CHAPTER XII.

PRESIDENT OF THE NATIONAL ACADEMY OF SCIENCES AND FOR THE SECOND TIME PRESIDENT OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

1878-1882.


On Dr. Runkle’s resignation of his office it became necessary to appoint his successor and at the earnest solicitation of the government, Mr. Rogers, in spite of feeble health, reluctantly consented to assume once more the presidency of the Institute, provided the Corporation would undertake to raise the sum of $100,000 for the present needs of the school.

In writing to a friend of the Institute on its behalf, Mr. Rogers referred to his new duty as follows: —

“Mr. Runkle having a few days since sent in his resignation of the presidency of the Institute, I have agreed, at the solicitation of the Corporation, to take charge of our noble ship in a general way and with
lightened duties until another President is appointed, on the condition that the Corporation shall raise $100,000 to be added to our funds by the beginning of the next school year."

In writing to another friend who had proposed to contribute to this fund and asked for more information concerning it, Mr. Rogers summed up its work hitherto as follows: —

BOSTON, June 24, 1878.

... For the last three or four years the Institute has been embarrassed by the want of a moderate addition to its income. The instruction given is of necessity very expensive, involving a large staff of teachers in proportion to the number of students and a great amount of costly apparatus. Added to this is the great outlay involved in the extent of working laboratories, which it has been the object of the Institute especially to develop, as being the best and most effective method of teaching. For these reasons the fees from pupils are insufficient to meet even the present low salaries of the Professors, and the income from invested funds falls short of the current expenses, other than salaries, and of the cost of keeping up the apparatus. The Professors have been most zealous, expending, in some instances, portions of their own salaries in the purchase of the necessary appliances of instruction. In the building lately erected the Institute has established also special laboratories for the instruction of women in chemical manipulation and analysis, and in botany and biology, including training in the use of the microscope. In the same building are rooms devoted to the tools and machines in use in the School of Mechanic Arts. These latter constitute the nucleus of a laboratory for the department of Mechanical Engineering, in which the student, while receiving instruction in the principles of mechanics, is also trained in the work of the hand by the use of tools of the best construction, therewith
working out the casting, forging, welding, moulding, turning and finishing the various mechanical devices or forms which enter into the construction of all machinery.

... It has been proved by the short experience in this department that in their main features the arts of the carpenter, the blacksmith, the iron-moulder and the machinist can be taught by ample practice in the conversion of wood and metal into the various forms which are common to all machinery, such as the cam, the shaft, the pulley, the screw, the lever, etc., and that when to this practice is added instruction in the principles of mechanics, engineering and construction, the graduates will be fully competent to use, or to direct others employed by them in the use of, the various tools of the mechanic and the engineer.

But while the Institute has thus been working out the best methods of instruction in applied science, the fact has not been ignored that scientific education may be narrow and pedantic, as well as that which is confined to the teaching of the classics, and therefore with each of the scientific courses is combined instruction in English, French and German. (It has been a matter of regret to most of the graduates that their preparation for entering the Institute had not been such as to leave them more time for work in the English department, in rhetoric, history, political economy and the elements of constitutional law, but this can only come with improvement in the methods of the schools that precede the Institute courses.) Drawing, both mechanical and free-hand, forms an essential part of every course. In this department, as well as in architecture, there is great opportunity for the training of young women as well as young men, were adequate means provided.

President Runkle has worked with the utmost zeal and disinterestedness for many years in developing the methods of the Institute, often with inadequate means and appliances. He has now resigned the
presidency and will devote a year in Europe to the investigation of industrial education, then returning to his professorship in applied mathematics.

FROM GEORGE S. HILLARD.

July 3, 1878.

MY DEAR WILLIAM,—I have just received your letter of July 2, and its contents have almost taken away the little breath I had left. I had not seen the resignation of Professor Runkle. My only fear is that your enthusiasm for the cause leads you beyond your strength. But if E. consents, if her vigilance does not object, I may rejoice that you are once more where you are so much needed.

TO DR. J. D. RUNKLE.

NEWPORT, July 13, 1878.

DEAR FRIEND,—I ought long ago to have acknowledged your letter referring to your visit to Europe; but I have, as you may suppose, been a good deal occupied in writing letters, some of them not easy ones, in regard to our subscription, and have been feeling, as usual, the depressing effects of summer.

I now send you two letters, which I think will be useful to you. Sir William Thomson may be at the seaside in August; but should you not find him on first going to Scotland, you will, no doubt, be able to learn his movements by inquiring at the University of Glasgow, and you would do well to enclose the letter to him with a note asking when and where you may call on him. I consider a letter to him as better than a bundle of them to others less hearty and less known.

Professor Tresca is one of the oldest of the distinguished teachers at the "Conservatoire," in Paris. Though a rather brusque old gentleman, he was kind and useful to me years ago, and I know of no one in Paris to whom I can better introduce you.
But in truth, dear Professor, you will find that you will have no need of introductions. At Paris you will meet many British and Continental men of science, as well as many from America, whom you already know, who will be able personally to make your way quite easy. I could write more notes of introduction for you, but I am sure that when you reach the ground you will not care to have them. If while you are abroad I can serve you in any way there or at home, I hope you will not hesitate to inform me.

And now, dear friend, with a full heart I must bid you good-by. We have known each other and have worked together so long, and, may I not say, so affectionately, that any professions of regard from me would be out of place. I can only say, in parting with you for a time, that I shall think of you with the old regard, wishing for you all the rest and the enjoyment which you have so richly earned by your untiring labours, and hoping that, after a not too protracted stay abroad, you may come back to your friends with renewed health, and with undiminished, if not augmented, zeal in the educational work to which you have devoted yourself.

To your dear wife and children I beg to send my affectionate good wishes, hoping that they may have the pleasantest of voyages and every enjoyment in their travels and sojournings that heart could desire. And now good-by. Drop a line sometimes to Yours faithfully,

WILLIAM B. ROGERS.

P. S. If you do not meet Sir William Thomson, please mail my letter to him, as it contains an acknowledgment for a pamphlet he sent me lately, etc.
FROM NATHANIEL THAYER.

Isles of Shoals, July 19, 1878.

