The new century and the new building of the Harvard Medical School, 1783-1883 : addresses and exercises at the one hundredth anniversary of the foundation of the medical school of Harvard University, October 17, 1883.

One Hundredth Anniversary

OF THE

FOUNDATION OF THE MEDICAL SCHOOL

OF

HARVARD UNIVERSITY.

THE HARVARD MEDICAL SCHOOL,

1883.

THE NEW CENTURY AND THE NEW BUILDING OF THE HARVARD MEDICAL SCHOOL. 1783—1883.

ADDRESSES AND EXERCISES

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HARVARD UNIVERSITY,

OCTOBER 17, 1883.

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BY

OLIVER WENDELL HOLMES, M.D., LL.D.

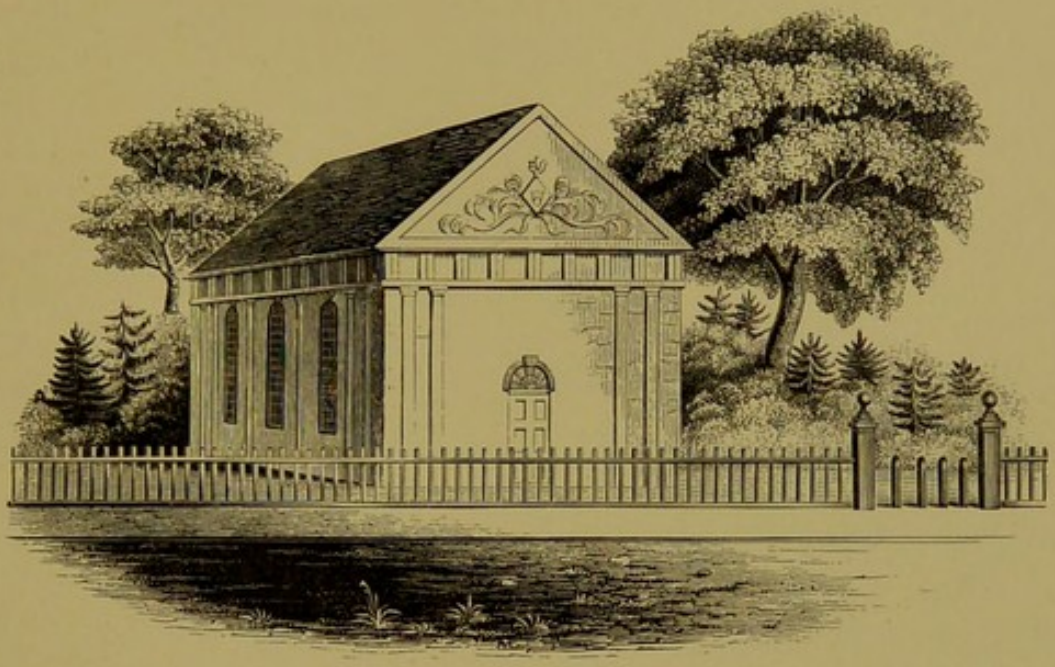
THE Medical School of Harvard University enters, with the commencement of the present season, upon the second century of its existence. By a fortunate coincidence it takes possession at this same time of the noble edifice which a generous public has reared for the use of the teachers and students of this institution.

Yesterday; to-day; to-morrow. Let us look backward at the period when this school began its teachings, and mark some of the longer strides which bring the professional condition of the earlier epoch to that of our own time. Let us see where we stand to-day, and we shall know better what to hope for the future of the teaching, the science, and the art of healing.

We are in the habit of counting a generation as completed in thirty years, but two lives cover a whole century by an easy act of memory. I, who am now addressing you, distinctly remember the Boston practitioner who walked among the dead after the battle of Bunker's Hill, and pointed out the body of Joseph

Warren among the heaps of slain. Look forward a little while from that time to the period at which this Medical School was founded. Eight years had passed since John Jeffries was treading the bloody turf on yonder hillside. The independence of the United States had just been recognized by Great Britain. The lessons of the war were fresh in the minds of those who had served as military surgeons. They knew what anatomical knowledge means to the man called upon to deal with every form of injury to every organ of the body. They knew what fever and dysentery are in the camp, and what skill is needed by those who have to treat the diseases often more fatal than the conflicts of the battle-field. They knew also, and too well, how imperfectly taught were most of those to whom the health of the whole community was intrusted.

Dr. John Warren, a younger brother of Dr. Joseph Warren who fell at Bunker's Hill, was the first mover in the project of founding a medical school in connection with Harvard College, and was the first Professor of Anatomy and Surgery. Those who remembered his teaching have spoken to me with admiration of the eloquence and enthusiasm with which he lectured. Dr. John Warren was a man of great energy, spirit, and ability. The Lectures of the newly founded School were delivered in Cambridge until the erection of the building known as the Massachusetts Medical College, in Mason Street, in the year 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the University town. But Dr. Warren did not ask whether it was easy or not. "In the fulness



Holden Chapel, Cambridge,

1783.

of professional business he daily passed over Charlestown ferry to Cambridge, there not being a bridge at that time; and sometimes, when impeded by ice, was compelled to take the route through Roxbury and Brookline to Cambridge, and to return on the same morning, after himself performing the dissections and giving a lecture sometimes three hours long." So tells us worthy Dr. Thacher, in the Appendix to his American Medical Biography.

Benjamin Waterhouse, honorably known for having been the introducer of vaccination into America, was the first Professor of the Theory and Practice of Medicine. I remember him well, and carry the scar of the vaccination he performed on me. His powdered hair and queue, his gold-headed cane, his magisterial air and diction, were familiar to me from my boyhood. Dr. Waterhouse had his degree from Leyden, where he wrote and defended a thesis, *De Sympathia Partium Corporis Humani, ejusque in explicandis et curandis morbis necessaria consideratione.* He had some learning, which he was disposed to make the most of, as perhaps we all are if we have it, and laid himself open to the playful sallies of the students of his time, one of whom announced a course of Lectures on Oudenology, which was supposed to be a travesty of some of his prelections.

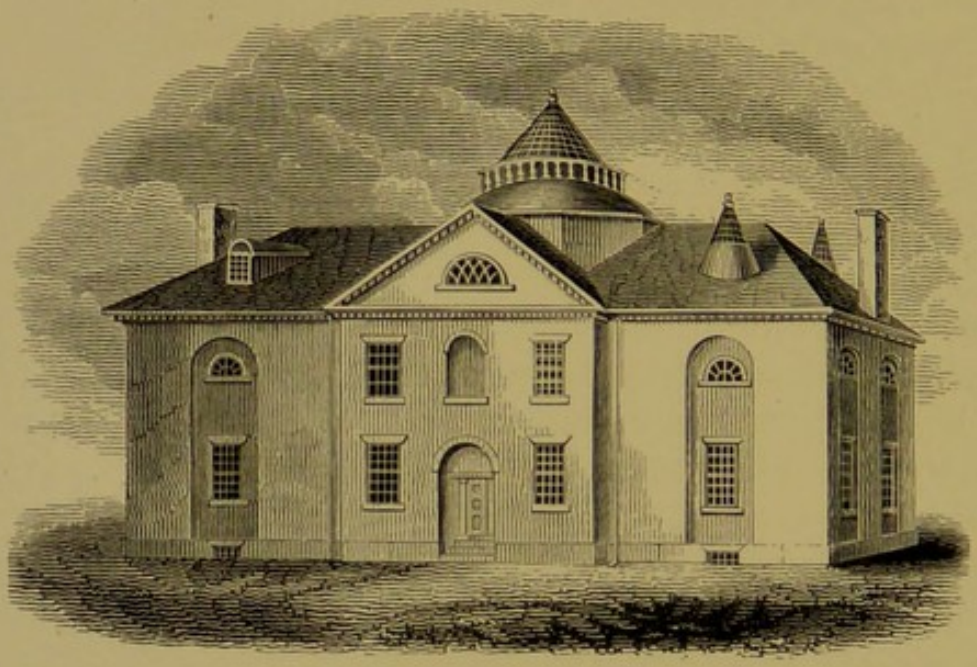
The first Professor of Chemistry was Aaron Dexter. It was the forming period of that science. Black, Cavendish, Priestley, Lavoisier, were building it up with their discoveries. A course of Chemical Lectures delivered in Boston or Cambridge at that day was

probably, as it certainly was at a later day, very entertaining, and not wholly uninstructive. Phlogiston had not yet definitely taken itself to the limbo of negative entities. But however crude the theories, we may be pretty sure that there was left in the student's mind a memory of startling precipitations, of pleasing changes of color, of brilliant coruscations, of alarming explosions, and above all of odors innumerable and indescribable.

