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ADDENDA.
THE FACULTY OF 1841.*
An Address Introductory to the Seventy-first Course of Lectures in the Jefferson Medical College of Philadelphia, Delivered October 2, 1895.
BY JOHN H. BRINTON, M. D.,
Professor of the Practice of Surgery and Clinical Surgery.

The present is an era of new things, new platforms in politics, new interpretations in the Church, new powers in mechanics, new doctrines in the professions. But the new does not long remain new. Now, as when St. Paul stood on Mars Hill, men go up and down, seeking to hear something newer still.

Look where we may, we see unrest and change. Progress is followed by fresh advances, and the wonder of to-day heralds the marvel of to-morrow. The word "New" has acquired a new significance. It no longer need refer to age or time, but rather to a bettered condition. We have a new party, a new city, a new army or navy, a new man, and last, not least, that new creation, stupendous and most astounding of all, "the new woman."

Yet, after all, these phases of newness are but kaleidoscopic changes, marking a mental activity, shared now by the many, formerly possessed by the few.

Dissatisfaction with what we have, "The Old," and a craving for what we have not, "The New," is a feeling coeval with man. Old Adam was not free from it. In Eden, among his flowers, he tired of Paradise. He yearned for something New, he guessed not what. The woman Eve, the brand-new woman, was given him, with what results to him and us we know. He entered on the fig-leaf stage of existence, and despite the evolution of 5,000 years, we are here still.

We all feel that of late the comforts and capabilities of life have been wonderfully bettered by the discoveries and inventions which have followed each other in unceasing rapidity. The life of two decades since, would simply be unbearable to-day. The arts and sciences have gone forward with measured tread, and in this general advance medicine has more than kept even pace—she is in the front. In every direction her boundaries have been widened by new discoveries and fresh developments in her component and subordinate branches. Especially has renewed activity marked investigations in pathology. And rich results have rewarded such research, results not vague or theoretical, but practical in their bearing and of direct clinical application.

*This lecture has been condensed from my address before the Alumni Association of the College, March 11, 1880. The present bright anticipations as to the welfare of the school, and the growing interest which is being taken, both in its future and its past, must be my warrant for now repeating these personal recollections of the men who had so much to do in the making of the Jefferson Medical College.—J. H. B.
The domain of medicine has thus been greatly enlarged, and the consequent wants of the student and responsibilities of his teachers have been proportionately augmented. An increase in the number, and especially in the scope of his studies, has made necessary a lengthened course. In our College this was at first advanced from two, to three years, but experience has shown that even this period is too short. An intellectual "digestion" rather than an intellectual "cram" must be obtained. Therefore it has been decided to add a fourth year to the College curriculum.

To carry this change into effect, we are now met, and it becomes my pleasing duty in the name of our Trustees and Faculty to welcome you all, on this opening night of another era, the inauguration of a "New Jefferson College."

On this occasion, it seems to me that it may not be amiss to tell you (even though it be a twice-told tale) something of those teachers who in times past did so much in the interest of our school. True, they have gone to their rest, but their labors have not failed. They built better than they knew. Their example is with us. They look down upon us to-night from canvas and from marble pedestal. May we not then learn something from the contemplation of the talents, learning, and forethought of that famous "Faculty of 1841."

If we examine closely the lives of these men, it is not difficult to comprehend the causes which made our school great and popular. I think—and I believe that you will agree with me—that the one great feature in the teachings of the school has been its practical character. From its foundation, the single object of the Faculty has always been to make its graduates good doctors, to send forth men trained and self-reliant, able to fight honestly and bravely the battle of professional life.

The history of the Jefferson College is naturally divided into two well-marked periods, the first of which extends from its organization on December 20, 1824, the date of the first Faculty meeting, to the year 1841; the second from the latter year to the present time. As you all know, the school was born of Genius. Its existence was due more to the exertions of Dr. George McClellan than to those of any other person or persons. He it was who obtained the charter of the school, organized its first Faculty, and by his personal exertions gathered the early classes. He had, too, most able colleagues, but from one cause or other withdrawals from the Faculty were, unfortunately, frequent. As a consequence, the classes during the first fifteen years of the life of the College varied greatly; in 1835-6, 364, with 134 graduates, but in 1839-40, the class had fallen to 145.

*For the facts embodied in this address, not within the author's personal knowledge, he is indebted to the following sources: The biographical notices of George McClellan, M. D., by Dr. S. G. Morton; of Franklin Bache, M. D., by Dr. Wood; of Robley Dunglison, M. D., LL.D., by Dr. Gross, and of Charles D. Meigs, M. D., by Dr. J. F. Meigs, all read before the College of Physicians of Philadelphia; obituary notices of C. D. Meigs, M. D., by Dr. John Bell, and of Franklin Bache, M. D., by Dr. Wood, read before the American Philosophical Society; the Alumni addresses of Drs. Hatfield, Gross and Atltee; the Inaugural addresses of Professors Rand, Mitchell, Dickson, J. Pancoast, Gross, Dunglison, and Biddle; the address of Dr. Keen at the dissolution of the Philadelphia School of Anatomy in 1875, and the College archives.
The causes of the decline of the school at this period were varied, but the chief were dissensions in the Faculty and consequent resignations. The public began to lose confidence in an institution which had apparently lost faith in itself. It is true that its professors were not ordinary men; they were able, and more than able; they possessed energy, learning, and many good qualities, but, unfortunately, they were not actuated by that spirit of harmony which can alone prevent the downfall of medical institutions. It therefore soon became evident that the preservation of the school could only be achieved by entire re-organization, and this was accordingly done by the Board of Trustees, who vacated, by resolution, all of the chairs, and then effected a complete reconstruction of the Faculty. Dr. Dunglison was re-elected to the chair of Institutes, Dr. Pancoast was transferred from the chair of Surgery to that of Anatomy, and Dr. Huston from that of Obstetrics to that of Therapeutics and Materia Medica. The remaining vacant chairs were filled by the election of Dr. J. K. Mitchell to that of Practice; Dr. T. D. Mütter to that of Surgery; Dr. C. D. Meigs to that of Obstetrics, and Dr. Franklin Bache to that of Chemistry.

From 1841 to 1856 no change occurred in the Faculty; in the latter year the resignation of Dr. Mütter took place, when the chair of surgery was filled by the election of the illustrious Professor, the elder Gross. During these years, the period of the true rise and healthy growth of the school, the attitude of the Faculty was one of harmony, nay, of unanimity. Many of those great advances in teaching were then effected which gave the stamp to the school, and helped not a little to bring about that prosperity which has lasted, unbroken, to the present day. Chief among these was the origination of the great system of Collegiate Clinics. The establishment of such a means of teaching had been in the minds of successive Faculties from the very beginning of the institution. Indeed, an infirmary had been opened within the walls of the Jefferson College in May, 1825, in advance of its first session, and on the 9th of that month Dr. George McClellan performed the first surgical operation in the anatomical amphitheater.* The system of practical teaching thus introduced was continued, with more or less regularity, down to the period of the reorganization. By the new Faculty, the Collegiate Clinic—medical, as well as surgical—was made a prominent feature in the weekly curriculum. To use the words of Professor Mitchell in his introductory of 1847, the clinic became “the right arm of the College.” In addition to the clinics of the College, the class had access to the lectures of the Pennsylvania Hospital and at the Blockley Almshouse. To the latter they were carried twice a week in large omnibuses hired for the purpose, the students often crowding the top, as well as the interior of the vehicles. This disorderly transportation was an event of great delight to all small urchins on the route, and afforded in winter, as I well recollect, inestimable chances for snowballing and boyish sharp-shooting.

The mode of instruction by Collegiate Clinics met at first with opposition; it was denounced and sneered at. It was said that it was imperfect and

* Prof. J. K. Mitchell’s Charge to the Graduates, March 9, 1850.
insufficient, that it conveyed false impressions, and was calculated to mislead rather than to instruct. It may be that at first it was imperfect. It undoubtedly was inferior in some respects to hospital clinics, nevertheless, it was a great step in advance, and the defects in the system soon brought their own remedy. In the early days of the clinics, I mean after 1841, patients who had undergone serious operations were sent to their homes in carriages, under the charge of a clinical clerk. A little later, about 1843 or 1844, one or two rooms were rented from a stove-maker, over his shop, at the southwest corner of Tenth and Sansom streets, and thither grave cases operated upon before the class were conveyed and treated. After a while these accommodations proved insufficient to meet the wants of the growing clinics, and in 1849 or 1850, a floor and a half or two floors were rented over a bottling establishment, then standing on the ground now occupied by the laboratories of the College. In the course of a few years, additional room having become necessary, this building was remodeled, and a very comfortable sort of miniature hospital was arranged, capable of accommodating fourteen or fifteen patients. This opened directly into the College building, and the fire-proof door through which patients were carried from the clinical amphitheater to their beds is, I am sure, familiar to many of my hearers. This small hospital served its purpose from 1843 until the 7th of September, 1877, when the new Jefferson College Hospital was officially opened by the Trustees of the College for clinical purposes. It is here worthy of mention that the anesthetic power of sulphuric ether was first exhibited in Philadelphia at the clinic of the Jefferson College, December 23, 1846, by Dr. Mütter. The operation was the removal of a tumor from the cheek.

The hospital facilities afforded by the stove-maker's room and the bottler's upper stories may seem to us now to have been meagre enough, but they were sufficient for the needs of the day. It is true that the administration was not a burdensome one. The kitchen stove of the family below furnished the patients' diet, a nurse at so much a week cared for them, and the clinical clerks were the resident doctors. Hard worked these latter were, too. For my part, I can remember many a night of waking and bedside watching within those narrow, cramped, and musty walls. I have sat since then at many a well-ordered table, but never have I relished dainties as I did then the savory oyster and steaming midnight cup of coffee served by the order of a crafty Faculty to ensure the wakefulness of the fagged-out watcher. But, alas! the quaint little hospital has passed away, and the jolly Old Tapster has long since ceased to count his bottles.

The first on the list of the Faculty of 1841, by priority of appointment, was Dr. Robley Dunglison. He was born January 4, 1798, at Keswick, in Cumberland, the beautiful lake country of the North of England. His early education was pursued at excellent schools in Cumberland, where every attention was paid to his classical and mathematical studies. In his seventeenth year he began the study of medicine in Cumberland, and afterward went up to London. He subsequently attended one course of lectures at the University of Edinburgh, visited Paris, and, returning to London, passed his examination at the Royal College of Surgeons and at Apothecaries' Hall.
He commenced practice in 1819 in London. His medical degree he obtained at Erlangen in 1824. Dr. Dunglison at first intended to restrict himself to medical and obstetrical practice, especially the latter, and had announced a course of lectures on midwifery for the autumn of 1824. He had also begun his career as an author, and was about associating himself in literary pursuits with his friend, Dr. Copland, the writer of the well-known dictionary.

It was just at this time that he received from ex-President Jefferson, the Rector of the University of Virginia, the offer of a comprehensive chair in that institution. In the latter part of October he sailed for this country, but so long and tedious was the voyage, that he did not arrive at Charlottesville until the middle of February, 1825. He remained at the University nine years, winning fame as a lecturer and building up that reputation as an author and man of letters which has served to make his name illustrious.

In 1833 he became Professor of Therapeutics, Materia Medica, Hygiene, and Medical Jurisprudence at the University of Maryland. In June, 1836, he was elected to the chair of the Institutes of Medicine in the Jefferson Medical College, a chair which was created for him, and which he occupied until the early part of 1868. He was thus for a third of a century a Professor of the school. During his residence in Virginia he was the physician of Jefferson and Madison, with both of whom he was on the most intimate terms of friendship, a friendship which he delighted to recall.

In 1854, after an absence of thirty years, he revisited his old home in England. Dr. Lonsdale, in his “Worthies of Cumberland,” has described this visit, and says: “His mother was still a fine-looking old lady, dressed in the old style, wearing a turban, and altogether a striking person; unfortunately, her memory had so failed her that she could not recognize him. This, it need not be said, was a great disappointment to Dr. Dunglison, but he showed much equanimity, and delighted to talk with her by the hour of bygone days, when she would generally conclude by saying to him, ‘So you have seen Rolley: he was the best boy that ever was.’” In the autumn of 1854 Dr. Dunglison returned to America. He had engaged passage for himself and his two sisters on the steamer Arctic; in consequence, however, of pressing letters from the Dean of the College, urging the necessity of his immediate return, he anticipated the day of his departure and sailed on the Pacific. He thus, fortunately for the Jefferson College, escaped the sad fate of those who perished in the ill-starred vessel.