My dear Mr. Rogers, . . . I was sorry to hear of President Runkle’s resignation, which is a great loss to the Institute, and am delighted to learn that you feel your health is such that you are able to take up the work again; but, my good friend, be careful that you do not go to work too hard, and break yourself down again. . . .

With kind regards to Mrs. Rogers, believe me, dear sir,

With great respect,
Yours very sincerely,
N. Thayer.

FROM AUGUSTUS LOWELL.

Boston, August 12, 1878.

My dear sir, — You gave me some little hope that you might possibly be able to give some lectures before the Lowell Institute next winter, and I need not say how much I should be gratified if you could do so.

Professor Peirce is to deliver six lectures, beginning in February, on one evening of each week, and it has occurred to me that you might, perhaps, prefer a similar arrangement, but not necessarily at that time.

Will you be so good as to consider this matter, and, if possible, grant me a favourable reply?

Yours very truly,
Augustus Lowell.

TO AUGUSTUS LOWELL.

Newport, August 15, 1878.

Dear Mr. Lowell,—Your kind note of the 12th inst. found me busy with Institute matters re-
quiring personal attention, else it should have received an earlier reply.

Let me frankly say that so pleasant are my associations with the Lowell Institute lectures, that on first reading your invitation I was prompted to say yes. But a sober second thought, reminding me of unreliable health and of the duties in the Institute of Technology, which I have agreed to resume for a time, and which, however lightened by aid from others, must give me much to do and think of during the coming session, warns me against making any engagement involving further effort and responsibility.

With a genuine regret that I am thus unable to comply with your kind and flattering request, I am, dear Mr. Lowell, as ever

Yours faithfully,

W. B. Rogers.

The academic year 1878-79 opened with Mr. Rogers as President of the Institute and Professor J. M. Ordway as Chairman of the Faculty.

FROM PROFESSOR R. H. RICHARDS.

Boston, October, 1878.

My dear Mrs. Rogers, — I cannot tell you how much we all enjoyed Professor Rogers's address yesterday. It warmed us all up, and seemed to remove all impediments to harmonious work among us. It carried us all back to the good old times when he used to be with us at all times.

If you can only keep our dear President strong enough to speak to us two or three times a year, all will go well.

Very sincerely yours,

Robert H. Richards.
DEAR PROFESSOR ROGERS,—I am in receipt of your note of 11th inst. It is from no lack of interest in the Institute that I have been unable to do anything towards procuring subscriptions. For the last two months I have been absorbed in politics. Mr. Forbes\(^1\) went off to Colorado about a month since, leaving upon my shoulders the principal charge of raising $50,000 to defray the expenses of the Anti-Butler campaign in this State. I felt that this was more important than aught else, and it could not be delayed, and to that I have given nearly all my time. I go to New York to-morrow for the remainder of the week. When I return, I will call the Committee together, but I am inclined to think it better not to attempt anything until after the election.

Sincerely yours,

W. ENDICOTT, JR.

In June, 1878, the National Academy of Sciences was required by Act of Congress to consider "the methods and expenses of conducting all surveys of a scientific character under the War or Interior Departments and the surveys of the Land Office, and to report to Congress . . . a plan for surveying and mapping the Territories." . . . The then acting President of the Academy, Professor O. C. Marsh, states that "As this was the first instance in which the advice of the Academy had been asked by direct Act of Congress, the action to be taken demanded most careful consideration," and that the members appointed to serve on this Committee were, "Professor James D. Dana . . . ; Professor William B. Rogers, the Nestor of

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\(^{1}\)John M. Forbes, Esq., always a devoted friend and benefactor of the Institute.
American geology, who had had long and varied experience with geological and geographical surveys; Professor J. S. Newberry . . .; Professor W. P. Trowbridge . . .; Professor Simon Newcomb . . .; and Professor Alexander Agassiz.” . . . The following letter refers to the report of this Committee:—

FROM PROFESSOR O. C. MARSH.

YALE COLLEGE MUSEUM,
NEW HAVEN, CONNECTICUT,
November 19, 1878.

DEAR PROFESSOR ROGERS,— You will be pleased to know that our Report was as well received in Washington as it was by the Academy. I telegraphed you that there was only one dissenting vote. The discussion went on for about two hours, but no valid point was made against our Report.

I went to Washington on the 9th inst., and in less than two days got the approval of Secretary Schurz, Secretary Sherman, General Sherman, the President (so far as he had the plan before him), and Superintendent Patterson of the Coast Survey. Professor Baird thinks the Report a very strong one, and that it will go through Congress without difficulty.

Altogether, I think we have done a grand piece of work, and one that will help the Academy very much. I remain,

Yours very truly,

O. C. Marsh.

Professor Joseph Henry, Secretary of the Smithsonian Institution and President of the National Academy, had died on May 13, 1878. Memorial exercises in his honor were held in the Hall of the House of Representatives on Thursday, January 16, 1879. The speakers on this occasion were Dr. McCosh, President of Princeton College, Senators Hannibal Hamlin and

On April 16, 1879, Mr. Rogers was elected as Professor Henry's successor in the presidency of the National Academy of Sciences. On assuming this office, which was perhaps the crowning honor of his life, Mr. Rogers made a brief address, unfortunately not preserved. Professor George J. Brush, head of the Sheffield Scientific School, in recalling after many years his impression of this address, writes:—

“The Professor, who was in Boston, had been informed by telegraph of his election; and although in feeble health, he responded at once by taking the night train to Washington, arriving early on the morning of the last day of the session, almost exhausted by lack of sleep and the fatigue of the journey. We hardly expected that he would be able to attend the meeting, when, to our surprise and gratification, he appeared, and, without waiting for any formality, gracefully returned thanks to the Academy for the honour conferred on him, and gave a brief address characterized by such depth of thought and feeling, with such elegance and brilliancy of expression, that nothing short of an accurate stenographic report could do justice to it.”

Early in 1879 the Lowell Institute was obliged to seek new quarters, owing to the sale of the hall on Washington Street in which its lectures had hitherto been given; and an arrangement was made with the government of the Institute of Technology by which the Lowell Institute lectures have since been given in Huntington Hall.

\(^1\) See Congressional Record, March 4, 1879.
TO PROFESSOR RUNKLE, IN EUROPE.