It is sad to think that professors honored in their day and generation should often be preserved only by such poor accidents as a sophomore's jest or a graduate's anecdote. The apparatus of illustration was doubtless very imperfect in Dr. Dexter's time, compared to what is seen in all the laboratories of to-day. We may admire his philosophy and equanimity, therefore, in recalling the story I used to hear about him.

"This experiment, gentlemen," he is represented as saying, "is one of remarkable brilliancy. As I touch the powder you see before me with a drop of this fluid, it bursts into a sudden and brilliant flame," — which it most emphatically does *not* do as he makes the contact. "Gentlemen," he says, with a serene smile, "the experiment has failed; but the principle, gentlemen, — the principle remains firm as the everlasting hills."

Three teachers only, where we have forty, or nearly that number! But when the great University of Göttingen was established, the illustrious Haller filled the one Chair of Botany, Anatomy, Surgery, and Medicine. I called it a Chair, — it was rather a Settee of Professorships.



Massachusetts Medical College, Mason Street, Boston,
1815.

It is to be regretted that we have not a list of the text-books in use during that first period of the School. Dr. Waterhouse would naturally refer his students to the learned Gaubius, the voluminous Van Swieten, the illustrious Boerhaave. The excellent Dr. Fothergill was his uncle; the immortal Jenner was his second creator; and their names, with that of Dr. Lettsom, were often on his lips. Sydenham, Pringle, and Cullen he speaks of as being in the hands of all his students, and his references show a considerable extent of reading.

The text-books in Anatomy were probably Cheselden and Monro, perhaps Winslow, and, for those who could read French, Sabatier. The Professor himself had the magnificent illustrated works of Albinus and of Haller, the plates of Cowper (stolen from Bidloo) and others. The student may have seen from time to time, if he did not own, the figures of Eustachius and of Haller. Haller's First Lines of Physiology were doubtless in the hands of most students. The works of Pott, of Sharp, and, most of all, of John Hunter, were taking the place of Heister and the other earlier authorities.

Smellie was probably enough the favorite in his department. What chemical text-books Dr. Dexter put into the hands of his students in 1783 I will not venture to conjecture.

And now I will ask you to take a stride of half a century, from the year 1783 to the year 1833. Of this last date I can speak from my own recollection. In April, 1833, I had been more than two years a medical student attending the winter lectures of this School, and have therefore a vivid recollection of the

Professors of that day. I will only briefly characterize them by their various merits; not so much troubling myself about what may have been their shortcomings. The shadowy procession moves almost visibly by me as I speak: John Collins Warren, a cool and skilful operator, a man of unshaken nerves, of determined purpose, of stern ambition, equipped with a fine library, but remarkable quite as much for knowledge of the world as for erudition, and keeping a steady eye on professional and social distinction, which he attained and transmitted: James Jackson, a man of serene and clear intelligence, well instructed, not over book-fed, truthful to the centre; a candid listener to all opinions; a man who forgot himself in his care for others and his love for his profession; by common consent recognized as a model of the wise and good physician: Jacob Bigelow, more learned, far more various in gifts and acquirements, than any of his colleagues; shrewd, inventive, constructive, questioning, patient in forming opinions, steadfast in maintaining them; a man of infinite good nature, of ready wit, of a keen sense of humor, and a fine literary taste; one of the most accomplished of American physicians; I do not recall the name of one who could be considered his equal in all respects: Walter Channing, meant by nature for a man of letters, like his brothers William Ellery and Edward Tyrrel; vivacious, full of anecdote, ready to make trial of new remedies, with the open and receptive intelligence belonging to his name as a birthright; esteemed in his specialty by those who called on him in emergencies. The Professor of Chemistry of that day

was pleasant in the lecture-room, rather nervous and excitable, I should say, and judiciously self-conservative when an explosion was a part of the programme.

Those who are curious to know what hand-books we students used in 1833 will find they were nearly as follows. In Anatomy, the works of John and Charles Bell, that of Wistar, and the Dublin Dissector. In Physiology, Haller's First Lines, and Richerand. In Chemistry, Webster's edition of Brande. In Surgery, Samuel Cooper's work, with his Surgical Dictionary as a book of reference. In Theory and Practice, Dr. Good's Study of Medicine was adopted by Dr. James Jackson, and generally followed. Gregory's Practice was often seen in the student's hands, and Laennec's Treatise on Diseases of the Chest and their Physical Signs was just coming to their notice in the form of Dr. Forbes's translation. Denman and Dewees were the favorites in their special branches. Bigelow's Sequel to the Pharmacopœia was much sought after by the students of this School. Like the excellent and serviceable work recently published by his successor in the Chair of Materia Medica, it was unpretentious enough for the most scrupulous teachers of the high and dry Northern latitudes.

Other books read by students were, Hunter on the Blood, Fordyce on Fever, Heberden, and, of course, Cullen and the earlier standard works which happened to be in their instructors' libraries. Louis was just beginning to be known among us. The Lectures of Sir Astley Cooper and of Mr. Abernethy were eagerly read. One fellow student of mine read through the

three solid quartos of Morgagni. These are the principal authorities I recall as lying about our study and lecture-rooms. But my memory is, no doubt, sometimes at fault.

Great stories had been reaching us for some time of the schools and hospitals of Paris. Dr. John Jackson, nephew of our old Professor, came home with news of the fine opportunities there offered. Young James Jackson, the Professor's son, was there still, writing home letters which remain on published record, to show how much of talent, and zeal, and high promise, was lost to the medical profession by his early death. Especially did he speak of Louis, whom he had chosen as his principal teacher, and of whom he became the favorite pupil and the very dear friend. These circumstances decided me to seek the same centre of instruction; and so, in April, 1833, I left Boston to pursue my studies in Paris. Dr. John Jackson bade me farewell with a look as if I were indeed on my way to the good Bostonian's heaven, and handed me a small square of India-rubber, his own newly suggested pleximeter, or instrument to be used for mediate percussion, which he wished me to show to Louis and the other great Paris doctors.

I have said something of my Boston teachers, and I will devote a few words to those whose instructions I followed in Paris, and to some of their most renowned professional contemporaries in other European countries, at the risk of a partial repetition of what I have said elsewhere.

Old Boyer, Baron Boyer, who, in spite of his title,

kept his own books for sale at his own house, was still creeping around the wards of La Charité. At Hôtel Dieu was the great surgeon Dupuytren. On the other side of the river was his large and loud rival, Lisfranc. Roux, best known by his report of his medical visits to England, was operating and lecturing, — lecturing, parenthesis within parenthesis, — ovum, germinal vesicle, germinal spot, until his embryo meaning vanished in the invisible; Velpeau, a reclaimed rustic, who, by sturdy industry, grew out of his wooden shoes into an erudite author and teacher and a celebrated practitioner; Civiale, the inventor of lithotrity; Ricord, whose mercurial temperament, to say nothing of his practice, displayed itself in his lively clinical promenades; — these were some of the more famous surgical celebrities of fifty years since. Louis, Andral, Chomel, Rostan, Trousseau, Bouillaud, were the best known teachers of clinical medicine. Cruveilhier was Professor of Anatomy in the École de Medecine, and Orfila, the handsome Dean of the Faculty, lectured upon some branches of medical jurisprudence.

Two or three water-logged old professors were moored to their chairs; one of them not so very old, but with a good many ancient barnacles about him; one formidable three-decker, Broussais, with his upper tier of guns still above the water-line, and banging away at the assailants of his famous "physiological doctrine." Some of the specialists I recall were Sichel, in ophthalmology, Biett, in dermatology, Dubois the younger, and a younger Baudelocque, inventor of a certain lemon-squeezer-like machine, which looked about as threat-

ening to the future of the race as the invention of that other medical practitioner, Dr. Guillotin.

