COMPLIMENTS OF THE AUTHOR.

ADDRESS

DEDICATORY OF THE NEW BUILDINGS

ERECTED BY THE

UNIVERSITY OF PENNSYLVANIA

FOR ITS

DENTAL SCHOOL AND MEDICAL LABORATORIES.

BY

S. WEIR MITCHELL, M.D.,
MEMBER OF THE NATIONAL ACADEMY OF THE SCIENCES.

DELIVERED OCTOBER 2, 1878, IN THE CHAPEL OF THE UNIVERSITY OF PENNSYLVANIA, AT THE ONE HUNDRED AND THIRTEENTH SESSION OF THE UNIVERSITY.

PHILADELPHIA:
J. B. LIPPINCOTT & CO.
1878.

DEDICATORY ADDRESS.

GENTLEMEN:—I have been asked as Chairman of the Committee of Trustees on the Department of Medicine to receive the splendid gift of the new buildings just announced by the Provost. I have been also honored by a request on the part of the Faculty of Medicine to say a few fitting words to the class at the opening of this, the one hundred and thirteenth session of the University. Nor is it possible, or right, to forget on an occasion so peculiar, that it is not only the student to whom I am to speak, but that I have in part a lay audience; and that what I say here, as representative of the policy and views of this school, may be read by many outside of this building.

If, then, a part of what falls from me be familiar in the ears of many on this platform, and to some of those before me, I bid them remember that the interests of the medical profession, and the position of this University with regard to education of all forms, are matters of the utmost moment to this whole Commonwealth and Country.

Fifty years ago the public concerned itself little as to any form of scientific progress,—and, save to open its mouth and shut its eyes, and to take what the doctor gave, like the children, it did not greatly disturb itself whether medicine improved or not.

For the individual doctor there was, and still is, the bedside jury of the patient's friends, swayed by fear, flattered by recovery, —always, from mere circumstance, unable to judge with fairness. This court, which, even yet, acquits or condemns with equal lack of reason, is still our immediate censor and judge. But the profession as a body, in its gains of thought and action, in

its restless ingenuity, in its alertness to profit by discoveries in Chemistry and Physics,—in a word, the profession of Medicine, as such, no longer lives a life of intellectual seclusion.

The increase in the number of scientific men, not physicians; the diffusion of knowledge as to Anatomy and Physiology; the ever-increasing interest in all forms of scientific activity; the growing value attached to Hygiene and to large measures of sanitary use; and what I might call the secularization of every addition to medical knowledge, by its instant record in newspapers, popular science journals, and reviews, have combined to give us, as a profession at least, what we once lacked,—a court, where we are heard with respect, and, for the most part, judged with fairness and interest. We have to-day a larger hold on the world than once we had; and therefore it is, Gentlemen of the Class, that in now addressing you students of medicine, I must be careful to remember that in the busy outside world thousands are intelligently interested in the mode in which we train you, and in the manner in which the responsibilities of a great position in this country, and of a trust long held, are dealt with by what we like to call, in a phrase too much abused, this time-honored University.

> Let him that hath been honored have more conscience for it:
> Time honors them alone that honor Time
> In Duty's quest, heart-whole with sense of right.

Time is for the wise but opportunity prolonged, and in the roll of notable teachers whose works have illustrated this school of learning, there have been many who lived by these precepts, and who have, in the highest sense, honored their Mother with all the honors which a century enabled them to gather.

Year after year some one of this distinguished line has stood, as I stand here to-day, to call upon the student for steady, honest work, and to sum up the growth of knowledge, widening like the growth of morning. Each year there were changes to chronicle, something new to learn, something old to unlearn or cease to learn.

By and by, the result of these numberless changes in medicine amounted, in practice, to a revolution so complete as to make it clear to all that the old plans of education needed revision.

For a long time, indeed, thoughtful men in our profession had been dissatisfied with modes of instruction which sent out the graduate utterly untrained, and left him to learn his business, with what caution his conscience might advise, on such as usually fall to the young doctor's care,—the poor and the needy.