Dr. Dunglison was an extraordinary man, a man of learning in the highest sense of the term, familiar alike with the classics of medicine and with the medical literature of the day. No professional topic escaped his keen observation. He was cognizant of all theories, but was carried away by none. The bent of his mind was eminently judicial. He listened, as it were, patiently to all arguments, sifted all evidence; with rare discrimination he rejected the false and held fast to the true, and his decision, once arrived at, was in the end almost always correct. He was not an enthusiast; he was not an ardent investigator or an experimenter in the modern sense of the term. He preferred rather to analyze the researches of others, and to
base his findings upon accumulated evidence. The experiments on the gastric juice, which he devised and assisted in carrying out in the famous Alexis St. Martin case, reported by Dr. Beaumont, were, however, very valuable and greatly interested him in their bearings on the digestive functions.

As a writer I need scarcely speak of him; his works, the "literæ scriptæ," remain, testifying to his industry, patience, research, learning, and sound judgment. So numerous are they that their very roll-call here would be tedious. I mention only his treatises upon the Practice of Medicine, his Therapeutics and Materia Medica, his New Remedies, Physiology, the Medical Dictionary, in itself an enduring monument to his name, various translations, editions of the physiological writings of others, one of Forbes' Cyclopedia, and very many articles, professional and non-professional, contributed to medical and lay journals. Of the latter, I would quote from Dr. Gross' exhaustive memoir of Dr. Dunglison, read before the College of Physicians, and to which I am indebted for many facts, the following: Articles on Road Making, English Fashions in the Seventeenth Century, The Construction of Words from Sounds, English Pronunciations, Penitentiary Discipline, Universities, The Legends of the English Lakes, Richard the Lion-Hearted and Blondel, Superstitions, Americanisms, Early German Poetry, Entomological History, Sanscrit Language, Ancient and Modern Gymnasia, Cradle of Mankind, English Orthoepy, Canals of the Ancients, Jeffersoniana, Biographical and Obituary Notes, and many others. He also, in conjunction with Mr. Chapin, Principal of the Institution for the Blind in this city, prepared a voluminous Dictionary for the Blind in raised type. Dr. Dunglison was undoubtedly the most popular medical writer of his generation, the sale of his books having reached in the aggregate more than 150,000 copies. His greater works, the text-books and the Dictionary, passed through many editions. Some of them were sure to be found upon the table of nearly every practitioner in our land, and this it was that gave to Dr. Dunglison his wonderful hold upon the American profession.

Dr. Dunglison's appreciation of character was remarkable. His judgment of the moral attributes of men, often based upon apparently trifling circumstances, which escaped the observation of others, was rarely at fault. As I look back now upon his beliefs, I may almost say his prophecies, as to the future of those just starting in professional life, I am astonished at his penetration. As a friend to the young, no one was more true; no advice was more to be depended upon than his. His knowledge of the world was so accurate, his observation and habits of thought were so close, that his conclusions were usually just. In the expression of his opinions he was guarded and cautious, qualities which he inculcated in others. Dr. Dunglison was a fluent speaker, his language was lucid and elegant, he never wanted for a word, and every word was well chosen. In fact, his diction was Johnsonian, and his lectures, delivered extemporaneously, never failed to command the undivided attention of his class. He stood before the world the representative of the Medical Sciences, and the honors heaped upon him from so many lands, a membership in more than a hundred scientific bodies, testified to the esteem in which he was held. He was a truly learned man, such
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a one as is not often met with, and his death, which took place in April, 1869, was a loss not only to the Jefferson College, but to the great community of scholars and to the medical profession of the world.

Dr. Robert M. Huston was a native of Virginia, and was born in 1794. During the war of 1812 he served as an Assistant Surgeon in the Army, and after the close of the war he settled in Philadelphia and entered into active practice. In 1838 he was appointed Professor of Obstetrics in the old Faculty, and in 1841, at the reorganization of the school, he was elected to the chair of Therapeutics and Materia Medica. He was then chosen by his colleagues Dean of the Faculty, which position he held until 1854. In 1857 he resigned his chair and was elected by the Trustees Emeritus Professor of the same branch. Dr. Huston’s lectures, which were delivered from manuscript, were marked by honesty and faithfulness in teaching. He dwelt much upon therapeutics, and always sought to guard his classes against the heroic use and abuse of medicines. In addition to his qualifications as a teacher, Dr. Huston possessed great business abilities. He was a thoroughly cool-headed, clear-sighted man, and, in his position as Dean, he contributed much, far more probably than will ever be known, to build up the College, to regulate its business relations, and to preserve the institution upon a sound financial basis.

Third upon the list of the Faculty of 1841 stands a name familiar and beloved, Joseph Pancost.

In 1839 Dr. Pancost was elected to the chair of Surgery (succeeding Dr. George McClellan), and this position he held until 1841, when in the reconstructed school he assumed the chair of Anatomy. As Professor of the latter branch he remained until 1874, when he retired from the active duties of his chair, with the well-merited title of Emeritus Professor conferred upon him by the Trustees of the school. In 1877 the formal opening of the new Jefferson College Hospital was, at the request of the Trustees, inaugurated by Dr. Pancost in an eloquent address. It is unnecessary for me here to speak of Dr. Pancost as an operator. The fame of his skill was world wide. As an instance of its appreciation by the profession at large, I may state that in 1876 the military medical representative of Russia showed me his private instructions from the Medical Bureau of the War Department of his government. Almost first among these was the order, “Visit Dr. Pancost, see him operate, and report.”

As I look back on the many years during which, as student and alumnus, I have gone to and fro in the Jefferson College, I can realize the important part in the every-day life of the school which Dr. Pancost played. As Professor of Anatomy, and as a sharer in the responsibilities of the surgical clinic, his influence over the class was very great. It was, too, an influence altogether in the right direction. His great object was to teach anatomy, not the anatomy of the dead, but rather of the living. With him it was anatomy applied,—medical anatomy, surgical anatomy. In his hands the dry bones lost their dryness, they became, as it were, living exponents of injuries and diseases. Their growth, their size, their measurements, served as themes for discourses of the most pregnant character. No zealous student could faithfully attend his lectures and fail to carry away with him a mass of practical
information of inestimable value in his future professional life. Dr. Pancoast's consummate knowledge of human anatomy and his vast surgical experience had so enriched his mind that his teachings were instinctive and without effort. Versed himself in the learning of the books, the charm of his lectures lay in that unwritten surgery which ever fell from his lips. This it was, I think more than anything else, which has given that value to his anatomical discourses, which only those who have heard him can appreciate. No one contributed more than he to enhance the surgical renown of the Jefferson College.

From the reorganization of the Faculty until 1858 the chair of the Practice of Medicine in the College was brilliantly filled by Dr. John K. Mitchell, and by his death the first break was made in the ranks of this veteran corps of Professors. Dr. Mitchell, the son and grandson of a physician, was born in 1793 in Virginia. He was of Scotch extraction, and was educated in Scotland, receiving his academic degrees at the University of Edinburgh. In 1816 he commenced the study of medicine as the pupil of Dr. Chapman at the University of Pennsylvania, from which institution he was graduated in medicine. His health being somewhat impaired at that time, he made three voyages to China in professional charge of a merchant bound to Calcutta and Canton. Having returned to this country, he settled in Philadelphia, and gradually acquired the very large practice which he held until his death. Dr. Mitchell early assumed the duties of a teacher. In 1822 he was appointed lecturer upon Medical Chemistry in the Philadelphia Medical Institute, the first summer school established in this city. He was subsequently chosen as Professor of Chemistry in the Franklin Institute, and in 1841, as we have seen, he was elected to the chair of Practice of Medicine in the Jefferson College, which he so long graced.

Dr. Mitchell's was not an idle life, for he made many contributions to science and to medicine. The papers in which he studied, with great skill and fertile ingenuity, the osmosis of fluids and gases, were translated into many languages, and were, when written, the most important contribution made by any American to this branch of physics. This is not the place to analyze these works, nor to do more than mention his discovery of the solvents of caoutchouc, and his study of the tests of arsenic. The solidification of gaseous carbonic acid also attracted the observation of Dr. Mitchell, and he devised an apparatus for this purpose. In 1830 and 1831 he drew attention to the spinal origin of rheumatism, and he was the first to point out the occurrence of joint troubles in diseases of the spinal cord. His invention of the spine car for cases of vertebral disease was, too, a valuable contribution, involving, as it did, the suggestion of a curative treatment by extension of the trunk and support of the head. I believe, also, that one or two minor surgical instruments were due to Dr. Mitchell's ingenuity. In 1849 he published his view on the cryptogamous origin of malarious fevers, which he afterward extended to embrace cholera, plague, and yellow fever.

During his long and useful career, Dr. Mitchell, in addition to his strictly professional lectures, delivered many discourses on chemical and scientific subjects. Some of these were in the form of orations before learned
bodies, others of a more popular nature before historical and social societies. Prominent among these addresses was one upon the "Wisdom of God as Displayed in the Formation of Water;" another on "The Practical Interrogation of Nature;" and a third on the "Means of Elevating the Character of the Working Classes," all given before the Franklin Institute. Wherever delivered, Dr. Mitchell's discourses were marked by profound and original thought, deep learning, and extensive reading. A vein of poetic imagination ran through all his works, and served to give grace and interest to his studies and descriptions of the most technical subjects. In addition to his scientific writings he also published a volume of poems.

In person Dr. Mitchell was tall and portly, with a gentle, polished bearing. He was open handed and hospitable, a charming companion, a man of genial manners, and yet of great dignity of character. He was greatly beloved by his classes, and their affection for him he strongly reciprocated. He was the students' friend. In sickness and trouble they turned to him, and never sought his aid in vain. Many a poor young fellow, struggling in the vortex of a great city's temptation, has he sustained by his wise counsel and kindly sympathy. Many a needy student has he helped from his own purse, and none the wiser. In his college lectures he was exceedingly happy; his terseness, his power of illustration, his way of putting things, his anecdote and lively wit, made a favorable impression on the class, an impression strengthened by their personal love for their teacher. He died in harness, holding his professorship to the end. The last official act of his life was the commencement reception of the graduating class of 1858 at his house. His health at that time was feeble, and the question arose whether the entertainment should not be given by one of his colleagues. He insisted, however, on giving it himself, saying that he would probably not live to give another. His misgivings were prophetic: in a month he had passed away, leaving behind him the reputation of a distinguished teacher, a zealous investigator, a most eminent practitioner, and a blameless citizen. To quote the words of the board of Trustees of the school, "he had proven himself one of the most valuable members of the Jefferson Medical College."

One of the most remarkable men of the Faculty of 1841, and one of the most original, was Dr. Charles D. Meigs, the Professor of Obstetrics. He was born at St. George's, one of the Bermudas, in 1792, his father having gone there from Connecticut to practice as Proctor in the English Courts of Admiralty. In 1796 Mr. Meigs returned to America, and was appointed Professor of Mathematics and Natural Philosophy at Yale College. In 1801 he was chosen President of the University of Georgia, and removed with his family to the seat of the University at Athens, Georgia. Here young Charles Meigs was classically educated, and, at the same time, he acquired from the Professor of French, an accomplished emigré named Petit de Clairvivre, that perfect knowledge of the French language which he retained through life.

About twenty-eight miles from Athens was the Indian country, inhabited by the Cherokees, Creeks, Choctaws, and Chickasaws. The Indian Agent, who lived at Hiawassee, Tennessee, was Colonel R. J. Meigs, Charles's uncle. The boy, in some way or other, having formed a friendship with a noted
scapegrace Cherokee, Jim Vann, a sort of trader, was, at his own earnest solicitation, permitted to accompany the latter up into the Indian country. Here he spent some little time, and learned much of the wild Indian life. These recollections he retained always, and I have heard him on more than one occasion allude in vivid description to his boyish experiences.

Dr. Meigs graduated at the University of Georgia in 1809, and then studied medicine, attending two courses of lectures, 1812-1813 and 1814-1815, at the University of Pennsylvania. In the spring of 1815 he married a Philadelphia lady, and very shortly began practice at Augusta, Georgia, although he did not receive his medical degree until April, 1817, at which time he was still in Georgia. In the summer of that year he moved to Philadelphia, and established himself on Eighth street above Race, afterward removing to Arch above Sixth. For some years Dr. Meigs made slow progress in private practice, although he was busily engaged in writing for the "North American Medical and Surgical Journal," the offspring of the Kappa Lambda Society. He also took great interest in the Philadelphia Medical Society, and was one of its most active debaters. Notwithstanding his literary work, he had, at this period, much unoccupied time upon his hands, some of which he spent, as we are told by his son, Dr. J. F. Meigs, in his Memoir of his father, in a little workshop fitted up in the garret of his house. Here he did carpenter work, and worked on his lathe in wood and metal. I fancy, too, that some of his skill in modelling clay and wax, which I have so often wondered at, was attributable to his garret experience.

