10 Papers, 1866

My dear Sir

I enclose my check for $3.000 in full for the course of evening instruction

Yours truly

J. A. Lowell & Co

Boston Jan 1. 1866

Prof Rogers
President
Mass Inst. Tech.

602

From Jno A Lowell
enclosing
Check for 3000 dolls
to Rev Jno H Eng.
Courses of Instr.

1. Tafft Place,
Jan 7. 1864

Dear Mr. Pettibone,

It is almost certain that I shall sail by Saturday's steamer for Liverpool. My brother's illness is such that I can only hope to find him living. Should my detention be delayed, to assist his wife, instead of sailing I shall return for R. I. & see you next Monday, when I should wish to have a meeting of the Committee & Post. to

Consider Mr. Ware's application.

I trust you will act for me during my absence, and I leave for you & Mr Cobb, Prof. Ware's letter relating to his request of leave of absence, & other particulars.

As regards my own opinion on the subject I beg to say that I heartily accede to his application for leave of absence & for the continuance of his full salary as he would be receiving if here. On condition that he will undertake without cost to the Institute to prepare Navigation & Nautical Astronomy, & what is of more importance as general Curator or President of the School as regards policy & discipline. It will perhaps be better except to act upon this or any other, but I am so much interested in having Prof. Ware as this seems a useful function, that I am quite willing to stand guarantee for a part of the moderate salary with which I believe he would be fully & satisfied.

furnish a substitute -- satisfactory to the Committee.

By such an arrangement I am satisfied that the Institution will gain important benefits for its development in its future development, ~~which~~ without being subjected to any additional cost.

Were here in Cambridge and funds for the equipment of the School at large I should go further & recommend the application of a suitable sum to aid Mr. Ware in his studies in the function of the Physiology of Instruction while abroad. ~~Hopes~~

I shall not be absent ~~from~~ Boston

More than six weeks.
Possibly I may be back
in June. I feel that
the Institute class is very
dear from me, but such
as those that are now
so sadly deserted from on the
quarter.
With Resident regards
to your lady & others of
the Cottage.
Yours truly
William B Rogers

John. D. Philbrick

P.S. I hope be in my relation the
valuable services of Prof. Osborne, as
assist. in Matt & Physics in as

1035

Boston Jany 8, 1866.

Prof. Rogers:

My Dear Sir,

When boys get out something which they think is new, they like to communicate it to their betters; and I, being an old boy, like to do the same. You may have devised the same thing or something better. At any rate, I send you the piccolo, & hope you will pardon the presumption.

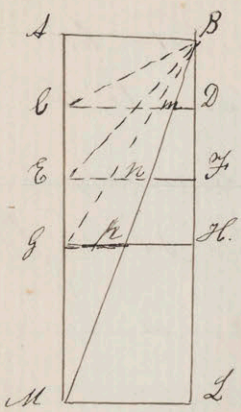
I trust that you have had good meetings of late, & that the school prospers gloriously, which I doubt not. Working every day continuously from 8 A.M. until 3 or 4 P.M. I have not been able to attend the last two meetings of the Institute; but, be assured that, after

my own School, which must & ought to command my best efforts, there is no institution in the world, in which I feel so deep an interest, & which I so ardently hope to see accomplish its proper work, as the Institute of Technology. — Don't wear yourself out just yet; able benefactors are scarce, and the world needs you many years in addition to this A. D.

With the highest respect & esteem,

Very truly,
Yours,
Thomas Sherwin

[encl] ? [Jan. 8, 1866]



A rectangle, AL, immersed in a liquid, the upper edge coinciding with the surface, vertically, to divide it by horizontal lines into parts such that the pressure on each shall be the same.

Draw the dividing lines + diagonals as in the diagram. Let the depths BD, BF, BH, &c. be designated by d, d', d'', &c. & the whole height by h and the pressure on the rectangles AD, AF, AH, &c by p, p', p'' &c. From the general rule for pressure, p = area BLD × d × w (w = weight of a cubic unit of the liquid); p' = BEF × d' × w; p'' = BGH × d'' × w, &c. But these triangles having a common base, are as their altitudes d, d', d'', &c.;

$p : p' : p'' \ldots = d^2 : d'^2 : d''^2, \ldots = BmD : BnF : BpH, \ldots$

Now to divide the rectangle AL as specified into n parts, we have

$1 : n = d^2 : h^2 \therefore d = \frac{h}{\sqrt{n}} = \frac{h}{n}\sqrt{n}$;

$2 : n = d'^2 : h^2 \therefore d' = \frac{h}{n}\sqrt{2n}$;

$3 : n = d''^2 : h^2 \therefore d'' = \frac{h}{n}\sqrt{3n}$; &c. Hence the series

$d = \frac{h}{n}\sqrt{n}$; $d' = \frac{h}{n}\sqrt{2n}$; $d'' = \frac{h}{n}\sqrt{3n}$; $d''' = \frac{h}{n}\sqrt{4n}$; $d'' = \frac{h}{n}\sqrt{5n}$; &c.

Therefore, to find the depth of any dividing line:

Multiply the number of parts by the number expressing the order of the dividing line from the top, extract the square root of the product, and multiply this root by the ratio of the whole height to the number of parts.