GIBBS AVENUE, NEWPORT, June 8, 1879.

MY DEAR PROFESSOR,—After a season of labour and anxiety, I am now beginning to enjoy comparative rest and quiet in our summer home, and am taking an early opportunity to give you some account of the recent doings and of the prospects of our Institute.

You have already been informed of the plan of retrenchment adopted in the autumn, leading to the resignation of Dr. Kneeland in January, and involving the discontinuance of Professor Howison's department, the reduction of salaries and the diminishing of the number of assistants, to take effect on October 1 next.

The economies carried out during the past session in the laboratory and other current expenses have been large, but they have been more than balanced by the diminished income from students, and by the necessity of employing a distinct teacher of mathematics, etc.

The subscription (to which I have given no small time) has now reached within a few hundred of $61,000, with a prospect of additions for the next four months; we may bring it up to $75,000 by the opening of the next academic year. Add to this that Mr. Lowell has lately agreed with me for the occupation of Huntington Hall next season for the Lowell Lectures at a rent of $2,500, an arrangement which can hardly fail to be permanent.

In these two particulars we have made good financial progress, but in spite of these important gains, and with all the retrenchments to be carried into effect in October, we find that without a decided increase in our paying class, or some unforeseen good fortune, our next year's income will still fall short of our expenses by several thousand dollars. We are hoping for an increased class, but the small number
(some thirty) passed at the recent examinations is not exhilarating. The professors, however, seem to think that an unusually large proportion of old students will come back, and that the aggregate will not fall short of the class of 1878-79.

You will see, therefore, that while the Corporation may find it necessary to make a further reduction of the teaching force than has already been decided on, to bring the expenses within the income, they cannot hope, for the next session, to relax the plan of retrenchment adopted by them.

In this condition of affairs the subject that gives us most anxiety and concern is the future arrangement of the Mathematical Department, in which, as heretofore, only one full professor can be provided for. This has been frequently spoken of in the Committee on the School, but no proposition has been made or considered in regard to it; nor could there be, in the absence of definite knowledge respecting your health and your wishes. From accounts that have lately reached us we are led to hope that your general health is much improved, but we are quite uncertain as to what you may think of your physical ability to assume a professor’s work next autumn and of your inclination to undertake it, and it is on this subject that I am especially anxious to hear from you.

I am glad to be able to tell you that all the old debts against the shops have been paid and the gymnasium debt assumed by the Corporation, so as to relieve you entirely from all the pecuniary responsibilities which you so generously incurred for these improvements.

A public graduation, such as we have so often talked of, was held on the 29th of May. It was perfectly simple, without music or flowers, either of rhetoric or horticulture, but has been pronounced a great success, even by Eustis and Lovering, who were present through the whole.

Now, my dear friend, do write to me early, telling
me all about your health and your wishes, and believe me with unchanging interest,

Yours faithfully,

W. B. Rogers.

The following is of interest as showing Mr. Rogers's views concerning the voting of women for members of school boards:

TO MISS I. E. GRAY.

July 29, 1879.

DEAR MISS GRAY,—While I heartily desire that women should have their just influence in the direction of our public school education, and should therefore be glad to see educated and experienced women form a part of all our school committees, I fear that the interests of our schools would suffer from the passage of a law conferring upon all women the right to vote for members of school committees, were such a law to go into operation.

It seems to me that the great numerical force of the ignorant and superstitious class of women, wielded, even more completely than that of the corresponding class of men, by influences which are known to be adverse to a true unsectarian education, could not fail to carry into the government of the schools a number of representatives wholly unlike the liberal-minded and thoroughly trained women who of late years have done such admirable work, and thus there would be great danger of lower and less intellectual aims in the direction of our schools.

These considerations weigh so strongly on my mind that I feel constrained to decline signing the petition which you have so kindly left with me, much as I sympathize with you in the important educational objects which you have in view. Believe me, with great respect,

Yours very truly,

W. B. Rogers.
P. S. I have not spoken with any of the professors of the Institute on the subject, but will send the petition to-morrow for their own independent action.

The summer of 1879 was passed in Newport and the following winter in Boston, Mr. Rogers meantime urging forward with unabated energy and much success the endeavors to raise money for the Institute.

On January 3, 1880, Mr. Rogers declined an election to the presidency of the Appalachian Mountain Club.

TO SAMUEL H. SCUDDER.

117 MARLBOROUGH STREET, January 3, 1880.

DEAR MR. SCUDDER,—In reply to your letter in behalf of the Nominating Committee of the Appalachian Club offering me the presidency of the Club for the ensuing year, I beg you to say to the Committee that while I feel honoured by their preference, I am constrained to decline the nomination. Were I a younger man and not already loaded with more responsibilities than are perhaps proper to my years, it would give me very great pleasure to comply with their request, as well as in other ways to show the warm interest which I have always felt in the work of the Club.

Let me also express my gratitude to the Committee for their proposal to relieve me of detail work should I accept the office; but from long experience I have found that every such office entails responsibility, and this, even more than work, would be felt by me now.

With thanks for the very kind manner in which you have communicated the wishes of the Committee, believe me,

Yours faithfully,

WILLIAM B. ROGERS.

His views on the registration of medical practitioners are recorded in a letter to J. R. Chadwick, M. D.
TO DR. J. R. CHADWICK.

117 MARLBOROUGH STREET, February 25, 1880.

SIR,—As I believe that the protection of society from ignorant and reckless medical quacks is a legitimate subject for legislation, I should hail with great satisfaction the passage of such a law as the one now proposed, by which, as in many other communities, the health and lives, especially of the poor, should be guarded against one of the worst avoidable dangers to which they can be exposed.

W. B. ROGERS.

The following is typical of many letters which Mr. Rogers received from time to time regarding his public addresses.

FROM——.

Wednesday Night, March 10, 1880.

WILLIAM B. ROGERS, LL. D.:

Dear Sir,—Midnight has come, as usual, before my day’s work is finished; but I cannot go to bed without thanking you for the great treat I had in your lecture this afternoon.

My own studies for the last thirty years have been literary rather than scientific; but mountains are with me almost a passion, and whatever relates to them is a matter of intense interest.

