of the cure, and instruct their comrades.

J. J. C.

PERSONALS.

THE Lady Superintendent of the Toronto General Hospital issued invitations for the graduating exercises of the class 1903, which were held in the amphitheatre of the hospital on Friday evening last, October 30th, after which a reception was held at the nurses' residence.

DR. GEORGE W. ROSS, the son of Hon. Geo. W. Ross, left the last week of September for the old country. He will walk the hospitals of Edinburgh and Leipzig for two years. The Premier, Miss Ross, and a number of friends were at the station to say good-bye, and to wish the young physician success.

At a meeting of Queen's University trustees held on the 16th ult., Dr. J. C. Connel, M.A., Kingston, was appointed Dean of the Medical Faculty in succession to the late Dr. Fife Fowler. Dr. Connel is a specialist in diseases of the eye, ear, throat, and nose, and has an extensive practice in Eastern Ontario.

DR. MACDUGALL KING, formerly of Toronto, and now of Denver, Colorado, has been appointed instructor in physiology

in the medical department of the University of Denver. He graduated in medicine from the University of Toronto in 1902, and served with the Canadian Field Hospital Corps in South Africa.

DR. WILLIAM BAYARD, the Nestor of the medical profession of St. John, N.B., celebrated his ninetieth birthday on August 22nd. Many called to congratulate him, and he received numerous valuable presents. Telegrams came from Canadian and United States friends, and five congratulatory cables were received from England. Dr. Bayard has been more than sixty years a physician, and is still in active practice and excellent health.

DR. CHARLES R. DICKSON, of Sherbourne Street, attended the thirteenth annual meeting of the American Electro-Therapeutic Association at Hotel Windsor, Atlantic City, N.J., and afterwards enjoyed a two days' cruise from Bordentown, N.J., to New York, *via* the famed Raritan Canal and Hudson River, as the guest of Dr. Emil Heuel, of New York, on his handsome launch, *Amrita*. A week was spent in New York, investigating recent developments in radio-therapy, before returning to Toronto.

At the Hospital Fund meeting recently at the Mansion House, London, Sir Frederick Treves finished a capital speech by a story which elicited from that decorous audience rounds of cheers as if it were Jean de Reszke at the opera. Holding up a 20-groat piece, he told how he had successfully operated at the London Hospital on a Norse sailor unable to follow his calling. The grateful patient found the surgeon's private address, made a polished speech of thanks, and begged him to accept that coin, not as payment, but because his wife, three years before, had sewn it in his belt, to use only when starving. After recovery he had wandered in search of a berth, and really hungered before he found one. Sir Frederick accepted it, and now considers it his choicest memento of a patient's gratitude.

Beds Endowed at Roosevelt Hospital in Honor of Dr. Jacobi.—Four beds at the Roosevelt Hospital have been endowed in honor of Dr. Abraham Jacobi, until last year the professor of children's diseases at the College of Physicians and Surgeons.

Obituary

R. A. BUCK, M.D.

Dr. R. A. BUCK, of 195 Dunn Avenue, Public School Trustee, died at his residence, from illness which had its inception about eighteen months ago, when he suffered a paralytic stroke. Though he had been around since then he did not practise. He continued to attend the School Board meetings until two weeks before his demise.

Dr. Buck was about forty years of age, and leaves a widow but no family. He was elected to the Public School Board in 1896, and had been a member continually since. In 1899 he was chairman of the Management Committee, and he held a similar position in the Property Committee in 1901, 1902, 1903. While Chairman Godfrey of the Board was absent in Europe this summer, Dr. Buck was selected to fill the vacancy. He presided at the School Board meeting on September 2nd, and attended a meeting of the Management Committee on September 13th.

He was a Presbyterian by faith, and attended Dunn Avenue Church. In politics he was a Conservative. Some years ago he owned a drug store in Parkdale.

JOHN BOSTWICK LIMDH, M.D.

Dr. JOHN BOSTWICK LIMDH, the oldest medical practitioner in Preston, died August 20th, as a result of paralysis. Dr. Limdh was in his seventy-eight year, and was born in the Township of Whitechurch, York County, coming of Quaker stock. He attended school in Picton and Lewiston, and graduated in medicine from Buffalo and Toronto Universities. After practising for a year in Baltimore, he came to Sheffield, Besterly Township, in the early fifties, and soon had a large practice. The confidence he then gained, he enjoyed throughout his life. A quarter of a century ago he moved to Galt, and fifteen years ago came to Preston, where he has since been living a retired life.

LOCHLIN C. SINCLAIR, M.D.

DR. LOCHLIN C. SINCLAIR, of Tillsonburg, died August 21st, in his sixty-fourth year. Dr. Sinclair was one of the best known and most successful physicians in the Talbot district. He was a public-spirited man, always ready to advance a good cause, political or social, an upright man in the fullest sense. He opposed John Charlton on one occasion as the nominee of the Conservatives for the House of Commons, and polled a large vote, though defeated.

SAMUEL RICHARDSON, M.D.

DR. SAMUEL RICHARDSON, a well-known physician of Detroit, Mich., died September 3rd, at St. Mary's Hospital, after a lingering illness.

Dr. Richardson was born at Scarboro', Ont., 58 years ago. In 1874 he graduated in arts from the Toronto University, and a year later graduated in medicine from the Toronto School of Medicine. For ten years he practised his profession in Essex County, Ont., and then moved to Detroit, where he had lived ever since. Besides his widow, he is survived by a brother John, of Toronto, and three sisters.

News of the Month.

THE OPENING OF THE NEW MEDICAL BUILDING OF TORONTO UNIVERSITY.

DEAN REEVE, the Senate, the Professoriate and the students are to be congratulated upon the completion of so spacious and well-equipped a medical building. Its opening occurred at the opportune moment when old Trinity and Toronto Universities, had just decided, after the usual lovers' quarrels, to join heart and hand. Amid new surroundings and under the happiest auspices may the medical students of Toronto University press forward in the field of medical knowledge, and attain unto the goal of ambition of this new century of progress—Discovery.

At the opening ceremonies an "absent" presentation of the key of the building was made on behalf of the Trustees, by Dr. Hoskin to President Loudon. Although the audience saw nothing tangible handed over by Dr. Hoskin, he brought to their "mortal minds" a vision of a key made of gold and studded with diamonds, and none of the array of physicians present objected to this form of Christian Science treatment, as a key of gold had unlocked the portal that admitted them to the real and practical study-temple of "Science and Health." The audience filled to overflowing the theatre, and relieved its severity by the brilliance and variety of color represented in the vestments worn by distinguished guests from universities abroad, next door, and members of the profession at home. It was interesting to observe the contrast of facial expression and feature among those present, and a lesson to our eye specialists, that with few exceptions the grand old men regarded life calmly and steadily out of the eyes Mother Nature had equipped them with, while the younger ones magnified the ills that flesh is heir to by lenses, gold-mounted, sitting astride their noses. No wonder some wise ones call this a pessimistic age.

Prof. Sherrington's address was elegant in diction, a delight to listen to, its beauty enhanced by his clear enunciation. A report in full of his address appears in this issue. In rapid succession speaker followed speaker. One of the members of the staff of this journal, who has Methodistic tendencies, said it reminded him of an experience meeting—a word of good cheer from a dozen or so representative men from across the border and from

distant Canadian universities. Every moment was devoted to the edification and strengthening of the brethren. Forms of expression, dignified, witty, or broadly humorous, made the building resound with applause or ring with laughter. Among the distinguished speakers were Prof. W. H. Welch, of Johns Hopkins, who warmly congratulated the University on the laboratories, which would greatly increase its usefulness. He thought it was extraordinary that the medical faculty should have started as co-ordinate with the others, and that there was a drift into proprietary medical schools, and he was not quite clear why there should be any half-educated doctors. But the time has come when medical science is recognized, and he drew attention to the municipal campaign now going on in New York, which hinged on questions of public health.

Prof. Townsend Porter, of Harvard, read congratulations from Prof. Bowditch, of that university, declaring that the importance of the movement for increased facilities for scientific investigation could not be easily calculated, and that it might result in transferring to the Western world the home of medical science. He referred in warm terms to the investigations at McGill, which had resulted in a revolution in the conception of matter. There is a danger, however, that the pendulum may swing too far towards laboratory work, and for this reason Harvard recently revised its curriculum to distinguish between the essential and the desirable. The result was that they condensed the work absolutely necessary for a first-class practitioner to three years, and left the men for elective work for specialties in the fourth year. He referred in laudatory terms to the "unit" system, which characterizes the architecture of the building, and said that it would be followed in the buildings now in course of erection at Harvard.