The works in the hands of French students were those of the great teachers and practitioners just mentioned. Jules Cloquet's Anatomy was a favorite manual. Sabatier's and Maygrier's were sometimes met with. The much more extensive and thorough work of Cruveilhier was a little later to come into common use. The great work of the same author on Pathological Anatomy was of a still later date. Bourgery's magnificent, somewhat dandified Anatomy, if I may borrow this term, was in course of publication. Its showy figures were got up like opera dancers, primarily for anatomical study and secondarily for æsthetic gratification. Magendie's Physiology had replaced that of Richerand. Boyer was still a leading authority in Surgery. The name of Jean Louis Petit was frequently cited in the lectures of Marjolin, himself scarcely remembered at the present day. Bayle and Corvisart were giving place to Louis and Bouillaud. Laennec held his position as few inventors and discoverers can hope to do in the face of the after-comers who improve on their improvements.

What had been the most signal advances in the science and art of medicine between 1783 and 1833, the first half of the century we are considering?

In medical science the method of studying the human body by its constituent elements, — the *General Anatomy* of Bichat, — which is to common descriptive anatomy what geology is to geography, would still hold the first place if it could claim all that the microscope

has done for it. It was at any rate a great onward movement, with far-reaching results for physiology and pathology.

Next to this would come the discoveries of Sir Charles Bell and Magendie of the distinct motor and sensitive functions of certain nerves and nerve-roots.

The most important practical achievement was the introduction of vaccination. I know that this practice has been, and is even at the present day, the subject of violent attacks and bitter prejudices. It is only very recently that our distinguished visitor, our fellow citizen, by the female side, the Right Honorable Sir Lyon Playfair, — at home alike in the laboratory of science and when presiding over the deliberations of the British House of Commons, — has had to defend it — nobly and successfully he did it — in that august assembly. There is always an unconvinced and irreclaimable minority. Those who believed not Moses and the Prophets would not believe though one rose from the dead to convince them. Most of us, I feel sure, are ready to say of Jenner's discovery, borrowing some of Luther's words about justification by faith, that vaccination is a test *stantis vel cadentis medicinæ.*

Laennec's invention of auscultation holds the next place to vaccination in the records of practical improvement during our first half-century. The recognition of the affection of the kidneys known as "Bright's disease," and the separation of the too familiar and fatal malady, diphtheria, from those with which it was long confounded, are other notable advances made during the period in question.

If we compare the two half-centuries, we may balance the following improvements against each other?

Against the discovery of the double nerve function, the extended knowledge of the reflex function.

Against "General Anatomy," the Cell-doctrine, due to the discoveries made by the use of the achromatic microscope, to which we also owe the discovery of the minute organisms, so important in the history of disease.

Against vaccination we may offset surgical anæsthesia.

Against the stethoscope, the medical thermometer.

We must divide the honors of lithotrity and those of ovariotomy between the two periods.

The beneficent changes in the treatment of insanity, effected by the earlier labors of Pinel and Esquirol, have been admirably carried on in the more recent period.

Many other and not inconsiderable improvements in medical science and art had taken place in our first half-century, as may be seen in Cuvier's Report on the Progress of the Natural Sciences. But the last fifty years have been not less richly productive. I can only indicate in the briefest manner some few among their acquisitions.

Modern scientific chemistry is a mystery to us who were brought up in the old school of pyrotechnic experimenters. It seems to us to make over its theories and its nomenclature about once in ten or twenty years. But that may be our ignorance. We know as much as this, that our Professors teach real and most valuable practical knowledge by making the student work, and work thoroughly, in the laboratory.

Physiology is a new science, we might almost say, since the perfecting of organic analysis, the invention of the achromatic microscope, and of the numerous instruments of precision which record the vital actions and conditions.

Anatomy has added the more exact study of regions and of sections to its earlier methods of investigation.

Operative surgery has of late years achieved its greatest triumph in the establishment of abdominal section as a legitimate and safe operation. First employed by an American surgeon, Dr. McDowell, of Kentucky, in 1809, in the hands of Spencer Wells and his contemporaries it has rescued and is rescuing hundreds of lives. Tenotomy by subcutaneous section is another new and valuable operation. Plastic surgery has learned to patch deformities as a skilful housewife patches a garment. Limbs which would have been sacrificed are saved by improved methods of dressing, especially by the use of antiseptics. Resection of joints or of portions of the shaft of a bone has in many cases taken the place of amputation. Let me not forget the operation of paracentesis with aspiration of the thorax in acute pleurisy, as first practised by Dr. Henry Ingersoll Bowditch and Dr. Morrill Wyman. But enough has been said to show that the last half of our century has justified itself for existing. I shall return to some of these matters when speaking of the new edifice where they are to be the subjects of instruction.

In the prevention of disease the gain has been extraordinary. The germ theory, alluded to as one of the results of the perfecting of the microscope, has done

much to account for the phenomena of many diseases, and to indicate the means of arresting their development. The recognition of domestic malaria as the frequent source of disease is of vast importance. The phrase "drain fever" has saved hundreds of lives.

It is harder to speak of medical practice, — the treatment of internal diseases, fevers, visceral inflammations, and the like. The practice of drugging for its own sake, the fatal bequest of the English apothecary, or "general practitioner," whose profit was made on his medicines, had infected the medical profession of this country, as I believed, when some twenty and more years ago, in guarded terms, often misquoted, I denounced it somewhat too epigrammatically for some of my friends of the Massachusetts Medical Society. Professor Gairdner of the University of Glasgow has recently used language much plainer than my innocent allusion to the probable effect of sinking a cargo of miscellaneous drugs among the fishes. It has been objected, he says, "that the Scottish graduate in medicine was not sufficiently conversant with the details of compounding and dispensing powders, and pills, and mixtures, and above all draughts (at 2s. 6d. apiece) to be taken two, three, four, or five times a day; in other words, that he had not sufficiently mastered the technical details by which his neighbor, the English apothecary, was able to accomplish the great ideal of the 'surgery-boy' type, — the dispensing of immense quantities of 'physic' in the most complicated prescriptions, to pass unquestioned down the willing throats of her Majesty's lieges."

There can be little doubt that the practice thus originating influenced the whole professional public of England to a very considerable extent, and through that public introduced the over-drugging system into her colonial dependencies and the States which some of these became. However this may be, great changes have taken place in the practice of medicine within the later decades of my remembrance. Bleeding is an almost unknown operation. Of the four great remedies of Dr. Holyoke's and Dr. James Jackson's time, antimony has fallen from grace, and calomel, instead of being next the apothecary's right hand, as the letter *e* is to the printer's, has gone to an upper shelf, where it may be supposed to repent of its misdeeds, like Simeon Stylites. Cotton Mather had said a century and a half ago, "I am not sorry that antimonial emetics begin to be disused." He had said too, more rhetorically, "Mercury, we know thee: but we are afraid thou wilt kill us too, if we employ thee to kill them that kill us." This was a lively way of putting a thought long afterward made into a famous saying.

While old drugs and old methods have become obsolete, new drugs and new methods have come in to take their place. The first aphorism of Hippocrates, "Life is short, art is long," and so on, is a glittering generality. The second aphorism is one of daily practical application, never to be forgotten. "Not only must the physician attend properly to his own duties, but he must see that the patient, the attendants, and all the external conditions are properly ordered." As the over-employment of drugs gives way to juster views,

the hygienic conditions and personal attendance on the patient are likely to be better cared for. The less the patient is annoyed with over-medication, — painful and disgusting remedies, — the more tractable he is likely to be, and the less likely to throw his medicine out of the window, where it will kill the chickens instead of the fishes. The more attention is likely to be paid to air and cleanliness and comfort, the more to the kind of nourishment and the modes and times of giving it. In proportion as the work of the apothecary diminishes, the cares of the nurse are called upon to render disease endurable by all the arts known to a skilful attendant. Little things mean a great deal in the sick-room. "Will you have an orange or a fig?" said Dr. James Jackson to a fine little boy, now grown up to goodly stature, and whom I may be fortunate enough to recognize among my audience of to-day. "A fig," answered Master Theodore, with alacrity. "No fever there," said the good Doctor, "or he would certainly have said an orange."

Now it is just in these little unimportant, all-important matters that a good nurse is of incalculable aid to the physician. And the growing conviction of the importance of thorough training of young women as nurses, is one of the most hopeful signs of medical advancement. So much has been done and is doing that the days of the Sairey Gamps and Betsey Prigs are numbered. I cannot help saying in this connection, that the Registry of Nurses fortunately connected with the Boston Medical Library, itself of comparatively recent formation, is a blessing to our community which can

hardly be over-estimated. What is there in the hour of anguish like the gentle presence, the quiet voice, the thoroughly trained and skilful hand of the woman who was meant by nature, and has been taught by careful discipline, to render those services which money tries to reward, but only gratitude can repay? I have always felt that this was rather the vocation of women than general medical and especially surgical practice. Yet I myself followed a course of lectures given by the younger Madame Lachapelle in Paris, and if here and there an intrepid woman insists on taking by storm the fortress of medical education, I would have the gate flung open to her as if it were that of the citadel of Orleans and she were Joan of Arc returning from the field of victory.