If the plane is inclined, the same measurements may be taken along the length of the plane; but if the

vertical depths are required, each formula must be multiplied by the sine of inclination of the plane to the horizon. This evident since the depth of the centre of gravity of each rectangle would be half the length into the sine of inclination i. p = area × $\frac{1}{2}$ d × w × sin θ (θ = inclination), or

$\frac{1}{2}$ area × d sin θ × w ∴ d becomes d sin θ, &c.

This proposition occupies 4½ octavo pages in "Jameson's Mechanics of Fluids."

Bureau of Navigation,
Navy Department.

Washington, 16th Jan., 1866.

Sir:

The Navy Department is about preparing a series of Special Instructions for the use of the Officers of the Navy, all of which are to be published in one volume.

The design of this work is to furnish, in a brief and didactic form, such information as will enable all travellers, and particularly Officers of the Navy, to profit by occasional and extraordinary opportunities for pursuing scientific investigation, and for making scientific collections, or rightly estimating the value of such as are already made. It is not intended, that the book shall be confined to a mere set of directions as to <u>what</u> and <u>how</u> to observe, but that the articles prepared shall include brief explanations

of

of the object and principles of the inquiries considered

The Bureau requests that you will be pleased to prepare for this work the chapter on Geology

In the distribution of the book it has been proposed, that the extent of this paper should be such as to make about 50 printed octavo pages; the Bureau, however, would not desire to restrict you to the number of pages indicated, but will be glad to avail itself of suggestions from you in respect thereto.

If you should do the Department the favor to accept this invitation, it will be prepared to pay for your contribution at the rate of five dollars for an estimated octavo page.

Very respectfully,
Your obt servant,
Thornton A. Jenkins
Chief of Bureau.

Prof Wm B. Rogers,
President of the Mass. Institute
of Technology,
Boston, Mass.

Copy
Cutter

41

Rooms of the Institute
16 Somerset St. Boston
Jany. 13. 1866.

To his Ex.
Gov. Bullock.

Dear Sir.

I have the honor of sending you herewith a copy of "The first annual catalogue of the Officers and Students, and Programme of the courses of Instruction of the School of the Mass. Inst. of Technology" and of transmitting a copy of the same to each of the Members of the General Court now in session.

The School was opened with a preliminary class in February last, and entered upon its first regular course of instruction early in October. Its plan of

of teaching is now fairly inaugurated, and the number & character of the pupils already attached to it would seem to give a presumption of its success.

Hitherto the Operations of the School have been carried on under great disadvantages, in hired apartments ill adapted to its purposes. But this inconvenience will not be felt much longer, as the new building will in a few weeks be in a condition to receive the School Classes, and we hope it is expected early in the Spring that the transfer of the Other Departments of the School & of all the Operations of the Institute to the commodious apartments provided for them within its walls.

The Meetings of "the Soc: of Arts of the Institute" held on the 1st & 3rd thursday of each Month of the Session, & of growing interest & value are well attended, & are its most important contributing agency.

The Communications, discussions relative to the practical arts & sciences, & the exhibition of useful inventions, and occupy the Meetings which are it is intended to contribute materially to the advancement of the Sciences & Arts & to the diffusion of general education.

I have the honor to subscribe myself

Your Ob't Serv't,

Collin B Rogers

Pres. Mass. Inst. Tech.

[mc1 4:54]

To Gov. Bullock

Jan. 13. 66

(Keep for Nat. Academy archives)

(X)

Albany Jan. 18th 1866

Dear Professor

I received the accompanying communication yesterday — from its place of issue I suppose it to have official sanction and authority — This is the first intimation I have had (except common hearsay) of the intention of increasing the number of Members. In the outset I may say that were I present I should raise no objection to the addition of Members; but to act upon this question and make the elections at the same Meeting seems to me objectionable, and scarcely fair to those who may for various reasons find it impossible to attend the Washington Meeting.

But are these elections proposed to be for full Memberships, or Associate Members? If to be full Members, a modification of the Act of incorporation will be required (unless already so modified) since the original Act limits the number to fifty.

If not to be full Memberships, then there are many objections — The organization is now looked upon by many as an invidious

tinction; and if any other than full members are elected, it strikes me that we make a double difficulty – Those elected are not flattered by the distinction, and those left out are more than ever hostile to the exclusiveness which has descended a step, but, not including them, places a greater distance than before between them and the original Academy. – Thus, if the movement is intended to prevent or obviate the necessity of a reorganization of the American Association, it appears to me that for this very reason it will prove a failure.

I have no hesitation in expressing myself in favor of a reasonable exclusiveness or – under other regulations – of admission without restriction as to numbers.

New duties devolving upon me here, would prevent me from going to Washington, even had my health been such as to warrant the journey at present.

I am very sincerely
yours &c
Sign'd James Hall.

Prof. Joseph Henry

Recd Jan 17. 1866

"The National Academy of Sciences will meet in the lecture room of Columbian College Law Building, on 5th Street between D & E at 11 A.M. on Wednesday 24th of January.

The subject of increase of Membership being before the Academy the Committee of Arrangements take this opportunity to urge members to attend in order that if that measure be adopted elections may be proceeded with, and a full summer meeting secured

Washington City, January 15th 1866.

Dear Sir,

I take the liberty of sending you a copy of a letter I have addressed to Mr Henry on the subject of increase of membership in the Academy – I have been unable to attend meetings and don't know perhaps the precise condition of affairs but on the receipt of this circular I thought some expression

I doubt from your view, that I cannot avoid the conclusion that we should at once revive the Association as one of the best means of advancing science and promoting communication among persons in pursuit of every description of investigation. I have been so much accustomed that I could not get this off to you until now and I fear you may have left for Washington.