Prof. Chittenden, of Yale, warmly congratulated the university on its progress in physiological chemistry under Dr. A. B. Macallum, and held it was a legitimate part of the study of physiology and ought not to be divorced from it.

Dr. Roddick, of McGill, said that that institution had also recently done pretty well, having received \$100,000 for the medical building from that grand old Canadian, Lord Strathcona. They had made good use of it, and in fact run into debt, but he felt that there might be another cheque forthcoming. The amalgamation of the two medical schools at Toronto was a step in the right direction, but he urged that the idea should go further. There should be a general federation of the universities of Canada, especially in the matter of matriculation, which should be uniform.

Prof. J. P. McMurrich, of the University of Michigan, as

an old student and graduate, was especially glad to extend his congratulations. He thought, however, President Loudon had omitted one strong argument for university endowment, and that was the enormous contributions to the country by research work in physiological laboratories. One single discovery, and there were many such instances, was sufficient to repay the whole cost. The stimulus of their new laboratories, he thought, could hardly be over-estimated.

Prof. Barker, of the University of Chicago, as an old student and a graduate in medicine, was pleased to extend congratulations from 130,000 Canadians in that city looking to Canada for stimulus in the matter of education. The most notable feature of the new building, he thought, was the provision for research work and he almost concluded that the architects, when in doubt about the use to which to put any corner of the building, said, "Oh, put in a research room."

Senator Sullivan, of Queen's University, said that in Kingston they were between two powerful and wealthy institutions, Toronto and McGill, but the Government has a surplus of millions, and the east can well help Toronto if necessary to go up to the elbows into the public treasury.

Congratulations were also extended by Prof. Roswell Park, of the University of Buffalo, and Prof. A. C. Abbott, of the University of Pennsylvania.

So much *en rapport* with the speakers was the audience that even the Sage of the Grange, of whom every Canadian is proud, and justly so, warmed up and relaxed into a smile, and joined in the general laughter, when Dr. Roswell Park, of Buffalo, said he hoped they would be so successful in their research in the new laboratories that some brilliant student would discover the formula of Paddy's poison, "one drop of which on the cat's tongue would kill a man." All Toronto men, former students and old professors, longed to give the glad hand to the Toronto boy, back for a day from his chair in the University of Chicago, Prof. Barker. What a pity 'tis there is not a place for such as he here at home, with his mobile face, his simple, effective way of saying his word or two, and his high ideals. We are letting these fine young men slip away from us. Canada needs them. Shall they, like "the youth who daily farther from the East must travel," perceive their "vision splendid" of high ideals "die away and fade into the light of common day"—swept into the overpowering vortex of the commercialism of the West?

Prof. Osler, of Johns Hopkins University, delivered the opening lecture to the students, in the evening, in the Gymnasium. The address appears in full in this issue.

With a quill for a goblet, and ink for its wine, may the

CANADIAN JOURNAL OF MEDICINE AND SURGERY scribble a toast to the Professoriate of the united Medical Faculties of Trinity and Toronto Universities. May their union ever be a Truce, and their future success a Triumph.

W. A. Y.

ANNUAL CONVOCATION OF TORONTO UNIVERSITY.

THE annual convocation of Toronto University took place at the gymnasium on the afternoon of October 2nd. The feature of the occasion was the conferring of the honorary degree of LL.D. upon five of the distinguished medical scientists then in the city. Prof. William Osler, of Johns Hopkins University, Baltimore, was presented for the degree by Prof. Ramsay Wright; Prof. Sherrington, of the University of Liverpool, by Prof. MacCallum; Prof. Welch, of Johns Hopkins University, by the Dean, Dr. R. A. Reeve; Prof. Keen, of Jefferson Medical College, by Prof. Irving Cameron; and Prof. Chittenden, of Yale University, by Prof. McPhedran. The degree was also conferred "in absentia" on Prof. Bowditch, of Harvard.

That morning at the new Medical Building, addresses were delivered to the third and fourth year classes by several of the most distinguished scientists present.

Prof. Keen, of Philadelphia, read a most interesting paper, in which he specially urged the students when they became practitioners to keep up-to-date, and keep books and records that would be of service to them for reference in diagnosing difficult cases.

The veteran Prof. Welch, of Baltimore, reviewed the history of pathology, showing how the growth of knowledge of physical life had proceeded first by generalization, followed by demonstration all through the century. He paid a high tribute to Virchow, who had reduced the theory of cellular life to fact; and also to Pasteur, who had done inestimable service by his investigation in the causation of disease, and his discoveries of parasitic organisms in the human body. Koch's creation of a simple technique of pathology had also led to many great discoveries. He assured the students that a scientific interest in pathology would add greatly to the interest and pleasure of their lives as practitioners.

Prof. Adami, of McGill University, combated the reaction against scientific teaching. He said that old physicians were prone to scorn the young cub who was well up on great names, but who could not diagnose a case of hives. As an outsider, he held that the educational system of Ontario might be better and might be much worse, but in Ontario the child from its cradle was taught to look up to the principle of authority. He had "authorized" text-books, and was expected to regard the written

word with awe. He warned students that if they stood solely upon the written word, their future careers would be broken ones. The physician should regard each case as a problem, and should deal with it as a rational being, not as an automaton. He paid a high tribute to the preliminary training in biology given at Toronto University, and said it was what enabled her to send out so many specialists to American universities. Prof. MacCallum's work in investigating the physiology of the cell blazed the future path of pathology.

The last speaker was Prof. Abbott, of the University of Pennsylvania, who gave an address which should be printed and hung up in the library of every doctor in Ontario. Dr. Abbott has been lately engaged in public health work in the corrupt city of Philadelphia. He said that the aim of every student should be to carry on the work of public health. They should realize that every physician who rightly understood his obligations was part of the organization for the improvement of public health. In Philadelphia they had been trying to give the people pure water, and to stamp out typhoid fever, for which the city was famous. Not long ago they succeeded in giving filtered water to two wards, and yet to their chagrin typhoid broke out worse than ever. They were ridiculed, but on investigation it was found that two milkmen, serving thousands in those wards, had each several cases of typhoid in their homes. And these cases, imperilling the lives of thousands, had been unreported by the attending physicians. He urged that the students study as a text-book the health regulations of the Province of Ontario.

PROFITABLE INVESTMENT FOR CANADIAN PHYSICIANS.

Now that a large number of members of the profession throughout Canada, especially, have decided not to invest further in Wall Street securities, most having been effectually "bitten" in that market, it is most opportune that they should turn to a different kind of investment for their surplus funds, one in which they are guaranteed ample return for their money. The investment referred to is the bonds of the Consolidated Uvero Plantations Co., Boston, Mass., which are even now commanding a premium. The bonds are issued in coupon form, with the privilege of registration as to principal. Each \$500 bond carries with it \$400 in stock as a bonus, due July 1st, 1912, with interest payable at the International Trust Co., Boston, Mass.

The business of the company is the growing and marketing of all tropical products, including oranges, lemons, grape and other citrus fruits, yucca, coffee, rubber and pineapples in the

richest agricultural district of Mexico, on the Tehuantepec National Railroad, equi-distant from the Gulf of Mexico and the Pacific Ocean.

The years of development work done on these properties has more firmly established the business and consequently increased the profits. For this reason the cash valuation of the property which was conservatively held one year ago at \$1,011,062.50, at the present time inadequately represents its valuation—and naturally has increased the value of all bond and stock holdings. Therefore the original offer of one \$500 bond to include an equal amount of stock (\$500) is manifestly unfair to old holders of securities who first purchased, and the amount of stock bonus given to new purchasers has been decreased to \$400.

The company now offers \$1,500,000 ten year 6 per cent. first mortgage sinking fund gold bonds on the following basis: Five hundred thousand dollars (\$500,000) of this allotment for cash and the remaining one million dollars (\$1,000,000) in forty-five monthly payments. Each payment as made is secured by issuing the purchaser a 6 per cent. First Mortgage Sinking Fund Gold Note. These notes recite on their face that when a purchaser has \$500 worth he may exchange them for one (1) \$500 6 per cent. First Mortgage Gold Bond at the International Trust Company, Boston, Mass., and receive at the time of exchange \$400 in stock.