I have often wished that disease could be hunted by its professional antagonists in couples, — a doctor and a doctor's quick-witted wife making a joint visit and attacking the patient, — I mean the patient's malady, of course, — with their united capacities. For I am quite sure that there is a natural clairvoyance in a woman which would make her as much the superior of man in some particulars of diagnosis as she certainly is in distinguishing shades of color. Many a suicide would have been prevented, if the doctor's wife had visited the victim the day before it happened. She would have seen in the merchant's face his impending bankruptcy, while her stupid husband was prescribing for his dyspepsia and indorsing his note; she would recognize the lovelorn maiden by an ill-adjusted ribbon, a line in the features, a droop in the attitude, a tone

in the voice, — which mean nothing to him, and so the brook must be dragged to-morrow. The dual arrangement of which I have spoken is, I suppose, impracticable, but a woman's advice, I suspect, often determines her husband's prescription. Instead of a curtain lecture on his own failings he gets a clinical lecture, — on the puzzling case, it may be, of a neighbor suffering from the complaint known to village nosology as "a complication of diseases," which her keen eyes see into as much better than his as they would through the eye of a small-sized needle. She will find the right end of a case to get hold of, and take the snarls out as she would out of a skein of thread or a ball of worsted which he would speedily have reduced to a hopeless tangle.

I trust I have not dwelt too long on this point, which grew out of my consideration of the great change that has so largely substituted the careful regulation of all the conditions surrounding the patient, for the drugging system derived from the practice of the English "Apothecaries." Like the Father of Medicine in the aphorism which I have quoted, we consider attention to these conditions entitled to precedence relatively to all active interference with the course of disease.

Yet we must not be ungrateful to the pharmacist for the useful agents, old and new, which he puts in our hands. Opium and cinchona appear in our modern pharmacopœia with all their virtues, but freed by chemical skill of the qualities which most interfered with their utility. Mercury is no longer considered a panacea, but it is still trusted for important special

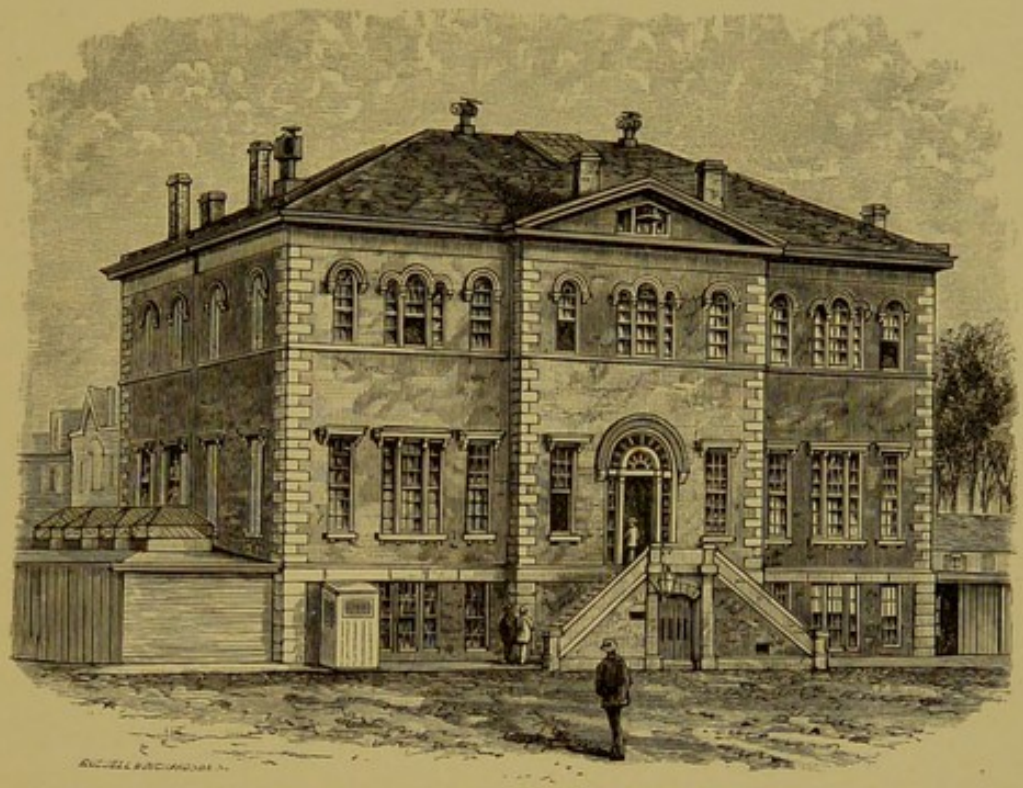
services. Most of the remedial plants have yielded their essential principles to chemical analysis, and have got rid of the useless portions which made them bulky and repulsive. Iodine, bromine, salicine, in their various compounds, have, within the present century, conferred inestimable aid in the treatment of some of the most formidable diseases. Many other new remedies, such as carbolic acid, glycerine, chloral, have been added to the list of those which are of daily use in combating particular symptoms, or are adapted to certain exceptional conditions. The method of administering remedies by inhalation has been greatly extended, and the admirable invention of the process of subcutaneous injection — a method, I may remark, tried upon himself and made the subject of a thesis by the late Dr. Enoch Hale, a graduate of this School — has become, next to etherization, the most rapid and potent means of subduing pain and other forms of suffering. I need not speak of medical electricity, which has proved so serviceable in the treatment of nervous and muscular affections.

I despair of enumerating all the improvements which have been effected in the various specialties into which the practice of medicine has become subdivided within these twenty or thirty years. The ophthalmoscope, the improved ear speculum, the rhinoscope, the laryngoscope, hold out their mirrors to enlighten us, or open their mouths to proclaim their own value. Diagnosis has reached a wonderful degree of accuracy; prognosis has become a terrible kind of second-sight, which is not always handled carefully enough; treatment gains

a little with every decade. The history of therapeutics records a succession of marches and countermarches, with a slight onward movement as the total result of every completed revolution, — slight, but precious to humanity.

I cannot pass over the most encouraging fact of the growth of medical libraries. We have a right to congratulate ourselves on the prosperity of that which has sprung into existence in this city within the last few years. It seems to me to mark the beginning of a new era in the medical history of the city. But what can I say of the immense library formed, but always forming, at Washington? and how can I sufficiently praise the work of Dr. Billings and his associates, one of the results of which comes before us in that colossal catalogue which is one of the best proofs of the advancing civilization of the great republic?

It was time for the Medical School of Harvard University, — of that ancient, and modern, Institution of which Massachusetts must always be proud so long as she has anything to be proud of, — it was time for this School to plant its chief edifice in a fairer position, and erect it on a broader foundation, than those with which it has been so long obliged to be contented. Let us not be ungrateful to the memory of our earlier benefactors; to the State for the grant which proved of such value in its time; to the individuals who gave land and money when the former buildings were constructed. But the little Mason Street building was long ago outgrown, and that which succeeded it had in turn become wholly insufficient for the needs of the School.



HARVARD MEDICAL SCHOOL, NORTH GROVE STREET,
1846.

You will pass from beneath this hospitable roof to the new edifice, in which, as we trust, many successive generations of medical students are to receive a large part of their instruction. As you enter its doors, as you survey its halls and lecture-rooms, its laboratories and their appliances, some of you may be ready to exclaim, What! all this to teach a student to cut off a limb or administer a potion?

The question is a natural one, and the answer is easy. The Art of Healing is supported, advanced, illuminated, by the various kinds of knowledge which are recognized as belonging to the Science of Medicine. And the Science of Medicine, like all other kinds of classified knowledge, is best taught, most easily and thoroughly learned, when taught systematically, because facts are most clearly perceived and most firmly retained in the memory when presented in their serial relations. The teaching of the various branches included in a complete medical course requires ample provision for its multiplied exigencies.