I am very truly
Yours
James Hall

Prof. W. B. Rogers
Va

James Hall

(X)

1. Temple place
Boston July. 30. 1866

Dear Sir.

The presence of work connected with the Mechs in our Institute School has prevented an immediate reply to your favor. rec'd some days ago. As it was wholly out of my power to attend the meeting of the Nat. Ac: I felt that a prompt answer to your letter was less urgent.

I have not attended any of the meetings of the Academy since that at which it was organized, & therefore I presume my

membership has lapsed.

I have long felt the desirableness of reviving our old Am: Assoc.n of Science. Whatever it may have been its fault, or short comings, it was of great service, and its free & unexclusive spirit ought I think to be perpetuated.

James Hale
Albany Jan 30 –

38

(X)

New Bedford Feby 24
.66

My Dear Sir

In reply to your interesting note I feel myself obliged to reply to it in doubt whether I shall be able satisfactorily to answer to your suggestion as I assure you I could desire to do in view of my claims on me which I would gladly dispense with in favor of yours were I at liberty to do so — I can only therefore say I would appearance

hereafter

warrant — I should most gladly think of your wants and wishes —

Asking you to remember me to Mrs Rogers

I subscribe myself
your affd friend
James Arnold

Mr Arnold –

32

(8)

10 COMMONWEALTH AVENUE.

Dear Sir,

I have long known the merits of the Technological Institute and looked forward to the pleasure of doing some thing for it. This I shall not fail to do. And speak of it both I always do as in fact I have much done since I got your letter.

But a shower of little donations just now have rather nickled my exchequer and I will if you please send one to Boston for a while. I dare say

just as good milk bills be
wanted later as now—

Remind your mother that
the 22d is my birthday
and that I shall hope
for a notice I remain
from dear,

Yours very truly

J. G. Appleton

Sunday

18 Commonwealth Ave

For Thos. G. Appleton

March 21. 1866.

73

Columbia College,

PRESIDENT'S ROOM.

New York. Mar 26, 1866

My Dear Sir,

Your letter of the 24th is before me. There is but one chair to be filled in this institution. It is the chair of Geology and Palaeontology in the School of Mines.

What the professor will have mainly to teach in the School will be Structural, Chemical and Economic Geology. Palaeontology will be taught, in the regular course, less extensively, but as fully as the nature of the case will allow.

I was aware that you had given to Mr. Hunt a testimonial; but that circumstance will not, I presume, interfere with your expression of your opinions in regard to Mr. Newberry.

I am, With sincere regard
Your Obt & Ob Servt,

Prof. W. B. Rogers.

F. A. P. Barnard.

Barnard
Col: College

Public Library
Boston, 3 April 1866

My dear Sir,

I am happy to inform you that the Trustees of the Public Library have voted to extend to the students of the Massachusetts Institute of Technology all the privileges of the Public Library, during their connection with the Institute. On presenting certificates of membership they will be requested to sign the Register & will receive cards for procuring books. The usual hours for giving out cards are between 9 & 10, A.M. and 8 & 10, P.M.

Hoping that this privilege may prove acceptable & may add something to the usefulness of the admirable institution over which you preside with so much honor & success -

I remain, dear Sir
faithfully yours
C. C. Jewett
Secretary
of the Board of
Trustees

President Rogers
Massachusetts Institute
of Technology

From C. C. Jewett Esq
Sec. Pub. Lib.

Ap. 3 —

Answered Ap. 7.

532

from.
Earl Dufferin

264

1 Belgrave Square
April 14. 1866

Dear Prof. Rogers

I have to thank you for all the trouble you have taken in ordering the axes for me. I have deferred this letter that I might have the opportunity of seeing and testing them ~~axes~~ on my visit to Tortworth at the Easter vacation.

The axes are excellent

My only complaint is, that the vendors in their republican contempt for the muscular powers of an old world aristocrat – have sent me rather lighter tools than those which I should use. However they are all useful and good. and I am well pleased with my purchase

=

Our cattle plague is steadily diminishing. apparently in consequence of the rigorous measures wh have lately been adopted. I find that 90 per cent of all the animals attacked are now slaughtered forthwith: from the time

that this treatment commenced. The disease began to abate.

We are in the midst of a Reform Bill which – in spite of the opposition of "The Times" and the Conservative party – will in all probability be passed in the H. of Commons. What its fate may be after that – I cannot tell.

With best remembrances to Mrs Rogers,

I am
Yours very truly
Derby

Prof Rogers.

1185

Cambridge April 17, 1866

My dear Sir,

I will write to Admiral Davis, asking him to prepare for the Council a short notice of Admiral Dupeney — if you think it best — and I will ~~pre~~ prepare that you do think it best, if you do not take the trouble to reply immediately.

I will ask Admiral Davis to do this for the Council, presuming that you assent, and that you are the embodied Council.

I should not be able to do this work myself; being much occupied with my work on the Naut. Alm.

Very truly yours
Chauncey Wright

Professor Wm. B. Rogers

Chauncey Wright

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  2.25
    12
  ----
   450
 225
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 27.00
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To
Wm. B. Rogers

36 Studio Building Boston
April 24. 1866.

Dear Sir.