In the early part of his life Dr. Meigs, as is stated by one of his biographers, Dr. Bell, had a great aversion to the practice of obstetrics, but, under the advice of wise friends, he afterward devoted himself largely to this branch of the profession. In 1831 he published a translation of Velpeau's "Treatise on Midwifery," and in 1838 an original work, his "Philadelphia Practice of Midwifery." Hufeland's work on scrofula he had translated in 1829. In 1841 he was called to the chair of Obstetrics and Diseases of Women and Children at the Jefferson Medical College, a position which he held for twenty-two years. In 1845 he translated the treatise of Colombat de L'Isère on the "Diseases and Hygiene of Females." In 1848 he published his work on "Woman and Her Diseases," and in 1849 his treatise on "Obstetrics, the Science and the Art." In 1850 his book upon "Certain Diseases of Young Children" appeared, and in 1854 a small work on "Childbed Fevers," followed in the same year by a volume on the "Acute and Chronic Diseases of the Neck of the Uterus," embellished with plates, some plain, others colored. The latter were from his own brush, and these artistic labors gave him the greatest pleasure. I can very well remember that just at the time he was so kind as to ask me one evening to his office to give me, as he said, a lesson in water-coloring. He was then painting for class demonstration a picture afterward reproduced in his book, and was washing in the color with an unsparing hand. In my ignorance I ventured to ask, "Is there not too much water?" "Too much water, too much water," said the Doctor, starting up, "by George, no, you can't have too much water;" and dashing a tumberful of colored water on
the picture until it ran on to the floor, he added, "See how I will rub it into the picture, and soak it up," which he did.

Dr. Meigs's manner before the class was peculiar and singularly impressive. He was eminently a scholar, and always seemed to me to aim to teach not only his branch, but something more. He loved to dwell upon the value of learning, and to inculcate above all things that the physician should be a cultured man, or, as he put it, a member of the great Scholar Class. He was forcible in expression, apt in illustration, a lover of the arts, and blessed with a poetic and fervid imagination. With the mummied bones of an Egyptian girl before him, I have heard him in an enraptured burst recall the glories of Egypt's ancient days. At his magic words the scene rose up. There stood the palace; there the temple, where trod the priests of Isis; yonder lay the brick fields thronged with the Hebrew slaves; at his feet the Nile murmured, there among the tangled rushes floated the wicker basket, and for the moment Teacher and Class stood in the presence of Pharaoh's daughter.

No member of his many classes will, I am sure, ever forget Dr. Meigs and the strange charm of his words; at times poetic, at times charged with quaint humor; now rising to the highest pitch of philosophic reasoning, now sinking to impress laboriously upon the student mind the beauties of Carus's curve. One characteristic of his teaching was his zealous effort to bring others, and notably his class, to think as he did. He was all earnestness, and, immovable in his convictions, he sought to make all share them with him. On the subject of anesthesia in parturition he held the most decided views. Pain in that condition he regarded as physiological. To banish it, in his opinion, was unwise, indeed, almost impious. In a series of pleasant letters this whole matter was discussed by Sir James Y. Simpson and himself, and I recollect the pleasure he evinced in reading these letters to his class.

Dr. Meigs took great pains to demonstrate the dangers of ether inhalation, and I recall an amusing incident in this relation. One afternoon he decided to etherize a sheep to death, to show how easily animal life might be destroyed by this, in his opinion, dangerous agent. So a sheep was brought into the amphitheatre and heroically etherized by the Demonstrator of Anatomy, the late Professor Wallace. The ether was poured from a demijohn, air was carefully excluded, and, after some struggling, and toward the end of the lecture, the desired end, to the Professor's great delight, was apparently obtained. The invited guests held formal inquest, and a verdict of "death from ether" was solemnly found. The carcass was removed, a few remarks on the moral of the exhibition and the criminal foolhardiness of all ether givers followed, and the class was dismissed. But, alas! as the students bounded down the stairs, a plaintive baa from the retiring room raised most suggestive doubts; for if that doomed sheep had escaped, then in truth the fatal attributes of ether must have been overstated. Dr. Meigs, I believe, somewhat modified his opinions regarding anesthesia toward the end of his life. As regards chloroform he was inexorable, but he subsequently admitted, as I have told, that in pressing cases ether might be used with advantage in parturition. A point of pathology which greatly engaged his attention was that of heart clots. He dwelt much upon embolism in his lectures, and it
seems to me that he is fairly entitled to share the credit usually assigned to Virchow in this respect, if indeed he did not anticipate him in his investigations. Dr. Meigs was deeply versed in professional literature. He greatly respected the writers of the last century, especially Haller. He asserted that most recent discoveries in medicine could usually be found in Haller's quarto volumes, and he was not far wrong.

It is an old adage, that "there is nothing new under the sun." We can almost believe this when we learn from the hieroglyphics of the recently unearthed papyrus now in the British Museum, that when the matron of Old Egypt was tired out with household cares she should be put to bed, kept on her back, quiet and still, and fed upon the fat of the land. Surely our brother-practitioners of that by-gone time were not so far away from the modern rest-cure. And yet one other piece of wisdom we learn from Dr. Untelen-Scn. He dotted down in his curious hieroglyphics the history of his case, and then entombed it in the sarcophagus, the coffin of his patient, presumably for the information of the gods. He spared his brethren the clinical report for 4,000 years. Just fancy a report of this week's clinic read and commented on in the year of our Lord fifty-eight hundred and ninety-five.

Dr. Meigs was a very busy man. A great and wearing practice, his literary pursuits, and the duties of his chair, told heavily upon him. In 1860 he resigned his professorship, although as Emeritus he, at the earnest request of the Board of Trustees, delivered the succeeding course in the enforced absence, from ill health, of the newly elected Professor. This done, he sought, in his country home of Hamanasset, in Delaware county, the realization, as he hoped, of his life's wishes. And here he passed the remainder of his life, absorbed in his books, his garden, his flowers, and his study of vegetable philosophy, fit resting-place after a life of toil. He died suddenly on the night of the 22d of June, 1869, leaving behind him the cherished memory of a learned, good, and gentle man.

Dr. Franklin Bache filled the chair of Chemistry in the Jefferson College from 1841 until his death, in 1864. As is well known, he was the oldest great-grandson of Dr. Franklin, whose only daughter, Sarah, married, in 1767, Richard Bache, a young English gentleman from Lancashire. Dr. Bache was born October 25, 1792, in a house built and owned by Dr. Franklin, on the south side of Market street between Third and Fourth streets, in this city. He entered the University of Pennsylvania, taking his degree of B. A. in 1810. He studied medicine in the office of Dr. Benjamin Rush, and, after his death, in that of his son, Dr. James Rush, and graduated in medicine at the University in 1814. Before graduating, and during the war of 1812, he entered the army as surgeon's mate, a position equivalent to that of assistant surgeon, in the 32d Regiment of Infantry; and his name will thus be found in the few copies of the early Army Registers now extant. He was subsequently promoted to the rank of surgeon to the same regiment. He graduated in medicine in 1816, and was appointed surgeon to the 2d Regiment of Infantry at the reorganization of the army after the war. In July, 1816, he resigned from the army, and entered upon private practice in this
city. For many years he was physician to the old Walnut Street Prison, and later to the Eastern Penitentiary.

When very young Dr. Bache evinced a fondness for chemistry. As early as 1811 he wrote a paper on muriatic acid, and in 1819 he published a small volume on chemistry. During the subsequent years he contributed a series of original articles on the same subject to Ure’s Dictionary of Chemistry, Turner’s Chemistry, Henry’s Chemistry, the American Cyclopaedia of Medicine and Surgery, and other publications. In 1826 he was appointed Lecturer on Chemistry at the Franklin Institute, and in 1830 he became one of the Lecturers of the Combined Association for Medical Instruction and the School of Medicine, private associations which then numbered among their teachers the names, afterward so distinguished, of Wood, Bache, Parrish, Rhea Barton, Morton, Gibson, Randolph, C. D. Meigs, Coates, and La Roche. In 1841 he was elected Professor of Chemistry in the Jefferson Medical College. The first Pharmacopeia of the United States was published in 1820 at Boston, but at that time attracted little attention. In 1829 the revision of the Pharmacopeia and the publication of a second edition was referred to a committee composed of Dr. Hewson, Dr. Wood, and Dr. Bache. This revised edition appeared in 1831, and was followed by the publication of the famous Dispensatory, the “Wood and Bache,” in 1833, which passed rapidly through so many editions. Up to the time of Dr. Bache’s death, we are informed by his biographer, Dr. Wood, that no less than 79,000 copies had been sold.

If I were asked to describe Dr. Franklin Bache, I would speak of him as an entirely upright man—not merely upright in outward dealings, but in thought and word and deed. To his mind a matter was either right or wrong, true or false. He could not appreciate, as some do, intermediate shades. Venial sins he did not comprehend; of expediency he knew nothing. He was a man of absolute precision; and this quality he carried into all his relations in life. Thus it was that in the lecture-room accuracy was the characteristic of his discourse; his speech was measured and slow, devoid of metaphor, free from all blemish. Every matter for discussion was well arranged, in its place, and brought forward for due consideration at the proper moment. He aimed to teach. With all his precision and apparent austerity, Dr. Bache possessed a fund of quaint humor, which often in conversation, and occasionally in the lecture-room, would find vent in a ludicrous allusion. He was greatly respected, and, indeed, held in awe by his classes. He retained his professorship until his death, which occurred March 19, 1864. I cannot better close my remarks on Franklin Bache than by quoting the last paragraph of the obituary oration of his old companion, Dr. George B. Wood: “If I have succeeded in my aim, I have represented to you an extraordinary man, upon whose memory not a stain rests, and who, while he worked diligently, and thus did much for the public good, has done still more within the limited circle where he was personally known, by presenting to the young men entering on the stage of active duties an example for their imitation of all that is morally excellent, lovely, and of good report in manhood.”

The last member of the Faculty of 1841 of whom I shall speak to-night,
was Dr. Thomas D. Mütter, who was Professor of Surgery from 1841 to 1856. He was born at Richmond, Virginia, in 1811, and graduated in medicine at the University of Pennsylvania in 1831. The following year he spent in Europe, chiefly in Paris. During his stay in that city Dr. Mütter followed the teachings of the great surgeons of that day, Dupuytren, Roux, Lisfranc, and Velpeau. He became at that time strongly imbued with the principles of the revived school of plastic surgery as expounded by Difffenbach, Lisfranc, and Liston, and with the achievements of orthopedic surgery, of which Stromeyer and Difffenbach may be regarded as the founders. In 1832 Dr. Mütter returned to America and settled in this city, and sought strenuously to bring before the profession and community the novelties with which he had been indoctrinated while abroad. As is the case with almost every one just starting, his success was at first slow. After a time, however, his efforts in plastic surgery and his operations of tenotomy attracted attention, and he gradually rose into practice.

Dr. Mütter early applied himself to teaching. In 1835 he was appointed assistant teacher of surgery in the Philadelphia Medical Institute, one of the summer schools of the day.*

It was in the Medical Institute that Dr. Mütter found his first and true development. He excelled as a teacher, and here he was in his proper sphere. He possessed, as I have been told, at the very outset of his career those powers and capabilities which shone so conspicuously in him when promoted to his brilliant position in the chair of Surgery in the Jefferson College. I can well remember him in my student days, as he stood in yonder amphitheatre, beloved, nay, almost worshiped, by his class. He was small in stature, delicately framed, with a clear, blue eye, high forehead, and hair prematurely gray. He possessed a wonderfully musical voice, which, even in its lowest notes, could be distinctly heard by his whole audience. His gesticulation was good and easy, his speech ready. His observation was quick, and he never failed to note at a glance the effect of his words, even upon the dullest listener. He was not a sluggish speaker; on the contrary, he always strove to lecture up to his highest mark, for he was conscious of his powers, and fond of that public approbation which their exertion invariably brought him. As a lecturer his great charm lay in his enthusiasm, and in his power of imparting

* A passing allusion to these old-time summer schools, which in their generation did such good service in medical teaching, may perhaps, be not inappropriate. The oldest of these was the Medical Institute, founded in 1818 or 1819 by Dr. Chapman; next was the Philadelphia Association for Medical Instruction; then came the School of Medicine; and later, in 1842, the second Philadelphia Association for Medical Instruction, which continued until the outbreak of the war in 1861. Among those who, at different periods, have lectured in the summer schools, were Drs. Horner, Dewees, Hodge, Bell, Jackson, J. K. Mitchell, Harris, Parrish, Wood, Hewson, Samuel G. Morton, J. Rhea Barton, Bache, Randolph, C. D. Meigs, Gerhard, Pancoast, Mütter, Rusel, Gibson, Coates, La Roche, John F. Meigs, the two Wallaces, Francis G. Smith, Allen, Keating, John H. B. McClellan, Leidy, Bridges, West, Morton and Alfred Stillé, A. Hewson, Penrose, S. Weir Mitchell, Da Costa, Darrach, Keen, Brinton, and others. Nearly all of these lecturers became subsequently Professors. The lectureships were not in their time lucrative, but the schools were recognized "stepping-stones." They were familiarly known as the "Schools of the Prophets," the word "Prophets," as was wittily observed by Dr. Drayton, being spelt with a "ph," and not with an "f."
something of his own spirit to his hearers. He possessed, too, a marvelous gift of stamping a fact, a theory, a doctrine, indelibly on the student's mind. He was orderly and systematic in the arrangement of his material, and apparently exhaustive in its treatment. He employed a copious illustration of diagrams, models, and specimens, and used them skilfully, so as to impress yet not confuse. He was, I think, in every respect an eloquent teacher, one whose words were not easily forgotten.