The bonds are secured by a first mortgage on all the assets, real and personal, including 6,000 acres of land, 1,600 of which is under cultivation, a general store, merchandise, residence, administration building, starch mills, pineapple cannery, bank, tin can factory, laborers' quarters, warehouses, live stock, mules, cattle, etc., together with all the necessary equipment and machinery to carry on the business of the company.

The directorate is composed of seven prominent business and banking men of the U.S. and Mexico, among whom are Arthur W. Stedman, of the firm of Geo. A. Alden & Co., importers of crude rubber, Boston; Judge V. Z. Wiley, Chief Justice of the Appellate Court, Indianapolis, and Hon. Senor Thomas Morau, member of the House of Deputies, Mexico City. The company has also an advisory board of twenty-one representative business men of the U.S., including such men as C. W. Rider, of the Merrick Thread Co., of Holyoke, Mass.; Frederick Tudor, Jr., Treasurer N. E. Gas and Coke Co., of Boston; D. Webster Dougherty, Attorney, Philadelphia; H. C. Wettengel, Cashier, Diamond National Bank, Pittsburg; Hon. C. J. Pedder, Pittsburg, and Remi Tremblay, member of the House of Commons, Ottawa, Canada.

Actual Profits Paid.—On July 1st last, the company redeemed nineteen of its bonds (\$500 each with interest on same for the

time the money was in the hands of the company); paid 6 per cent. interest on all bonds outstanding and 3 per cent. dividends on the stock.

INFANT MORTALITY.

THE presidential address at this year's annual meeting of the British Medical Association is in the main a survey of the splendid progress of modern antiseptic surgery, with which the honoured name of Lister will always be inseparably associated. But the deliverer of this address, Dr. T. D. Griffiths, felt bound incidentally to refer to one or two weak spots in a manner which should certainly compel public attention. He dwelt, for instance, upon the fact that the middle classes, for whom the hospitals are not intended, are dependent commonly for surgical treatment upon private nursing homes, most of which are run for profit. Many of these institutions, Dr. Griffiths declares, are sadly inferior, both in the surgery and in the nurses they supply, and he asserts that, with a view to efficiency, a reform is necessary which should include support either by public money or by the munificence of benefactors to the elimination of the private profit element. Dr. Griffith's strictures apply equally well to Canada as to England, for it cannot be disputed that the system of more or less irresponsible private nursing homes here as well as there does not fit into the medical ideal any more than more or less irresponsible private schools fit into the ideal of the educational reformer.

Very striking, indeed, is Dr. Griffith's statement as to the huge and unnecessary annual waste of infant life. While the general mortality of the community has diminished during the last thirty-six years, he points out that infant mortality has increased, and he declares that no fewer than 60,000 babies die in England every year whose lives could be saved, and should be saved by modern improvements in the way of sanitation. It is a startling statement for which Dr. Griffiths, of course, is responsible; but even the layman can see some of the reasons which have tended to keep infant mortality at a high level. The very fact that mortality among adults has diminished has some effect in this direction. No doubt weaklings have been kept alive who would have died in earlier generations, and their offspring are naturally not of the sturdiest.

A grim factor, of which we have had samples in Canada, and to which many will point, is that of child insurance. But it can hardly be maintained that these are the principal causes of the ill-omened phenomenon. The increase of drinking habits among women, to which frequent attention has been drawn, cannot be

left out of the reckoning. The child of a drunken mother is only too likely to be a puny baby at best, and, even if it should not be overlaid, it has an almost certain prospect of underfeeding and neglect. Education can be depended upon to do much to reduce the death-rate among children. As ignorance among mothers as to feeding, cleanliness, and the like, diminishes, the children's chance increases. But we fear that infant mortality can never be really low while the crowding into the towns continues. In the close confinement of the poor quarters the fresh air and healthy surroundings that babies need are still unobtainable.—Editorial, *The World*, Toronto.

MEDICAL TEACHING AT TORONTO ISOLATION HOSPITAL.

THE local Board of Health decided on October 7th to recommend that students from Toronto University Medical College desiring instruction in the treatment of contagious diseases be admitted to the City Isolation Hospital. A deputation addressed the Board on the subject.

Dr. McPhedran, the first speaker, dwelt on the importance of Toronto, a great educational centre, providing all branches of medical instruction. Dr. Oldright, in supporting the application, said there were many instances on record of the spread of contagious disease, through lack of knowledge as to treatment on the part of young practitioners.

In reply to Ald. Lynd, as to whether or not students should be charged for the instruction asked for, Dr. McPhedran said he thought not, as the students were a benefit to the city through the money they expended in board, lodging and clothing.

"Will Dr. Sheard be paid?" asked Ald. Lynd.

"For years he has always been paid as a professor of the Medical School, and will be paid for his services at the Isolation Hospital," replied Dr. Oldright.

"Speaking from a purely economic standpoint," said Dr. McPhedran. "I may say that the city is benefited to the extent of \$1,500,000 a year by the presence of the Medical School."

President Loudon, of the University, said that if the question of compensation was to be considered, he thought the Provincial Government might make a grant to the Isolation Hospital.

Ald. Noble then moved that students be admitted to the hospital for instruction.

Dr. Sheard suggested that it should be understood that all such students should be under the supervision of the Medical Health Officer. He added that the question of fees was a new feature but he thought in the event of students from the Woman's Medical College seeking admission, a fee should be charged.

It was the opinion of the members of the Board that the question of fees could be satisfactorily disposed of when the details were worked out.

Dr. Sheard explained that rubber coats and other protective material would have to be purchased.

"I think the University authorities, or the students themselves, should buy the necessary clothing," said Ald. Noble.

The Board finally decided to adopt Ald. Noble's motion and instruct Dr. Sheard to charge each student a fee of \$5 to cover the cost of the necessary protective clothing.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

THE thirteenth annual meeting of the American Electro-Therapeutic Association was held on September 22nd, 23rd, and 24th, at Atlantic City, N.J., in Hotel Windsor; the Marine Room with its nautical fittings and ocean outlook, made an admirable meeting hall. In point of attendance, new members, scope and interest of papers and discussions, the meeting was one of the best in the history of the Association. Dr. Daniel R. Brower, of Chicago, made a capital president, and the secretary, Dr. Clarence E. Skinner, of New Haven, Conn., was simply indefatigable.

The recent death, on August 28th, of Dr. Robert Newman, of New York, a chartered member and tireless worker, cast a gloom over the entire proceedings. As a tribute to his memory, the president's gavel was draped in mourning, and his address alluded most feelingly to the deep loss which the association had sustained. In responding to the Mayor's address of welcome, Dr. C. R. Dickson, of Toronto, expressed the sorrow of the Association; Dr. G. Betton Massey, of Philadelphia, pronounced a fitting eulogium, and on motion of Dr. Dickson, a committee was appointed and drafted appropriate resolutions.

Several instructive reports were presented by the standing committees on scientific questions. The programme contained thirty-four most interesting papers which were very fully discussed, and an innovation which proved highly successful was a suggestion of Dr. C. R. Dickson, viz., Problems in Electro-Therapeutic Practice: a general discussion. Members were invited to submit difficulties arising in practice, on which information or advice was desired, and to offer suggestions as to the solution of such problems.

The entertainments included an exhibition drill of the crew at the Life Saving Station, a visit to the United States Signal Station, and a reception given by the medical profession and Academy of Medicine of Atlantic City at the Marine Room.

The following officers were elected for the coming year: President, Dr. A. D. Rockwell, of New York, N.Y. First Vice-President, Dr. Willis P. Spring, of Minneapolis, Minn.; Second Vice-President, Dr. William W. Eaton, of Danvers, Mass.; Treasurer, Dr. Richard J. Nunn, of Savannah, Ga.; Secretary, Dr. Clarence E. Skinner, of New Haven, Conn.; Members of Executive Council, Dr. Francis B. Bishop, of Washington, D.C.; Dr. Daniel R. Brower, of Chicago, Ill.; Dr. Maurice F. Pilgrim, of New York; Dr. Frederick H. Morse, of Melrose, Mass.; Dr. Charles O. Files, of Portland, Me.; Dr. Ernest Wende, of Buffalo, N.Y.