You will enter or look into more amphitheatres and lecture-rooms than you might have thought were called for. But if you knew what it is to lecture and be lectured to in a room just emptied of its preceding audience, you would be thankful that any arrangement should prevent such an evil. The experimental physiologists tell us that a bird will live under a bell-glass until he has substituted a large amount of carbonic acid for oxygen in the contained air. But if another bird is taken from the open air and put in with the first, the new-comer speedily dies. So when the class

I was lecturing to was sitting in an atmosphere once breathed already, after I have seen head after head gently declining, and one pair of eyes after another emptying themselves of intelligence, I have said, inaudibly, with the considerate self-restraint of Musidora's rural lover, Sleep on, dear youth; this does not mean that you are indolent, or that I am dull; it is the partial coma of commencing asphyxia.

You will see extensive apartments destined for the practical study of chemistry and of physiology. But these branches are no longer studied as of old by merely listening to lectures. The student must himself perform the analyses which he used to hear about. He must not be poisoned at his work, and therefore he will require a spacious and well-ventilated room to work in. You read but the other day of the death of an esteemed fellow-citizen from inhaling the vapors of a broken demijohn of a corrosive acid. You will be glad to see that every precaution is taken to insure the safety and health of our students.

Physiology, as now studied, involves the use of much delicate and complex machinery. You may remember the balance at which Sanctorius sat at his meals, so that when he had taken in a certain number of ounces the lightened table and more heavily weighted philosopher gently parted company. You have heard, perhaps, of Pettenkofer's chamber, by means of which all the living processes of a human body are made to declare the total consumption and product during a given period. Food and fuel supplied; work done. Never was the human body as a machine so well understood; never did it give

such an account of itself as it now does in the legible handwriting of the cardiograph, the sphygmograph, the myograph, and other self-registering contrivances, with all of which the student of to-day is expected to be practically familiar.

You will find apartments devoted to microscopic instruction and study. I have referred to the modern achromatic microscope as having created a new era in Medical Science. I have no time to tell what it has done for Anatomy, Physiology, and Pathology, besides its great services in other departments of knowledge. But to those who have never seen its miracles I can give an illustration, which they will find it hard to believe I did not borrow from some new Gulliver's Travels or from some Jules Verne's imagination. Yet what I shall say is the simplest truth in the world to any microscopic expert, and may be easily verified by any sceptic.

If we had to examine the structure of a human body by the naked eye, — or, as I will venture to call it, *gymnoscopic* or rather *gymnopic* inspection, — it would make a great difference whether our subject were of the natural dimensions, or whether he were a Liliputian or a Brobdingnagian. We should lose sight of many particulars in the structure of the Liliputian which we easily detect in a man of the natural size. We should find many things plain enough in the Brobdingnagian which we do not notice in the man of ordinary dimensions on account of their minuteness. Thus, for instance, we should find that man is shingled all over, or tiled, if you will, — covered with scales, more literally, just as a ser-

pent is. The statue of Liberty, the arm of which the cast in the square at New York has made familiar to us, the statue of Carlo Borromeo near Arona, that of Bavaria, or the new statue of Germania, — any one of these, changed to flesh and blood, would be a great source of knowledge to a gymnopic anatomist. You will observe that the naturalist could examine only a small portion of one of these colossal figures at a time. Of course the same thing is true of the microscopic man I am going to describe. He must be examined in small fragmentary portions.

The individual from whom we will suppose the portion under examination to have been taken was, we will say, of short stature; a little more than five feet two inches in height, and weighing one hundred and twenty pounds. Our microscope, a rather powerful, but not extraordinarily powerful one, magnifies a thousand diameters. This fragment, then, thus magnified, represents an individual just one mile in height. He would ten times overtop the loftiest of the pyramids; twenty times the tallest of our steeples. He could bestride our good city from Long Wharf to Charles Street. His breadth and thickness being in proportion to his height, his weight would be one hundred and twenty thousand million pounds, equal to sixty million tons. He could take our State House up as we should lift a paving stone, and fling it into the waters beyond Boston Lighthouse, — cleaning out that palace of the people by a summary process quicker than the prætorian bands of Domitian or Commodus would have cleaned out a Roman Senate-chamber that dared to have an opinion

of its own. Such is the microscopic man as we see him piecemeal in that wonderful instrument. It is the telescope of the microcosm, the master-key to the portals of a new universe, and the student must be carefully taught how to use it.

Among the various apartments destined to special uses, one will be sure to rivet your attention; namely, the Anthropotomic Laboratory, known to plainer speech as the Dissecting-Room. The most difficult work of a medical school is the proper teaching of practical anatomy. The pursuit of that vitally essential branch of professional knowledge has always been in the face of numerous obstacles. Superstition has arrayed all her hobgoblins against it. Popular prejudice has made the study embarrassing, and even dangerous, to those engaged in it. The surgical student was prohibited from obtaining the knowledge required in his profession, and the surgeon was visited with crushing penalties for want of that necessary knowledge. Nothing is easier than to excite the odium of the ignorant against this branch of instruction and those who are engaged in it. It is the duty and interest of all intelligent members of the community to defend the anatomist and his place of labor against such appeals to ignorant passion as will interfere with this part of medical education, above all, against such inflammatory representations as might be expected to lead to midday mobs or midnight incendiarism.

The enlightened legislation of Massachusetts has long sanctioned the practice of dissection, and provided means for supplying the needs of anatomical instruc-

tion, which, managed with decent privacy and discretion, have served the beneficent purpose intended by the wise and humane lawgivers, without doing wrong to those natural sensibilities which are always to be respected.

During the long period in which I have been a Professor of Anatomy in this Medical School, I have had abundant opportunities of knowing the zeal, the industry, the intelligence, the good order and propriety, with which this practical department has been carried on. The labors superintended by the Demonstrator and his assistants are in their nature repulsive, and not free from risk of disease, though in both these respects modern chemistry has introduced great ameliorations. The student is breathing an air whieh unused senses would find insufferable. He has tasks to perform which the chambermaid and the stable-boy would shrink from undertaking. We cannot wonder that the sensitive Rousseau could not endure the atmosphere of the room in which he had begun a course of anatomical study. But we know that the great painters, Michael Angelo, Leonardo, Raphael, must have witnessed many careful dissections, and what they endured for art our students can endure for science and humanity.

Among the large number of students who have worked in the department of which I am speaking during my long term of service, — nearly two thousand are on the catalogue as graduates, — there must have been some who were thoughtless, careless, unmindful of the proprieties. Something must be pardoned to the hardening effect of habit. Something must be forgiven

to the light-heartedness of youth, which shows itself in scenes that would sadden and solemnize the unseasoned visitor. Even youthful womanhood has been known to forget itself in the midst of solemn surroundings. I well remember the complaint of Willis, a lover of the gentle sex, and not likely to have told a lie against a charming young person. I quote from my rusty memory, but I believe correctly: —

> "She trifled! ay, that angel maid, —
> She trifled where the dead was laid."

Nor are older persons always so thoughtful and serious in the presence of mortality as it might be supposed they would show themselves. Some of us have encountered Congressional committees attending the remains of distinguished functionaries to their distant place of burial. They generally bore up well under their bereavement. One might have expected to find them gathered in silent groups in the parlors of the Continental Hotel or the Brevoort House; to meet the grief-stricken members of the party smileless and sobbing as they sadly paced the corridors of Parker's, before they set off in a mournful and weeping procession. It was not so; Candor would have to confess that it was far otherwise; Charity would suggest that Curiosity should withdraw her eye from the keyhole; Humanity would try to excuse what she could not help witnessing; and it may be hoped that a tear would fall from the blind eye of Oblivion, and blot out their hotel bills forever.

You need not be surprised, then, if among this large

number of young men there should have been now and then something to find fault with. Twice in the course of thirty-five years I have had occasion to rebuke the acts of individual students, once in the presence of the whole class, on the humane and manly sympathy of which I could always safely rely. I have been in the habit of considering myself at liberty to visit the department I am speaking of, though it had its own officers; I took a part in drawing up the original regulations which governed the methods of work; I have often found fault with individuals or small classes for a want of method and neatness which is too common in all such places. But in the face of all peccadilloes and of the idle and baseless stories which have been circulated, I will say, as if from the chair which I no longer occupy, that the management of the difficult, delicate, and all-important branch committed to the care of a succession of laborious and conscientious Demonstrators, as I have known it through more than the third of a century, has been discreet, humane, faithful, and that the record of that department is most honorable to them and to the classes they have instructed.