In his love for the Jefferson College, in his pride in its present, in his faith in its future, he was second to none. He believed that the Institution was entering upon a great era, and he longed in anticipation for such a hospital as, under the auspices of the Board of Trustees, has recently been established. I can remember his chagrin when a plan, emanating from himself and his colleague, Dr. Mitchell, to purchase, at small cost, the buildings and ground adjoining the College for a hospital, came to naught. Brilliant as Dr. Mütter was in his didactic teachings, he surpassed himself in the clinical arena. In the every-day surgical operations he was careful and adroit; in the performance of those of great magnitude he leaned a little, yet always gracefully, upon the strong arm of his colleague in Anatomy, his co-worker in the Surgical Clinic. I say co-worker, and this term is, I believe, peculiarly appropriate, for these two, each so excellent in his own way, labored for many years shoulder to shoulder in a friendly co-operation, marvelous even in that harmonious Faculty. Mütter and Pancoast, Pancoast and Mütter, each striving to assist the other, and both contributing to the common end—the alleviation of human suffering, the welfare of the surgical clinic, and the advancement of the honor and renown of the Jefferson Medical College.

In 1856 Dr. Mütter was forced by ill health to resign his chair in the school. He was then created by the Board of Trustees Emeritus Professor of Surgery. In the autumn of that year he visited Europe, hoping to find in the milder climate of Italy an alleviation of his sufferings. He spent the winter in Nice, a period to him of great bodily suffering and distress, and in 1858 he returned to this country. His health by this time had been greatly shattered by frequent attacks of gout and by occasional occurrences of hæmoptysis. Dreading another northern winter, he visited the Southern States, and died at Charleston on the 11th of March, 1859, at the age of forty-eight, leaving a reputation as Lecturer, Orator, and Teacher rarely equalled in the medical profession.

Dr. Mütter's private museum, which was very rich in specimens of surgical interest, he had presented during his lifetime to the College of Physicians. He accompanied the donation by the gift of thirty thousand dollars, under certain stipulations regarding the erection of a fireproof building. The funds which were put in trust were for the support of the Museum and for the foundation of a Lectureship on Surgical Pathology. These conditions have all been complied with, and the Mütter Museum, greatly enlarged by the purchase from its ample funds of valuable anatomical and surgical specimens, has already attracted great professional interest. It is each year being more and more visited and studied, and is constantly used by your Clinical Professor of
Orthopedic Surgery for the instruction of our classes, and thus are being realized the anticipations and cherished hopes of its founder.

Gentlemen, I have this evening, in these few words, touched upon a past era in the history of our school, and have sought for a moment to bring you all face to face with that Faculty which has passed away. I trust that you will not think I have spoken too freely or flippantly of those who are gone, or that I have ventured with impious hand to uncover their dead lineaments. Be assured that in what I have said I have been actuated only by a feeling of filial love for those who, in their lifetime, were very kind to me. Time in his flight brings many changes, levels many landmarks, wipes out many names. Yet I feel sure that through the mist of fleeting years, which is fast settling down between us and those of whom I have spoken, their figures will not wane, but rather stand out with an increasing grandeur. For in good truth, this Faculty of 1841 were men of mark. Some were great men; all were great Professors; and we, Alumni of the Jefferson School, owe them much.

And now, in bidding them farewell, may we not experience something of that emotion which I have often fancied must have stirred the bosoms of the grim veterans of the old French Empire as the disentombed remains of their Great Captain passed up the Seine to their last resting-place beneath the mighty dome of the Invalides—Respect, Love, Veneration.

So, Dear Friends, Brothers, those of us who have left our school's portals long ago, those entering to-day—Veterans, Soldiers under arms, Fresh Recruits—shall we not all fall into line, dress ranks, and stand at "present arms," with muffled drums and colors drooped, as these great Spirits of our own Dead sweep by?
OPENING ADDRESS.

The following address was delivered at the opening of the new Medical Hall, Jefferson Medical College, Monday evening, October 2, 1899, by Phineas S. Conner, M. D., Professor of Surgery, Medical College of Ohio.

Son and grandson of Jefferson, it is with no ordinary pleasure that I extend heartiest congratulations to Trustees, Faculty and Students on the completion of the new home so generously provided for our “Cherishing Mother.” Elegant in design, complete in appointment, thoroughly adapted to present needs, this last of the three buildings that have in turn opened their doors to incoming classes, is indicative, as were its predecessors, of the status of Medical Education in our country.

The years of Jefferson cover more than half of the period in which there has been collegiate training in America, and when, in 1825, McClellan, Eberle, Smith, and their colleagues, began their labors, medical teaching in the few existing schools was hardly other than supplementary to private instruction in the offices of preceptors. Scarcely a decade had passed since there were but half a dozen medical schools, their graduates but few, but, in fact, still more in proportion to the whole number of doctors throughout the rapidly extending inhabited area of the nation. Prior to 1813 there were but two medical colleges in New England, four in the Middle States, not one south of the Potomac or west of the Alleghenies. When Jefferson was founded, the Medical Department of the University of South Carolina was the only school in the South a year old, Transylvania and the Medical College of Ohio the only ones in the West. A large part of the prospective practitioners were still acquiring such professional knowledge as they could from the doctors in their neighborhood, in whose offices they read such books as they might find, compounded pills, powders and potions as directed, saw such cases as the preceptor would show them, and not seldom were servants as well as students. Their training was necessarily largely defective, for too often their teachers were unlearned, unskilful. Exceptions there were: here and there was to be found a man of marvelous perception, of extraordinary adaptability, of wonderful knowledge, if not of books of cases, ready for any emergency, able to decide upon a proper remedy and to dispense it, knowing when to operate and how; and years-long pupilage under such a teacher was at once an education and an inspiration. The three or four years’ office training ended, the student became a doctor, sometimes after examination by a committee of a district or State medical society, more often in virtue of a certificate from his preceptor. It has been with no little interest that I have looked upon the first of such certificates issued in the West, which reads:
"Cincinnati, State of Ohio, August 1, 1805.

"I do certify that Mr. Daniel Drake has pursued under my direction for four years the study of Physic, Surgery and Midwifery. From his good abilities and marked attention to the prosecution of his studies I am fully convinced that he is well qualified to practice in these branches.

"Wm. Goforth,

"Surgeon General, 1st Division Ohio Militia."

Daniel Drake, the first medical student in the "Interior Valley of the Mississippi;" the first to cross the mountains and bring back the diploma of Doctor of Medicine; Professor in Transylvania in 1817; founder of the Medical College of Ohio in 1819; Professor of Theory and Practice in Jefferson in 1830; teacher, writer, man of science and of letters, whose life and labors are among the glories of American medicine!

The years in which the original building of our College was occupied were those when schools were being established in considerable number, many of them in small towns in sparsely settled districts. The teachers in these "country schools" were, with few exceptions, men of energy, of ambition, of learning, and of skill, many in later years holding professional positions of high distinction, among them and representative of them, Bartlett and Mussey and Holmes and Parsons and, a little later, Clark and Peaslee and Ford.

More and more the training under preceptors was being completed by or supplanted by that in the schools, where didactic instruction of high order could be secured and clinical advantages were afforded. As a necessity, as classes grew larger, more room for them was required. After twenty years' occupation of the original buildings here, a second, more spacious, architecturally more imposing, was erected, about which with many of us cluster the recollections of student days. The changes of 1846 and the additions of 1879 were not so much because more had to be taught, and that in a different way, but that the numbers in attendance compelled enlargements. For a generation the method of teaching remained in general the same, and, by didactic courses, largely repetitional, with practical work in the dissection room, was taught the Science and Art of Medicine. Two years of College training answered the requirements for the doctorate here as everywhere in our country, and for a long time, even down to my own teaching, in most of the schools, ten years of practice was accepted in lieu of the first course. Looking at it from the standpoint of to-day, the only wonder is, not that the recent graduate knew so little, but that he had learned so much. It is to be remembered, though, that a generation ago there was less to be taught, and in Jefferson and in not a few of the other colleges the teachers were Masters of Medicine. The student then, of fairly trained mind, could under such instruction as he was receiving learn in two years' course to recognize and to treat the ordinary diseases and injuries; and this, after all, was the chief object of undergraduate study for a large proportion of those in training.

But in the last generation times have changed and we have changed with
them. Slowly and by degrees the teaching became more full, the subjects taught more numerous, the specialties were being treated and developed, laboratory work in one department and then another was instituted, and the period of pupilage was extended to three years, quite recently to four. The old-time Faculty of seven Professors, with a Demonstrator of Anatomy, gave place little by little to one of ten or a dozen or more full Professors, with as many more Clinical Associate and Adjunct Professors, with Demonstrators and Assistants in numbers proportionate to the size of the classes and the demands of the several departments.

The advisability of and then the necessity of a hospital in immediate relation with the didactic teaching and practical work was recognized, and from small beginnings, such as the little two-room hospital here that I well remember, came larger and better equipped college hospitals, until, in connection with a number of our medical schools, there are hospitals of ample size, thoroughly equipped, excellently administered, and of great importance in the scheme of instruction. The Jefferson Hospital, as it now is, was among those organized comparatively early, to steadily grow in favor until its capacity is now strained to the utmost, and the need is imperative of marked enlargement, as we are informed is soon to be made.

As has been the case with the Science and Art of the profession, so with the fullness of their teaching, the change has come steadily—by evolution, not revolution. Students have been instructed in the new Pathology, as its truth was demonstrated and its field enlarged; in the new Therapeutics as remedies were introduced and their value established; in the new wound-treatment and the surgical operations that such treatment made feasible; in the new Physiology that shed much light on vital actions and rendered intelligible many morbid processes; in the special departments as they have become more essential parts of professional practice.

The consideration of the medical education of to-day includes that of what is to be taught, who are to be taught, and how they are to be taught. Precedent to all study of disease and injury there must be that of structure and of function. Anatomy and Physiology are the fundamental studies, and the more thoroughly they are pursued the more accurate and extensive the knowledge of them, the better qualified the student will be to care for the sick and the wounded; and this, be it ever remembered, is the great office of the doctor, to relieve as he can, to comfort as he may. The prime object of medical education is not to make investigators, scientists, men of learning, but skillful practitioners. Of the knowing and the doing, the doing is the greater. Let Anatomy and Physiology, then, be well taught and well studied—so taught that they may be studied as means rather than ends; the various parts of each dwelt upon in accordance with their practical value. The time allotted to Anatomy and Physiology here, as indicated in the programme of lectures, time spent in the lecture room and the laboratory, the abundance of material and full equipment of apparatus for experimentation and investigation, the thorough qualifications and long experience of the occupants of the chairs, and the goodly number of trained
assistants, all indicate how well the authorities of the College appreciate
the demands of the day, and the rooms so commodious, so well adapted to
the work that is to be done in them, are among the chief excellencies of this
new building.

Chemistry and Therapeutics are the other foundation studies, knowledge
of which is essential to the proper training in the practical departments—
Medicine, Surgery and Obstetrics. The Chemistry which should be taught
is that of the secretions and excretions, of the products of cell-action in the
human body. The time has passed when it was proper and necessary
to spend any portion of the years allotted to medical study in the consider-
ation of so much of inorganic and organic chemistry, as taught in high
school and college, as a part of the required preliminary training of those
who would, in the professional school, fit themselves for the duties of med-
cial life.

The Therapeutic teaching of to-day is that of the influence—correcting,
controlling, removing—of medicinal agents upon pathological conditions.
Because of the great advances that have been made in pharmacy, resulting in
the presenting to us of active agents in concentrated form and of great
strength, it is no longer necessary that there should be taught the botany
of medical plants, or the mechanical preparation of the remedies to be dis-
pensed. The training in this department is in the line of making clear the
action of remedies, classified according to their constructive or destructive
or modifying character, and in the experimental determination upon animals
of the effects of drugs and the ways in which they are produced. To
every one familiar, in even the slightest degree, with the history of Medicine
and in the story of the multitude of drugs that have been recommended,
vaunted, tested and abandoned; to every one who realizes how often, even
in these present days, sound judgment and careful observation are wanting
in those who burden the literature of the profession with reports of cases
handled with this remedy and that, to every such one it is apparent that never
before was it so necessary for the teacher of Therapeutics to see accurately,
to reason correctly, to discriminate carefully, and to impress upon the minds
of students only established facts and well-grounded opinions. Less and less
each year should it be true of physicians that they are putting drugs
of which they know little in bodies of which they know less.