Many years ago this sense of dissatisfaction with the older plan of teaching had reached the Faculty of the University, and finally led, with other changes, to the creation of a great hospital, which was meant to be, first and foremost, a means of help to the sick, and also a place where disease could be studied at the bedside. This step was followed last year by a radical change in the whole system of medical tuition,—a change in which we had been already anticipated by Harvard University, and with the nature of which most of you are familiar.

It seems almost idle to defend an approach to what is far below the grade of instruction we ought to give, and mean at some future day to give; and yet, for plain reasons, I shall ask you to hear me as to this, because a part of what I have to say will continue to be needed, until every school of medicine in America is engaged, not in seeing how many students it can count and graduate, but in honest rivalry as to who shall best educate the best men.

Until very lately, as you well know, a student was expected to spend a year in a doctor's office, to attend two courses of lectures, and to pass an examination. The city student, and the rich, of course, possessed advantages. The year in the doctor's office in any great city was a valuable help, and gave the chance for as much attendance on lectures as was desirable, while hospitals and dispensaries were open to the city student during all his years of study. Preceptorship in cities was also, and still is, the occupation of ambitious, active, young men, whose competition keeps the business of personal teaching in a wholesome state.

Far otherwise was it in the country. The teacher, untrained for his work, could at the most show his student a few cases, answer his questions, and tell him, from remembrance of his own far-away days of study, what to read. Then, as the preceptor in the country was usually chosen for his position as a

practitioner, he was apt to be a man more or less advanced in life, and was, therefore, remote from contact with the constant novelties which are every day on trial, and was the last to be influenced by those cumulative, and what I might call molecular, changes in medicine, which, far more than single discoveries, alter radically, but silently, the views and acts of our profession. In the dull days of medicine this did well enough, but it has long ceased to replace practically the apprentice system which it was meant to imitate; and when the student came from it to the city he was ill able to profit by what he saw, or to digest the boundless meal which, in kind as in amount, was made alike for every digestion. He went to lectures which puzzled him by their depth and troubled him by their number. Seated on benches more or less remote, he heard clinics, and saw patients examined; he beheld professors listen to chests, he saw them see, he saw them touch, he heard them draw conclusions and make diagnoses. He had little or no chance to listen, or to touch, or to see closely. He was not taught as an individual. He could not ask questions by the way; he got what he could, and, with our strange national adaptability, a good deal more than young men of most nations would have gotten.

The system was a poor one always, but that which made it so utterly worthless was the gradual introduction into all branches of medicine of an accurate knowledge founded on precise methods, making use of instruments of precision, and of fixed standards of comparison. By these means what my friend Dr. Billings has aptly called "predictive medicine" has been made usefully larger day by day.

By predictive medicine, I understand such means as enable us with exactness to say what is the matter with a man, what will come of his disorder, what will be the precise effects on a given set of conditions, normal or abnormal, of the addition of a new condition, such as low temperature or a certain alkaloid or salt.

It is the multiplication of accurate methods, aided by arms of precision, which have made the need for our hospital and dispensary teaching, for the vast laboratories which we open to-day, and for that direct, constant, individual teaching by

demonstrators and tutors, as well as by lectures, which this University has been at such costly pains to furnish.

I have laid much stress upon the need to learn the easy every-day use of those instruments of precision without which accuracy in medicine is impracticable. What has been the accomplishment of the few we desire to make the readily-used property of the many.

And let me pause here to say that to the country physician a knowledge of all the really practical instruments of use in diagnosis is much more needful than to those who live in great cities. Alone with acute cases in the silence of the night, away from all help save what his own training gives, he must settle questions and decide for and by himself. Even in chronic cases, where accurate predictive science is most valuable and most difficult, and where the assistance to be had from definite methods is largest, he must, save in the case of the rich, decide alone. In great towns, there is for the latter class, to be had at short notice, the aid of some one of the many accomplished consultants whose opinion a vast experience has made valuable. And even for the poorest the like resource is constantly open, through clinics and hospitals, directed by the ablest men in the profession.