But there are better things to think of and to speak of than the false and foolish stories to which we have been forced to listen. While the pitiable attempt has been making to excite the feelings of the ignorant against the School and the University, hundreds of sufferers throughout Christendom — throughout civilization — have been blessing the name of Boston and the Harvard Medical School as the source from which relief has reached them for one of the gravest injuries, and for one of the most

distressing of human maladies. I witnessed many of the experiments by which the great surgeon who lately filled a chair in Harvard University has made the world his debtor. Those poor remains of mortality of which we have heard so much have been of more service to the human race than the souls once within them ever dreamed of conferring. Dr. Bigelow's repeated and searching investigations into the anatomy of the hip-joint showed him the band which formed the chief difficulty in reducing dislocations of the thigh. What Sir Astley Cooper and all the surgeons after him had failed to see, Dr. Bigelow detected. New rules for reduction of the dislocation were the consequence, and the terrible pulleys disappeared from the operating amphitheatre.

Still more remarkable are the results obtained by Dr. Bigelow in the saving of life and the lessening of suffering in the new method of operation for calculus. By the testimony of those renowned English surgeons, Sir Henry Thompson and Mr. Erichsen, by the award to Dr. Bigelow of a sexennial prize founded by the Marquis d'Argenteuil, and by general consent, this innovation is established as one of the great modern improvements in surgery. I saw the numerous and patient experiments by which that priceless improvement was effected, and I cannot stop to moan over a scrap of human integument, said to have been made imperishable, when I remember that for every lifeless body which served for these experiments a hundred or a thousand living fellow-creatures have been saved from unutterable anguish, and many of them from premature death.

You will visit the noble hall soon to be filled with the collections left by the late Professor John Collins Warren, added to by other contributors, and to the care and increase of which the late Dr. John Jackson of precious memory gave many years of his always useful and laborious life. You may expect to find there a perfect Golgotha of skulls, and a platoon of skeletons, open to the sight of all comers. You will find portions of every human organ. You will see bones softened by acid and tied in bow-knots; other bones burned until they are as light as cork and whiter than ivory, yet still keeping their form; you will see sets of teeth from the stage of infancy to that of old age, and in every intermediate condition, exquisitely prepared and mounted; you will see preparations that once formed portions of living beings now carefully preserved to show their vessels and nerves; the organ of hearing exquisitely carved by French artists; you will find specimens of human integument, showing its constituent parts in different races; among the rest, that of the Ethiopian, with its cuticle or false skin turned back to show that God gave him a true skin beneath it as white as our own. Some of these specimens are injected to show their bloodvessels; some are preserved in alcohol; some are dried.

There was formerly a small scrap, said to be human skin, which has been subjected to the tanning process, and which was not the least interesting of the series. I have not seen it for a good while, and it may have disappeared, as the cases might happen to be open while unscrupulous strangers were strolling through

the Museum. If it has, the curator will probably ask the next poor fellow who has his leg cut off for permission to have a portion of its integument turned into leather. He would not object, in all probability, especially if he were promised that a wallet for his pocket, or a slipper for his remaining foot, should be made from it.

There is no use in quarrelling with the specimens in a museum, because so many of them once formed a part of human beings. The British government paid fifteen thousand pounds for the collection made by John Hunter, which is full of such relics. The Hunterian Museum is still a source of pride to every educated citizen of London. Our foreign visitors have already learned that the Warren Anatomical Museum is one of the sights worth seeing during their stay among us. Charles Dickens was greatly interested in looking through its treasures, and that intelligent and indefatigable hard worker, the Emperor of Brazil, inspected its wonders with as much curiosity as if he had been a Professor of Anatomy. May it ever remain sacred from harm in the noble hall of which it is about taking possession! If violence, excited by false outcries, shall ever assail the treasure-house of anthropology, we may tremble lest its next victim shall be the home of art, and, ignorant passions once aroused, the archives that hold the wealth of literature perish in a new Alexandrian conflagration. This is not a novel source of apprehension to the thoughtful. Education, religious, moral, intellectual, is the only safeguard against so fearful a future.

To one of the great interests of society, the education of those who are to be the guardians of its health, the stately edifice which opens its doors to us for the first time to-day is devoted. It is a lasting record of the spirit and confidence of the young men of the medical profession, who led their elders in the brave enterprise, an enduring proof of the liberality of the citizens of Boston and of friends beyond our narrow boundaries, a monument to the memory of those who, a hundred years ago, added a School of Medicine to our honored, cherished, revered University, and to all who have helped to sustain its usefulness and dignity through the century just completed.

It stands solid and four-square among the structures which are the pride of our New England Venice, — our beautiful metropolis, won by well-directed toil from the marshes and creeks and lagoons which were our inheritance from nature. The magnificent churches around it let in the sunshine through windows stained with the pictured legends of antiquity. The student of Nature is content with the white rays that show her just as she is; and if ever a building was full of light, — light from the north and the south, light from the east and the west, — light from above, which the great concave mirror of sky pours down into it, — this is such an edifice.

The halls where Art teaches its lessons and those where the sister Sciences store their collections, the galleries that display the treasures of painting and sculpture, are close enough for agreeable companionship. It is probable that in due time the Public Library

with its vast accumulations will be next-door neighbor to the new domicile of our old and venerated institution. And over all this region rise the tall landmarks which tell the dwellers in our streets, and the traveller as he approaches, that in the home of Science, Arts, and Letters the God of our fathers is never forgotten, but that high above these shrines of earthly knowledge and beauty are lifted the towers and spires which are the symbols of human aspiration, ever looking upward to Him, the Eternal, Immortal, Invisible.

EXERCISES IN HUNTINGTON HALL,

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

REMARKS OF PRESIDENT ELIOT.

Ladies and Gentlemen: We have met to celebrate the beginning of the second century of the Medical School's existence, and the simultaneous completion of its new building.

It is a hundred years since John Warren, Benjamin Waterhouse, and Aaron Dexter were installed as Professors of Anatomy and Surgery, Theory and Practice, and Materia Medica respectively, and, without the aid of collections or hospital, began to lecture in some small, rough rooms in the basement of Harvard Hall, and in a part of little Holden Chapel, at Cambridge. From that modest beginning, the School has gradually grown until it counts a staff of forty-seven teachers, — ten professors, six assistant professors, nine instructors, thirteen clinical instructors, and nine assistants, working in the spacious and well-equipped building which we are shortly to inspect, and commanding every means of instruction and research which laboratories, dispensaries, and hospitals can supply.

Out of our present strength and abundance, we look back to the founding of the School, and its slow and painful development. We bear in our hearts the three generations of teachers who have served this School with disinterested diligence and zeal. We recall their unrequited labors, their frequent anxieties and conflicts, and their unfulfilled hopes; we bring to mind the careful plantings and the tardy harvests reaped at last, but not by them that sowed. We meet, indeed, to rejoice in present prosperity and fair prospects; but we would first salute our predecessors, and think with reverence and gratitude of their toils and sacrifices, the best fruits of which our generation has inherited.

The Medical Faculty of to-day have strong grounds for satisfaction in the present state of the School; for they have made great changes in its general plan and policy, run serious risks, received hearty support from the profession and the community, and now see their efforts crowned with substantial success. By doubling the required period of study in each year of the course, instituting an admission examination, strengthening the examinations at the end of each year, and establishing a voluntary fourth year of instruction which clearly indicates that the real standard of the Faculty cannot be reached in three years, they have taken step after step to increase their own labors, make the attainment of the degree more difficult, and diminish the resort of students to the School. They have deliberately sacrificed numbers, in their determination to improve the quality of the graduates of the School.

At the same time, they have successfully carried out

an improvement in medical education which required large expenditures. This improvement is the partial substitution, by every student, of personal practice in laboratories, for work upon books and attendance at lectures. The North Grove Street building, erected in 1846 or 1847, contained only one small laboratory for students, — that of anatomy. We shall shortly see that the new building contains a students' laboratory for each of the five fundamental subjects, anatomy, physiology, chemistry, histology, and pathology, and that a large part of the building is devoted to these working-rooms.

It was a grave question whether the profession, the community, and the young men who, year by year, aspire to become physicians and surgeons, would support the Faculty in making these improvements. The answer can now be recorded. The School has received by gift and bequest three hundred and twenty thousand dollars in ten years; it has secured itself in the centre of the city for many years to come, by the timely purchase of a large piece of land; it has paid about two hundred and twenty thousand dollars for a spacious, durable, and well-arranged building; it has increased its annual expenditure for salaries of teachers from twenty thousand dollars, in 1871–72, to thirty-six thousand dollars, in 1882–83; its receipts have exceeded its expenses in every year since 1871–72, and its invested funds now exceed those of 1871 by more than one hundred thousand dollars. At the same time, the School has become a centre of chemical, histological, and sanitary research, as well as a place for thorough instruction; its students bring to the

School a better education than ever before, they work longer and harder while in the School, and leave it prepared, so far as sound training can prepare them, to enter, not the overcrowded lower ranks of the profession, but the higher, where there is always room.