In no other departments of Medicine have there been in the last gener-
atlon such advances in knowledge, such advantageous changes in treatment,
as in Practice and Surgery; and never before has it been possible to teach
so much, and with so much accuracy and certainty. Of many of the
diseases now coming under our care, it may be truly said that we know their
natural history, what causes them, what will be their course if left to them-
selves, how they may be controlled; further, how they may be prevented.
The speculations of the past have given place to the certainties of the present,
for belief too often evolved from inner consciousness have been substituted
facts ascertained by scientific investigation, their truth demonstrated by
experiments upon animals or man. Of a large proportion of the more
common and more morbid affections, the exciting cause has been isolated
and cultivated, and by inoculation the disease produced in the previously healthy. The unknown something, so long sought, and believed to be in airs or waters, in inherited structure or acquired habit, can now be seen under the glass, a living organism. Wider and wider experimentation, with technical methods more and more perfected, is constantly enlarging our knowledge of Etiology, and year by year fewer and fewer are the diseases long recognized clinically, of which the existing cause remains undetermined. Of malaria, cholera, typhoid fever, the bubonic pest, the great white plague, diphtheria, of the wound-complications with their resulting septicemias; of, in brief, all the dangerous diseases that ordinarily come under care, except syphilis and cancer, perhaps yellow fever, the determining organism has been discovered. To know the physical properties and effects, at least, of the chemical products of pathogenic micro-organism, has become as essential a part of the undergraduate study as the clinical appearances and proper therapy of medical and surgical diseases, and the symptoms and treatment of injuries and growths. There must then be bacteriological study to an extent sufficient at least to enable the youngest practitioner to diagnosticate the ordinary maladies from microscopic evidence by itself or in association, with due recognition of long-known symptoms. In less measure now than ever before is it true that diagnosis is but the estimation of probabilities. The improved therapy, pharmacal and mechanical, largely in the way of anticipating and controlling the infectious processes, has not only abbreviated the time and diminished the mortality of medical and surgical affections, but has lessened the difficulties in the way of explaining and understanding them.

The extreme importance that the surgical specialties have lately assumed has made necessary their consideration during the college course, and, as a rule, the last year is largely devoted to it.

How far shall the studies of these specialties be a necessary, how far an elective part of the curriculum? The question cannot yet be answered; perhaps never will be with exactness.

My own feeling is that the demanded training should be to such extent, and such only, as will enable the general practitioner to recognize the more ordinary morbid states and to treat them judiciously, or refer to those more skilled, according to severity and the nature of the remedial measures demanded, leaving all else to elective and post-graduate study. From the latter, properly carried out, much good must come; but time and again in the last twenty years post-graduate school instruction has been an almost unmitigated evil, developing through a six or eight or twelve weeks' training (personal and practical in only a most limited way) specialists of assurance, not skill—dangerous in direct proportion to the practice secured.

In a limited degree, but still to a degree, there has been effected in the last few years a change in quality, so to speak, of those under medical training—a change far more marked in the lower than the higher grade schools. Through the influence exerted by the profession at large, by State boards of health and of registration, and by college associations, a minimum of preliminary education has been established; certainly none too high when
it bars entrance to the professional school to those only who have not pursued an ordinary school or normal school course. But with respect to one class of students (that of the graduates in Arts, Letters or Science) there exists a difficulty which is attracting no little attention among not only undergraduates but the authorities of our literary colleges. The advisability of broad academic training, the many advantages connected with the education, general and special, that leads to the securing of the degree of A. B., B. L. or B. S., cannot be questioned; but there is yearly arising more and more of a doubt in the minds of students, and of those responsible for them, whether or not the average collegian, intending ultimately to study medicine, can be expected to or afford to devote the required time and money to the securing of an academic degree when four years more must afterward be spent as a professional student. Within the period of which many of us are familiar, the college graduate was a doctor of medicine and ready to begin his active life-work at the age of twenty-two, twenty-three or twenty-four. To-day he will probably be from two to four years older, and it is very doubtful if he can properly give these additional years unless possessed of somewhat ample means, or purposing to fit himself for professorial rather than ordinary professional work. Not a few of our higher-class colleges are so arranging a schedule of elective studies as will permit of the taking of the first (some even of the first and the second) courses of medical study in the senior or junior and senior years of college life. But in certain of our States four full years of post academic collegiate study is demanded of those who would practice their limits, and modification of the laws regulating the practice of medicine must be made before any fusion of college and medical school education can be effected. And further, if the last, still more the last two years of academic life, are devoted to strictly technical work, the reality will be largely lost of the true collegiate training which shall underlie and be preparatory to any line of study in after life.

The reiterated declaration of enthusiasts and fault-finders, that medical schools were turning out multitudes of ignorant and half-educated doctors, a declaration that had in it only such small modicum of truth as to afford it a shadow of plausibility, will, it is to be feared, give place to the sober, true statement that, as the years go by, fewer and fewer college graduates will find in medicine a proper field for the exercise of their well-trained powers of study, their disciplined habits of observation, their developed logical thought, their acquired facility of expression. Whatever may be gained in technical skill, it will be a sad day for Medicine when it ceases to be a learned profession.

One thought more in this connection. If extensive protracted study is required of every one who would be a doctor, what will be the medical care of the sick and injured in the poorer, sparsely settled, uneducated sections of our country, where there is neither agreeable association nor pecuniary rewards to satisfy in any degree the demands of one who has spent much time and money in preparation for practice? Under the conditions existing and likely to exist in many a place west and south (I will not say north and east), would not a doctor of the old type, having little book knowledge,
yet attentive, watchful, and therefore fairly successful, be better than the "good wives' simples," or the patent medicines of the cross-roads store?

May it not be in these later years there has been too much Law mixed with Medicine, too many regulations and statutes? Might it not be well to let the community at large ask for what it would have, and should it not be reasonably expected to be somewhat governed in matters medical by the old rule, "caveat emptor?"

Under the new order of things, undergraduate training in a medical school necessitates a much enlarged teaching force, and many and varied appliances for investigation, demonstration and individual work on the part of students. How must Modern Medicine be taught? By didactic instruction, by recitations, by laboratory work, by clinics and by section teaching in hospital and dispensary. From far and wide there are coming protests against didactic lectures and declarations of their want of value in the instruction of to-day. That the Trustees and Faculty of Jefferson do not believe that such protests are well based, such declarations correct and judicious, is indicated by the spacious and comfortable lecture rooms in this new building. Didactic lectures in the past have been of two kinds. Of little worth, often of positive injury, have been those monotonous readings of old manuscripts, those parrot-like repetitions of text-books, those ill-considered dogmatic assertions accompanied too often by oratorical flourishishes, or by broad stories of cases and experiences unbecoming the professional dignity, and a poor compliment, even positive insult, to the intelligence of the student. Such didactics have no place in the teaching of to-day. But the logical condensed presentation in lecture form of the wisdom of the past, the science of the present, as they have become a part of the accomplished scholar, the well-trained practitioner, the experienced surgeon, the dextrous experimenter, given in language terse, lucid, graceful, it may be—didactic lectures of such quality are far more impressive, far more instructive, far more effective, at the time and later, than the study of any or of many text-books. But this just-mentioned study has a place, and an important one, in the earlier preparatory teaching in each department, and has in these later years been given proper position in undergraduate training, from which it is not likely to be removed. Into every modern scheme of teaching the sciences, laboratory work on the part of students under direction of skilled instructors largely enters, and, in the medical school, Anatomy, normal and pathological, Chemistry, Physiology, Therapeutics, Pharmacy, are studied with lens or test tube, or experiments upon animals, with resulting acquisition of knowledge of structure and of the changes produced by substances from without; yet more of the power to see, to infer, to reason, to anticipate. What, above everything else, the student needs to acquire is accuracy—accuracy of observation, accuracy of comprehension, accuracy of expression; and laboratory training largely conduces to such acquisition. But to possess the necessary appliances for the just-mentioned varieties of work-room instruction, there must be liberal expenditure for place and apparatus. The day has gone by when a room, a table and a chair, constituted the equipment of a medical college. From the impossibility of securing buildings, hospitals,
apparatus, teachers such as are even now being demanded, and will be yet
more, will come, it is very likely, the spontaneous elimination of those weaker
medical schools in our country which, however it may have been in the
past or may be in the present, will in the future have no reason for ex-
istence.

Essential as are didactic and laboratory instruction, clinical training at
the proper time and due amount is yet more so, familiarizing the student,
as it does, with the practical work of professional life. Even though such
teaching be, as of necessity it must at times, in a measure didactic rather
than demonstrative, it is at once attractive and instructive, and, by the com-
bination of what is said and what is shown, lasting impressions are made
upon the student's mind. When, because of the size of the classes and
fewness of patients, amphitheatre clinics only can be held, their real value
may be questioned; but when, and so far as it is possible to bring the
student beside the bed or the operating table to permit him to use eye, ear
and finger, in actually learning for himself the morbid conditions present,
the benefit he can derive from such training cannot be overestimated. Just
here is the great advantage of the college hospital and dispensary, with
a wealth of material that can be carefully, thoroughly, scientifically utilized.

Beyond all question, hospitals and dispensaries have been multiplied
to a degree far in excess of what is required and what is best—best for
the community, best for patients, best for doctors. The subject of gratui-
tous and semi-gratuitous care of the sick and injured is many-sided, and
too wide for present consideration; but, it seems to me, every patient sup-
ported at public expense and treated without cost, should be used for pur-
poses of instruction, if such use is thought desirable and will not endanger life.

The students of to-day in colleges like this, in their opportunities to do
work, a few at a time, in hospital ward and dispensary room, studying case
after case of general and special disease and injury, have an enormous
advantage over those in earlier days, who were not and could not be brought
in close relation with patients; whose first real knowledge of the rose spot,
the fracture crepitus, the feel of the foetal head, was acquired only when
the responsibilities of attendance were resting with almost crushing weight
upon the young doctor. The ideal clinical instruction, an ideal being rapidly
realized in not a few of our colleges, is that in which every student shall be
practically trained in the details of the examination of the sick and injured.
But never, it is to be hoped, will such training be had at the cost of human
suffering, still more of human life. Rudeness and coarseness, and unkind-
ness to the poor and wretched, have no place in the teaching of Medicine
in America.

You gentlemen of the classes now assembled will, I am sure, place high
estimate upon the conveniences for study here and now afforded you through
the enlightened generosity of the citizens of Philadelphia, and the Trustees and
Faculty of the College. Your opportunities are great; see to it that you learn
both much and many things. Remember, to whom much is given, of him
much will be required. The older men of Jefferson look to you and your
successors to advance its honors and its dignities, to serve well in whatever
station you may be placed. For three-quarters of a century Jefferson training has profoundly influenced American Medicine. You are to continue the work. By life and labor, by tongue and hand and pen, you are to benefit the world, to honor the profession.

The Alumni scattered far and wide, in highland and lowland and isles of the sea, with heartfelt gratitude for lessons of wisdom learned at that old building, now a thing of the past, rejoicing in the present, sure of that greater yet to come, are largely with us in spirit to-night. With familiar faces before us of the honored ones long gone, in our ears many a well remembered voice to be heard no more, there is something of sadness in the heart as we realize that old things have passed away; but with it full assurance of the future.

The earnest wish of each loyal son for the College, ever young, is and will be, "Floreat Semperernum."

THE COURSE OF STUDY PREPARATORY TO MEDICINE.

The following is the text of an address read at the meeting of the Academy of Jefferson Medical College, March 13, 1900, by Martin B. Tinker, B. Sc., M. D., of Philadelphia, Assistant Demonstrator of Surgery and of Anatomy, Jefferson Medical College:

As competition grows sharper in professional as well as in business careers, the great importance of suitable preparation for one's life-work is becoming more and more thoroughly appreciated. When you have entered the practice of medicine, your advice will be frequently asked as regards the best preparation for medical study. Answers to such inquiries deserve thoughtful consideration, for much of man's success depends on careful preparation. The first question to be considered is: Should the preparation of a man about to enter the medical profession differ from that of the man entering any other of the learned professions? It seems to me that there are several good reasons why it should. The physician deals with natural phenomena—with facts gained by the use of his fingers, eyes and ears. He has to estimate comparative value of such facts; he is obliged to learn to reason from observation, and to draw accurate conclusions. Moreover, much depends on his dexterity in a great deal of his work; on the art, as distinguished from the science, of medicine. It is easily seen that, for such a career, different qualities of mind are needed, and a different training for the faculties is requisite, than in the professions of law, teaching, theology, etc., for the lawyer and minister deal mainly with printed facts and abstract processes of reasoning; with statements of books, and not with facts gained by using their senses. What studies, then, constitute the most suitable preparation for the physician? We may divide such studies into those which absolutely must follow and those
which it is desirable to take up. We will take it for granted that our student
already possesses what we are accustomed to call a common school education.
Then, in the first place, he should have a thorough knowledge of English.
I think you will all agree that every educated professional man should have
a sufficient command of his native tongue to be able to express his thoughts
fully, clearly, forcefully and correctly, and it is highly desirable that he
should know something of its splendid literature. The physician should be
able to command the attention and respect of the members of his own pro-
fession and of the public, when he feels called upon to present his views before
them; he should be able to take part in the proceedings of societies and other
professional meetings, and to put his thoughts in suitable form for publication
in the journals of his profession. Again, it is the physician's duty to report
interesting and important observations and discoveries for the benefit of his
fellow practitioners, and it is desirable that he shall be able to record the re-
sults of his experience and use his influence to bring about reforms. No one
knows as well as the physician the evils of crowded tenements, careless sew-
age, imperfect ventilation, a contaminated water supply, and the requirements
of the hygiene of the school, the work room and the home. Every public-
spirited physician should feel it his duty to use his influence toward improving
such conditions, as well as in contending against the foolish opposition which
is often made to vaccination, dissection, vivisection, and other means of gain-
ing important knowledge for the advancement of medical science. To ac-
quire such power of persuasive writing and speaking necessitates thorough
early training and practice under the guidance of competent teachers. A
thorough knowledge of the English language I should consider the first and
most important study to be mastered in preparing for the medical profession.