A HOSPITAL FOR TORONTO UNIVERSITY.

At the conferring of the five degrees of LL.D. *honoris causa*, at the special convocation of the University held last month, the Government was urged by the visiting scholars to go a step further in its support of the medical faculty, and provide, in addition to the magnificent building, admittedly the finest in America, a university hospital.

Prof. W. W. Keen, of Philadelphia, started the agitation. He congratulated the faculty on the building, but added that medical science has not reached its limit. There are other worlds to conquer. There is the question of immunity from disease, the prevention of cancer, of typhus, of typhoid, of measles. It was not enough to stop at these new laboratories. The university must teach the students how to apply the remedies.

"You must, therefore," says Prof. Keen, "provide a complete university hospital under your own control, so that students may learn not only the different phases of disease, but the means of cure."

He went on to say that wards were wanted not only for the sick, but for those afflicted with diseases of a special character, and for whom an occasional visit, say once a week, might suffice.

In reply to the common objection that students should not be allowed to practise to the injury perhaps of the patients, he said that in forty years' experience at half a dozen hospitals he had never known a single patient who was injured or whose chances of recovery were lessened by the students at the bedside. The fact was that a poor patient in a public ward had often a better chance for proper treatment and for recovery than had a rich patient in the seclusion of a private ward. A college, a hospital, outdoor patients, a laboratory, are all parts of a great university.

He referred to the progress of science in Germany and other European countries, and to the post-graduate courses taken there

by Canadians, and asked, "Why should not that familiar label, 'Made in Germany,' be changed to read, 'Made in Canada?'"

Prof. Welch, of Johns Hopkins, emphatically endorsed the importance of a university hospital, and pointed out that it was due to such an institution largely that Johns Hopkins had reached its excellence. "Toronto University," he declared, "will not reach the height of its endeavors unless it has a hospital under university control."

Prof. Osler, of Johns Hopkins, Prof. Chittenden, of Yale, and Prof. Sherrington, of Liverpool, the other three receiving degrees, also spoke briefly.

RESULTS OF TORONTO UNIVERSITY FACULTY OF MEDICINE EXAMINATIONS.

Fourth Year.—The following have passed: J. W. Cook, D. Evans, W. S. Fawns, C. H. Gilmour, R. Hacking, R. B. Harris, L. R. N. Hess, C. F. A. Locke, C. M. MacKay, N. F. Sutton, D. M. Sutherland, A. L. W. Webb.

The following are required to pass supplemental examinations before completing the examination of the fourth year: Medicine—W. D. Beaton, J. A. Kane; Clinical Medicine—D. J. Cochrane.

Third Year.—The following have passed: R. W. Anderson, J. H. Bennett, F. E. Chalmers, J. W. Cook, E. G. Evans, W. S. Ford, P. J. McCue, F. F. McEwen, J. K. McGregor, R. Vansickle.

The following are required to pass supplemental examinations before completing the third year: Clinical Medicine—M. Galbraith, J. B. Swanston; Pathology—J. H. Cascaden, T. R. Henry.

Second Year.—The following have passed: Miss E. Beatty, F. E. Chalmers, H. H. G. Coulthard, W. G. Evans, R. Hacking, J. J. Hamilton, F. V. Hamlin, C. W. Murray, D. F. McLachlan, J. H. McPhedran, W. J. O'Hara, A. E. Schultz, G. Stewart, D. M. Sutherland, J. B. Swanston, R. W. Tisdale, S. Traynor, R. Vansickle, F. J. Walker, F. E. Watts, H. G. Willson.

The following are required to pass supplemental examinations before completing the second year: Anatomy—M. Galbraith, A. J. Gilchrist.

First Year.—The following have passed: D. Black, E. George, J. J. Hamilton, V. S. Kaufman, D. E. Robertson, H. T. Royce, F. J. Walker.

The following are required to pass supplemental examina-

tions before completing the first year: Theoretical biology—D. C. Balfour, K. Campbell, Miss E. A. Ewen, C. V. Jamieson, W. C. Pratt, R. W. Tisdale, R. E. Humphries; Physics—J. H. Jackson, J. A. Kane.

TRINITY TAKES ITS FINAL STEP FOR FEDERATION.

At a largely attended meeting of the Corporation of Trinity University on October 1st, presided over by the Bishop of Toronto, the final step was taken, so far as Trinity is concerned, towards the federation of Trinity University and the University of Toronto. That step was the execution of the instrument containing the terms of agreement for federation. The instrument was ten days later submitted to and adopted by the Senate of the University of Toronto and the Lieut.-Governor in Council, and the Provincial Secretary issued a proclamation that federation had been accomplished.

At a meeting on October 1st, a report of the recent litigation was submitted, along with the judgment of Mr. Justice MacMahon, dissolving the injunction. Then, upon the motion of Dr. J. A. Worrell, K.C., and Provost Macklem, a resolution was submitted setting forth briefly the steps already taken, stating that the terms of the agreement had received the sanction of the Bishops of Toronto, Niagara, Huron, Ottawa, Algoma and Ontario, and that the instrument embodying the terms of agreement had been executed by the trustees of the University of Toronto, and, therefore, instructing the Vice-Chancellor, Provost Macklem, to execute the instrument on behalf of Trinity University, and forward it to the Senate of the University of Toronto and to the Lieut.-Governor in Council.

Rev. Dr. Langtry and Mr. Wm. Ince opposed the resolution, and Lieut.-Colonel Halliwell, of Sterling, pleaded for delay. Dr. Langtry's was, however, the only vote finally recorded against it.

POST-MORTEMS ON BODIES OF INSANE.

A DEPUTATION of medical men asked Premier Ross a week or two ago to establish an institute of pathology with a laboratory attached, in connection with the asylum for the insane in this Province. The idea is to provide accommodation for such an institute in one of the asylums, say Toronto, and appoint a director who would have jurisdiction over all the asylums in the Province in this particular phase of the work. One or two rooms would be all that would be required, and the deputation figured that about \$6,000 a year would support the enterprise. It is claimed for the

scheme that by it a mass of information could be collected which would do much to solve the causes of insanity.

On the deputation were Dr. Arthur Jukes Johnson, Dr. Cassidy, Dr. Burkhardt, Dr. Herbert Bruce, Dr. Grasett, Dr. Ryerson, and John Richardson, M.P.P., who introduced the others.

Dr. Johnson explained the need of the institute. The bodies of inmates who die in asylums are now not subject to post-mortem examinations, excepting in rare cases. Dr. Johnson said that those inmates who were cared for at public expense should contribute something to the advancement of science after their death. Even in other cases, friends of insane people would not object to post-mortems, and they would be most anxious to learn, if possible, the causes of the derangement. The belief was becoming more firmly established that insanity was accompanied by structural changes in the brain. There was an undisputed demand for further investigation into insanity, and while there was lots of material in Canada to investigate upon, it was going to waste.

Dr. Burkhardt and others argued that Ontario ought to contribute its share to the cause of this department of science. Neighbouring States had departments similar to the one proposed.

The Premier said in reply that he would lay the matter before his colleagues, but that nothing could be done until a vote from the Legislature had been secured.

CANADIAN MEDICAL ASSOCIATION OFFICERS.

THE following are the names of the officers elected by the Canadian Medical Association for the ensuing year:

President, Dr. S. J. Tunstall, Vancouver, British Columbia.

Vice-Presidents—Prince Edward Island, Dr. S. R. Jenkins. Nova Scotia, Dr. Dewett, Wolfville. New Brunswick, Dr. Blair, St. Stephen. Quebec, Dr. F. G. Finley, Montreal. Ontario, Dr. A. McPhail, Toronto. Manitoba, Dr. J. A. McArthur, Winnipeg. North-West Territories, Dr. T. A. Patrick, Yorkton, Assa. British Columbia, Dr. R. L. Fraser, Victoria.

Provincial Secretaries—Prince Edward Island, Dr. A. E. Douglas, Hunter River. Nova Scotia, Dr. C. D. Murray, Halifax. New Brunswick, Dr. Crawford, St. John. Quebec, Dr. J. Olmstead, Hamilton. Manitoba, Dr. W. Rogers, Winnipeg. North-West Territories, Dr. Love, Regina. British Columbia, Dr. W. Bryhtonjack, Vancouver.