Limited though my scientific knowledge is, I had no difficulty in following every sentence of the lecture, on account of the clearness with which everything was set forth, and the enthusiasm with which you led us on step by step.

You gave another proof to what I have often said, that the highest scientific teaching goes side by side with the noblest poetry; and I find that others of the audience had the same thought.

I trust you will not consider it an intrusion if I add that many eyes filled with tears at your touching allusion to your brother.
With the hope that you may be enabled for many years to inculcate the great lesson of thoroughness, which was so forcibly presented to-day, I remain, Yours very truly,

FROM THE SECRETARY OF THE COBDEN CLUB.

Reform Club, March 6, 1880.

Dear Sir,—I have the pleasure to inform you that you have been elected an Honorary Member of the Cobden Club, and the Committee desire me to express their hope that you will allow your name to be enrolled on our list. I am,

Faithfully yours,

Thomas Bayley Potter,
Honorary Secretary.

The presidency of the Boston Society of Natural History was now offered to Mr. Rogers. To the retiring President he wrote: —

Washington, April 17, 1880.

Dear Mr. Bouvé,—Your telegrams, followed by one from the Nominating Committee of the Natural History Society, were received yesterday. I hear with surprise and most sincere regret that you decline a re-election to the presidency of the Society, which position you have long filled with so much advantage to it and honour to the office. I should feel it an honour to occupy so important a position, and would not hesitate a moment to accept the flattering nomination if I were younger; but I am seeking now to be relieved of my cares and duties as the head of the Institute, and it would be unbecoming in me at the same time to assume other responsibilities. While, therefore, I gratefully acknowledge the kind partiality which has suggested my nomination to this honourable post, I feel constrained to decline to accept the invitation.
I know that it will be difficult to secure a continuance of such devoted and disinterested service as has marked your official connection with the Society, but I doubt not that if you still persist in your withdrawal the Society will find among its able and energetic members one on whom it can confidently rely for the wise management of its affairs. I am telegraphing to the committee my decision. Will you be so kind as to communicate to them my reasons above stated, with the request that they will kindly accept this statement in lieu of a letter to them, and believe me, dear Bouvé,

Most faithfully yours,

W. B. ROGERS.

FROM HIS BROTHER ROBERT.

PHILADELPHIA, Sunday, May 16, 1880.

MY DEAREST WILLIAM AND E., — We were delighted to receive on Friday your letter of Wednesday with the welcome news of William's resignation, about which we have had so much anxiety.

We presume it will take effect after the "Commencement," when it will rejoice my heart to see my dear William have some real rest, both in body and mind. Then, too, it is most gratifying to learn that the government contemplate endowing the Chair you speak of.

Altogether we are happy in this pleasant winding up of the great work. . . .

From the time when Mr. Rogers had consented to resume the presidency of the Institute it had been his intention to serve only until a suitable successor should be found. His choice soon rested upon General Francis A. Walker, Professor of Political Economy in Yale College, and at this time engaged in Washington as Superintendent of the Tenth Census.
117 Marlborough st.
Boston Jan 1 1887

Dear Prof. Luquiens,

I have great pleasure in announcing to you that by a recent vote of the Corporation of the Institute your position as the Head of the Department of the School has been advanced from that of Instructor to that of Assistant Professor in that Department, and further that in view of this change your salary shall be increased to $750 per annum.
I am making this communication to advise you of the high esteem entertained by the Corporation for your abilities and accomplishments as a teacher. I am informed that you have devoted yourself to the advancement of your Class in the Institute.

With most cordial good wishes, [Signature]

Very sincerely,

William B. Rogers

Prof. Jules Laguerre
TO GENERAL F. A. WALKER.

Newport, R. I., June 12, 1880.

Dear Professor Walker,—Since my conversation with you in Washington, some weeks since, I have conferred with members of the Corporation of the Institute of Technology on the subject of choosing a President for the Institute, and I have been authorized, in concert with the Committee on the School, to offer the presidency to the person whom we may consider to be best fitted by scholarly training, zeal and administrative ability, to carry forward the educational plans of the Institute.

I now write with the authority of the "Committee on the School" to offer the position to you, and I need not say, my dear Professor, how earnestly I desire that you will accept it.

Should it be our good fortune to have you with us, I can assure you and Mrs. Walker a hearty welcome in Boston.

In case of your favourable reply, be good enough to say at what time you would probably be free to enter upon the duties of the office. Believe me,

Yours faithfully,

William B. Rogers.

FROM GENERAL WALKER.

New Haven, July 5, 1880.

To William B. Rogers, LL. D., President, Massachusetts Institute of Technology, Boston:

Dear Dr. Rogers,—Your kind letter deserved and required an earlier answer, but, in truth, I had not expected that the project broached by you in our conversation in Washington would so soon reach an issue, and I found it well-nigh impossible, amid the whirl of the June examinations, and in the absence of my safest counsellor and best friend, to come to the decision of a matter so momentous to me and to my family.
I can now say that I confidently anticipate being so far advanced in my Census work as to be able to leave in the hands of a deputy whatever may remain undone at the beginning of the collegiate year 1881–82, and that I entertain no doubt that I should then, with great satisfaction, if it were still desired on your part, transfer myself and all my work to the Institute of Technology, with the single desire to devote my time and energies to its interests. All my thoughts of the position you so kindly propose are agreeable, and I see nothing in the future which I would prefer to do; but I do not feel able to make, so far ahead of the occasion, a final decision of the question, to which publicity should be given, or which would require to be communicated to my colleagues here. It is perhaps owing to the great nervous strain of the past three months that I feel somewhat less courage and self-confidence than usual, and find myself shrinking from dealing irreversibly at this moment with the question of my future. I am completely wrung out by my summer’s work at Washington, under the intense heat of this exceptional season, and feel as if it would take months to regain my tone.

Faithfully yours,

FRANCIS A. WALKER.

At home only for to-day.

Mr. Rogers, in acknowledging the foregoing, agreed that General Walker should take such time as might be necessary to reach a final decision. To this letter General Walker replied:

WASHINGTON, July 26, 1880.

