

liams, the geologist, whose memory is cherished with admiration and love. Nor do I forget those who have here been trained to become leaders in their various departments throughout the country. One must be named, who has gone from their number, Keeler, the gifted astronomer, who died as the chief of the Lick Observatory in California, whose contributions to astronomical science place him among the foremost investigators of our day; and another, the martyr Lazear, who, in order that the pestilence of yellow fever might be subdued, gave up his life for humanity.

Like clouds that rake the mountain summit,
Or waves that own no curbing hand,
How fast has brother followed brother
From sunshine to the sunless land.

It is sad to recall these interrupted careers. It is delightful to remember the elevated character of those I have named, and delightful to think of hundreds who have been with us, carriers to distant parts of our country and to other lands of the seeds which they gathered in our gardens of science. It is delightful to live in this age of bounty; it is delightful to know that the citizens of Baltimore who in former years have supplemented the gifts of the founder by more than a million of dollars have come forward to support a new administration with the gift of a site of unsurpassed beauty and fitness. A new day dawns. "It is always sunrise somewhere in the world."

INAUGURAL ADDRESS.*

It has been said that 'old men tell of what they have seen and heard, children of what they are doing, and fools of what they are going to do.' Your speaker, fearing to furnish data that may suggest to you his place in this system of classification, prefers this morning to deal with

* By President Remsen, on the occasion of his inauguration as President of the Johns Hopkins University.

matters that are largely independent of time.

The American University as distinguished from the College is a comparatively recent product of evolution—or of creation. Being young, its character is not fully developed, and we can only speculate in regard to its future. On an occasion of this kind, when one of the young universities of the country is celebrating in a quiet way the twenty-fifth anniversary of its foundation, and when a new presiding officer makes his first appearance before a large assembly, it seems fitting that he upon whom has been placed the responsibility of guiding, for the present, the affairs of the University, should take the opportunity thus afforded of giving expression to a few thoughts that suggest themselves when one begins to reflect upon the significance of the University movement in this country. Everyone at all acquainted with educational matters knows that the differentiation of the University from the College is the most characteristic fact in the history of higher education during the past quarter century. It is well that we should ask ourselves, What does this tendency mean? Whither is the movement likely to carry us?

While, from the beginning, the authorities of the Johns Hopkins University have maintained a collegiate department as well as a graduate or university department, and have endeavored to make this as efficient as possible under existing circumstances, the subjects that present themselves in connection with this branch of our work are so familiar and have been so much discussed that I can pass over them now without danger of giving the impression that we consider these subjects of less importance than those more directly connected with the work of the University. At all events, in what I shall have to say, I propose to confine myself to the latter.

The idea that a student who has completed a college course has something yet to learn, if he chooses the career of a teacher or scholar, does not appear until quite recently to have taken strong hold of the minds of those who had charge of the educational interests of our country. Perhaps it would be better to put it in this way: They do not appear to have thought it worth while to make provision in the system for those who wanted more than the college gave. The college has for its object the important work of training students for the duties of citizenship, not primarily the duties of scholarship, and no one doubts that, in the main, they have done their work well. Nor does any one doubt that, whatever may come, the college has a leading part to play in this country. Collegiate work by its very nature necessarily appeals to a much larger number than university work. But college work requires no apologist nor defender. It appeals strongly to the American people, and it is well that this is so. The college is in no danger of annihilation, though the indications are that it will undergo important modifications in the future as it has in the past. Upon this subject much might be said, and I feel strongly tempted to enlarge upon it, notwithstanding the intention already expressed of confining myself to problems more directly connected with the university proper.

There is, however, one phase of the college problem that is so closely connected with that of the university that I cannot avoid some reference to it. There is a marked and rapidly growing tendency to make college work the basis of the work in professional schools. As is well known, some of our medical schools now require a college degree for admission. The average age of graduation from our leading colleges is so high that the students cannot begin their professional courses until they

are from twenty-two to twenty-three years of age on the average. Then, too, the length of the professional courses is greater than it formerly was, so that some of the best years of life are taken up in preparatory work. One thing seems to admit of no denial, and that is that, in so far as it prevents students from beginning their professional studies or their work in business life until they have attained the age of twenty-two or twenty-three, our present system is seriously defective. The defect is one that must be remedied. Various efforts are now being made looking to improvement, but it is not yet clear how this problem will be solved.