General Secretary—Dr. Geo. Elliott, Toronto (re-elected).

Treasurer—Dr. H. B. Small, Ottawa (re-elected).

Executive Committee—Dr. W. J. McGuigan and Dr. Lefevre, Vancouver, and Dr. Gibbs, Victoria.

A committee of six was appointed to arrange with the railways for the Vancouver meeting, and it was also resolved to ask the Dominion Government for an appropriation for the gathering.

A CHAIR OF ORTHOPEDIC SURGERY.

ACCORDING to a New York despatch, it is stated on the authority of a gentleman who is in a position to know that Armour, of Chicago, whose daughter Lolita was said to be permanently cured of congenital dislocation of the hips by Dr. Lorenz, of Austria, is to establish a chair of orthopedic surgery after the Lorenz school in at least one hospital in the leading cities of every State and territory of the United States and several in Canada.

Mr. Armour is so enthusiastic over the recovery of his little girl, and is so greatly angered at the attitude of some of the surgeons in his own country for the adverse position which they take on the subject of the restoration of Lolita Armour, that he is anxious to enable every parent in the country to secure for his children the opportunity that his own child had.

The method of founding the Lorenz chair, or, more properly speaking, beds, in the various hospitals has not been determined as yet, but it is thought that it will be in the shape of a donation of sufficient money first to have a surgeon taught in the specialty, and then to pay his salary thereafter at each hospital.

ITEMS OF INTEREST.

\$200,000 for a Sanitarium.—Pietro Cartoni, a well-known land owner, has given \$200,000 to found a sanitarium for consumptive patients in Rome, in memory of his only two sons, who succumbed to tuberculosis.

Polk's Medical Register.—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk & Co., Publishers, Detroit, Mich.

Recently Appointed Coroners.—The following appointments as coroners were lately gazetted: Dr. J. A. Dickson, Hamilton, to be associate coroner; Dr. J. A. Hamilton, New Liskeard, to be associate coroner; Dr. E. T. Kellam, Mazura Falls, to be associate coroner; Dr. W. W. Thompson, Mazura Falls South, to be associate coroner.

Teeth of School Children.—A dentist of Germany states that out of 5,300 school children examined only 4.37 per cent. had sound teeth.

The College of Physicians and Surgeons, the medical department of Columbia University, opened on September 24th in Vanderbilt Hall, at Fifty-ninth Street and Tenth Avenue, with an address by President Nicholas Murray Butler, who then introduced Dr. Walter B. James. Dr. James spoke on "The Old and New Medicine."

Rush College Commencement.—At the quarterly convocation, held October 5th, twenty-two were graduated from Rush Medical College (Medical Department, Chicago University). The address was delivered by Prof. L. Sherrington, of Liverpool, England, his subject being "Localization of Cerebral Centres in the Ape." The lecture was illustrated by lantern slides.—*Jour. Am. Med. Assn.*

DaCosta's Sign.—The familiar little tin sign, loosely placed in the window and simply inscribed "Dr. DaCosta," was the only one this well-known clinician ever possessed. From frequent falls it had acquired such a worn appearance as to excite the notice of its owner, who remarked several months before his death, "The sign has done its work and the owner too; we will soon be gone together."—*Med. Book News.*

Medical Examination of Public School Teachers.—It is not unlikely that before long Boards of Education will require a certificate of good health from candidates before appointing them as teachers. A case in point occurred in Chicago this year, when the City Superintendent recommended that one of the teachers be not allowed to continue her work on account of having tuberculosis. The lady was a Christian Scientist.

The Clinical Thermometer in Poesy—Truly it is given to the poet to find "tongues in trees, books in the running brooks"—and poems in fever charts. One of the newly-published poems of Rudyard Kipling, "The Parting of the Columns," deals with the farewells of the soldiers who had fought side by side in the Boer war.

There isn't much we 'aven't shared since Kruger cut an' run,
The same old work, the same old skoff, the same old dust and sun;
The same old chance that laid us out, or winked an' let us through;
The same old life, the same old death. Good-bye—good luck to you!

Our blood 'as truly mixed with yours—all down the Red Cross train,
We've but the same thermometer in Bloomingtyphoidtein,
We've 'ad the same old temp'ature—the same relapses, too,
The same old saw-backed fever chart. Good-bye—good luck to you!

—*New York and Philadelphia Medical Journal.*

The Woman's Medical College.—The Woman's Medical College of Pennsylvania, the oldest woman's college of medicine in the world, opened September 23rd for the season of 1903-1904. Addresses were made by Dr. Clara Marshall, Dean of the College, and Dr. T. Turner Thomas. It was announced that, owing to the resignation of two members of the faculty, the vacant places in that body would be filled by Dr. Edith Warner Cadwalader, Professor of Obstetrics, and Dr. Ruth Webster Lathrop, Professor of Physiology and Hygiene. The Chair of Anatomy, vacated by the death of Professor William H. Parrish, will not be filled this year.

Medical Inspector of Schools for the District of Columbia.—The United States Congress has authorized Commissioner Macfarland to appoint twelve physicians, at a salary of \$500 each per annum, as Medical Inspectors of the Schools in the District of Columbia. The inspectors must have had at least five years' experience in the practice of medicine in the District of Columbia, and must undergo a competitive examination. They are to perform their duties under the direction of the Health Officer, according to rules formulated by him, and approved by the Board of Education and the Commissioners. Eight of the inspectors are white and four colored.

Tannoform in Intertrigo.—Dr. S. E. Ostrowsky has employed tannoform with excellent result in the intertrigo of small children. The drug was used either as a dusting-powder mixed with an equal part of starch, or as a 10-per-cent. ointment with vaselin. When the latter is employed, the inflamed area should be washed with a solution of boric acid before applying the salve. Forty infants were treated in this manner, and the most obstinate cases, which had resisted all other applications, yielded promptly to tannoform. The results are ascribed to its astringent and antiseptic properties. No irritation was observed even in the youngest infants.—*Arch. of Pediatrics.*

New Hospital for Consumptives.—Contracts for the erection of the new Toronto Free Hospital for Consumptives have been awarded to Mr. D. C. Walton, of Toronto Junction, and work will commence at once. Mr. F. H. Herbert is the architect. The site is on the line of the Weston trolley road, between Toronto Junction and Weston Village, and consists of 37 1-2 acres of beautifully wooded land on the banks of the Humber. A large stone building is on the property, which, when remodelled, will be used as an administration building. Additions will be made to the main building, and pavilions and roofed tents for patients will be built, making the accommodation at the outset for about fifty patients. It is hoped to receive patients by next month.

Unique Gift to Columbia from a Physician.—Dr. Saram R. Ellison, of 118 West One Hundred and Third Street, has arranged to bequeath his remarkable library of works on magic to the library of the Columbia University. The collection consists of some twelve hundred books relating to every phase of black and white magic, from the superstitious performances of necromancers of the middle ages to the latest scientific marvels of Maskelyne and Kellar. Several scrapbooks in the collection are made up of clippings from magazines revealing magical secrets that have not been published elsewhere. Dr. Ellison has received assurances from the college librarian that the collection will not be broken up, but will be placed on the shelves in its integrity.—*N. Y. Med. Jour.*

School of Journalism.—Dr. Nicholas Murray Butler, president of Columbia University, has announced that the trustees had received a gift of \$1,000,000 from Joseph Pulitzer, proprietor of the *New York World*, for the establishment and endowment of a school of journalism as one of the departments of the university. If, at the end of three years, the school of journalism is in successful operation, Mr. Pulitzer will give to Columbia an additional million dollars. It will be the province of the school of journalism to provide both theoretical and practical training for journalism as a profession. The school will take rank with the existing professional schools of law, medicine, engineering, architecture, and teaching. The estimated cost of the building, fully furnished and equipped, is about \$500,000.

The Teaching of Personal Hygiene.—The ordinary instruction in physical education, physiology, dietetics, and exercise is not sufficient, and it is often faulty. It is not desirable to produce athletes, physical culture fanatics, or practitioners of new-fangled and erratic "systems" and "pathies." What is needed is simple instruction by capable teachers in the proper care and use of the body, authoritatively based upon the best available modern anatomic, physiologic, and hygienic data. We should not have "every man his own physician," as seems often the object in lectures, periodicals, and books relating to health; rather give every man fundamental knowledge that will enable him to understand and, if necessary, formulate the requisite rules of health, and to distinguish scientific medicine from quackery. Stripped of its superfluous technicalities this knowledge may be imparted to any one of average intelligence and education.