PROFESSOR W. B. ROGERS, LL. D., Newport, R. I.:

Dear Dr. Rogers,—I thank you with all my heart for your very kind and generous letter. I dislike exceedingly to be in the attitude of receiving so much confidence and kindness, and yet withholding my decision on the question; but for the reasons stated in
my letter to you from New Haven, it seems to me impossible to give a conclusive answer. The time you so kindly allow me for making up a final decision will carry me past all my occasions for uncertainty. Meanwhile, as I stated, I have no other plan or thought for the future than to come to you on the termination of my present engagement.

With sincere respect,

Francis A. Walker.

The American Association for the Advancement of Science was to hold its annual meeting at this time in Boston. Mr. Rogers, as Chairman of the Local Committee, invited Governor Long to welcome the Association to the State.

TO HON. JOHN D. LONG, GOVERNOR OF MASSACHUSETTS.

Newport, July 29, 1880.

Dear Sir,—As Chairman of the Local Committee of the Boston meeting of the A. A. A. S., I write to request that you will honour us with your presence at the opening meeting on Wednesday, August 25, and that you will aid our initial proceedings by a word of welcome to the Association in behalf of the State.

I am aware of how many calls of a like kind are made on your ready eloquence, and should hesitate to make this request but for believing that you will be particularly interested in the objects and character of this meeting, and that it will not cost you any trouble to make one of those short speeches of yours that are so agreeable. I am expected to say a word or two for the committee of citizens, and Mayor Prince for the city; and these, with your remarks and the response from the President of the Association, will make up the brief preliminary to the regular scientific work of the Association.

Earnestly hoping that you will give us the pleasure of seeing and hearing you on this occasion, I remain,

Your obedient servant,

W. B. Rogers.
In the autumn of 1880 Mr. Rogers was again obliged to give most careful attention to his health; but as the Institute opened with excellent prospects and an increased attendance, this gradually improved.

FROM HON. JOHN EATON, U. S. COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR, BUREAU OF EDUCATION,
WASHINGTON, February 4, 1881.

WILLIAM B. ROGERS, LL. D., President, Massachusetts Institute of Technology, Boston, Mass.:

Dear Sir,—A thousand thanks for your note of the 1st inst. and the information accompanying.

I know that it is annoying to an overburdened man, who is busy with a great work, to stop and tell what he is doing; yet the position in our country of instruction, either on the side of art or industry, is such that it seems almost a necessity to the great work itself to tell to the public what is accomplished.

This comes in season to go into the report for the Senate, and also for the report to the Department of Education at Ontario, Canada, which I am just making up.

With great respect, your obedient servant,

JOHN EATON.

On February 22, 1881, Mr. Rogers, with others, spoke at the dedication of the new buildings of the Boston Latin and English High Schools.

On March 24 he presided over a meeting of the Society of Arts, and made an address on "Phosphorescence."

On May 20, General Walker was formally chosen by the Corporation as Mr. Rogers's successor, and the Faculty having been duly informed of the fact, replied through a committee as follows:—
PRESIDENT WILLIAM B. ROGERS:

Dear Sir,—The announcement in your note of Saturday, of the election of General Francis A. Walker to the presidency of the Institute, was received by the Faculty with a general expression of satisfaction.

We, the Committee, to whom this note was referred, beg leave to say that the Faculty appreciate the generous and self-sacrificing spirit in which you resumed the direction of the Institute three years ago, and have carried it safely through a critical period of its history. Very thankful that you have been able to continue at the head till prosperity has dawned upon us, we must admit the justice of your claim to be relieved from the duties of an office involving so much of care and labour, and acknowledge that it would be ungrateful to ask you to bear the burden longer.

While regretting that the need of rest is such as to impel you to withdraw, we are much gratified to learn that the choice for succession has fallen on a gentleman of high reputation and eminent ability, who can carry forward the Institute in accordance with its original design and its established character.

Although in coming years you may no longer be of us, we hope that you may long remain with us to rejoice with encouraging sympathy in the prosperity and advancement of this Institution, to whose establishment and extension you have freely devoted so many years of a well-spent life.

Respectfully yours,

JOHN M. ORDWAY,
ROBERT H. RICHARDS,
WILLIAM H. NILES,
Committee of the Faculty.

The graduating exercises of the Class of 1881 occurred in Huntington Hall on June 3. President
Rogers made the opening address, of which unfortunately the following newspaper account only is extant:—

"After referring to the simplicity and honesty of the graduating exercises, he said: 'We are a school of applied science,—that is, a school combining science and practical art. In art truth is the means towards an end; in science truth is the end; and yet, though there seems to be a distinction between them, we find there can be no distinction made. Every thread of art is entwined with the fibres of science. Art begins; science continues. In the whole history of human knowledge we find that science begins on simple art as its foundation, and art is extended by the investigations of science, and so on in alternate succession till the whole body of knowledge has been accomplished. Hence a school of science like ours must comprehend a large amount of practical work, as well as a large body of scientific study. The scientific man is one who is trained; he is the practical man of the world. The world-enforced distinction between the practical and scientific worker is utterly futile, and the whole experience of modern times has demonstrated its utter worthlessness. In order to be truly practical we must know the material with which we work, the implements which we use, the character and properties and forces of those materials, and the mechanical qualities and properties of them, too, and in knowing this we must be scientific. We maintain that in the school in which we are interested we are training men in a preëminent degree not only to be scientific, but to be practical, and to be practical largely because they are scientific. It is no small satisfaction that, in looking to my colleagues of the government of the Institute, my dear friends and companions, and to the members of its Faculty, and its corps of instructors, I point to these theses of to-day as illustrations and proofs of the nature of the
work on which our youth has been engaged, and of
the quality of the preparation. We are inviting you
to witness the simple ceremony of conferring the di-
ploma of Bachelor of Science on these worthy students.
They are all baccalaureates, to wear around their brows
in the academic fashion the enwreathed foliage and
berries which adorn them and dignify them as they
close this first period of their student's career. It
marks the growth and advancement of their four
years' study, and gives us some symbol at least of the
fruitage of that study in the future years. And as
baccalaureates we do not claim them as belonging to
any sex. The wreath of mingled leaf and fruit be-
longs to the brow that covers the brain, whether it be
that of man or of woman, which can achieve after a
series of continuous labours that amount of knowledge
which entitles it to this degree. This indeed is its
power and fame. Now, in this last session in which
it shall be my duty to preside directly over the inter-
est of this Institution, I shall introduce to you two
young ladies as graduates. In doing so, permit me to
say that there has been no sparing, there has been no
tittle of indulgence extended to them. There has been
no recognition whatever of differences between them
and the young gentlemen side by side with them in
these arduous works and study.
"And thus our degree stands fast, and those who
reach it must reach it through the same growth of
continual ascent and labour, without which labour
they never can obtain the desired summit of know-
ledge and practical skill. I will now ask you to listen
to the short abstracts which are to be read by the
gentlemen and ladies. There will be no poetry, nor
effusion of sentiment, nor ornamentation of rhetoric,
but solid work, which each of these graduates has per-
formed, and through which, as a last labour, they have
attained to the degree of Bachelor of Science of the
Massachusetts Institute of Technology.'
"The pupils then read short abstracts of their
theses, after which they received their diplomas from the hand of President Rogers.