Allow me to take this means of bringing before you, and through you before the Committee of Instruction, some considerations in regard to the Department which you have done me the honor to place in my charge. I have already taken occasion to explain in general terms the spirit and method in which as it has seemed to me an Architectural School should be conducted, in a paper read before the Society of Arts in the early part of the winter, and since then printed. A chief portion of this I had previously brought to your notice through a letter addressed to Professor Runkle, nearly a year ago, when I was first approached in regard to the School. I shall hereafter recall this subject to your attention in presenting for your approbation the Articles of

the system thus sketched out. These details however have yet to be elaborated, and so to elaborate them as to make of this theoretical scheme a practicable working system, is the first duty of the Department. It is to the means necessary to this that I desire now to call your attention, and in so doing I by have to submit for your approval the course I would myself propose to pursue in carrying on this work of preparation.

These necessary means are, in short, a thorough study of the corresponding institutions on the other side of the water. It would be, as I have said, but an poor illustration of our methods of procedure if we attempted single-handed to work out the great variety of questions that must come up, while an almost identical problem is in course of solution in half-a-dozen cities of Europe. The field is new and we shall doubtless fall into new and original errors. We can at least save ourselves from the old ones."

But this work of observation and comparison cannot, of course, from the nature of the case, be pursued after the School is once underway. The study of foreign institutions must be pursued abroad, and by the same person who is to apply its result to our ~~use~~ here. ~~the~~ Even if it were possible to obtain the result by correspondence or by receiving service, the work to be done by the Department in the daily conduct of the school must be for many years too laborious and engrossing to leave time or attention to so difficult a study. If it is to be taken up at all it must be before this ~~Department~~ Course is actually underway. ~~(The effect of this [illegible] but it [illegible]) the [illegible] consequence [illegible] which is [illegible] [illegible] the [illegible] [illegible]~~ The apparent delay which this would make in the opening of the Department is I conceive of no consequence in an institution which is ~~to~~ founded for the future not for the present; it would disappoint no expect-

tations on the part of the public which cannot still be met, as I will presently explain, and would indeed if properly understood greatly add to the éclat of the Department and of the School of which it forms a part. It would show that we are in earnest in undertaking to afford the best things.

The collection of drawings models photographs casts and other necessary equipment of an Architectural School could best be made at the same time with this study of existing schools, and time spent in learning what can be had and in making judicious selections, would be well spent.

I may add that I consider a year spent in Europe absolutely indispensable to myself both on my own account and on account of the school. My professional studies are not complete until I have been abroad, and as when the school once begins

[4/24/1866]

It will be impossible for me to be absent, at least for a number of years. I must go now, or wait until my going will be of comparatively little service either to myself or you. I consider indeed that it is as necessary for the school as for myself that I should enjoy these opportunities of improvement. Without them I consider myself, as I said a year ago, entirely incompetent to the work you have put into my hands.

I should propose besides making myself familiar with the schools in question and with the local opinions held of them, to make the most of the opportunities I should find of learning from architects themselves the most approved methods of work and gaining from them also a most intelligent criticism of the received methods of instruction. I think that a tour among the architects would be something quite new, and as serviceable to the school as to myself. I should also propose to prepare accurate lists of the collections and apparatus need-

ed for my classes, so that they could at any time be sent for with the certainty of getting the right things, and of knowing their prices exactly. At the same time I should undoubtedly come across a great many things of interest and of a unique value, which if had at all must be had at once. It would be very much for the interest of the school accordingly if a portion of the fund intended for the equipment of this department could be put into my hands to be used in this way at my discretion.

It is in this way that I would propose to pursue that work of preparation which must in some way be completed before this ~~[illegible]~~ course can begin. I believe that it cannot be satisfactorily done in any other way. I have accordingly respectfully to suggest that leave of absence, in the service of the Institute, be granted to me during the whole of the next academic year.

[11/24/1866]

The Course of Building and Architecture would then be opened in the autumn of 1867, in connection with the instruction in materials and construction which will then first be given to the classes in Chemistry and Engineering. Applicants for admission will be classified according to their attainments, and young men proposing to take this Course will accordingly be recommended to qualify themselves for an advanced position by pursuing their scientific studies in the School, and obtaining in Architects offices as much knowledge and skill as they may. The relation which it is hoped to establish between the School and the offices, in which each shall supplement the other, may thus be inaugurated at once, and no one need be at a loss for suitable study through the year's delay in the organization of this department.

If you will lay this note before the Committee of Instruction, or such other body as have authority in the case, and obtain early action upon it, I shall be able at once to determine my course.

The care of the Mechanical and Freehand Drawing, including the care of all the graphical work and the superintendence of the drawing rooms, must in any case have to be put into the hands of a subordinate officer of the school. His nomination must I suppose come from me, as this work is under my care, and I should be able to indicate my nominee and explain to him the work before him, so that my absence would not be felt in any of the work going on in the school.

I am very truly yours

William T. Ware

810

59 St. Vincent Street
~~University of~~ Glasgow,
28th April 1866

My dear Sir,

Enclosed I beg leave to send you the answer I have received from Messrs Charles Griffin & Co., the publishers of my books on Engineering &c. If you wish for any further information I shall be glad to obtain it for you

Dear
Yours very faithfully
W. J. Macquorn Rankine

Professor W. B. Rogers LL.D

18

39 India Wharf
Boston. 31st May 1866.

Prof: W. B. Rogers
5 Joy Place

Dear Sir,

The rooms recently occupied by the Institute of Technology in Chauncy St have been left in a condition which it seems proper should be brought to your notice. Will it be convenient for you to meet Mr Langworthy & myself at an early day to examine the rooms? If you will designate the day & hour I will notify Mr Langworthy

of the same.