A Professorship of the History of Medicine in the United States.—The medical world has during the past few years been waking up to the value of the study of the history of medicine. Much has been done informally in this country, as elsewhere, to

arouse an active interest among the profession in this subject, but up to the present there has not, we believe, even been a regular professorship of the history of medicine in any university of the United States, though a few chairs do exist in Europe. The University of Maryland has taken the lead in this matter by the creation of such a chair, the first incumbent of which is Dr. Eugene F. Cordell, of Baltimore. Dr. Cordell has published in the *Johns Hopkins Hospital Bulletin* an exceedingly interesting contribution on the "Doctors and Medicine of Horace," and recently, we understand, a similar essay with Juvenal as the special subject of research.—*New York and Philadelphia Medical Journal.*

Tuberculosis in Animals.—Dr. D. E. Salmon, chief of the Bureau of Animal Industry of the United States, and an expert bacteriologist, at the convention of the American Veterinary Association at Ottawa, in September, described a series of experiments which have resulted in upsetting the theory of the celebrated German, Dr. Koch, who discovered a lymph for the destruction of the tuberculosis germs. Dr. Koch held that tuberculosis in animals was not contagious to man. The experiments of Dr. Salmon, he claims, have proven that Dr. Koch was wrong, and that several cases of tuberculosis had been traced to the affected animals. Some discussion followed, in which it was asserted that Dr. Koch had stated that although his experiments were numerous, it was possible for them all to be wrong. The paper was the most important read for some time, and Dr. Salmon was congratulated by a very large majority of the scientific men present. Papers from Dr. C. H. Higgins on "Colics and Obstruction of the Smaller Intestine, and from Dr. A. S. Wheeler, Baltimore, on "Experiments with the Stomach Worm in Sheep," were submitted, as well as an address by Hon. Sydney Fisher on the importance of veterinary science to agriculture.

The Significance of a Sneeze.—The editor of the *National Druggist* says: "The fact is, that the majority of peoples, both ancient and modern, with the exceptions noted hereafter, seem to have regarded the act of sneezing as one usually fraught with evil. The custom still existing in many lands and among many peoples of uttering a salutation or a benediction on hearing one sneeze is a survival of a traditional fear of evil foreshadowed by the act. Some time ago a German contemporary, in answering a question regarding the origin of the almost universal Teutonic habit of saluting a sneeze with "Zum wohl," or "Gott senge dich," or "Gesundheit," stated that it originated during the prevalence of the great plague in the fourteenth century. One of the earliest symptoms of infection was a sneeze, single at first, but soon followed by a number of sternutations in quick suc-

cession. When a person sneezed, therefore, it was assumed that he was infected with the plague, and all who were near him commended him to the care of heaven, and lit out hot-foot to get away from him." This is the view generally held of the origin of the custom as it prevails throughout Europe to-day, but, that it will not bear investigation, is shown by the fact that among the wild tribes of Asia, Africa, Australia, etc., and among the ancient and modern Greeks and Romans, Egyptians, Jews and others there have, in times past, existed and now exist various and different superstitions regarding the significance of sneezing.—*American Medicine.*

A New Method in Medical Congresses, and one which seems certain to revolutionize the present plan, has been inaugurated by the International Congress of Ophthalmology. At present, as is well known, the programmes of large medical societies are overloaded, and the reading of the papers wastes the time of the members, because the articles soon appear in the journals, and can be read with more understanding than listened to. The most important criticism of the usual custom is that the time for discussion is lost in that used for the reading of papers. To avoid these errors the ophthalmologists have adopted the following plan: The papers must be forwarded to the committee sufficiently in advance to be grouped according to their contents, and immediately printed. They will form the first part of the printed report of the congress, and will be sent to each member, together with his admission ticket, at least two weeks before the time appointed for the opening of the congress. In this way each member will know the subjects to be considered, and will be able to prepare himself for serious discussion. The reading of the papers is thus dispensed with. The authors will be called upon by the president to make known in a few words the conclusions at which they have arrived, after which the discussion will at once begin. The opinions of men who have not the time to write and publish their experiences and opinions may thus be heard. The discussions will be printed, and will form the second part of the official report, which will be sent to each member after the close of the congress. The plan should receive the serious consideration of the officers and members of our national and State medical societies.—*American Medicine*, October 3rd.

Antidiphtheritic Serum Lozenges.—It is said that the diphtheria antitoxin, discovered by Professor Roux, of the Pasteur Institute, is now being made up in the form of lozenges for use during convalescence.—*Philadelphia Med. Journal.*

The Physician's Library.

BOOK REVIEWS.

American Text-Book of Surgery. For Practitioners and Students. Edited by WILLIAM W. KEEN, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; and J. WILLIAM WHITE, M.D., John Rhea Barton Professor of Surgery, University of Pennsylvania, Philadelphia. Fourth edition, thoroughly revised and greatly enlarged. Handsome octavo of 1363 pages, with 551 text-illustrations and 39 full-page plates, many in colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, \$7 net; sheep or half morocco, \$8 net. Canadian agents: J. A. Carveth & Co., Toronto.

The editors and publishers of "The American Text-Book of Surgery" have every reason to be more than proud of the success their volume has met with during the three editions through which it has run up till now. There are not many medical works that can boast of a sale of well on to 50,000 copies; but when one examines the character of the material presented in the twelve or thirteen hundred pages of which the book consists, and how one edition excels its predecessor, it is little surprise that the profession have shown, as they have done, their thorough appreciation of "The American Text-Book of Surgery."

The fourth edition has been thoroughly revised in almost every chapter, so that no one need fear that they will be duplicating volumes in purchasing again. The part devoted to spinal and local anesthesia is exceedingly interesting, as also the section on the more recent anesthetics. Six new chapters have been added, military surgery, naval surgery, tropical surgery, examination of the blood, immunity, and surgery of the pancreas. W. A. Y.

The Elements of Pathological Anatomy and Histology. By WALTER SYDNEY LAZARUS BARLOW, B.A., B.C., M.D., F.R.C.P. Philadelphia: P. Blakiston's Son & Co. Canadian agents: Chandler & Massey Limited, Toronto and Montreal.

A new text-book for students upon the subject of pathology is, perhaps, not the most necessary thing in the world. In no other department of medicine has the number of text-books been

so multiplied in the past few years, as in pathology, and one is apt to approach a new one with suspicion.

There are, however, in this text-book a number of points to be commended. First of all, one is struck by the freshness and originality of the illustration. Both those of gross specimens and the drawings of microscopic section are exceedingly well executed, and will be of the greatest assistance to the student.

Another point to be very much commended, is that this is a text-book of pathology, and not, as so many are nowadays, largely padded out with chapters upon bacteriology and bacteriological technique. The subject-matter is treated in an interesting fashion, and where possible the clinical bearing of facts is emphasized.

Here and there, one meets with statements with which one cannot agree, as for instance, on page 55, where the author refers the solution of tissues in pus formation to the action of proteolytic ferments secreted by the invading micro-organism. Again, in referring to deciduoma malignum, the description by the author is not clear, and there is an exceedingly confusing use of the term, "large decidual cells," which does not give one a very good idea of the pathological significance of the tumor. On the whole, however, the book may be recommended.

J. J. MCK.

The American Illustrated Medical Dictionary. For Practitioners and Students. A complete dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables, of arteries, muscles, nerves, veins, etc.; of bacilli, bacteria, micrococci, streptococci; eponymic tables of diseases, operations, signs and symptoms, stains, tests, methods of treatment, etc. By W. A. NEWMAN DORLAND, A.M., M.D., editor of the "American Pocket Medical Dictionary." Handsome large octavo, nearly 800 pages, bound in full flexible leather. Price, \$4.50 net; with thumb index, \$5 net. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Toronto: J. A. Carveth & Co.

The rapid exhaustion of two large editions cannot but be a gratifying proof to the editor and publishers that this excellent work meets the varied needs of physicians and students better than any other dictionary on the market.