In thinking over the causes which have led us by degrees to such changes in medical practice as have made our old means of teaching a mere caricature of what teaching should be, I have come upon a group of facts which have singularly interested me, and which are, I think, not very generally known.

They illustrate the history of instruments of precision in medicine, and show how hard it is, or was, to introduce into familiar use methods for which the mass of the profession is not ready; while also they show, if I mistake not, how swift it is to seize upon and use them when that time has come.

Until a period so recent as to be almost within the memory of some who hear me, the means of studying disease were limited to what we learned through the unaided sight and touch. For, save to listen to what a patient had to tell, the sense of hearing gave us no help, until we were taught the splendid lesson of what to hear, and how to hear it, by those three greatest of listeners, Avenbrugger, Corvisart, and Laennec.

The books of the end of the seventeenth century and of the early part of the eighteenth, in their immense minuteness of detail as to the pulse and the character of the secretions, show how the doctor strove, by almost painful notation of the facts he saw, to enable himself to relate such changes to the essential and more hidden phenomena of disease.

A vast number of the pulses and appearances of tongue and fæces and urine, which are set down in the books of that day, we no longer think of moment, or have learned to group together, or to read more correctly. In fact, the physician had gone as far as was possible for him to go with unaided senses, and he had now to wait until other help came to him, and until physics and chemistry were so advanced as to lend a helping hand.

Of the first practical, and really available attempt in this way, in the reign of Anne, an almost romantic echo comes down to us from middle-age Italy.

When Galileo watched the lamp swinging in the Cathedral of Pisa, thinking its vibrations to be in equal time, and therefore fit to be measures of duration, he was but eighteen, and had begun, much against his wishes, to study medicine. Desiring to have at once some test of the regularity of the swing of his pendulum, he is said to have used that wonderful clock, the pulse, as a test.

This was a grave moment in the history of medicine. It was the birth of precision; nor can we conceive of a more striking picture than this wonderful boy, in the gloom of the darkened church, intent on a fact which was, by and by, to give to every science the pregnant gift of exact measures of time.

It is also interesting to note, in passing, that, some forty years later, when near the end of his life, Galileo, in describing the accuracy of his first clock-work, still refers to the pulse as a measure of exactness. "My clock," he says, "will not vary so much as the beat of a pulse."

From using the pulse as a test of the regularity of the pendulum, he seems to have been led, when but a lad, to make use of the pendulum to measure the pulse-rate. His instrument was known as the pulsilogon. The method of using it was most ingenious. Having always a pendulum of equal

weight, he set it swinging, and then shortened the string or lengthened it until the beats corresponded with those of the patient's pulse. Then he measured the length of the string, and Mr. B's pulse would be represented arbitrarily, but most precisely, by, we will say, ten inches; Mrs. C's by eight inches. Galileo seems to have given little care to this invention, and does not speak of the medical use of the pendulum in any of his essays. The most we know of it comes down to us from his pupil, Viviani.

A contemporary of Galileo, also an Italian, professor of medicine at Padua, the well-known Sanctorius, describes in 1626 several forms of what he also called the pulsilogon. There is little doubt that this was precisely the same instrument that was used by Galileo, and left through his large-minded indifference to be appropriated by the first unscrupulous claimant.

Meanwhile, Galileo had invented the thermometer, and is said to have applied it to medical uses, as Sanctorius undoubtedly did many years after. During this brilliant era of Italy, Medicine had thus offered to it such chance of gain as came to it not again for many a day.

The use of the thermometer in disease must in fact have been quite common, since thermometers of special form were invented for this purpose, and used by tying them on to the wrist. The Grand Duke Ferdinand the Second seems to have been among the most able of those who improved upon Galileo's instrument, and some of Ferdinand's pulse thermometers were shown in 1876 at the South Kensington exhibition of scientific instruments.*

These inventions served, however, so far as medical progress was concerned, only to illustrate the ingenuity of individual observers, and were without permanent influence; perhaps because the methods used were difficult, and involved costly and cumbrous apparatus; perhaps because the profession was not yet so educated as to be able to make practical use of them.