Probably of next importance is some training and study in the natural
sciences; the student should learn science, not from text-book recitation, not
from listening to lectures by men who are not investigators and know little,
if anything, of the practical methods of science; neither can he expect to gain
the necessary knowledge by listening to brilliant lectures and witnessing
showy experiments, by ever so skillful and learned professors. The student
himself must weigh, measure, touch, scrutinize, analyze and dissect, in order
to train his own senses and his own judgment effectively. For this kind of
instruction, instruments, apparatus, materials and laboratories are needed.
Well equipped laboratories and expensive laboratories are by no means synon-
ymous terms; indeed, many laboratories with very modest equipments are
doing far better work than more expensive institutions. But the most im-
portant essential is a thoroughly trained, enthusiastic laboratory instructor,
who has the power of imparting knowledge. The student who enters the
study of medicine after a thorough course of study, including efficient labora-
tory work in chemistry, physics, botany, zoology and comparative anatomy,
already has a training of his powers of observation and judgment that is
certain to give him a great advantage over his fellow student who has not
had such previous training. The ability to observe accurately and to draw
conclusions from such observations seems to me so important, that I should
consider any course of study preparatory to medicine decidedly deficient.
ADDEDA

which did not include a very large amount of such thorough, practical, scientific study.

Perhaps the modern languages should occupy the next place in our list of subjects essential to the adequate preparation for medical study. The large and splendid literature of the French and German languages will prove a source of delight to any who will devote careful study to acquiring these languages thoroughly. A certain knowledge of the spoken languages is desirable, and very often useful to physicians, but the greatest value of these two great modern languages for physicians lies, not in their general literature, or in the practical use to which they may be turned in traveling, or in conversing with patients, but in the great amount of highly important work which is constantly being done by French and German investigators and clinicians. The value of German and French scientific writings is so great that no one can claim to keep abreast of the times who is unable to read in the original articles written in these two languages. It is true that the most important papers are usually translated into English; but this is not always the case, and, moreover, translations are apt to appear at a comparatively late date, and are often imperfectly done. Scholars in every branch of scientific learning admit that French and German are absolutely indispensable.

At least an elementary knowledge of the ancient languages is desirable, especially of Latin; but it can hardly be maintained that study of the classics is by any means so essential as the studies already mentioned. The large claims which were formerly made as to the value of these studies are now questioned by nearly all prominent educators. It has been maintained by some that a study of Latin and Greek was the best means of acquiring a thorough knowledge of English, but it is a well known fact that many highly successful writers and speakers have had no acquaintance with these languages in the original. The incorrect use of such common words as would and should, can and may, the disconnected writing and imperfect punctuation of many graduates of classical courses, makes it evident that, however efficient the ancient languages may be in some cases in training one to use the English language, they sometimes fail to accomplish this end. There is much that is fine in classical literature, but it is exceptional to find a college graduate who has entered into the study of Latin and Greek with enthusiasm sufficient to enable him to learn more from the original than from English notes and translations. I am glad to say that I do not speak thus of the ancient languages because I am entirely lacking in knowledge of them. Many persons still advise the study of the ancient languages for mental discipline to be obtained from such study, but it is doubtful how much mental discipline the average, careless, lazy and indifferent boy gets from such study. It seems much more likely that a boy who dislikes Latin intensely, and who has a natural bent for the sciences, will gain more discipline from studying the subject of his choice. It is very desirable, however, that the medical student should have sufficient command of Latin and Greek to enable him to appreciate the full meaning of words derived from these languages, and so that he can write prescriptions with a reasonable degree of accuracy. Most
students should be able to acquire this knowledge in three or four years' study in preparatory school, leaving the college course free for other study. Entirely too much time has been devoted in the past to dead languages and mathematics. Practice in dissecting Latin and Greek sentences is far less likely to be of use to the medical student than practice in dissecting vertebrate animals.

The higher mathematics have undoubtedly considerable value as disciplinary studies, but they are not essential for the student who intends to enter the medical profession.

The study of logic, ethics, and metaphysics has engaged the best energies of many of the wisest men of all nations that the world has produced, and it cannot be doubted that this thought has profoundly influenced the world's past progress. No man can claim to be thoroughly educated who is entirely ignorant of these subjects. Psychology may also claim attention, not merely because it is of interest to study our mental states, our will, our emotions, sensations, and reasoning, but from the important influence which mental conditions have upon disease, and particularly nervous and mental diseases.

The study of history is also of great value for the educated man. No study can do more to broaden the intellectual and moral horizon than the study of the great and noble achievements of the past, the rewards of national honor, and the dangers of natural failings, weaknesses and sins. If any study has just claim to be called one of the humanities, this study of the records of the human race should be certainly entitled to it.

Political economy deals with social, industrial and political problems about which every educated man should be informed, and this is specially desirable for citizens of a republic. Many of its problems are directly or indirectly connected with medicine, and every man intending to study medicine would do well to include economics in his list of studies.

There are many other studies which justly claim a place in the preliminary education of the physician, and the exacting demands of medical science require so much of time and energy that it is impossible for any one to gain even a smattering of many subjects of general knowledge if he hopes to become efficient in the absolute essentials of his professional training. The study of English, the natural sciences and the modern languages seem to have first claim to our time and attention. With these fundamental branches every physician must be familiar if he hopes to progress toward the highest success in his profession. Among the studies which he ought to know more or less thoroughly have been mentioned history, political economy, the ancient languages, higher mathematics, and philosophy, psychology, logic and metaphysics.

The acquisition of even this comparatively small number of branches will require a large amount of time, and it is an important consideration when such preliminary education should begin. This is a difficult question to settle. It is undoubtedly essential, in order that the student acquire the true scientific spirit, that the study of the natural sciences be begun at a comparatively early age. The languages are also much more easily and thoroughly acquired at an early age. Hence it seems that these branches, with the other ordi-
nary subjects of general education, should be taken up in schools preparatory to college, and should occupy a very considerable part of the time in college. A study of philosophy, economics and broader training in history would be probably better postponed until the latter part of the college course. Although it is possible to obtain an adequate knowledge of the branches mentioned without a college or university course, in this country at least, it would be undoubtedly best obtained in some well-equipped college or university. Such a course is desirable, not only because of the training in the branches mentioned; besides this, it teaches the student to understand men. There is, perhaps, no profession in which the personal equation counts for more than in the medical profession. The physician deals not with natural phenomena of inanimate matter as in physics and chemistry; every diseased condition which comes under his notice is influenced by the personality of the patient; different individuals differ as much in mental and bodily characteristics as in form and features, and these characteristics decidedly influence their condition in both health and disease. College life is a splendid school for acquiring a knowledge of character. There one meets the brightest and best men from different sections of their own country, and perhaps from foreign countries; men who have been brought up with greatest possible differences in environment, ideals, aims and benefits, and with the most varied natural gifts and prospects in life. Another most valuable and important consideration is the inspiration which the college student gains from his profession. The college is poor indeed that has not among its faculty a number of men that furnish bright examples of what an unselfish, earnest, helpful life can accomplish in aiding, encouraging, stimulating and uplifting others. Many a college graduate owes his success and ideals in later life in no small part to the influence of his instructors. Nowhere is one so likely to meet men of mature judgment and of lives of the truest and highest character. I believe that few men pass through a college course without getting something of the inspiration and stimulus which comes from contact with such men. A course at any good college or university, regardless of what special studies are taken, is almost certain to be helpful in the ways just mentioned.

If the student has had the proper advantages, and has made good use of them, he will be fairly prepared to enter his college course by the time he is eighteen years of age, and numerous examples prove that it is possible that he shall enter college, as in most foreign countries, a year or even two years earlier without loss in thoroughness of preparation. As most college courses are now arranged, this will leave him eight years more of solid study before graduating in medicine. The arrangement which now exists in some medical schools by which college graduates who have taken certain sciences are excused from the first year of their medical study reduces the time of study to seven years. This is highly desirable, and we may hope that some arrangement will soon be made by which the two courses may be covered regularly in this time, for, if the student devotes a year or more to hospital practice, he will even then be later in getting into practice than might be wished, and considerably later than is the rule in most European countries. Let us hope that either the literary colleges will soon reduce their course for a degree to
three years, or that all literary colleges and scientific schools will furnish the better facilities for scientific study which are now to be found in only the best institutions, and which are essential to make the courses in sciences of colleges the real equivalent of similar courses in the best medical schools.

This, then, is something of the ideal education to which the student of the future should look forward. It is a course expensive in time and money, yet the cost of such an education need not debar any earnest, persevering student from a thorough education. Every college graduate knows men who have earned every dollar of the cost of their education by their own unaided efforts. Any education worth having means hard, persistent, earnest study, whether by the wealthy or poor student, but it is well worth the having, and any man who has such thorough training may be certain of a reasonable measure of success.

I make no claims to originality in the suggestions which I have brought before you. Such a course of study preparatory to medicine, with some unimportant variations, is now a part of the regular curriculum of a number of our colleges and universities, and in many others such a course may be easily arranged by a wise selection of elective studies. What I would like to specially emphasize is, not that every student should follow an absolutely fixed course of study, but that he should take some thorough course of preparatory study, and that the general trend of such studies should be along those lines which will help him in his career. The importance of this can hardly be overestimated. The lack of adequate training is the greatest weakness in the present system of American medical education. According to the bulletin of the University of the State of New York on Professional Education, there are 156 medical schools in the United States, and of this number only thirteen require as much as a high school course of study for entrance. As college graduates who appreciate the value of a liberal training, I urge you, when you enter the medical profession, to use your influence to promote the adoption of higher standards in medical education.

THE MISSION OF A MEDICAL COLLEGE.

The following address was delivered at the Seventy-sixth Commencement of the Jefferson Medical College of Philadelphia, on May 15, 1901, by William W. Keen, M. D., LL. D., F. R. C. S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery.

Mr. President: Gentlemen of the Graduating Class: Twelve years ago I had the honor of delivering the introductory address at the opening of the session of the Jefferson Medical College. I took as my topic the "New Era in Medicine, and Its Demands Upon the Profession and the College." In it I pointed out the demands which the New Era in Medicine made on our
Medical Colleges. To-day I propose to supplement that address by considering an allied topic, "The Mission of a Medical College."

A mission is defined as "that with which a messenger or agent is charged," and I find in Webster an apt illustrative quotation from Milton:

"How to begin, how to accomplish best,
His end of being on earth and mission high."

There are missions for individuals, as for Columbus, Washington, and Lincoln; and in Medicine for a Vesalius, a Jenner and a Lister. There are missions for nations, as for the Hebrews in religion, the Greeks in art, the Romans in law, England and America in civil and religious liberty. But there are also missions for institutions, especially for institutions of learning, such as the Universities of Bologna, of Oxford, Edinburgh, Harvard, etc. Has not the Medical College a mission; if so, what is its nature, and how is it being accomplished?

The mission of institutions of learning, among which may be classed the medical school, is threefold. First and foremost, the development of the character of its students; secondly, the education of its students, and, thirdly, the encouragement of original research.

First. The development of character, that is, "the sum of the moral and mental qualities which distinguish an individual viewed as a homogeneous whole." The school which instructs the intellect, but does not develop the moral character of its students, fails in its most important duty. "Intellect alone is cold, heartless and selfish; it must be lighted up by moral and spiritual principles to reveal its beauty or fulfill its high mission."