Very respectfully Yours
J. P. Mellody
Treasurer.

Melledge

British Association for the Advancement of Science,
London, 42 Rutland Gate, Knightsbridge.
April, 1866.

Sir,

We are directed by the British Association for the Advancement of Science to announce to you that the Thirty-sixth Meeting of the Association is appointed to be held at Nottingham on Wednesday the 22nd of August, 1866, under the Presidency of William Robert Grove Esqre M.A., D.C.L. F.R.S. and to express the earnest desire of the Members of the Association to be honoured by your presence on the occasion of this its first visit to Nottingham

The Officers of the Association hope to be supported on this as on many previous occasions by the personal assistance and written contributions of the Philosophers of other Countries; and they gladly undertake to make preparation for the convenient reception of those distant friends and Associates who may honour them by accepting this invitation and giving notice of their intention to be present at the Meeting.

We have the honour to be,
Sir
Your obedient Servants

W R Grove — President.
Francis Galton — General Secretary.
George Griffith — Assistant General Secretary.

To Professor W. B. Rogers,
Cambridge

Professor W. B. Rogers.

Cambridge
United States

BOSTON AM. PKT.
3
MAY
PAID

Private Letter

[Encl 4:54]

19 May 66

My dear Sir —

I send for you to look at a specimen of <u>con=</u>
<u>=glomerate</u> — from the bottom of the Emperor frigate —
It is quite heavy & shows a good deal of copper — there is charcoal also — It seems almost impossible that the mere copper sheathing could by any combination of fire, water, & sea shells, make so heavy a mass & it cannot but think — they must be the result of the fusion of a brass gun, or a mass of copper, which mixed with wood & became incrusted — yet how could it occur?

we know that shell do
adhere even to copper in
time & in brackish water.
At any rate it is curious
& will interest you as
geologists & new fossils.

I am
Yours truly
R B Forbes

P. S. Regards

36 Studio Building -

Boston. May 29. 1866 -

Dear Sir -

If, as I suppose I may expect, the Committee of Instruction accede to my request for a leave of absence in the service of the School, I should like to have you direct their attention to two points, both relating to the expenses of the Department.

I understand that the salaries of the officers of the School are contingent upon the organization of the Departments to which they belong. In the case of the other Departments this may be presumed to mean the commencement of instruction, this being a mark of work actually going on. But in the Department of Building and Architecture, there is, on account of the novelty of the undertaking, a great deal of work to be done before the School is in a condition to receive pupils, and this work is of a particularly difficult and responsible kind. The Department

must be had at work for a long time before instruction can be begun, and I do not suppose it was the intention of the Committee who reported the resolution in question, that this labor should go unrewarded. It is this work which I propose to pursue in great part abroad, where alone indeed a great part of it can be performed, and where I can have the freedom from other cares indispensable to its performance. There are other and private ends which I propose to compass at the same time, but I cannot afford from my private means the extra expense which the proper serving of the School would entail. I beg that you will bring this aspect of the subject to the notice of the proper authorities.

In regard to the expenses to be incurred in equipping the Department, I am of the opinion I expressed in a former note, that the chief part of the collections may be as well made bye and bye as now. I can obtain at once such information as will enable me to make out complete lists of articles to be desired, and these can be sent for from time to time as circumstances permit. I am also confirmed in the opinion I expressed that it is best to have a certain sum put at my disposition for immediate use, so that the School may profit by any specials opportunities I may enjoy; some friends of the Institute, whom I have consulted in regard to the probability of our obtaining from private collections of books or photographs contributions to our store, have suggested that it will not be easy to obtain such benefactions until a nucleus is formed. Set a beginning once be made, it has been said to me, ~~and~~ and people will hasten to add their offerings to the pile. There is no doubt a great deal of material which the owners would be glad to convey to our use, things which have outlasted their ~~original~~ owners' purpose, but which are perfectly adapted to ours, and which our collections, once begun, would attract towards it.

I beg to submit this consideration to the authorities of the School.

I should think that two or three thousand dollars would be sufficient for this purpose.

I am very truly yours

William T. Ware

Professor of Building and Architecture in the School of the Institute.

1. Temple place
May 29. 1864

My dear Doctor Boylston.

Mr. Lowe the Manufacturer of Edson's Hygrometer tells me that you are desirous of having my opinion as to the merits of the Instrument. This I cheerfully give, only regretting that the over Institute engagements allow me no time for more than a very brief notice of Mr. Edson's improvements. I need hardly add that, from taste as well as a sense of duty to the Institute, I carefully abstain from recommending the merchantable wares of any inventors however valuable I may think them, & that in the

present instance I speak to you as a man of Science, only of the Scientific value of the Instrument. . . . . .

Mr. Edson's Hygrometer, to which I think he has needlessly attached the new name of Hygrodeik is an improvement on the well known Wet-bulb Hygrometer which for the last twenty four or more years has been much used by Meteorologists & other Scientific Observers. Its indications are dependant on the fact that a thermometer with moistened bulb will assume a permanently lower temperature than a similar adjacent thermometer whose bulb is dry, & that the difference between the two will furnish a measure of the degree of dryness of the surrounding air.