---

* See report on Italian Instruments, South Kensington Special Loan Collection, 1876, p. 100 *et seq.* Also Viviani's Life of Galileo, and that by De Nelli. Sanctorius' works are not to be found in any American library; at least there is no copy of his Comm. in Libri Avicennæ, Venice, 1626, which contains details as to his pulsilogon and thermometers.

Be this as it may, the precious gifts were thrust aside, and we hear little again of precision in observation until in the reign of Anne, 1707, appeared a book which is little known, almost never read, and which contains an account of a new effort to introduce into medicine an instrument of precision. You will feel, perhaps, some sense both of surprise and of amusement, when I tell you that it was the watch; or, as the inventor, Sir John Floyer, calls it, the "pulse watch." For, after Sanctorius, until about 1707, few counted the pulse accurately, or left on record any statement as to its number, save that it was slow or fast, feeble or bounding, or what not. I do not find that Harvey once mentions the number of the pulse- or heart-beat, and in those marvellous pictures of disease which Sydenham drew with a certain artistic breadth of effect, there is a remarkable accuracy of all other needful detail, but not a word as to the number of pulse or respiration.

Sir John Floyer dedicates his two volumes, the one to Queen Anne, the other to the Duke of Marlborough, since to the doctor then, as to the purely literary hack, a patron was necessary, until honest old Sam Johnson broke the spell. Sir John says that he tried the pulse at first by the minute in common watches, and by pendulum clocks, but "after met" with what he calls the "sea minute glass," which may have been used to time the log; "but because," he adds, "that was not portable, I caused a pulse watch to be made, which ran sixty seconds, and I placed it in a box. I also made a half-minute glass, whose case turns like a dark lanthorn, and that was portable and useful in feeling my patients' pulses, but that differed four beats from the minute glass which I always kept at home as my standard."

Then, just as we nowadays speak of an instrument-maker, he says, "The pulse watch here treated of is made and sold by Mr. Sam Watson, Watchmaker in Longacre, by Sir Jn. Floyer's direction."

With these means Sir John did some good and accurate work in the study of the pulse. He was the first to give the numbers of pulse and respiration in numerous diseases. He studied the number of the pulse in old and young, in pregnancy, during rest and exercise, in sleep, under the influence of baths

and of blisters; and he even went so far as to attempt to relate the pulse number to states of the barometer and thermometer. He was often right, and sometimes wrong, but he knew certain facts which have been rediscovered of late years, and he displayed capacities for accurate clinical research which were long wanting after his death. Like a good practical doctor, he gets a passing fling at pure science in the shape of a remark upon the failure of Harvey's discovery of the circulation to influence the practice of medicine.

I presume that in Sir John's day watches with second-hands, giving the duration of the minute accurately, were rare or unknown. For whatever cause, the habit of accuracy in feeling the pulse, and determining its number by an unchanging standard, did not prosper, and his prediction that this new plan would be sneered at proved only too true. Until the first quarter of the present century definite statements as to the pulse were rare, and the absence of our familiar minute-hands, and even of the minute as a recognized measure of time, is illustrated by the rare statements in Morgagni, as when he describes a case as having a pulse which beat twenty-two times in the sixtieth of an hour. It was only when minute-hands had grown common in watches that we come to recognize the now familiar picture of the doctor, watch in hand, a finger on the pulse, the thoughtful face, the anxious lookers-on around the sick-bed.

This brings us down, as we have seen, to the era of the great French teachers who gave us the stethoscope, and forced a generation to learn over in new aspects everything it believed itself to know about heart and chest disease. It was, and is, an instrument of precision, because it enables us to isolate the sounds which come from limited regions, but it does not magnify sounds as we may hope to do. Every physician who deserves the name now uses the stethoscope; but, as yet, few men of the mass of physicians have trained themselves to practical use of the many other means which, in later years, have come to our aid.