In this country the name university in the new sense is frequently applied to one department, and that is the philosophical department. This has to deal with philology, philosophy, history, economics, mathematics, physics, geology, chemistry, etc.; in short, it comprises all branches that do not form an essential part of the work of the departments of medicine, law and theology. A fully developed university, to be sure, includes at least four departments—the medical, the legal, the theological, and the philosophical; or, in other words, the university faculty comprises faculties of medicine, of law, of theology and of philosophy.

The new thing in educational work in this country is the philosophical faculty of our universities.

This meets the needs of those students who, having completed the college course, and having, therefore, had a good general training that fits them for more advanced study, wish to go forward in the paths of learning, and, so far as this may be possible, to become masters of some special branch. Most of these students are preparing to teach in colleges and elsewhere, so that the philosophical department of the University is to-day a professional school just as much as the medical or the legal de-

partment. On the completion of the college course, the student holds the same relation to the philosophical department of the university as to the other departments, or to the professional schools, and the age question is fully as important in the case of the student in the philosophical faculty as in the case of those who are to enter the professional schools. Now, if it be conceded that the training of specialists—not necessarily narrow specialists, but necessarily those who are thoroughly grounded in some one subject—I say, if it be conceded that the training of specialists is essential to the growth of the highest scholarship, then by advancing the age of graduation from our colleges, we are interfering with the development of scholarship in the highest sense, because the greater the age of graduation from the colleges the less will these graduates be inclined, or be able, to take up the advanced work that is essential to convert them into scholars. But let me close what I have to say on this subject by the safe prediction that the time will come when the work of our colleges will be adjusted to the work of the various faculties of the university so that the passage from the one to the other will not involve something unnatural—either hardship to the student or a telescoping of college and university which now on the whole furnishes the best way out of the existing difficulty.

I have said that the new thing in educational work in this country is the philosophical faculty of our universities. The growth of the work of the philosophical faculty has, however, undoubtedly influenced that of the other faculties—more particularly the medical. Gradually the medical schools, those connected with the universities at least, are adopting university standards. The same is true to some extent of schools of law and of theology, so that, I think, it is safe to assert that the great activity that has characterized the

work of the philosophical faculties of our universities has tended in no small measure to the improvement of the work of our professional schools. It has lifted them to a higher level, and that is a result that the world at large may congratulate itself upon.

One of the most remarkable facts in connection with what we may call the development of the university idea in this country, is the surprisingly rapid increase in the attendance upon the courses offered by our philosophical faculties during the last few years. In what I shall have to say I shall for the present use the term graduate student in the restricted sense which it has come to have, meaning a college graduate who is following courses offered by the philosophical faculty of some university, and excluding, therefore, those who are studying medicine, or law, or theology in universities.

I have recently asked the United States Commissioner of Education to help me answer the following questions:

1. How many graduate students were in the United States in the year 1850?
2. How many in 1875, and
3. How many in 1900?

The answers are these:

1. In 1850 there were 8 graduate students in all the colleges of the country. Of these 3 were enrolled at Harvard, 3 at Yale, 1 at the University of Virginia and 1 at Trinity College.

2. In 1875 the number had increased to 399.

3. In 1900 the number was 5,668.

At present the number cannot be far from 6,000.

In order that these facts may be properly interpreted we should know how many Americans are studying in foreign universities. The records show that in 1835 there were 4 American students in the philosophical faculties of German universities; in

1860 there were 77; in 1880, 173; in 1891, 446; in 1892, 383; in 1895, 422, and in 1898, 397.

These figures show clearly that the increase in the attendance at American universities is not accounted for by a falling off in attendance at German universities. On the other hand, they do show that for the last ten years at least there has been no increase in the attendance at German universities, but rather a slight decrease.

Six thousand students are, then, to-day pursuing advanced courses in our American universities, while not longer ago than 1875 the number was only about 400. In this connection it must further be borne in mind that during this period the colleges have not relaxed in their requirements. The tendency has been in the opposite direction. So that it means to-day more rather than less than it did in 1875 to be a graduate student. That there is an increasing demand for university work is clear and it seems to be destined to play a more and more important part in the development of our educational methods.

Now, what is the cause of the rapid increase in the demand for university work, or the rapid increase in the attendance upon university courses? No simple answer would be correct. Probably the principal direct cause is the increased demand on the part of the colleges, and to some extent of the high schools, for teachers who have had university training. The degree of Doctor of Philosophy being the outward and visible sign of such training, many colleges have virtually taken the ground that none but Ph.D.'s need apply. This would, of course, tend directly to increase the attendance at the universities. Operating in the same way is the multiplication of chairs in the colleges. While not long ago one man often taught a number of subjects, sometimes related, sometimes not, the college authorities are coming more and more

to entrust a single subject to a single man. The old-fashioned professor who could teach any subject in the curriculum with equal success is a thing of the past except in a few remote regions. The university-trained man has largely taken his place, and the universities are spreading their influence into the nooks and corners of the country through these men.