In this the third edition several hundreds of new terms that have been added to the vocabulary of medical sciences have been incorporated and clearly defined. The entire work, moreover, has evidently been subjected to a careful revision, and many of the

tables, notably those of acids, bacteria, stains, tests, methods of treatment, etc., have been amplified, and their practical value greatly increased. It is only by such constant and careful revision that a medical dictionary can hope to reflect the progress of medical science, and the usefulness of this work by this present revision has been very largely extended.

The plates are beautiful, especially those of the blood, bacteria, urinary tract, nerves, arteries, cells and bandages.

This book should be in the hands of every student of medicine, and will be found indispensable to the general practitioner.

W. J. W.

A Text-Book of Diseases of Women. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopedic, and the Philadelphia Hospitals. Handsome octavo volume of 675 pages, sumptuously illustrated with some 650 mostly original illustrations, many in colors. Philadelphia, New York, London: W. B. Saunders & Co. 1903. Cloth \$5 net; sheep or half morocco, \$6 net. Canadian agents: J. A. Carveth & Co., Toronto.

Hirst's Text-Book of Obstetrics is now a fairly well-known work, and this his latest contribution to medical literature will form a companion book to it. We have perused with a great deal of satisfaction, as well as profit, the portions devoted to operations for the relief of various gynecologic anomalies of various kinds, and we don't hesitate to say that a more lucid section, or one "more full" of common sense, we have not read for a long time, and we commend it to practitioners. The photographs reproduced in half-tone are exceedingly good, and add to the value of every chapter. It is very readily seen that Dr. Hirst strongly believes that anyone intending to take up a special course of gynecology, and ultimately become a specialist in that branch, should first and foremost take special training in the treatment of all the complications and sequels of childbirth.

W. A. Y.

Lucotherapy, or the Therapeutic Action of Light. By CORYDON EUGENE ROGERS, M.D., Seattle, Wa., U.S.A., Gold Medallist University of New York, 1868; late Prosector of Anatomy, same; A. A. Surgeon, U.S.A., etc. A practical treatise upon the principal methods of employing light rays in the treatment of all germ diseases. Pp. 157. Illustrations, including portrait of author. The Metropolitan Press, Inc., Seattle, Wa.

The treatise is, properly speaking, a guide to the use of the Rogers Therapeutic Lamps in the treatment of tuberculosis, in-

cluding laryngeal forms, tubercular peritonitis, genital tuberculousis, and lupus, scrofuloderma, (consumption of the skin), Pott's disease, and other osteo-arthritic tubercular lesions, pneumonia, pleurisy, asthma, hay-fever, cancer, puerperal inflammations, non-infectious diseases of women, dysmenorrhœa, acute and chronic articular rheumatism, rheumatism of the heart, traumatic arthritis, acute nephritis, diabetes mellitus, lumbago, neuroses, angina pectoris, mumps, gonorrhœa, cystitis, orchitis, inflammation of the vulvo-vaginal glands, chorea, chancre, chancroids, buboes, eczema, pityriasis maculata and circinata, erysipelas, gangrene, psoriasis, ferunculus, anthrax (carbuncle) and malignant pustule, galactophoritis, insomnia, gonorrhœal salpingitis, uterine fibroids. The list is that given in the book. The author quotes very extensively from other writers—to show how very wrong everyone else is, including Finsen. The first diagram shows that the Rogers method employs all the actinic rays used by Finsen, and in addition the remainder of the visible spectrum, plus the heat rays, for he considers that: "The germ-destroying power of light is equal to the sum of the vibratory forces employed," and does not lie wholly in the actinic rays. As a contribution to the literature of light therapy, the book is certainly a curiosity.

C. R. D.

A Dictionary of Medical Science. Containing a full explanation of the various subjects and terms of anatomy, physiology, medical chemistry, pharmacy, pharmacology, therapeutics, medicine, hygiene, dietetics, pathology, bacteriology, surgery, ophthalmology, otology, laryngology, dermatology, gynecology, obstetrics, pediatrics, medical jurisprudence, dentistry, veterinary science, etc. By ROBERT DUNGLISON, M.D., LL.D., late Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. Twenty-third edition, thoroughly revised with the pronunciation, accentuation, and derivation of the terms, by Thos. L. Stedman, A.M., M.D., Fellow of the New York Academy of Medicine. Philadelphia and New York: Lea Bros. & Co. 1903.

There are but few of the active medical practitioners of to-day who have not always looked upon Dunglison's Medical Dictionary as one on which they have relied, ever since they first handled a medical work. Dunglison's dictionary has for many years been considered among the best of its kind, and justly so, as, in place of being but a lexicon of medical terms, it is more of a condensed medical encyclopedia, giving under each heading an epitome of its varied medical relations.

Dr. Stedman, in revising the work, has adhered, as much as

possible, to the author's style, only altering when actual necessity arose for doing so. During the past few years, even, the number of new medical terms has so increased that we find well on to 2,000 new definitions in the twenty-third edition of Dunglison, so that as a dictionary it can safely be considered a thoroughly complete and up-to-date volume, one that it will take a great deal of very hard work to surpass.

W. A. Y.

A Text-Book of Obstetrics. By J. CLARENCE WEBSTER, M.D. (Edin.), F.R.C.P.E., F.R.S.E., Professor of Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago; Obstetrician and Gynecologist to the Presbyterian Hospital, Chicago; Obstetrician to the Chicago Lying-in Hospital and Dispensary, Chicago, etc., etc. Handsome octavo volume of 767 pages, with 383 illustrations, 23 in colors. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, \$5 net; sheep or half morocco, \$6 net. Canadian agents: J. A. Carveth & Co., Toronto.

A fault that we have more than once called attention to in our review columns in connection with works on obstetrics is that far too little attention is, as a rule, devoted to the description of the anatomical changes which invariably accompany pregnancy, labor, and the puerperal period. Dr. Webster, on the other hand, has erred the other way, if that could be possible, and has devoted a goodly portion of his capital text-book to those important changes. He has done so as the result of considerable study of frozen specimens, the best possible basis for use by the clinician. The author gives his readers the result also of his own experience, so that what he states, especially as to diagnosis and treatment, is thoroughly valuable material. The illustrations are very fine, most of them being original.

W. A. Y.

The American Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Containing the pronunciation and definition of the principal words used in medicine and kindred sciences, with 566 pages and 64 extensive tables. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Flexible leather, with gold edges, \$1 net; with thumb index, \$1.25 net. Canadian agents: J. A. Carveth & Co., Toronto.

In this little work, now in its fourth edition, we have a pocket dictionary equalled by none on the market. It is a wonder to us how the editor has gotten so much information in such a small space. In this edition several thousand of the newest terms that

have appeared in recent medical literature have been added, and the entire work subjected to a careful revision. Since the work has come to us for review, we have had many occasions to refer to it for definitions of new words, and in no instance have we been disappointed. We believe that the work in its new form will meet more fully than ever a real demand on the part of physicians and students. It is unnecessary to add anything further, as we are satisfied that all who use this handy little volume will endorse the above statement.

E. H. A.

A Text-Book of Pathology. By ALFRED STENDEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Octavo volume of 933 pages, with 394 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, \$5 net; sheep or half morocco, \$6 net. Canadian agents: J. A. Carveth & Co., Toronto.

Professor Stengel in this work has considered, more fully than is customary in works of pathology, the practical application of pathologic facts to clinical medicine. In the second part of the work, the pathology of individual organs and tissues is treated systematically, and under sub-headings that clearly indicate the subject-matter to be found on each page. The section on general pathology has naturally received the greatest care, and the most extensive revision. Owing to the advances in pathologic research, some of the chapters have been practically re-written. A useful appendix has been added, treating of pathologic technic methods. Many new illustrations, including ten excellent plates, have also been added. Undoubtedly one of the very best works on pathology in the English language.

A. J. H.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Sixth edition, thoroughly revised. Handsome octavo volume of 1300 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, \$5.50 net; sheep or half morocco, \$6.50 net. Canadian agents: J. A. Carveth & Co., Toronto.

Six separate and distinct editions in as many years is a record to be proud of. That is the measure of appreciation accorded to Dr. J. M. Anders' text-book of practice, and, judging from what we have so far had time to read of the sixth edition, the record of the past will be that of the future.