The microscope has been long known, but it was useless in practical medicine until the micro-chemistry of the tissues and secretions had been so definitely acquired as to become popu-

lar property. Even as late as when I was a student, those who could employ the microscope were, so to speak, marked men. To-day, no busy doctor can practise medicine rationally a fortnight without using it, or having it used for him. To its employment, as a means of studying diseased and healthy tissues and secretions, we dedicate a very large space in our new laboratories, and you will find every room well supplied with these instruments of research.

I do not mean to linger over this familiar tale. The otoscope, laryngoscope, ophthalmoscope, above all the thermometer, the various forms of galvanic or induction batteries, the æsthesiometer, and the sphygmograph, have all of them, or nearly all, become a part of the arms of precision with which you are called upon to war against disease.

The list seems formidable, but every one in active practice sees every day cases in which, if he means to know the most that can be known of his patient's state, one or more, and sometimes all of them, must be used. Contrast such an examination of a patient with that which even a Sydenham felt to be sufficient.

These additions to our means of diagnosis have by degrees made medical practice a handicraft, and while making it precise, and giving us definite standards of comparison, have made it, in some sense, more difficult.

Our machines are not labor-saving. We employ almost as many tools as the surgeon, and more, and also more complicated ones, than are used by some mechanics.

To learn how to use the tools of this handicraft in a workshop so delicate and sensitive as the human body, makes needful such careful personal instruction as cannot be given in the lecture-room alone, and demands the individual training of the student in hospital, dispensary, and laboratory, and by familiar demonstrations.

Future generations of students will go out of these halls fitted by familiarity with such methods to practise medicine as no former graduates have been. It will be their own fault if out of the use of instruments of precision there comes not other good. In war, the rifle, the telegraph, and the telescope have involved the need for greater intelligence in rank and file.

In the cotton-mill, the gradual improvement and complication of machines have, I am assured, elevated and educated a large class of operatives. With us, in a higher sense, the use of refined instruments, of accurate and unchanging standards, has created difficulties, and given a training which tends to raise the level of acuteness in the whole range of medical observation, and so to give rise to keener criticism, to more exact care, to a more intelligent patience.

You will see that I at least feel sure that the methods to which we are trained by instruments of precision help to educate us into intellectual habits, which make us more precise in what we look for, and see, and note, with our unaided senses.

Very few of the novel questions of the day, such, for example, as the diagnosis of the locality of brain disease, can be answered by the more careless post-mortem studies of past years. I might say, indeed, so far more precise are we to-day, that a world of dispute would be saved by agreeing not to quote for the solution of this problem a single post-mortem study made more than ten years ago. There is, in fact, hardly one which is not open to hostile criticism, for want of the kind of care which to-day is exacted in all well-regulated hospitals.

Many of you have perhaps been taught that some of the instruments of precision to which I have alluded belong, like the ophthalmoscope, only to the specially trained practitioner. But ophthalmology, which is, with the exception of the dental art, the most perfect, as yet, of all the branches of practice, has undergone the change which all specialties undergo. It has come to relate itself so widely with general practice, and has invented so many easy methods of rapid research, that it has grown needful, and indeed easy, for the general practitioner to become to a large degree familiar with portions of it once considered too difficult for common use.

Now that we know what questions the ophthalmoscope readily solves for us, now that we are aware, for example, how many headaches, vertigoes, and other obscure head disorders arise out of imperfections in the eyes, considered as optical instruments working in unison, it is plain that we must more and more strive to learn thoroughly at least enough for diagnosis of the modern means of studying the eye.

What I have said of this branch of knowledge applies almost equally to the rest.

One after another of the more difficult forms of study have been provided for in our curriculum by the creation of new professorships or lectureships. Last of all, it was determined, within a year, to complete our list of studies by adding to it a school of Dental Medicine and Surgery. This was no sudden or novel idea.