I need not discuss this phase of the subject further. It will, I am sure, be acknowledged without argument that it is desirable that our college faculties should be made up of men who have enjoyed the best educational advantages. In supplying such men the universities are doing a work of the highest value for the country. If nothing else were accomplished by our universities they would be worthy of all the support they get. The results of their work in this direction are not as tangible as that of the work of the colleges, for the latter reach much larger numbers and in ways that can be more easily followed. But if we keep in mind the fact that the college is dependent upon the university for its faculty and that the character of the college is in turn dependent upon the character of its faculty, it will be seen that whatever good may come from the college is to be traced directly to work done by the universities. In order to keep our colleges up to a high standard it is absolutely necessary that our universities should be maintained on a high plane. This university work is not something apart, independent of other kinds of educational work. It is a necessary part of the whole system. It affects not only our colleges, but our schools of all grades, and must, therefore, have a profound influence upon the intellectual condition of the whole country. It is difficult, perhaps, to prove this, but it seems to me that the statements just made are almost self-evident truths.

But the universities are also doing another kind of work of importance to the

country. Through their specially prepared men they are doing something to enlarge the bounds of knowledge. To be sure, such work is also being done to some extent in our colleges and elsewhere, but the true home of the investigator is the university. This work of investigation is as important as the work of training men. What does it mean? All persons with healthy minds appear to agree that the world is advancing and improving. We see evidences of this on every side. Those results that appeal most strongly to mankind are, perhaps, the practical discoveries that contribute so much to the health and comfort of mankind. These are so familiar that they need not be recounted here. If great advances are being made in the field of electricity, in the field of medicine, in the field of applied chemistry, it is well to remember that the work that lies at the foundation of these advances has been done almost exclusively in the universities. It would be interesting to trace the history of some of these advances. We should find that in nearly every case the beginning can be found in some university workshop where an enthusiastic professor has spent his time prying into the secrets of nature. Rarely does the discoverer reap the tangible reward of his work—that is to say, he does not get rich—but what of it? He has his reward, and it is at least a fair question whether his reward is not higher than any that could be computed in dollars and cents.

The material value to the world of the work carried on in the university laboratories cannot be over-estimated. New industries are constantly springing up on the basis of such work. A direct connection has been shown to exist between the industrial condition of a country and the attitude of the country towards university work. It is generally accepted that the principal reason why Germany occupies such a high position in certain branches of

industry, especially those founded upon chemistry, is that the universities of Germany have fostered the work of investigation more than those of any other country. That great thinker and investigator, Liebig, succeeded during the last century in impressing upon the minds of his countrymen the importance of encouraging investigations in the universities, and since that time the German laboratories of chemistry have been the leaders of the world. In Germany the chemical industries have grown to immense, almost inconceivable, proportions. Meanwhile the corresponding industries of Great Britain have steadily declined. This subject has recently been discussed by Arthur C. Green in an address read before the British Association at its meeting at Glasgow last summer. The address has been republished in *SCIENCE*, volume 2, page 7, of 1902. I call the attention especially of our business men to this address. I think it will show them that university work in some lines at least is directly and closely connected with the industrial position of a country. Speaking of the coal-tar industry, the author of the paper referred to says: "In no other industry have such extraordinarily rapid changes and gigantic developments taken place in so short a period—developments in which the scientific elucidation of abstract problems has gone hand in hand with inventive capacity, manufacturing skill, and commercial enterprise; in no other industry has the close and intimate interrelation of science and practice been more clearly demonstrated." And further on: "Again, besides the loss of material wealth which the neglect of the coal-tar trade has involved to this country, there is yet another aspect of the question which is even of more importance than the commercial one. There can be no doubt that the growth in Germany of a highly scientific industry of large and far-reaching proportion has re-

acted with beneficial effect upon the universities, and has tended to promote scientific thought throughout the land. By its demonstration of the practical importance of purely theoretic conceptions it has had a far-reaching effect on the intellectual life of the nation. How much such a scientific revival is wanted in our country the social and economical history of the past ten years abundantly testifies. For in the struggle for existence between nations the battle is no longer to the strong in arm, but to those who are the strongest in knowledge to turn the resources of nature to the best account."