Character is partly the result of heredity and of environment. Those who are so fortunate as to possess parents to whom they can look up with reverence, even after they have passed away, are most happy. They have had a training which nothing else can supplement. The environment which they had at home, and the subtle influences of the family life, will influence their whole subsequent career. The preliminary education which they have had, the physical health with which they have been endowed, the mental stimulus that they have received from their parents, all these count for much. Then there are undoubtedly individual differences, for example: The slothful, the vicious, the brave, intelligent, hard working and virtuous. It would be a trite saying to assert that the last are those who will win prizes in the struggle of life.

But when a young man has left his home and enters the medical school, he comes under a different set of influences, partly from his fellow students, but chiefly from his teachers. He is moved by their example, observes their industry, acknowledges their ability, and recognizes their success in life as due to a sturdy character which in turn develops the character of the student. The college is a center for those projectile moral forces which, once set in action, prolong their efforts for many years afterward in wellnigh every student. We can point, for example, in this school, to the splendid and forceful lives of a McClellan, a Dunglison, a Gross, a Pancoast and a Da Costa,
whose influence on the character of hundreds and even thousands of men all over the world tells for the best and highest ideals in medicine.

Not that which one learns in a medical school or any other educational institution is of the most value. The methods he learns, rather than the facts which he acquires; the high ideals which are instilled into him, rather than the low cravings for a mere sordid success—these are the things which are of value, and develop most the character. To do one's level best every day, with every patient, and in many cases without hope of fee or reward save the sense of duty done, the inspiring influence of success in the constant and irressible conflict between good and evil, life and death, this is what is of more value to the student of this and every other college than the mere information which he has acquired. It is not given to everyone to occupy a conspicuous place, but every one of you in your sphere, humble though it may be, can do your daily duty faithfully and truly, and if you do this, if you develop a high and noble character, even though your sphere is humble, when you lay down life's burdens the Great Master may well say to you, “Well done, good and faithful servant.” Character depends not on the sphere, but on the person, not on the greatness of the opportunity, but on how opportunity is met. Let me quote a portion of the justly celebrated oath of Hippocrates to show you away back in the fifth century before the Christian era how well the Father of Medicine met his opportunity and set us an example we well may follow:

I will “reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring on the same footing as my own brothers, and to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel. *** With purity and holiness I will pass my life and practice my Art. *** Into whatever house I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption. *** Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the Art, respected by all men, in all times! But should I trespass and violate this oath, may the reverse be my lot!”

The second mission of a medical school is education. In the address already alluded to, I pointed out in considerable detail the enormous and rapid strides which had been made in medical education in the last thirty years. It is especially gratifying that the progress made has not been only in medicine proper, but largely in the preliminary education which is re-
quired of medical students of to-day. The better educated men you are at starting, the better educated men you will be at the finish, and, as a rule, the greater your success. But, along with this better preliminary education, in order to meet the enormously increased demands of a modern medical education, a college must furnish facilities which were not in existence thirty years ago, but are absolutely indispensable now. Let us see how the demand has been met.

The former methods were limited to lectures and text books. The spoken word, in my opinion, is of the greatest importance. Fresh from his everyday contact with disease and death, an impressive, ardent lecturer exerts enthusiasm and stamps his ideas on his students. But this alone is quite insufficient for our purpose. It must be supplemented by your text books. In them is garnered the knowledge of the past and the present. This is indispensible as a starting point. As there were brave men before Agamemnon, so were there great surgeons before Gross. They were men with few of our artificial helps, but they had eyes, and ears, and fingers, to observe with, and common sense and sharp intellects to utilize their stores of accumulated facts.

But the knowledge of other men, which one reads about, is with difficulty made part and parcel of our intellectual bone and muscle. We must do more than this. We must develop individual observation and individual knowledge. This is done in the medical school in two ways relatively new.

The most striking change in modern medical education is the introduction of the laboratory. There the medical student has his powers of observation developed by his teachers in approved directions, and trained and filed to a fineness by careful personal investigation. There he learns not what others have done, but what he himself has done, and sees the results that he himself has accomplished. Yet, when I began the study of medicine in 1860, there was absolutely no laboratory connected with the Jefferson, or any other medical college, with the exception of the dissecting room, that is the laboratory of anatomy. Now we have eleven laboratories, through each of which every student passes and there learns to observe for himself and think for himself. That was a very brief but pregnant reply of Huxley to a querulous correspondent, a reply which epitomizes the value of knowledge acquired for one's self by actual personal investigation: "Take a cockroach and dissect it."

The other relatively new method is the clinical; that is to say, each individual student is not taught, as formerly, only didactically the symptoms of disease which he must memorize, and the treatment which, very likely, he will forget; but in small ward cases he is made to examine as many patients as possible for himself, to elicit the family and the personal history, institute a physical examination, percuss, auscult, palpate, and by the most approved clinical methods discover the nature of the existing ailment, understand its pathology, comprehend its symptoms, and suggest the proper treatment, all by the exercise of his own brains. Contrasting the exclusively didactic methods when I was a student with those of to-day, which are so personal and individual, the difference is almost that of darkness and of light. Surely, the Jefferson Medical College, which has tripled the length of its course of
instruction, and quadrupled the means and the thoroughness of instruction, is fulfilling its mission.

Yet any medical school which is content with its present methods of fulfilling its mission has at once fallen from its high estate. If it does not advance to newer methods, to better methods, to more exact methods, it is left behind in the march of progress. The whole history of the wellnigh fourscore years that the Jefferson Medical College has existed, shows that it has constantly made progress to these better and better methods. That the next half century will witness a still greater progress who can doubt?

The third mission of a medical college is to encourage original research. Teaching existing knowledge is very well, and, for the student, is the chief end or final cause for which a medical college exists. But the medical school owes a duty to the profession, to the public, and to the cause of science. This duty is constantly to add to our present knowledge, to solve the riddles of disease, to answer the questions which are ever arising in the human mind as to our animal existence, with all its disorders and accidents, and our mental capacity and their disturbances, and persistently and intelligently to improve our means of treating these deviations from the normal. We must restlessly and continually enlarge the boundaries of knowledge if we desire to make progress—and where, in the quest for additional knowledge, should investigation and original research be so likely to find a congenial home as in the very institutions where the present state of knowledge is exhibited from day to day, where teacher and pupil, conscious alike of the limitations of our knowledge, long for a better and wider view? The characteristic of the past century, which Wallace has so well described as the "Wonderful Century," is that of original research, and the consequent growth of every department of human knowledge. Witness the enormous progress in our means of transportation on land and water for social and commercial purposes; witness the wonderful development of our manufactures from the invention of the steam engine, the sewing machine, the cotton gin, the various electrical devices, such as the telegraph, the telephone, the trolley car, and the dynamo; the fast printing press, the improved processes for making iron and steel, and a hundred other instances which occur to you in a moment.

All these, mark you well, are the result of the searching, persistent, careful work of the scientific student in the laboratory. They are not accidents; they have followed in the wake of the discovery of the laws of dynamics, of electricity, of chemistry. First came that which was pure theory, then the practical application for the welfare of the world.

Nor has medicine lacked during this wonderful century. We have seen the introduction of vaccination, of anesthetics, of antiseptics, which three, as with a besom, have swept into oblivion a large part of the disfigurements, pain and death which ravaged the race in former centuries; of the serum treatment of disease, which has gone so far as to put an end to the hecatombs of victims of diphtheria and its congeners. Pharmacology has given us so many new drugs that our prescriptions differ as the antipodes from those of a hundred years ago. Bacteriology has revealed the actual causes of many diseases, and, still better, has shown us how to protect mankind from their in-
vasion. Chemistry has given us new and efficient methods of sanitation, which has wonderfully prolonged human life. The microscope has laid bare to us the processes of disease; the blood has yielded up at least some of its secrets; the examination of the secretions now warns of unsuspected dangers. We can see the spectral forms of the bones, the beating of the heart, and other viscera, by the X-rays, and instruments of precision have enabled us accurately to weigh and measure where before we only vaguely guessed.

In view of this enormous progress, it may be asked whether there is anything to be discovered. To this it may be replied that if, starting with their poor equipment, our sturdy fathers made such immense forward strides, shame upon us, their degenerate sons, if, with our rich inheritance, we cannot outdo them and solve many of the enticing problems by which disease beckons us onward into the realms of the unknown; if there are not among us other Röntgens, to make the twentieth the most illustrious of the centuries.

What a boon will he confer upon humanity who discovers the cause and means of cure of those curses of the race—cancer, sarcoma, and other tumors, of syphilis, typhus fever, rheumatism and gout, scarlet fever, measles, and even, who can tell?—a panacea for old age and all its present evils!

Other triumphs, too, in wholly unknown and unsuspected realms await the patient, persistent investigator. These triumphs will be won by close observation at the bedside, and by indefatigable investigations in the laboratory. To me the most encouraging sign of the times in medicine is the enthusiasm with which the laboratory has been welcomed, not to replace, but to be the handmaid of the clinician.

In this country our medical schools have not been wanting in their duty. I need but to point to the many laboratories now in actual daily use, not only in facilitating the instruction of the student, but in training up skilled assistants who, within the next few years, will be in the van in making new discoveries of the utmost importance to the well being of mankind.

But all this means more buildings, enlarged equipment, more men, more money. Whence all these to come? The student cannot pay increased fees at all commensurate with the increased expense of his education. The older methods, where one man lectured to one hundred or five hundred men at once, have been replaced by a method of instruction which requires training of small classes of twenty, fifteen, ten, or even one or two men, by a single teacher. In other words, our modern methods have wholly changed from general instruction given to large classes, to individual instruction of smaller classes, and often even of single students. As Harvard, Yale, Princeton, Brown, and all other universities, are clamoring for increased endowments for such enlarged work, and are getting them, just so the medical school must have increased funds for providing facilities for instruction and research, and especially must have endowments by which these hitherto unknown expenses can be met.

I have indicated the mission of the medical school, and have shown that it is being splendidly fulfilled. Is there no corresponding mission, also, for the community? Shall it be, can it be, that these ardent teachers and these faithful students shall valiantly struggle on in the endeavor to solve the prob-
lems how to transmute sickness into health, how to avert dire effects of accident, how to say to death, "Thus far and no farther?" and the community stand aloof, apathetic and indifferent, absorbed in business, forgetful that sickness and sorrow will some time inevitably come to them? Remember that sickness and sorrow can only be averted by the highest skill, the greatest learning, the wisest judgment, all founded upon knowledge gained in these expensive laboratories and in these great hospitals which train the men who are to minister to you in the time of peril.

Citizens of Philadelphia, to you we must appeal! Yonder College and Hospital, as I have told you, are fulfilling their "mission high," but are sorely hampered for want of larger means. Every week we have to refuse worthy sufferers for want of a larger number of beds, in a constantly crowded hospital. You can give them to us. We need endowments for Professorships, for Fellowships and Scholarships. You can give them to us. By your gifts and your bequests, you may make possible the fine ideals which we hope to realize. We have the men, men of brains, of education, of industry, who are longing only for the opportunity. If you but knew as I know how earnest, how intense, how consuming is the longing in these very young men before you to do their level best, if you only give them the chance, must we Americans, we Philadelphians, say them nay for want of such encouragement and of such gifts? I do not believe it. As in your hours of sickness you trust implicitly in us, so in your hours of health and wealth we trust implicitly in you, and I know we shall not trust in vain.
ADDRESS BY PRESIDENT POTTER.

The following address introductory to the seventy-ninth session of the
Jefferson Medical College was delivered on September 24th, 1903, by William
Potter, President of the Board of Trustees:

Gentlemen:

In place of the Introductory Lecture on a scientific subject, usually deliv­
ered on this occasion by a member of the Faculty, it has been thought best
by the Administration of the College to submit this year an Address by the
President of the Board of Trustees. The Trustees, as you no doubt well
know, are co-operating with the professional element of this College in
helping not only to obtain for you a medical education under the most
advantageous conditions, but are also endeavoring, with some show of
success, to continue Philadelphia a medical center—in spite of the superb
taclities offered in this same direction, particularly by the Cities of New
York, Chicago, Boston and Baltimore.

There is nothing to my mind that so contributes to the real greatness of
a community as the possession of such institutions as Jefferson and her sister
medical colleges in this city; for, in them young men are prepared for one of
the noblest professions on earth. It has been well said by one of your own
distinguished teachers: "Medicine is a science which has progressed with
extraordinarily rapid strides during the last few decades, and the rate of
progress during your active life time will be even more phenomenal." Not
being a member of the medical profession, I will not be rash enough to instruct
you in this difficult science, but endeavor to acquaint you with the advantages
which are open to you in your efforts to secure the degree of Doctor of Medi­
cine in this particular environment.

One of the most difficult problems which faces us to-day is to provide
ways and means to keep this Institution up to the very expensive equipment
now required in order to give to you undergraduates the advantages necessary
for the proper study of your calling. This has been made still more difficult
for the reason that we have not as yet been able, like our friendly rivals in
other sections of this country, to secure princely individual benefactions for
our College and Hospital necessities.