"The Rev. James Freeman Clarke next gave a short and very practical talk to the graduates, dwelling quite emphatically upon their future relation with work-people, and the work they would each have to do in establishing a proper relation between employers and employed. He recommended the practical education as contrasted with that merely of books, although each had its advantages. He spoke of the nearness to Nature to which the technological student attains, and its influence on the moral side of human nature. President Rogers replied in a short address, which closed the exercises. "After these were over the President gave a reception at his residence."

FROM J. N. JONES.

ISLE OF WIGHT COUNTY, VA., July 1, 1881.

DEAR OLD PRECEPTOR AND FRIEND,—I, a few days ago, dined with my old schoolmate and your former pupil, Charles B. Hayden, of Smithfield. After dinner he was telling me of his visit to you last year, and what a delightful time he had with his loved old preceptor. I was delighted to hear him speak of you as he did, of your well-preserved life and cheerfulness. It carried me back to days of youth, when I was with you at old William and Mary, from whence I followed you to the University of Virginia. I then thought and have ever since retained the impression that I was one of your favourite boys. I remember well private conversations with you, your words of advice, with proffered assistance. . . . With gratitude and best wishes I subscribe myself your old pupil and friend,

JOE N. JONES.
TO J. N. JONES.

MORNINGSIDE, July 22, 1881.

... Your reference to former pupils and friends at William and Mary and the University recalls many dear scenes and faces to my remembrance. Of my old William and Mary pupils, Mr. Hayden and W. R. Galt, of Norfolk, are almost the only ones whom I have met for a very long time; but your own name and the names of Albert C. Jones, William G. Young, Samuel Wilson and George H. Crump, mentioned by you, have a grateful, familiar ring, and awaken many pleasant recollections of persons and incidents belonging to those dear old college days. I beg that when you have the opportunity you will remember me to them with the warm regards and kind wishes of their old preceptor.

I am glad to picture you as after your wanderings happily anchored in your early home, and especially as having among your neighbours your old classmate, Hayden, a friend of whose culture and intelligence and true-heartedness you and your community may well be proud. Please, when you meet him, give him my affectionate remembrances. . . .

I heartily wish that I may be able to attend the Yorktown Celebration, but the prospect of having such a pleasure is very slight. Yet whether I shall meet you and other old Virginia pupils and friends there, or elsewhere, or not again anywhere, the thought of them will always kindle a glow in the heart of

Your old friend and preceptor,

WILLIAM B. ROGERS.

FROM HENRY BROMFIELD ROGERS.

HÔTEL DES DEUX MONDES, AVENUE DE L'OPÉRA,
PARIS, July 7, 1881.

My dear Mr. Rogers,—Your letter of June 20, received here on the 4th inst., was truly welcome. As I read its lines I thought of the friendship and tender
regard which for a series of years you had been pleased to extend towards me, and especially of your attentions and sympathy under recent affliction, and my heart swelled with gratitude towards you at this new proof of your kindness. I am not willing to intrude too far upon your peculiar modesty of character, but you must allow me to say that your friendship, undeserved as it has been, has been and is one of the best joys of my life. For really to respect and esteem a human being for his own sake, to feel that goodness actually dwells within him, that his soul is pure as crystal, that his actions proceed from just and high motives, what is this but to experience the most rare and precious thing in this life of ours? I know nothing nobler or more desirable, and may I hope you may long permit me to enjoy it.

I have read with deep interest what you say about the Institute, and certainly rejoice with you at the prospect which seems to be opening before it in the increased number of pupils and the expectations entertained in regard to its proposed new President. The change, I trust, will be a great relief to you mentally, and the means of restoring and improving your bodily health, for which I have in the last few years again and again trembled. Still, I apprehend it cannot take place without some feelings of regret on your part. The Institute is your child, and you cannot part with it and say good-by without a pang. In this feeling I sympathize with you; it is natural, it is even necessary; but I beg you to remember that the public will always regard you as the sole originator and founder of this noble institution, its supporter and mainstay from the beginning; the one individual through whose unwearied zeal, perseverance, care, ability and wisdom it was brought into being, carried through the dangers and difficulties of its infancy and youth, and raised to its present position of prosperity and success. Believe me, my friend, our community will surely bear you in grateful remembrance; and if
your successor follows in your footsteps, it will at last, through its gifts and bequests, make this Institution which you have loved so well an honour and blessing to the Commonwealth. But you must not retire from all official connection with the government of the Institute. I beg of you not to think of it; give up all active work and responsibility, but not official connection; remain vice-president. Your name and influence are essential.

This awful catastrophe at Washington! it seems to have stirred the two hemispheres to their very depths, and in this regard may prove a blessing. God grant it may be so! God in mercy spare the President's life! . . .

Yours sincerely,

HENRY B. ROGERS.

The summer of 1881 was passed at Newport, in geological studies, with the anticipation of a total relief from responsibility in the autumn when General Walker was expected to assume the duties of the presidency of the Institute. But the assassination of President Garfield, and the uncertainties attending the accession of a new Executive, obliged General Walker to remain in Washington longer than he had intended. Mr. Rogers accordingly continued to act as the head of the Institute until General Walker's arrival in November.