What I want to make clear by these quotations and references is that universities are not luxuries, to be enjoyed or not, as we may please. They are necessities. Their work lies at the very foundation of national well-being.

But there is another aspect of university work of greater importance than that of which I have spoken. I mean the intellectual aspect in the highest sense. The world is advancing in other ways than along material lines. While as I have pointed out, the material interests of the world are connected with the intellectual condition, there are thoughts, there are ideas, that are above material considerations, ideas pertaining to the history of mankind, to the origin and development of the universe, to the phenomena of life, to the development of thought, to the significance of religions. All these are of importance, and the character of a nation is determined by the extent to which these ideas are cultivated. There is call for investigation in every subject—in the various branches of philology, in history, in economics, in archæology, as well as in the natural sciences, and here again the universities furnish the workers and the workshops.

There are, then, deep-seated reasons for

encouraging the work of our universities in every possible way. We cannot afford to let them languish. The interests involved are too great. The more clearly this is recognized the better for us.

The rapid advances that have been made in university work in this country have brought us somewhat suddenly face to face with new educational problems, and we have not yet had time to adjust ourselves to the new situation thus created. We are in the experimental stage. We are trying to determine how we ought to deal with our graduate students in order to get the best results; how, in general to make the work as efficient as possible.

As one who, with others, has been engaged for twenty-five years in studying the new problems and in attempting to solve them, I may be permitted to say a few words in regard to one of the most important problems that the universities have to deal with at present. I refer to the problem of the professors. Having been a professor for about thirty years, and having during that time known intimately many of those who belong to this class and worked with them, I feel that I may speak of the professor problem with some confidence.

The university is what the professors make it, and the president has no more important duty to perform than that of seeing that the various chairs are filled by the right kind of men. He should not take the full responsibility of selection. He should take all the good advice he can get. He is sure to have some that is bad. He should, however, not only take advice, but he should endeavor to determine for himself by every available means whether or not the persons recommended to him are worthy of appointment. He should not shirk this responsibility. A mistake in this line is almost as difficult to rectify as a mistake in the matrimonial line—perhaps

more difficult. It is, therefore, doubly important that an appointment should be made with great deliberation and with a full realization of the gravity of the act. It is not, however, the process of appointing that I wish especially to speak of, though much that is interesting to university circles might be said on this subject. It is rather the principles that are involved. What constitutes a good professor? What kind of men are the universities looking for? Is the supply of this kind of men equal to the demand? These are some of the questions that suggest themselves in this connection. Let me attempt to answer them briefly.

The development of universities in this country has created a demand for a kind of professor somewhat different from that demanded by the college. It would not be difficult to describe the ideal university professor, but we should gain little in this way. I shall assume that he has the personal traits that are of such importance in those who are called upon to teach. A man of bad or questionable character, or of weak character, is no more fit to be a university professor than to be a college professor or a teacher in a school. That is self-evident. At least it seems so to me. Leaving these personal matters out of consideration, the first thing that is essential in a university professor is a thorough knowledge of the subject he teaches and of the methods of investigation applicable to that subject; the second is the ability to apply these methods to the enlargement of the field of knowledge; and the third is the ability to train others in the use of these methods. But a knowledge of the methods, the ability to apply them, and the ability to train others in their use, will not suffice. The professor, if he is to do his duty, must actually be engaged in carrying on investigations both on his own account and with the cooperation of his most advanced students. This is

fundamental. It may be said, and this cannot be denied, that there is much research work done that is of little value to the world, that, in fact, much of that which is done by our graduate students is trivial judged by high standards. It would be better, no doubt, if every professor and every advanced student were engaged upon some problem of great importance to the world. But this is out of the question in any country. Few men possess that clearness of vision and that skill in devising methods, combined with the patience and power of persistent application that enable them to give the world great results. If only those who can do great things were permitted to work, the advancement of knowledge would be slow indeed. The great is built upon the little. The modest toiler prepares the way for the great discoverer. A general without his officers and men would be helpless. So would the great thinker and skillful experimenter without the patient worker, 'the hewer of wood and drawer of water.'