This difference disappears when the air is at the point of saturation, as in that case evaporation from the wet bulb ceases. As however a given difference, say 10 degrees, at a high temperature of the air implies a nearer approach to saturation than the same difference implies at a lower temperature a formula has been devised which enables us from the observed temperature of the dry bulb & the difference of temp between the dry & wet bulbs to compute the relative humidity or degree of saturation of the air at the time & place of observation.

To the Agent, &c

of the Building of the Mass. Inst.
of Technology;

Mr. Lowell wishes to know what will be the rent, per year, of the Whole room above the Hall, properly partitioned, prepared with sinks, &c., with gas pipes of sufficient size carried to convenient places for the burners required by the School — including the warming of the whole during the cold weather.

Also, the rent of the middle portion alone, or middle & one side, (in case only so much be needed for his purposes), prepared as above.

Yr. obt Servt

B. R. Cotting

June 21st/66

Dr. B. E. Cotting
to the Agent of the Building
of the Mass. Inst. of Technology.
Dated June 21st. 1866.
Recd in Government
Meeting June 27/66
& referred to Committee
on Instruction to report
what action should be
taken thereon.

Roxbury, June 22/66

Dear Sir,

I forgot, in my note of yesterday to add and <u>care</u> — ie "rent & <u>care</u> of Room" — as it would create confusion, often, to have separate janitors, &c.

It will be desirable that the teachers & Curator have the same authority with & over the janitor as teachers & managers of the Tech^c Inst. have —

It will be required of the janitor to keep the rooms in proper order, attend to the lighting, & extinguishing the gas, & such other matters as custom regulates.

Please interline the words <u>& care</u> in my note of yesterday —

Very truly yr Obt Servt.

B. E. Cotting

M. D. Ross, Esq.

Dr. B. E. Cotting
to M. D. Rolfs.
Dated Roxbury June 22/66.
Read in Government
Meeting June 27th. 1866,
& referred to the Committee
on Distinction to report
what action should be taken
thereon.

July 6 1866

To the Chairman of the Committee of Instruction of the Mass. Institute of Technology

Sir;

At a meeting of the Faculty of the Institute held this day it was Voted that the Secretary be directed to communicate to the Committee of Instruction a schedule of the apparatus and furniture that will be absolutely necessary in each department of the School at the commencement of the next term Oct 1 1866.

I herewith enclose a memorandum, in ac-

Cordance with the above
vote

Respectfully

W. P. Atkinson
Sect of the Faculty

Commonwealth of Massachusetts.

In the year One Thousand Eight Hundred and Sixty-six.

Resolves

concerning the Universal Exposition at Paris.

Whereas, There is to be held in Paris under the auspices of the French Government, during the year eighteen hundred and sixty-seven, a "universal exposition of the agricultural, manufacturing and artistic productions of all nations;" and Whereas our general government has initiated measures to have the United States of America represented in that exposition; and Whereas we think it the duty of Massachusetts to cooperate with our general government, in order that the enterprise, ingenuity and skill, of the citizens of this commonwealth may be more fully exhibited on that occasion: Therefore,

Resolved, That the governor, by and with the advice and consent of the council, be and hereby is authorized to appoint a commissioner to attend said exposition, and co-operate with the commissioner accredited by our General Government to the Imperial Commission; and also as many agents as to His Excellency shall seem necessary to co-operate with the State Commissioner and any agents appointed by the General Government, in organizing and forwarding the movement in the United States, by furnishing to citizens of Massachusetts, desirous of exhibiting their industrial products at said exposition, the requisite information and facilities.

Resolved, That to carry into effect the provisions of the foregoing resolve, there be allowed and paid out of the treasury of of the Commonwealth such sums of money, not to exceed ten thousand dollars in all, as the governor and council shall deem necessary

House of Representatives, May 14, 1866.
Passed, James M. Stone, Speaker.

In Senate, May 16, 1866.
Passed, Joseph A. Pond, President.

May 18, 1866.
Approved, Alex. H. Bullock.

Secretary's Department,
Boston, July 6, 1866.

A true copy,
Oliver Warner.
Secretary of the Commonwealth

Entire

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Harvard College, July 18, 1866.

To
Professor William B. Rogers, LL.D.

My dear Sir

I take great pleasure in informing you that the University has this day conferred upon you the degree of Doctor of Laws, in recognition of the distinguished success with which you have pursued physical inquiries, and of the successful zeal with which you have served the cause of education.

With great respect
Very truly
Yours
Thomas Hill

The Diploma will be sent to you.

Prest. Hill
announcing the
degree of LL D conferred

[Mc 1 4:54]

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20 State St
Boston 27 July 1866

Dear Sir

In company with Judge Hoar and other gentlemen I have an interest in a cannel coal mine near Charleston West Virginia where we make coal oil, not very profitably.

The enclosed newspaper slip struck my eye a day or two ago and naturally interests me.

I should like very much to be put in the way to obtain reliable information

as to the experiments referred to.
but have no idea in what
direction to apply for
light. Can you aid me?
Of course in addition to the
results of the experiments I
should need to learn whether
any change in the structure
of a steam engine is required
to use oil as fuel.
I crave the liberty I take
in troubling you -
Otherwise
Very Respt Truly yours
Dwight Foster

Prof. Wm B. Rogers -

Dwight Foster

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New Haven, July 31. 1866.