On November 1, 1881, General Walker assumed his new duties, and on the 10th of the same month was formally introduced to the public by Mr. Rogers at a meeting of the Society of Arts. The following newspaper account of this meeting is of interest. Mr. Rogers said:—

"Ladies and gentlemen of the Society of Arts of the Institute of Technology,—I have this evening a very pleasant duty to perform, exceedingly grateful
to me personally in consideration of what we have to expect, and because I shall feel myself relieved of a sense of obligation which I have felt for some years past in connection with the presidency over the interests of this Society. You are all aware of some points in the history of the Society of Arts which endear it very much to all the old friends of the Institute of Technology, and which give it an influence and importance in their estimation far transcending what might be supposed to attend it as evidenced in the publicity or extent of the work, as a Society of Arts, which it has actually performed. It is now very nearly nineteen years since the Society of Arts held its first meeting in this city in humble rooms in Mercantile Hall on Summer Street. It was then the Institute of Technology. As yet there were no means for establishing a school such as has now attained success and importance. There were no funds, and there were comparatively few friends of the enterprise which had just been set on foot, and which had, to a certain extent, been sanctioned by the action of the Legislature. Only one year after the charter of incorporation had been granted, in the midst of the thunders of the civil war, the Society of Arts, the very first fruit of the Institute of Technology, was established in this city. Without capital, with only such brains as we might claim to possess, some half-dozen citizens of Boston assembled together to constitute the Institute of Technology in its active form, as then presented, and the only form of activity that it could assume was simply to collect persons together every week or two and hold lectures or meetings somewhat after the fashion of those that are now held by this Society; and in the records of the Society at that time always the statement was made, 'Meeting of the Institute of Technology as the Society of Arts.' But it was not till three years after this, in the month of February, that the School of Technology, which is the transcending and most obviously important element
of the Institute of Technology, was established in the same neighbourhood in Boston, to be transferred, in the succeeding year, into the ample accommodations and arrangements of this building.

"Such, then, was the history of the Society of Arts in its early stage; and although it has not prospered as many societies have prospered, yet it has steadily performed good work, as is evinced by the character of the records which it can exhibit. It might have prospered more rapidly and have attained to what might have been called magnificent proportions, relatively speaking, had it not abstained with conscientious care from all exhibitions which might have the taint of commercial recommendation. It has carefully and sedulously abstained from these, and hence to-day it maintains its pure reputation as an institution for the promotion of mechanical science and the useful arts without any reference whatsoever to the mercantile interests of any of the individuals representing the Corporation. This is something to be said to its credit, because those who have been with me in this matter well know how many have been the inducements, how frequent have been the temptations and seductions presented to deviate from this course of pure scientific and educational rectitude, and in no case has such a deviation, one hair's-breadth, been ever permitted. Now, gentlemen, we have attained a point in the growth of the Institute which seems to demand a corresponding expansion in this department of the Institute. It cannot be severed from the Institute of Technology under any circumstances. It is properly growing, and I trust its future growth will justify the hopes that have been entertained in the early part of its history.

The Institute was founded originally for a threefold purpose, — for the establishment of a Society of Arts, a Museum of Industrial Arts and a School of Industrial Science. That particular element in the original constitution or charter of this Institute which stands last in the enumerating is that which we all recognize as
vastly the most important; and yet this enumeration seems to indicate how much still remains for the friends of the Institute to do. The department of a Museum of Arts is to be established on a proper foundation. Great as our school has become in the eyes of those who are familiar with this class of institutions in this country and abroad, still it must be supplemented by a grand museum of practical art and the proper development of this Society of Arts, in order to give it that fulness and comprehensiveness which will correspond to its original plan.

"After this preliminary remark upon the history of the Institute, I now turn to the most important subject of this evening. I wish to introduce to the Society my successor as President of the Institute of Technology, and therefore President of the Society of Arts; and in making that introduction, personally, of President Francis A. Walker, I must say I do so in the fullest confidence, not only in his capacity for carrying out the hopes and purposes of this school, but of the hearty sympathy and earnest regard which he entertains for its past history and for its future development. I trust in him as I would trust in myself were I of his years and had I his experience in administrative work; and in saying this I say all that any man can say in reference to his successor. I commend him to you, knowing what are his sympathies and what are his capacities of usefulness; and I commend you to him, knowing you for these many years as my friends, personally, and as the friends of this Institute of Technology."

General Walker spoke as follows: —

"Ladies and gentlemen,—in assuming this chair I am deeply sensible of the honour of presiding over the Society of Arts as, indeed, of the privilege of attending its meetings and listening to its proceedings. In studying the published records of the Society during
the last two years I have been greatly impressed as well as gratified at the very wide range of subjects which has been covered by the papers presented here and by the discussions upon them. Academies and societies of arts and sciences are of two kinds: those for repose and those for work, and the catalogue of papers which have been presented to this Society shows that it belongs to the latter class. I cannot, I do not even presume to hope that I can, fill President Rogers's place here. Greatly as he must be missed in every department of the Institute, it is here most of all that his loss must be felt. A recognized Master in every department of physical science, and gifted with rare eloquence and powers of statement, it has been for many years his easy and pleasant task to give an appropriate and agreeable introduction to every paper offered to the Society, to join in the discussion of any topic, however abstruse, and to sum up the facts and arguments offered, in a thoroughly judicial spirit, and with the full advantage of the ripe results of modern researches. For myself, a student only in the department of political and social science, that office is denied. I cannot presume even to express an opinion concerning the majority of the topics which are likely to be brought forward for your consideration. I know, therefore, that the Society will feel painfully, and will long continue to feel painfully, the loss of a President who could both preside and lead, — a man fitted to instruct anybody, however learned, whose suggestions and briefest comments have always been an inspiration in the pursuit and discovery of truth, and who, as President of the National Academy, today illustrates and honours American science as no other man could.” . . .

Mr. Jacob Dresser offered the following resolution, which was seconded by Mr. Henry W. Fuller, and was adopted by a rising vote: —
"Resolved, that in view of the retirement of Professor William B. Rogers from the presidency of the Institute and consequently of this Society also, we desire to express and to record our high appreciation of his great services in originating and so largely sustaining, as he has, the exercises of the Society through these many years. We part from him with the deepest regret and sorrow, and assure him that he carries with him into his well-earned retirement our heartfelt affection and our warmest wishes for his continued life, health and happiness."