Of so-called research work there are all grades. A man may reveal his intellectual power as well as his mental defects by his investigations. But it remains true that the university professor must be carrying on research work or he is failing to do what he ought to do. It is part of his stock in trade. He cannot properly train his students without doing such work and without helping his students to do such work. One of the best results of carrying on this research work is the necessary adoption of world standards. A man may teach his classes year after year and gradually lose touch with others working in the same branch. Nothing is better calculated to keep him alive than the carrying on of a piece of work and the publication of the results in some well-known journal. This stimulates him to his best efforts, and it subjects him to the criticism of those who

know. He may deceive his students and himself—no doubt he often does—but he cannot deceive the world very long. The professor who does not show what he can do in the way of adding to the knowledge of the world, is almost sure to become provincial when he gets away from the influence of his leaders.

Other things being equal, the professor who does the best work in his special branch is the best professor. The universities want leaders. Unfortunately, the number of these is quite limited, and it is not surprising that there are not enough to go round. It is becoming very difficult to find properly qualified men to fill vacant university professorships. Given sufficient inducements and it would be quite possible to 'corner the market.' There are at least half a dozen, probably more, universities in this country on the lookout for young men of unusual ability. They are snapped up with an avidity that is a clear sign of the state of the market. One of the greatest obstacles in the way of the advancement of our American universities to-day is a lack of enough good professorial material. Fortunately, the universities are themselves providing the means by which this obstacle may be overcome, though not as rapidly as we should like. That is, however, not the fault of the universities. Some deeper cause is operating. Nature does not seem to supply enough raw material. It is often raw enough, to be sure, but its possibilities are limited.

This, too, suggests another question of deep import for the intellectual development of our country. Do our ablest men enter universities and engage in advanced work? This is a question which it is very difficult, if not quite impossible, to answer. I think it is not uncommonly assumed that they do not; that our ablest men, our best thinkers, are not in the universities. It is often said that they are in the law or in

business. It may be. Certainly the great jurists and the great business men seem to be relatively more numerous than the great university teachers. I should not think it worth while to touch upon this subject were it not for the fact that recently the suggestion has been made that some of the men who become great in other lines might be induced to enter the academic career if only sufficient inducements were offered. The proposition is that a marked increase in the emoluments of professors would tend to attract some of the best material from other fields. I do not feel sure of this. In any case, the subject is hardly worth discussing. Whatever improvement is to come will come slowly, and this is fortunate. A sudden increase of the salaries of the leading professors of this country to, say, \$10,000 or more, would not suddenly change the status of these professors among their fellow men, and, while the professors might be pleased, and probably would be, the main question is, Would this change have any effect in the desired direction? Speculation on this subject seems to me of no value. If it be true that the men of the best intellects do not find their way into university circles, it is safe to assume that this is due to a great many conditions, and that the conditions are improving. The intellectual standards of our colleges and universities are gradually being raised. We cannot force matters.

The best thing we can do for our students is to give them good professors. Sumptuous laboratories, large collections of books and apparatus, extensive museums are well enough. They are necessary, no doubt. But I fear they are too much emphasized before the public. A university is, or ought to be, a body of well-trained, intelligent, industrious, productive teachers of high character provided with the means of doing their best work for their students, and therefore for the world.

The Johns Hopkins University cannot live on its past, however praiseworthy that past may have been. If the contemplation of the past has the effect of stimulating us to our best efforts, it is a profitable occupation. If it lulls us into inactivity, it is fatal. We should not, nor can we, escape criticism for present misdeeds by referring to a glorious past. We have, to be sure, inherited certain ideals that we should cherish. So, also, we have probably done things that we ought not to have done, and the study of our past may help us to see where we have made mistakes and to show us how to avoid them in the future. There is only one way to make a university what it ought to be, and that is by doing good work according to the highest standards. Professors and students must cooperate in this. With the right professors we shall have this cooperation. Students have the power of collective judgment that is probably fairer than the judgment of any individual. They will work well if their masters work well. The professor is teaching all the time. His duty to his students is not done when he dismisses them from the lecture room or the laboratory. His influence for good or evil is continuous and lasting.

Will you allow me a few personal words? Those of you who know most of the occurrences of last year know best that the office, the duties of which I formally assume today, came to me unexpectedly and against my wishes. My life up to the present has been spent as a teacher. I ask no higher occupation. There is none more rewarding. It would have been agreeable to me to continue in this occupation to the end. Indeed, even as matters now stand, I hope it will not be necessary for me to withdraw entirely from the work to which my life has thus far been devoted. On the other hand, I recognize to the full the importance of the new work to which I have been called, and I accept the new duties with the inten-

tion of using every effort to further the interests of this University. Having taken the step, I accept the responsibility. I cannot permit anything to interfere with the work of the presidency. I believe, however, that I shall not be obliged to give up that which is dear to me in the science of chemistry.