My dear Professor

I was exceedingly grieved to hear of the death of your excellent brother. The announcement took me wholly by surprise; for I had always thought of him as in perfect health. We could not have said less in the Journal, and it is a gratification to know that you are pleased with the brief tribute to him. Through his labors, he has made an impress on the very foundations of Geological Science, and one that will remain to his honor through all time: (a share of which, I may add, is yours). I thank you

for your letter and for all it contains respecting your Brother.

The American Association, I am happy to say, is to commence again, and under good auspices. Fortunately, the President appointed for the Nashville meeting was F. A. P. Barnard; and he has decided, with others, that the Association ought to be revived, and has authorized the call. Of course he will be present. I hope you will be there to aid in the reorganization. I should be on hand if my health would allow of it. But the long railroad ride to Buffalo

would wear me out before reaching there. So, I shall have to lay aside, and be present only in spirit. Mrs Dana joins me in kind regards to Mrs Rogers.

Yours truly,

J. D. Dana

W. B. Rogers.

Your open letter and all it contains respecting your brother.

The Dunsinane Observatory I am happy to say, is to commence again, and under your management.

Instantly, the Beneficial appointed by the Perthshire Institution, and G. G. A. Cameron, and he has accepted, with other, that the Observatory ought to be renewed, and has contributed the cash. Of course he will be present. I hope you will be there to meet the Observing-Committee. It would be an honour if any Perth-shire worker should be at the first meeting made to Mr Wylie.

132 Vernon St
Boston
Aug 10 1866

My dear Sir

It seems an absurdity to write to Lunenburg while the chances are so enormously in favor of your being all the while en route for Temple Place. But on returning from Mt Desert I find

a letter from Dr. Kneeland in which he asks me to make formal application in his behalf to the Govt. of the Inst. Tech. for the position of secretary.

What I can at present do anything more or better than to inform you of this request I do not see. Hence this note!

I have, — and shall
continue to hold
until I can see
or hear from you,
several papers
(tabular view of forms
of bonds) for you
which were left
by Eliot when
he sailed.

I can find
neither head nor
tail to the Inst.
Mech. — in the absence
of so many of
its officers.

Somebody should be procured to represent us — and that as soon as possible.

With special regards to the Mrs. Rogers I am as ever yrs most truly

Frank H. Stover

Adopt.

Mass Inst of Technology
Boston Aug 29th 1866

Dear Mrs Rogers.

I take such paper as I have at hand to answer your welcome note of yesterday just recd. I am delighted to hear that our dear Prof. is getting on so well. The Adv I wrote about in my last announces the the time of the Examination &c, and also five courses of Instruction for the information of those likely to want special courses. I think the Prof had better see it, for he may think it best to separate the circular part of the Adv from the simple announcement of the Examination. Besides, if we announce these courses, which seems to me best, I think one or two should be added, and especially that on Geology & Mineralogy. I am over my hurry & can obey at ne any summons I may get from Sunny Hill. The gas pipes are going in at the same time, but not so as to affect the special details of each room. This needs more careful study, upon which we

are now at work. Mr Shedd is here with me nearly every day and Mr Walworth frequently.

The desks for the Chemical rooms, one in the Qualitative & three in the Quantative, are in hand & will be done in time. The piping of the Chemical floor is about done; the boilers are set and the floor for the engine laid. The cold air ducts will be in in a few days. In short we are doing all we can to expedite matters.

Hoping that the Prof's health may continue to improve I am with love to all

Yours truly
C. D. Runkle.

Boston Dec. 23. 1846.

To R. Morris Copeland Esq.

Dear Sir.

Having witnessed your experiments on the effects of atmospheric resistance with models of various shapes as exhibited last spring at a meeting of our Institute I have no hesitation in commending them to the careful consideration of scientific engineers & of all persons who are interested in R. Road transportation.

Then Esq. While commencing the results of ~~recently~~ the Pressure on the effect of Resistance Observations ~~made~~ made at various times by Bolton & other lumpers experimenting ~~& [illegible]~~ should be on a more ~~[illegible]~~ practical in the character, by them

These exp.ts while confirming the results of previous observations made at various times by Borlase and Mr Renfrew ~~respecting~~ investigations as to the effect of form on air-resistance ~~effects~~ ~~effect~~ ~~effect~~ ~~are~~ ~~especially~~ so especially valuable from the strictly practical character ~~of them~~.

Showing as they do the influence of the shaping of a R. Road train upon the resistance which it necessitates, & indicating the mod.n of form which with the same velocity may be expected to secure an important reduction of air-resistance & of course a corresponding economy of motive power.

Any information on the value of gem expts is such that I think it may give one who may have the opportunity of seeing & studying them will at once feel the importance of ~~having~~ subjecting ~~the results~~ your conclusions to an experimental test on the actual scale of R.R. operations.

This I presume can be done without considerable expense & must, in any event lead to important results.

Written by
W. B. Rogers

To R. M. Copeland

Commending his letters
on anti-resistance
to the election of
Engineers

Paris. ce 29 août 1864.

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Monsieur,

J'ai l'honneur de vous adresser ci-joints un introduction pour le Conservatoire des arts et métiers, avec une lettre. — M. Tresca, sous directeur, est en absence, quelqu'un pourrait peut-être vous satisfaire — la place le Conservatoire est au 5e Martin. 292.