Professor William Ripley Nichols had for some months been unable to perform the duties of his professorship of chemistry, owing to the progress of a disease which finally ended his life in 1886. The following "New-Year's" letter from Professor Nichols gave great pleasure to Mr. Rogers.

January 1, 1882.

DEAR PROFESSOR ROGERS,—As you know, for some time I have not been a very useful member of society. In order, however, not to be absolutely idle, I conceived the plan of compiling a list of the "Contributions to Scientific and Periodical Literature" made by professors and alumni of the Institute of Technology. I have several times had such a project in mind, but have never before been situated so that I could consider it seriously.

An additional incentive to make such a compilation was the thought that the list might add, in some trifling degree, to the satisfaction which you must have in reviewing your connection with the Institute and in feeling that, while the burden of active duty is now removed, the vine of your own planting has already borne much fruit.

The favour with which my idea was received by professors and alumni has made the completion and publication of the list possible, and I did hope to
present you with a finished copy as a New Year’s surprise. This, however, could not be accomplished; but in order not to deprive myself of the anticipated pleasure, I take the liberty of presenting you with a New Year’s card in the shape of a complete set of “proofs” of the matter as it now stands. In the course of two or three weeks, I shall send you a copy of the pamphlet itself, which will be more complete and more orthodox in outside appearance; but the present issue has at least the merit of being unique.

With the hope that you may still for many years be permitted to watch the progress of the Institute, which owes so much to you, which, indeed, owes itself to you, I am,

Yours respectfully,

WILLIAM RIPLEY NICHOLS.

On January 19, 1882, the Alumni Association of the Institute held its annual meeting and passed resolutions of gratitude to Mr. Rogers “for his devotion to the interests of the Institute.” Mr. Rogers was present and introduced to the Alumni his successor, President Walker.

In answer to an appeal for subscriptions to provide the statue of Professor Benjamin Silliman which now stands in the Yale quadrangle, Mr. Rogers wrote:

TO PRESIDENT NOAH PORTER.

117 MARLBOROUGH STREET, BOSTON,
March 15, 1882.

DEAR SIR, — Your interesting letter of the 13th inst. was received yesterday.

I am glad to learn that a memorial statue in honour of the late Professor Silliman is contemplated. His services to the cause of science and in the interests of mankind were such and so long continued as to claim an enduring recognition, and I cannot doubt that the
wealth of the Alumni of your University and their veneration for the memory of their distinguished teacher will make it an easy task to secure the required amount.

As you invite contributions from others I shall have great pleasure in giving fifty dollars towards the object, and I wish that consistently with my means I could name a larger sum. Believe me,

Yours faithfully,

WILLIAM B. ROGERS.

The last meeting of the National Academy which Mr. Rogers attended was held in Washington in April, 1882.

After the meeting of the Academy Mr. and Mrs. Rogers once more made a brief visit to Virginia.

TO MAJOR J. HOTCHKISS.

LURAY INN, VIRGINIA, May 4, 1882.

MY DEAR MAJOR HOTCHKISS,—It has been a great disappointment to lose your companionship in our journeying, in spite of the great pleasure I have had in the geological opportunities afforded in the new sections through which I have passed.

The trip from Clifton Forge to the Cave was particularly interesting, and has made a strong impression. The visit to the Cave and the view from the neighbouring hills renewed delightfully old impressions, and the trip to-day to this place was most delightful. I have been able to go through most of the wonderful Cave, and feel grateful to the taste and enterprise that have brought the electric light so skilfully to illustrate its wonders.

We leave to-morrow morning for Washington, and thence in a day or two to Philadelphia and Boston.

In answer to an appeal from Professor James Hall, State Geologist of New York, for testimony as to the
practical value of geological surveys in general, and that of New York in particular, Mr. Rogers wrote: —

May, 1882.

To Hon. Addison P. Jones, Chairman, Senate Committee on Public Printing, Albany, N. Y.:

Dear Sir,—My sense of the great value of the admirable volumes of your State Geologist on the Palæontology of New York, thus far published, moves me to express the earnest wish that his later researches on this subject may be provided for, and that there may be no hindrance to the completion of work which has proved so useful to the State and honourable to American science.

It is not too much to say of Professor Hall’s labours in this department of Natural History that his volumes on the Palæontology of New York constitute the authority on the branches of American Palæontology to which they relate, and that they take rank with the very highest works on kindred subjects which have been published in Europe.

As I learn that Professor Hall has the materials for one or more additional volumes ready for the press, and as it would be difficult if not impossible to carry on this great work on which he has been so long engaged under any other supervision than his, it would seem an obvious waste of opportunity and a false economy to discontinue or even to further delay the prosecution and publication of his work to its proper completion.

The territory of New York includes one of the grandest and most complete geological records, and its interpretation under the direction of Professor Hall will bring enduring honour to the community by whose liberality his work has been carried thus far.

The following was one of the last letters of Mr. Rogers.
TO SENATOR H. L. DAWES.

Newport, May 27, 1882.

HON. H. L. DAWES:

Dear Sir,—I learn that a committee of which you are the chairman has been appointed by Congress to consider the subject of making some pecuniary provision for the relief of the widow and children of the late Superintendent of the Coast and Geodetic Survey. Having been familiar with Captain Patterson’s character and labours for many years, I cannot but feel a deep interest in this object. The devotion of Captain Patterson to the public service, both in connection with his required official duties and in other ways in which his advice and aid were of important value, was so faithful and unremitting, and his personal disinterestedness and official integrity were so conspicuous, that such a provision as is contemplated for his family would seem an appropriate recognition of his faithful public labours.

I think that I express the sense of men of science generally in saying that his administration of the interests of the great work of which he had charge was such as to maintain the high reputation for accuracy and completeness of method which it had already secured. Had he been less exclusive in his devotion to his duties, many of which were extra-official, as pointed out in the memorial presented by his friends to Congress, he might have left his family in more prosperous circumstances. I trust, therefore, that a generous regard to the memory of this faithful and accomplished officer will lead you to favour a suitable provision for his bereaved family.

Please accept my apologies for addressing you on this subject and believe me,

Yours truly,

WILLIAM B. ROGERS.