The Faculty recognize that the generosity of the community and the confidence of the students impose upon them reciprocal obligations; they gladly acknowledge themselves bound to teach with candor and enthusiasm; to observe and study with diligence, that they may teach always better and better; to illustrate before their students the pure scientific spirit; and to hold all their attainments and discoveries at the service of mankind. Certainly the Medical Faculty have good reason to ask to-day for the felicitations of the profession and the public.

Nevertheless, the governors, teachers, graduates, and friends of this School have no thought of resting contented with its present condition. Instructed by its past, they have faith in its future. They hope, they know, that the best fruits of their labors will be reaped by later generations. The medical profession is fortunate among the learned professions, in that a fresh and boundless field of unimaginable fertility spreads out before it. Its conquests to come are infinitely greater than those already achieved. The great powers of chemistry and physics, themselves all new, have only just now been effectively employed in the service of medicine and surgery. The zoölogist, entomologist, veterinarian, and sanitarian have just begun to contribute effectively to the progress of medicine. The great achievements

of this century in medical science and the healing art are all prophetic. Thus, the measurable deliverance of mankind from small-pox is an earnest of deliverance from measles, scarlatina, and typhoid fever. Within forty years anæsthetics and antiseptics have quadrupled the chances of success in grave surgical operations, and have extended indefinitely the domain of warrantable surgery; but in value far beyond all the actual benefits which have thus far accrued to mankind from these discoveries, is the clear prophecy they utter of greater blessings to come. A medical school must always be expecting new wonders.

How is medical science to be advanced? First, by the devoted labors of men, young and old, who give their lives to medical observation, research, and teaching; secondly, by the gradual aggregation in safe hands of permanent endowments for the promotion of medical science, and of the sciences upon which medicine rests. Neither of these springs of progress is to fail us here. Modern society produces the devoted student of science as naturally and inevitably as mediæval society produced the monk. Enthusiastic devotion to unworldly ends has not diminished; it only manifests itself in new directions. So, too, benevolence and public spirit, when diverted by the teachings of both natural and political science from many of the ancient forms of benevolent activity, have simply found new and better modes of action.

With thankfulness for the past, with reasonable satisfaction in the present, and with joyful hope in the future, the Medical Faculty celebrate this anniversary

festival, welcoming their guests, thanking their benefactors, and exchanging with their colleagues, their students, and the governing boards mutual congratulations and good wishes, as the School sets bravely out upon its second century.

And now, ladies and gentlemen, I have the pleasure of presenting to you our oldest professor and our youngest, our man of science and our man of letters, our teacher and our friend, Dr. Holmes.

Dr. Holmes then delivered his address.

Dr. Francis Minot then presented a portrait of Professor Holmes in behalf of the donors. He said:

Mr. President: Many alumni of the School, besides many of its present students, have desired that a permament memorial of their beloved teacher, Professor Oliver Wendell Holmes, should be placed in the new College building, in token of their gratitude for the great services which he has rendered to many generations of his pupils. By his eminent scientific attainments, his sound method of teaching, his felicity of illustration, and his untiring devotion to all the duties of his chair, he inspired those who were so fortunate as to come under his instruction with the importance of a thorough knowledge of anatomy, the foundation of medical science.

In the name of the alumni and students of this College, I have the pleasure of presenting to the Medical Faculty a portrait of Professor Holmes, painted by Mr.

Alexander, to be placed in the College in memory of his great and invaluable services to Harvard University, to the medical profession, and to the community.

Hon. Samuel A. Green, M. D., in behalf of the donors, then presented a bust of Professor Henry J. Bigelow. He said: —

The pleasant duty has been assigned me, Mr. President, to present to you, as the head of the Corporation of Harvard College, in behalf of his many friends, this animated bust of Professor Henry J. Bigelow.

The list of subscribers comprises about fifty names, and includes nearly all the surgeons of the two great hospitals in this city; several gentlemen not belonging to the medical profession, but warm personal friends of Dr. Bigelow; a few ladies who had been his patients; and all the surgical house pupils who had ever been connected with the Massachusetts General Hospital, during his long term of service at that institution, so far as they could easily be reached by personal application.

The bust is given on the condition that it shall be placed permanently in the new surgical lecture-room, which corresponds to the scene of Dr. Bigelow's long labors in the old building. It has been made by the eminent sculptor, Launt Thomson, of New York, and is a most faithful representation of the distinguished surgeon. It outlines with such accuracy and precision the features of his face and the pose of his head, that nothing is wanted, in the opinion of his friends, to make it a correct likeness.

I need not, in the presence of this audience, name the various steps by which Dr. Bigelow has reached the high position which is conceded to him as freely and fully in Europe as it is in America; but I cannot forbear an allusion to some of his original researches.

His mechanism of the reduction of a dislocated femur by manipulation was a great discovery in surgical science, and follows as a simple corollary to the anatomical facts which he has so clearly and minutely demonstrated. His operation of rapid lithotrity has deprived a painful disease of much of its terror, as well as of its danger.

Nor should I overlook on this occasion his quick and ready discernment of the importance of Dr. Morton's demonstration of the use of ether as a safe anæsthetic, which took place at the Massachusetts General Hospital, in the autumn of 1846. The discovery of this greatest boon to the human family since the invention of printing was fraught with such immense possibilities that the world was slow to realize its magnitude; but by the clear foresight and prudent zeal of Dr. Bigelow, shown in many ways, the day was hastened when its use became wellnigh universal.

Dr. Bigelow has filled the Chair of Surgery in the Harvard Medical School during thirty-three years, a period of professional instruction that rarely falls to the lot of any teacher, and he now leaves it with the honored title of Professor Emeritus. During this long term of service he has taught through his lectures probably not fewer than 1,800 students who have graduated here, and perhaps 7,500 more who have taken their degrees

elsewhere; and by the survivors of these thousands of physicians, now scattered throughout the land, Dr. Bigelow is remembered as most eminently a practical teacher. Active in his profession, clear in his instruction, and enthusiastic in his investigations, he always had the happy faculty of imparting to his students a kindred spirit and zeal. *Haud inexpertus loquor.*

The audience then adjourned to the Medical College on Boylston Street, where the Dedicatory Services were held.

After prayer, PRESIDENT ELIOT said: —

On behalf of the President and Faculty of the Medical School, I now declare this building to be henceforth devoted to the advancement of medical science, and to the improvement of the art of healing.

MR. HENRY LEE, in behalf of the donors of the building, said: —

Mr. PRESIDENT: Thanks for your invitation to be present on this interesting occasion, — the hundredth anniversary of your Medical School, and the dedication of a new building of fair proportions well adapted to your wants, as far as a non-professional can judge.

You have assigned to me the honorable task of speaking for the contributors to the building fund.

I little thought, as I used to gaze with awe at that prim, solitary, impenetrable little building in Mason Street, and, with the aid of imaginative companions, conjure up the mysteries within, — I little thought that

I should ever dare to enter, and explore its interior; nor have I yet acquired that relish for morbid specimens which characterized my lamented kinsman, who devoted so many years to accumulating and illustrating your pathological collection.

It is an ordeal to a layman, Mr. President, especially to one who has reached the sixth age, to be so forcibly reminded, as one is here, of the

> "Last scene of all,
> That ends this strange, eventful history, ...
> Sans teeth, sans eyes, sans taste, sans everything."

And it is a further ordeal to assume to speak for others, whose motives for aiding you I may not adequately set forth.

This I can say, that we are citizens of no mean city; that private frugality and public liberality have characterized the inhabitants of this "Old Town of Boston" from the days of the good and wise John Winthrop, whose own substance was consumed in founding this colony, to the present time.

Down through these two centuries and a half, the multiform and ever-increasing needs of the community have been discovered and supplied, not by the government, but by patriotic citizens, who have given of their time and substance to promote the common weal, remembering that "the body is not one member, but many," and that "the members should have the same care one for another."

It is this public spirit, manifested in its heroic form in our civil war, that has made this dear old commonwealth what we all know it to be, despite foul slanders. Far

distant be the day when this sense of brotherhood shall be lost.