J'y joins une carte pour M. Verdonnet, directeur de l'Ecole centrale, qui sera probablement absent, mais quelqu'un pourra vous donc vous donner un exemplaire du programme

de l'enseignement. L'Ecole est rue Thorigny. 7.

Je vais faire voir à l'Ecole des mines, afin d'obtenir le programme imprimé d'admission; ~~et je~~ vous l'adresserai, dès que je l'aurai. Le Directeur et les trois directeurs de cette Ecole sont absents. Si vous désirez néanmoins la visiter, veuillez vous adresser au Concierge — M. Barrier. ~~Dans~~ ma ~~carte~~ carte.

Veuillez agréer, Monsieur, l'expression de ma considération la plus distinguée.

A. Daubrée

Mon Ami Dormet, Directeur de l'Ecole Centrale des Arts et Manufactures.

A. Daubrée,

Ingénieur en Chef des Mines

Membre de l'Institut

Demeurant à M. le Directeur de l'Ecole ~~centrale~~

91, rue de Grenelle Saint Germain

Mon Verdonnet, Directeur de l'Ecole centrale des arts et manuf

A. Daubrée,

Ingénieur en Chef des Mines

Membre de l'Institut

demande à M. le Directeur de l'Ecole centrale

91, rue de Grenelle Saint Germain

Introduire M. W. B. Rogers, physicien
distingué des Etats Unis, qui désirerait
avoir le programme de l'enseignement de
l'Ecole centrale des arts & manufactures.

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Niagara Falls, Sept 3, '66.

My Dear Sir,

I am an applicant to the State Dep't for one of the Honorary (unpaid) commissionerships to the Paris Exposition of 1867.

Mr. Seward, at this place, yesterday, expressed to a friend of mine his willingness to appoint me; but said there was a great pressure upon him; and suggested that some written recommendations should be sent to him at Washington, to make a show of interest in my behalf. There are many of my friends to whom I might safely appeal, under these circumstances, and some to whom I am appealing, and whose support I feel will be valuable. Among these I count yourself as of

those whose voices will carry with them the highest weight.

I do not ask, nor is it necessary, that any very high commendation should be bestowed upon me in testimony of my fitness. It will be sufficient, I presume, to say, that in your opinion, my appointment would not be an unfit one, and that it would not be likely to bring any discredit on the country. If you can and will say so much as this, I shall esteem it a great favor.

I trust you are recovered from your temporary indisposition, which unfortunately deprived us of the pleasure of your presence at Buffalo. I am happy to say that the Assoc.n went on to the completion of its labors in perfect harmony, and that the session was uncommonly interesting.

I am, Very truly Yours,

F. A. P. Barnard.

Prof. W. B. Rogers.

P. S. I shall return to New York within the next week or two.

From
Prest. Barnard
Col. Coley

Ans. Sept. 20. 66

From H. L. Wayland, Esq. 60a

Providence R. I.

Nov 1 - 1866

President Robins.

Dear Sir

If I am not in error, you were at the Univ. of Va. when my late Father, Francis Wayland, & Mr L. Allen visited the Univ. in 1850; & it was at your house that they were entertained.

I venture to make an inquiry or two to aid me in preparing the part of his biography relating to the new system then introduced into Brown University.

May I ask, whence was the system then in use at the U. of V. introduced? Was it in accordance with Mr Jefferson's original plan? Was the method successful? Was it substantially the same introduced in Brown Univ. as recommended by my Father in his Report of 1850?

How far is the Institute of Technology a result or carrying out of the plan adopted in the U. of V.

Permit me to add that if you recall anything connected with his visit, of interest, or if you have any letters from him of any moment, I shd return them greatly favored by receiving them, the letters of course to be returned.

I beg leave to express my sense of the value of the work done by your admirable Institute. While very much of my past life has been invested in classical studies, I am painfully impressed with a sense of the inadequacy to the wants of the mind, or the demands of the ~~age~~ age

I remain, Sir,

Respectfully yours

H.L. Wayland

To this Dr Rogers replied:—

H. L. Wayland to
Ashby.
March 16. 1867

Wm B. Rogers. Esq.

New York.
Decr 13th 1866

Dear Sir.

Several years ago a coal & salt property called Warfield & lying on the Left Fork of Big Sandy River in Laurence County Kentucky & then belonging to the late Genl Geo B. Floyd of Virginia was inspected either by you or by your brother the late Mr Rogers Esq. in Edinburg. I am informed that this inspection was probably during your responsible life at the University of Virginia & while you were Geologist of that State. The widow of Genl Floyd & her friends are under the impression that either you or your brother made a report connected with this property which with other valuable records in connection with Warfield were burnt during the war. This report was one of great value to Mrs Floyd & through me she begs the favor of you to furnish her with a copy of this report if in your possession or to give to her your

Carrington, Chas. S. x

Kind assistance in obtaining such a copy - if the same be in existence If there was no written report - if you have any information as to this property - she believes that this information will be of great value to her. & she throws herself upon your kindness in this regard.

I shall be happy to receive a letter from you. directed to the care of Thos. L Brown. 95. Liberty Street - New York.

I have not the pleasure of your acquaintance but you are well known to me - not only through your reputation but also through many acquaintances of your own in Virginia & among others Samuel of the Professor. now at the University of Virginia. Hoping that you will pardon the liberty which I have taken in this letter I am.

With great respect.
Your Obt. Servt
Chas. S. Carrington

x A letter to
Prof. William Barton Rogers