There is little or no change in the general plan of the book,

but it contains a great deal of new material, more especially chapters on amaurotic family idiocy, adiposis dolorosa, transcortical aphasia, the fourth disease, and albuminuria. All through the work, the author has given careful attention to the daily needs of practitioners and students.

A Text-Book of Clinical Anatomy. For Students and Practitioners. By DANIEL N. EISENDRATH, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons); Attending Surgeon to the Cook County Hospital, Chicago, etc. Handsome octavo of 515 pages, beautifully illustrated with 153 illustrations, a number in colors. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, \$5 net; sheep or half morocco, \$6 net. Canadian agents: J. A. Carveth & Co., Toronto.

Any book that will materially assist the medical student to apply the knowledge he gains during his career at college to his daily work in later years is simply invaluable. This, we take it, is what Professor Eisendrath intended in writing his text-book of clinical anatomy, and we can but say that he has succeeded in his object. He has bridged over the chasm between student and practitioner as far, at least, as descriptive anatomy and its application in the operating-room is concerned. The half-tone illustrations could not be improved upon, as also the typography.

A Text-Book upon the Pathogenic Bacteria. For students of medicine and physicians. By JOSEPH MCFARLAND, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Philadelphia Hospital and to the Medico-Chirurgical Hospital, Philadelphia. Handsome octavo volume of 629 pages, fully illustrated, a number in colors. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, \$3.50 net. Canadian agents: J. A. Carveth & Co., Toronto.

It is only a short time since the third edition of Dr. McFarland's work was placed in the hands of the profession; but, so rapid have been the strides made in pathology, that he wisely decided to re-write his book, so that it will the better maintain its reputation as being invariably free of old matter, and full of what is only most recent and up-to-date. Dr. McFarland has added quite a quantity of new material, so that the volume is considerably larger than its predecessor. College students will act wisely in providing themselves with a copy, and will find that, in their laboratory work, it will prove of the greatest assistance to them.

The Principles and Practice of Hydrotherapy. A guide to the application of water in disease, for students and practitioners of medicine. By SIMON BARUCH, M.D., Professor of Hydrotherapeutics in the N.Y. Post-Graduate Medical School. Second edition, revised and enlarged. With numerous illustrations. New York: William Wood & Co. 1903. Canadian agents: Chandler & Massey Limited, Toronto and Montreal.

It is during but recent years that the profession have used, to any extent, water in the treatment of disease. Dr. Baruch has for a considerable length of time urged the more precise use of hydrotherapy in disease, just as much so as the regulation of diet, the use of rest and exercise, and the prescribing of medicinal agents. His volume in its present form is a creditable production, and, though there are many who may not agree with his ideas, especially in the views he expresses as to the adoption of hydrotherapy in asylums in the treatment of insanity, there are, on the other hand, many more who will be under a debt of gratitude to him for a volume which is the outcome of a great deal of patient, hard work.

W. A. Y.

The Papers of Pastor Felix. By ARTHUR JOHN LOCKHART. Toronto: William Briggs.

We are always pleased to meet the work of a Canadian author, and "The Papers of Pastor Felix" form no exception. The sketch of Phemie, the beautiful, bright-eyed child of rural Canada, with the pathetic picture of her aged grandfather constantly and vainly looking for her return, keeps one's attention with increasing interest, and pleasantly passes a tired hour.

We were also much pleased with the minister's Saturday evening, and the dialogue between himself and his two friends, the village doctor and the school master. The legend in verse, of the little lost child of the Indians in the mountain region of New Hampshire—The Waters of Carr—is especially fine.

The work contains a good deal of original poetry, mixed in with prose sketches and apt quotations from the best poets.

W. J. W.

The Principles of Obstetrics. A Practical Manual for the Student and General Practitioner. By STANLEY PERKINS WARREN, M.D., Obstetric Surgeon to the Maine General Hospital, etc. Profusely illustrated. New York: Wm. Wood & Company. 1903. Canadian agents: Chandler & Massey Limited, Toronto and Montreal.

This is a concise, practical text-book upon the principles of obstetrics for students and general practitioners. An effort has

been made to restrict the work to the smallest limits possible, without omitting essential facts. It is readable, reliable, well printed and beautifully illustrated, and is thoroughly adapted for the use of those who desire to obtain a practical working knowledge of the subject without taking time to go into discussion which are interesting mainly from a theoretical standpoint. A. E.

Physical Diagnosis of Diseases of the Chest. By RICHARD C. CABOT, M.D., Physician to Out-Patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. Second edition. New York: William Wood & Co., Publishers. Canadian agents: Chandler & Masey Limited, Toronto and Montreal.

This is a work, concise, definite, and yet exhaustive, well arranged, with complete table of contents and excellent index.

Part I. treats of technique and general diagnosis, Part II. of diseases of the heart, and Part III. of diseases of the lungs and pleura. Many common errors are corrected, and valuable modern observations and methods noted. It is well illustrated, and altogether an excellent work. A. R. G.

Aids to Physiology. By PEYTON T. B. BEALE, F.R.C.S. (Eng.), Lecturer in Physiology and Histology, Women's Department, King's College, and Demonstrator of Histology, King's College, London. Bailliere, Tindall & Cox, 8 Henrietta St., London. 1903.

This is intended to be an aid to students in reviewing their work for class-room and other examinations, and to practitioners who wish to refresh their memory. It is well written, brief and full, and is well adapted for the purpose for which it was intended. A. E.

Earth's Enigmas. By CHARLES G. D. ROBERTS, author of "The Kindred of the Wild," "The Heart of the Ancient Wood," "Barbara Ladd," "Poems," etc. Illustrated by Charles Livingston Bull. Toronto: The Copp Clark Co., Limited. 1903.

"Earth's Enigmas" is a collection of short stories presenting one or another of the problems of life or nature to which, as it appears to many of us, there is no adequate solution. Others are the literal transcript of dreams, while others are taken from Canadian backwoods life. The stories are well told, and are exceedingly interesting. I must say I enjoyed them greatly.

A. J. H.

A *Laboratory Guide in Urinalysis and Toxicology*. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry, Physics and Toxicology in the Medical Department, Cornell University; Member of the American Chemical Society, and of the Chemical Societies of Paris and Berlin, etc. Fifth edition. New York: William Wood & Co., Publishers. Canadian agents: Chandler & Massey Limited, Toronto and Montreal.

This is a most complete and valuable guide for laboratory work, most conveniently arranged and bound and well illustrated.

A. R. G.

Golden Rules for Diseases of Infants and Children. By GEORGE CARPENTER, M.D., M.R.C.P., Assistant Physician at the North-Eastern Hospital for Children, etc. Second edition, enlarged. Bristol: John Wright & Co.

The "Golden Rules" consist of short statements regarding the nature, symptoms, and treatment of diseases of infants and children. It is a handy pocket edition for ready reference.

A. E.

CORRECTION.—In a review of "Polyphase Currents in Electrotherapy," in a previous number, the reviewer was made to say that "Guimbail, of Paris, has employed them (*i.e.* polyphase currents) for over sixty years." The sentence should read "six years."

"THE DOCTOR'S RECREATION" SERIES.

THE following series of books, which must of necessity interest medical men, will be published this winter by the Saalfeld Publishing Company. Judging from their titles, the publishers ought to have no difficulty in getting a large number of subscribers from the ranks of the profession. It comprises twelve octavo volumes:

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Volume XI. *A Cyclopeda of Medical History*. A Ready Reference of Medical Practice from the Earliest Times, Biographical and Statistical. Edited by Charles Wells Moulton.

Volume XII. *The Doctor's Who's Who: A Biographical Dictionary of Living Practitioners in All Parts of the World*. Edited by Charles Wells Moulton.

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Physicians' Book-keeping.—It is a well-known fact that book-keeping to the average physician is his *bête noir* and that professional men would be far better off financially if they paid a little more attention to the business side of practice. Nowadays it costs a mere bagatelle to employ someone to keep the books written up and accounts rendered, as they should be, once a month, especially when results are looked at. A practical accountant, with the best of references and long experience, wishes to make arrangements with physicians to keep their books and render their accounts, in the evenings. His terms are very moderate and he solicits a personal interview. Those interested address, "Accountant," Box 71, CANADIAN JOURNAL OF MEDICINE AND SURGERY, TORONTO.