Purple and fine linen are well, if one can afford them; but let not Dives forget Lazarus at his gate.

> "Ill fares the land, to hastening ills a prey,
> Where wealth accumulates, and men decay."

Whatever doubts may arise as to some of our benevolent schemes, our safety and progress rest upon the advancement of sound learning, and we feel assured that the increased facilities furnished by this ample building for acquiring and disseminating knowledge of our fearful and wonderful frame, will be improved by your brethren.

Some of the papers read before the International Medical Congress in London, two years ago, impressed me deeply with the many wants of the profession. And who are more likely to have their wants supplied? For the physician is not regarded here, as in some countries, as the successor to the barber surgeon, and his fees slipped into his upturned palm as if he were a mendicant or a menial.

Dining with two Englishmen a few years since, one an Oxford Professor, the other the brother of a lord, I was surprised to hear their views of the social standing of the medical profession, and could not help contrasting their position here, where, if not all autocrats, they are all constitutional, and some of them hereditary monarchs, accompanied by "honor, love, obedience, troops of friends."

But, however ranked, physicians have the same at-

tributes the world over. I have had occasion to see a good deal of English, French, German, and Italian physicians under very trying circumstances, and have been touched by their affectionate devotion to their patients.

The good physician is our earliest and our latest friend; he listens for our first and our last breath; in all times of bodily distress and danger, we look up to him to relieve us. Neither "the pestilence that walketh in darkness," nor "the destruction that wasteth at noonday," deters him.

> "Alike to him is time or tide,
> December's snow or July's pride;
> Alike to him is tide or time,
> Moonless midnight or matin prime."

The faithful pursuit of any profession involves sacrifice of self; but the man who calls no hour his own, who consecrates his days and nights to suffering humanity, treads close in the footsteps of his Master.

No wonder, then, that the bond between them and their patients is so strong; no wonder that we respond cheerfully to their call, in gratitude for what they have done, and in sorrow for what they have not been able to do to preserve the lives and to promote the health of those dear to us.

And how could money be spent more economically than to promote the further enlightenment of the medical profession? What better legacy can we leave our children, and our children's children, than an illumined Medical Faculty?

Professor HENRY W. WILLIAMS, in behalf of the Medical Faculty, then said: —

Friends of the Harvard Medical School: For a hundred years the Medical Faculty of Harvard College have earnestly sought to discover, and striven faithfully to teach, whatever might exalt the condition, relieve the woes, and prolong the service, of those minds and bodies through which man lives, and moves, and is. Year by year they have seen their horizon of knowledge extended, and their sphere of duty enlarged. But, though zeal and self-sacrifice have not been wanting, their efforts to be useful have been continually hindered, because of imperfect facilities and scanty resources.

All is changed; in this more wonderful than Aladdin's palace, risen from the sea,[1] and which has already endured the wrath and mercy of the flames, we see a fulfilment of our hopes, and the means and assurance of success. Thanks to generous benefactors, there will no longer be a lack of room or of appliances for our needs; our work will go on under fairer auspices, and we can offer to disciples of the healing art fitter opportunities, and ampler aid in their studies.

As spokesman of the Faculty, on this occasion so full of felicitation and of promise, I would I could give to their message a host of tongues, to adequately thank those whose great flood of bounty has thus favored and endowed us.

In occupying this beautiful and convenient structure, we shall ever feel that the place is dignified by the giv-

[1] The site now occupied by the Medical School was once covered by water with every tide.

er's deed. And we rejoice the more, because we know that this gift of $300,000 has been bestowed by those who are accustomed to use their own eyes in their estimation of desert, and that it signifies a hearty approval of our endeavors, and an intent that medical science, as it is to be here embodied and taught, shall have a warm and generous support.

In accepting this more than princely gift, as a token that the value and necessity of well-educated physicians to every community are felt and acknowledged, we hail the privilege of goodly fellowship in which the donors and ourselves have become co-workers, to the end that blessings to the whole land may arise and be memorized in this institution; and we trust that the efforts of the Faculty to advance the knowledge, train the judgment, and perfect the skill of those entering our profession will ever continue to deserve countenance and help.

APPENDIX.

ENDOWMENT OF THE HARVARD MEDICAL SCHOOL.

[The following appeal, from the pen of Dr. Holmes, states clearly and concisely the work of the School, and its aims for the future.]

Among the branches of knowledge which are taught in schools, not one comes so directly home to the needs of all communities and every condition of human beings as that which deals with the issues of life and death, of health and disease, as affecting the public and individuals. Sooner or later, most persons must call upon medical art, for themselves or others, in one of those moments when the physician or surgeon is looked to as an earthly saviour. But, besides what he can do in saving life, and in shortening the course of disease, it is impossible to estimate the amount of relief from suffering, bodily and mental, which is due to his ministrations. There is hardly any case so desperate that art cannot alleviate some of its symptoms, if it can do nothing more. And one thing the physician can always do, — lift off that load of responsibility which falls upon the relatives and friends of a patient when they are least able to bear its weight. But we are looking foward to the time when much of the disease which now preys upon our city population shall be done away with

by the use of proper preventive measures. When the health of cities is properly cared for, they become greenhouses, where the finest human fruit grows better than the average ill-protected, out-of-door product. The study of the conditions which determine the healthfulness or sickness of centres of population and of different regions, is to occupy a large space in the medicine of the future.

Medical science is only a special province of biology, — the science which deals with the laws of life. It borrows much from other divisions of this great realm of knowledge. It levies contributions from other realms, — from physics, from chemistry; it accepts a useful hint from whatever source it may come. A medical school has to teach much that seems incidental to medical practice, but only in this way can it send forth fully eqnipped practitioners. It begins with chemistry, anatomy, physiology, and thus prepares its students for study at the bedside and in the operating-room. All this takes time and the co-operation of different experts, each of whom should be a master in his special department. There is a general tendency in this country to hurry through a student's medical education. Young men are impatient to be at work, and they will flock to a school which will give them a degree after a short period of study and a slight examination, which they are almost certain they can pass successfully. In this way great multitudes of practitioners are sent forth not thoroughly fitted for their work, and the community has to suffer the consequences.

It is the province of Harvard University to set a higher standard in this most practical and vital branch of education, as it has already done in other less immediately essential departments of knowledge. This duty it has

attempted to perform in the face of grave doubts and difficulties. In the performance of this duty it is now strenuously engaged. It has established a preliminary examination for admission into the School, thus excluding the ignorant and wholly untrained young men who would begin the arduous studies of a medical course without the knowledge and mental discipline which are necessary to fit them to profit by such instruction as is given in a medical school like that of our University. It has organized a regularly systematic and progressive course of instruction, in place of the mixed courses which have been long tolerated in spite of the general conviction and confession of their unphilosophical character and unsatisfactory practical results. It has multiplied its courses of instruction so as to include the various important specialties which have developed of late years into separate professional branches. It has secured the co-operation of numerous clinical teachers in different public institutions, so that many of the advantages of the great foreign hospitals can be obtained without going abroad to find them. All this has not been done without the expenditure of much thought and labor, nor without running a risk of financial failure, which at one period was a source of anxiety, and the serious character of which is sufficiently illustrated by the course of one of the great medical schools of the commercial metropolis. The school referred to began the new system in which our own institution is now, as it had been for years, clearing the way for others, but found its resources so much diminished that it gave up the new plan and returned to its old methods.

A school which depends for its existence on the number of its students cannot be expected to commit suicide in

order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw, must be tempted to sacrifice its higher aims to popularity. No high standard can be reached under such circumstances, and the only way to insure the independent action of a school which aims at teaching the whole country by example is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half taught, hastily taught practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health, soldiers, and, if need be, martyrs, in the unending battle with disease and its causes.

We bring this appeal before the community to be weighed with other claims, believing it to be one which will commend itself to all who wish to see our city established as the centre of educational intelligence, the normal school of the Western continent. When we can offer the most complete medical education the New World has to give, we shall have made one great step in that direction. The Old World motto is *Noblesse oblige*. Our generous men of wealth are changing the phrase to *Richesse oblige*, and thus becoming recognized as our untitled nobility. It is only necessary to show them in what way their beneficence will do the most extended and the most lasting

good. The foundation of five or six professorships will carry the names of their founders down to a remote posterity, and call them to honored remembrance when the stately buildings around us are replaced by other and still nobler structures.

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