In May, 1851, Dr. E. B. Gardette, of Philadelphia, the well-known and distinguished dentist, addressed a memorial to the Trustees of the University of Pennsylvania, asking for the establishment of Lectures on Dental Surgery, and that every dentist should be a regularly graduated Doctor of Medicine.

Again, some years ago, the Faculty of the University memorialized the Trustees anew on this important subject, but lack of means interfered, and it was only within the last year that we felt ourselves in condition to offer to students of dentistry all that seemed to us to be at present needed for the most complete education.

For this purpose the Trustees have created two chairs: one of Mechanical Dentistry and Metallurgy, the other of Operative Dentistry, Dental Histology, and Dental Pathology; while for all the rest of their studies in Physiology, Pharmacy, and Anatomy, the students will share with medical students the instructions of our well-known teachers in these branches. The present policy of the University will also be carried out in this as in other medical studies, with the help of close personal teaching by an ample number of paid demonstrators.

To purposes of dental instruction we devote a large part of our new building, and by the free expenditure here made, and the completeness of the outfit, the dentists of America will judge of the importance we attach to a branch of medicine which, more than any other, owes to American genius its most valuable improvements,—I might say, almost its creation. Nor should I leave this subject without assuring the dental surgeons of America that we do not propose to rest content with even that large advance which our scheme of teaching now proposes; but we look forward, with their help, to still greater gains, and to the time when every dentist will be graduated in medicine,

and will elect, after due training, to practise one of its most advanced specialties,—the therapeutics and surgery of the teeth.

I have detained you longer than I meant to do, but I must ask yet a few minutes, that I may allude to the relative duties of the community and a great school of learning.

What, then, is the duty of those to whom is confided a trust so important as that which we hold? It certainly is not in the direction of that ambition which looks alone to large lists of students; to classes which make up in quantity what they lack in quality; to education, or its counterfeit made easy; to a host of graduates as well prepared to practise medicine as a sailor would be to sail a ship after hearing two years of lectures on navigation.

The duty of those who preside over any great school like this is to be forever stirred by a noble discontent; to be forever asking how they can better their methods; are they giving the best education, in the best way, to the men best fitted to profit by it?

In the exercise of such a lofty self-criticism this great school paused in the midst of a career which, in a commercial sense, was brilliantly prosperous, and dared to risk great material interests in order to meet the demands of the time.

The step she took was to make such a revolution in medical teaching as shall, in the future, send out to practise medicine men who will have been honestly trained in every refinement of our profession.

As we give more and give better, we shall expect to get more,—more in the way of previous education and intelligence, more in the earnest use of the means we offer.

The result will surely be a class of graduates who will start on a higher level, and who will not only feel that they have a well-earned right to add the simple M.D. to their names, but that, with proud justice to their higher training, and honoring the mother who taught them, they may write distinctively M.D. University of Pennsylvania.

You are most of you familiar with what we have done. You cannot know of the anxious labor, of the individual sacrifices on the part of Professors, of the generous bounty which made it possible to act with success.

In creating new professorships, in exacting three years of carefully-graded study, in adding annual examinations, in the large use of personal teaching by paid and numerous demonstrators or tutors; by offering in the spring not only the usual instruction, but elective studies in Botany, Mineralogy, Hygiene, Comparative Anatomy, and Medical Jurisprudence; by stating most clearly that we look forward in the future to a longer term of annual study and to preliminary examinations,—we knew full well that we should run the risk of lessening the size of our classes while improving their character.

When it became at last clear that the movement was desirable, and that we had only to make sure that we did not sacrifice the just rights of old and valued servants of the University, we met the possible risk of lessened income by a guarantee fund of sixty thousand dollars. It was raised in a week; and since it was the Trustees and Professors on whom fell at last the responsibility of these decisive changes, I am glad to say that they did not leave to friends of the University outside its walls the whole burden of supplying the means required.

The first year's experience reassured us. The class fell off but little, and I am told that no class, in the remembrance of our teachers, has so distinguished itself by steady, systematic work.