In conclusion, I wish to express my hearty thanks to my distinguished predecessor, to my colleagues, to the students of the University, and to this community for the kindness with which they have accepted my election. I could not ask for better treatment. In return, I can only promise to do all that in me lies to make this University worthy of its history, to make it as helpful as possible, not only to this community, of which I am proud to be a member, but to the State and to the country. It is my earnest wish, as I am sure it is yours, that the period upon which the University now enters may be at least as useful as that which now ends.

We have passed through a time of great anxiety. Causes have been in operation that have of late seriously interfered with our development. It is not strange that the world at large should have received the impression that the Johns Hopkins University has seen its best days. The fact is that the doleful stories that have been going the rounds have a slight basis. It is this: The growth of the University has been temporarily checked. It has not gone backward, but, for a time at least, it has stood still. I believe that a new day has at last dawned and that the onward march will soon be taken up. Our difficulties have by no means been overcome, but a magnificent beginning has been made. The public spirit and generosity of William Wyman, of William Keyser, of Samuel Keyser, of Francis M. Jencks, of William H. Buckler and Julian Le Roy White, are worthy of the highest commendation. These high-

minded men have started the new era. They have shown their confidence in the work of the University and set an example to their fellow men. I would not detract in the least from the praise due to every one of these gentlemen, but I am sure the others whom I have named will pardon me if in conclusion I exclaim, Long live William Wyman and William Keyser!

PRESENTATION OF CANDIDATES FOR
HONORARY DEGREES.*

To the Assembly:

From time immemorial, it has been the custom of universities at festive celebrations, to bestow upon men of learning, personal tokens of admiration and gratitude. In conformity with this usage, our university desires to place upon its honor list the names of scholars who have been engaged with us in the promotion of literature, science and education. In accordance with the request of the Academic Council and in their name, I have the honor and the privilege of presenting to the President of the Johns Hopkins University those whose names I shall now pronounce, asking their enrolment as members of this 'Societas magistrorum et discipulorum.'

To the President:

MR. PRESIDENT: In the name of the Academic Council, I ask that several scholars, who pursued advanced studies under our guidance, without proceeding to degrees, be now admitted to the degree of Master of Arts, *honoris causâ*, and assured of our hearty welcome to this fraternity.

WILLIAM THOMAS COUNCILMAN,
BENJAMIN IVES GILMAN,
JOHN MARK GLENN,
CLAYTON COLMAN HALL,
THEODORE MARBURG,
WILLIAM L. MARBURY,

* On behalf of the University, by Dr. D. C. Gilman, President Emeritus, on the occasion of the celebration of the twenty-fifth anniversary of the founding of the University.

ROBERT LEE RANDOLPH,
LAWRASON RIGGS,
HENRY M. THOMAS,
JULIAN LE ROY WHITE.

MR. PRESIDENT: I have now the honor of presenting to you, one by one, a number of eminent men, recommended by a committee of the professors, and of asking you to admit them to the degree of Doctor of Laws, *honoris causâ*, in the Johns Hopkins University.

Three of these scholars were friends and counsellors of the Trustees before any member of this Faculty was chosen. They pointed out the dangers to be avoided, the charts to be followed, and during seven and twenty years they have been honored friends, by whose experience we have been guided, by whose example we have been inspired.

CHARLES WILLIAM ELIOT, President of Harvard University, oldest and most comprehensive of American institutions,—the Chief, whose wisdom, vigor, and devotion to education have brought him honors which we gladly acknowledge, which we cannot augment.

JAMES BURRILL ANGELL, teacher, writer, diplomatist, scholar, excellent in every calling, whose crowning distinction is his service in developing the University of Michigan, a signal example of the alliance between a vigorous state and a vigorous university.

ANDREW DICKSON WHITE, honored Ambassador of the United States in Germany, the organizer of Cornell University, whose diplomatic success increases the distinction he had won as an able professor, a learned historian, and a liberal promoter of science, literature and art.

With these early friends, I now present to you several men who have been associated with us in carrying on the work of this University:—

JOHN SHAW BILLINGS, able adviser of the Trustees of the Johns Hopkins Hospital respecting its construction, an authority on the history of medicine, a promoter of public hygiene, a famous bibliographer and the wise administrator of public libraries in the City of New York.

GRANVILLE STANLEY HALL, who planned and directed the first laboratory of experimental psy-