For comparison, it may be well to enumerate some of these: The College
of Physicians and Surgeons, through the Vanderbilt Clinic and Sloane Ma­
ternity, in New York, have received over $2,000,000 from the Vanderbilt
family alone. The Syms Operating Theater, at the Roosevelt Hospital, was
erected by the Syms family at a cost of about $350,000. Cornell University
has received from Mr. Payne about $1,000,000. The New York Maternity,
an old established institution, has received from Mr. J. Pierpont Morgan
$1,000,000 for building and $350,000 for equipment. Johns Hopkins University, at Baltimore, in addition to the princely benefaction of nearly $7,000,000 left by Mr. Hopkins, has also received, owing to the default in interest on Baltimore and Ohio securities, a gift from the City of Baltimore of $1,000,000. Harvard University’s Medical Department has raised $5,000,000 and, in addition to this, $5,000,000 more for a new hospital, to be in affiliation with its medical school. The Rush Medical College of Chicago is endeavoring to raise $1,000,000, and when this shall have been accomplished, Mr. Rockefeller has agreed to donate several additional millions, with the understanding that this College shall then be incorporated as “The Medical Department of the University of Chicago.” On the other side of the border, McGill University, of Montreal, from wealthy citizens of that city has received for its medical department about $1,000,000.

It is, therefore, curious to note that in Pennsylvania alone, of all the States in which great medical institutions are situated, rich men have given liberally to libraries and all other institutions of learning, utterly forgetful of the needs of those devoted to the saving of human life. It is a fact that if we and the other teaching hospitals of this great Commonwealth had not received State aid during the past ten years we should have been compelled practically to close our doors.

The present Jefferson endowment is entirely insufficient to meet the expenses, augmented each year by the increasing cost of running such an institution with the equipment now required for the proper, scientific treatment of the sick and injured. The crippling, or even curtailing, of our hospital work would mean a corresponding limitation of our College influence; for every progressive medical student must and will obtain ample practice and experience in a teaching hospital. We have, however, an abiding faith in the generosity of our fellow-citizens and believe—when they understand the good we are doing for poor, suffering humanity; when they realize that those of us who are actively engaged in this work have given and are constantly giving, liberally, of our money; when they comprehend that we are seriously hampered by the shadow of debt which, like disease itself, weakens effort—they will surely come to our aid and help us to save life, restore health and mitigate human suffering.

We have in the present College a building splendidly equipped with four spacious lecture rooms, ten large laboratories, seventeen smaller private rooms for individual research, besides recitation halls, class rooms, etc. In addition to this, the Medical Hall contains a superb Museum in which the great collections of our late Professors Gross, Parvin and DaCosta are situated. We also have a medical library for the use of the students with upwards of four thousand volumes; and for the latter this Institution is indebted to that excellent Association, “The Women’s Auxiliary of Jefferson Medical College.” The College was built five years ago, largely on faith, and at a cost that still leaves us greatly in debt, in spite of the fact that we have this June reduced the original mortgage from $225,000 to $160,000.

Competent critics, including Professor von Mikulicz-Radecki, Professor of Surgery in the University of Breslau, and Professor Adolph Lorenz, of
the University of Vienna, both of whom possessing international reputations, have held clinics in our Hospital this year, state that it is impossible in Europe to obtain better facilities than those possessed by you for the study of your science. Such praise from these distinguished men, adopted sons of your Alma Mater, the former having already been the recipient of a degree and the latter proposing to return in a short time to receive a like honor, compensates us in a measure for the risk we have taken in the completion of this College and the still greater risk that we propose to undertake in the erection of the best equipped, fire-proof Hospital in this Commonwealth.

We often hear laymen say: "Why do you build an expensive College, and why do you propose to erect a still more expensive fire-proof Hospital in the most crowded and most congested section of Philadelphia, where there are no green fields and no escape from the din and noise of the traffic of a great city?"

In answer to this, first, the medical college of to-day must be associated with its teaching hospital in order that the students may study every form of disease at the bedside, may obtain this knowledge not only from the lecture room and book, but from the patient direct; and the hospital which has the greatest number of patients, or, as it is termed in medical phraseology, the greatest wealth of clinical material, will, of necessity, attract the most desirable medical student and the best professional skill.

The crowded city is where the teaching hospital should always be situated, for here the greatest number of patients are to be found, and here the emergency cases—resulting from the accidents usual to crowded localities—must and can have immediate treatment; otherwise, death will ensue while hurrying them to more distant, but more beautifully situated hospitals. The great Guy's Hospital is in the most crowded portion of London. The Vanderbilt Clinic and the Sloane Maternity (the latter the finest of its kind in the world) are situated in the densest part of New York; and the location of Jefferson, in the most congested portion of Philadelphia, has probably done more to make its reputation than anything else in its history.

Think of it, gentlemen, in the present poor, inadequate hospital building we have treated, in addition to the regular hospital work, over three thousand accident cases last year, or an average of more than ten poor, bruised specimens of humanity each day. And in the Out-Patient Department, during the same time, we aggregated over one hundred thousand treatments.

In the report of our Hospital work for the year ending December 31, 1902, the following statement is made: "For a long time past the work performed in this Hospital has increased each year. The building is not merely overcrowded; it is indeed a marvel that such enormous work could be performed in such limited space. The Trustees of the College have had under consideration, for well-nigh three years, the plans for a new fire-proof structure, and had acquired, by purchase, the various buildings on the plot of ground to the east of the Hospital, running to and facing Tenth street and bounded by three streets. The plans were completed in the beginning of 1903, and in the first week of April the demolition of the houses and the excavations for the foundations were begun. The new Hospital, two stories
under, and seven above, ground, with a roof garden, when completed, will relieve the great congestion of work in the present Hospital. The new Jefferson Medical College Hospital will be a realistic exhibition of the marvelous development of modern medicine and surgery, not alone to Philadelphia, not merely to the United States, but to the world. Its future career as a teaching Hospital will demonstrate that America intends to remain in the forefront in all things pertaining to the science of the healing art.

Our Maternity Department is in a separate building at No. 224 West Washington Square. Here each member of the graduating class is given bedside instruction in midwifery, and the Medical Director, Dr. Davis, delivers a series of lectures to students and nurses on all matters pertaining to obstetrics. The Board of Women Managers who, with authority derived from the Trustees, co-operate with Dr. Davis in the supervision of this Department, are entitled to our gratitude for the care and diligence they exercise in this special work.

In addition to the general Hospital and the Maternity Department, we have a Training School for Nurses—for the nurse, as we all know, is indispensable to the doctor and on her depends so often the very life of the patient. The name of the Jefferson nurse, the appreciation which her work invariably invites, is the best tribute to the training received in this Institution.

Unfortunately these young women, owing to our poverty, have been compelled, when off duty, to reside in the Nurse’s Home, at 226 West Washington Square, some distance from the Hospital, and the accommodations therein provided are cramped and not as comfortable as they deserve. We have purchased this year Nos. 1023, 1025 and 1027 Walnut street, opposite the Hospital, and if we can induce the liberally inclined people of this Commonwealth to give us the money we propose to pay off the mortgage of $54,000 and to erect on this site a commodious new Nurses’ Home.

Is it any wonder, gentlemen, that with the prospects thus offered to each student here to examine and study so many forms of disease that we should have at the beginning of the seventy-ninth year of Jefferson College over seven hundred undergraduates from every portion of the United States, including Alaska and Porto Rico, and representatives from Cuba, Canada, the West Indies, Continental Europe, Turkey, Egypt, Syria and Persia.

Apart from the honor accruing to a community in being the birthplace of an Institution like Jefferson, the health of every city to-day is safeguarded by its hospitals. Without even taking into consideration the great work done by them for the suffering poor, which always appeals to the world at large, the old objection to having the well-to-do treated therein is passing away. The poorest patient in a city hospital receives as good, and in most cases better, because safer, attention than the rich in their palatial residences. Most skilful surgeons, as has come under my personal observation during the last few days, are averse to performing important operations in the home, excepting in cases of extreme emergency, insisting, if possible, that in order to take advantage of the most improved methods the patient be removed to the nearest hospital.

In addition to the ordinary hospital work to which I have just referred
the teaching hospital, in direct communication with its medical school, does the largest, most important and far-reaching scientific work of the present day. It educates not only its undergraduates, its trained nurses, its medical men—those bright professional minds who ever frequent the teaching hospital, where their special desire for knowledge is best satisfied—but its chief object is, after all, to be the depository of that knowledge based on the bedside study of disease that will inure for good in practice and text-book, not merely to the patient treated, but to the more certain cure of the sick and injured and the relief of humanity at large.

In concluding this portion of my remarks, I can in no better way epitomize the need of this experience to you undergraduates than by quoting from one of Dr. Keen’s latest addresses on this important subject:

"The teaching hospital does its great mission through the influence of its clinics. Not only in the public clinics, where during the past year we have been able to see some of the most distinguished surgeons of Europe operating, but more especially in the smaller clinics, working with classes of ten to twenty men each, where, under an experienced teacher, the absolute work of the clinic is divided among the various students in turn: Watching the pulse, the respirations, giving an anaesthetic, percussing the chest, palpating the abdomen, determining the inequality of the surfaces and the varying density of each organ. Here is the real forum where the modern medical student acquires his skill. In many cases visits to the ward itself are made and to a small group around the bedside the physician or surgeon will point out the phenomena to be recorded or noted for the examination of the blood, the result of bacteriological cultures, facts discovered by the microscope or the chemical reagent. And by the Socratic method also, he will reveal to the student the imperfection of his knowledge and urge him to educate the power of observation, and thus stimulate his thoughts and give him an impetus which will last through life. Who that has walked a hospital with Skoda, a Troussseau, a Nelaton, a DaCosta or a Mitchell (and shall we not say, a Keen) can ever forget their teaching?"

In order, however, to accomplish the general plan herein outlined, which is Jefferson’s effort to continue the medical supremacy of this City and State, it is necessary that we shall have sufficient funds to purchase and erect suitable buildings and to provide the expensive modern equipment made necessary by the wonderful developments in the science of medicine.

These are the problems which are now facing us and which we are daily trying to solve, for we have determined to push towards completion the new Jefferson Hospital, even if we have to augment very considerably the great debt under which we are now laboring. And now, gentlemen, having given you an idea of the plans which your Trustees, Faculty and Teaching Staff have in view, I wish to state, before uttering the few personal words I have yet to say, that it has been a source of satisfaction to see the good order of the student body, particularly since our occupancy of the new College building, and the manner in which you, through your class organizations, have cooperated with us in preserving this property.

I have always been impressed with the sentiment used in the conferring
of the medical degree: that every young doctor should have an honorable, and then a successful, career. The key-note of your calling is, first, to do your duty and in no way to be influenced by the materialistic spirit of the age. This has been very aptly referred to in the following extract from the "Introductory Lecture" delivered by Professor Chalmers DaCosta, two years ago, in speaking of the profession of medicine: "It is an acquiescence in the best tendencies and a protest against the worst tendencies of the age. It constructs no trust, it founds no monopoly, it excludes no qualified competitor, it retains for its own profit no valuable discovery, and it has no real standing room for the crank or the scoundrel."

You will, I hope, be very successful in your life work, but you must be true to the traditions that enoble the medical profession. Seek not first the financial return which you are to receive, but the satisfaction that you will be able to make the world better and happier through your individual skill, issuing from the knowledge obtained in this College.

Most of us after death are forgotten; the rich man cannot take one dollar with him out of this world, and the only object of real value that he possesses in it is the peace of mind that comes from noble purpose and deeds of well-doing. The only object of real importance that he can leave behind him is a good name, which is, alas, too often tarnished in the eager quest for wealth and power. In this age, when cruelty and slaughter seem to be still so sadly in evidence, when cunning and greed—as in the days when the Psalmist sang "I have seen the wicked flourish like a green bay tree"—seem to be so successful; when politics—as in the days of Walpole—particularly in our American municipalities, appear to again have struck the lowest level of cupidity, you young men are to be congratulated on the choice of a profession whose purpose is not to destroy or cause shame and sorrow, but to relieve, to cure, to save.

Ruskin says: "We complain of the want of many things. We want votes, we want liberty, we want amusement, we want money. Which of us feels or knows that he wants peace?" This peace of mind can be best obtained right here, in this active life of ours, by making character the controlling influence of your lives, by treating every man as your brother, by avoiding the Scylla of selfishness and the Charybdis of unscrupulousness which have wrecked so many human vessels apparently under full sail of prosperity, and be known by your acts as those that love their fellowmen.

Welcome then, gentlemen, to these halls. May you win the prized degree, and so, in the words of our great Professor Gross, "Go forth into the world to relieve pain and suffering, pour the balm of hope and consolation into the wounds of the afflicted, open the eyes of the blind, restore the hearing of the deaf, make the dumb speak and the lame walk, battle successfully with death and smooth the pillow of the dying where all prospect of succor is at an end. Certainly a God-like and noble profession, worthy of the most exalted aspirations of the human race."