Congratulating the men of the last class, and those of the new, upon an appreciation of opportunities which, in itself, is a test of the quality and ambition of the student, I feel that the success of intelligent courage has been ours. We have trusted the sagacity of American physicians and the higher instincts of American young men, and we have not trusted in vain. After the last session our way became so clear that we saw we should be embarrassed for room and apparatus wherewith to carry out the personal teaching, which is especially full in the second and third years of our new system.

We therefore asked our generous guarantors to convert their guarantees into gifts, and with them we have reared the great laboratories which to-day we place at your disposal and dedicate with lofty hopes to noble uses.

But the duties of a great school do not cease with even the full measure of constantly-improving education. This Univer-

sity has a well-organized hospital and well-furnished laboratories. In the possession of these, she acquires and accepts a yet higher trust, that of testing older knowledge and of creating new.

This is a matter of which the public, however interested in results, or however intelligent it may be, knows but little. It is aware that the passing years see a constant and increasingly relentless sifting of old ideas and of accepted remedies. It sees new gains in surgery and medicine by which it profits. It hears casually of new remedies which are tried, and take their place or disappear. Of the endless labor, the restless search, the wearisome note-taking in hospital wards, the ceaseless investigations of the chemical and physiological laboratory,—in a word, of the scientific side of the lives of the higher class of medical workers, it knows almost nothing.

For such purposes laboratories are needed, where physicians will receive a welcome, and find means to carry on original researches which otherwise would prove too costly; since in physiology and therapeutics and chemistry the unaided senses have long ago done their best, and nowadays every research involves the use of expensive apparatus such as only a great school can provide.

To such scientific hospitalities this University invites all who can prove their ability to make the world of thought more rich by honest use of the means she offers. She looks too, with confidence, to see her own teachers use these laboratories for researches which shall illustrate her future; feeling sure that when her instructors cease to be productive, when they degenerate into mere utterers of other men's thoughts; when her hospital has no new words to say of disease, no criticisms on old remedies, no suggestions of new; when her laboratories send out no records of research; when, in a word, she ceases to be freshly productive, and a radiating as well as receptive centre, then will her teachings fail to excite in the mind of the student that enthusiasm which they no longer possess; then will she be thus far untrue to her fertile past, to her scientific trust, to her place as a centre of learning,—and then may men indeed begin to doubt her future. These responsibilities have been well met in the past, quite as well as was possible during

the years that went by, without help from the State, and with but rare and slight aid from individuals.

In the days of little help, this University was never untrue to her duties to the profession of medicine or to this Commonwealth. In this later time, when a better spirit prevails in this State and City, she has been as ready to obey the demands of the community, and to supply the craving of medical men for a larger and more liberal education.

That the craving was a real one, the demand a true one, our classes already show. My profession, at least, on which depends the support we get in the way of pupils, has said in strong words, and distinctly in acts, that we shall not be allowed to fail.

And the community,—has it no duties to the University which for more than a century has borne the name of the State, and which has not failed to give it honorable illustration?

In place of endowing this and that small college, and struggling to create universities with inadequate means, let it recall the fact that it has here an old and firm organization, a school proud of its wholesome capacity to change when change is needed.

This Commonwealth, and the rich within it, can reach us with help which was never more needed than now. They can remember us in wills; they can follow the noble example of Mrs. John Rhea Barton, by endowing medical and other professorships; they can give means to assist poor and able men to carry on original researches; they can enable us by larger salaries to secure the whole time of the highest talent; and now that our laboratories are complete, they can place in our grounds a competent and endowed free library, which would also supply an urgent want of all this western portion of Philadelphia. Last of all, they can help us, and the help must be large, to do in a measure for animals what we have done for men. They can aid us in the next great enterprise to which, in the confidence of wholesome growth, this University already looks forward,—the creation of a great American School of Veterinary Medicine. Here are our present wants: shall we not find some Pennsylvanians waiting to respond to our appeal?