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✓ Andrew Cornhill Parusky LL.D. F.R.S. <sup>March 2</sup> 1881

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✓ Pendock Rectory  
Worcestershire -  
England

Prof. Peter Guthrie Tait.  
Edinburgh.



Mass. Inst. Technology.

Prof. J. W. Ordway.

Boston March 4<sup>th</sup> 1881

Chairman of the faculty.

Dear Sir.

I hereby  
tender my resignation as "Instructor in  
Mechanical and Free Hand Drawing", to  
take effect - April 1<sup>st</sup> 1881.

To relieve any embarrassment  
that might arise by my action at this time,  
I would respectfully call your attention to  
the following suggestions; Mr. W. K. Burdick  
of the School of Mechanic Arts, having  
formerly been my Assistant, will  
probably be able to take my place if you  
so desire. Should he by so doing, require  
an Assistant for his present work, I can  
recommend to you for the position  
a Mr. Chas. L. Adams, of Savin Hill.  
I know him to be an expert draughtsman,  
both theoretic & practical, and one



who has also had five or six winters  
experience teaching in the Free Evening  
Drawing Schools of the City of Boston.

Very Respectfully Yours -  
H. N. Mudge -



H. N. Mudge Designer & Decorator

C. L. Adams.



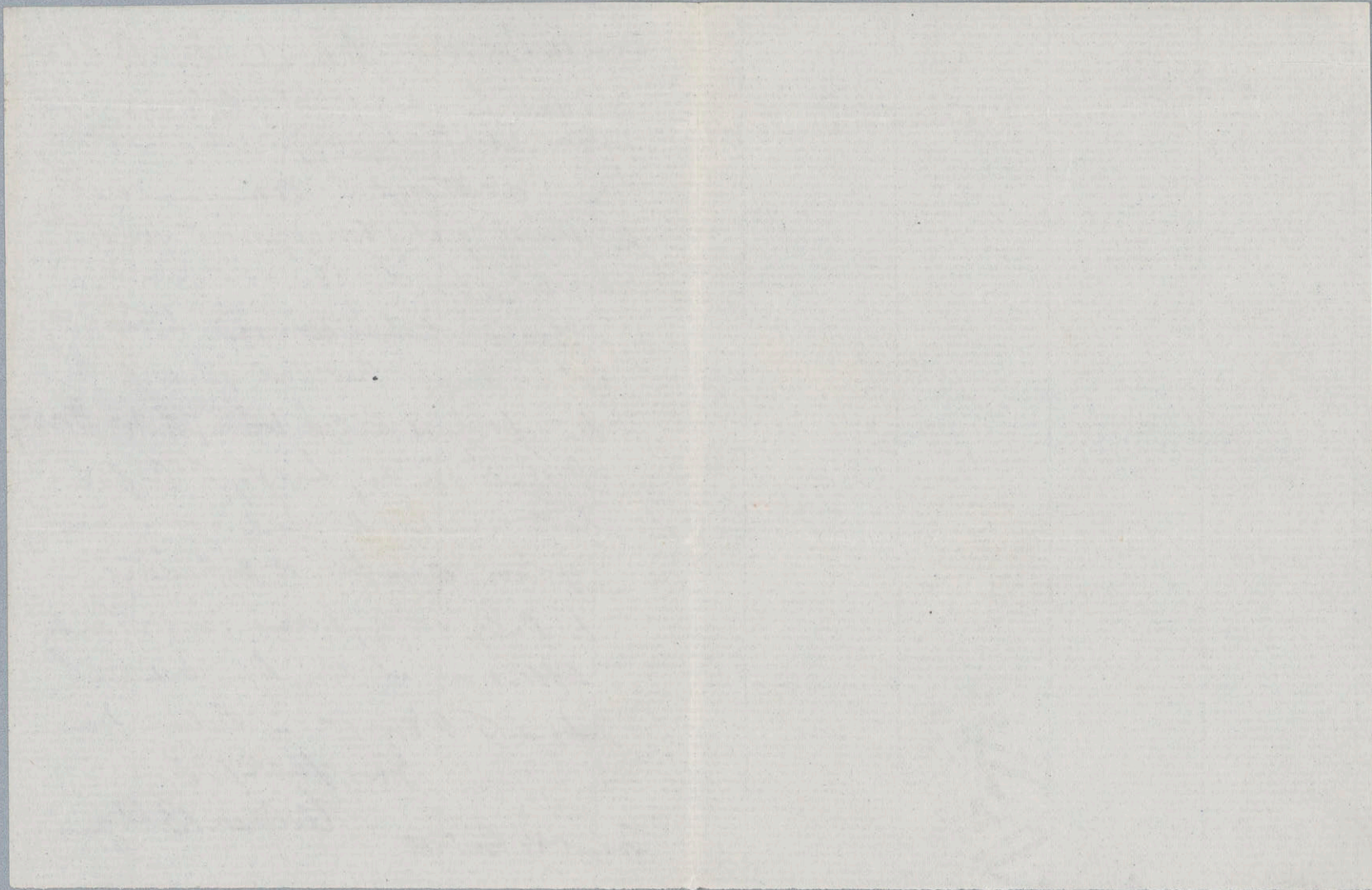
Dear Mr Bowditch March 8, 1851.

I shall be glad to talk with you on the  
subject referred to in your kind note of the 5<sup>th</sup> inst,  
the although I find it rather  
to think of any arrangement for the  
benefit of the L. Scientific School,  
should it be removed to Boston,  
which might not interfere with  
the scope & actual working of our Inst;  
I shall be <sup>very</sup> happy to confer  
with you on the subject of you  
if you can find it convenient  
to call at my house next Thursday  
afternoon at any hour between  
4 & 5 o'clock - Believe me  
yours faithfully,

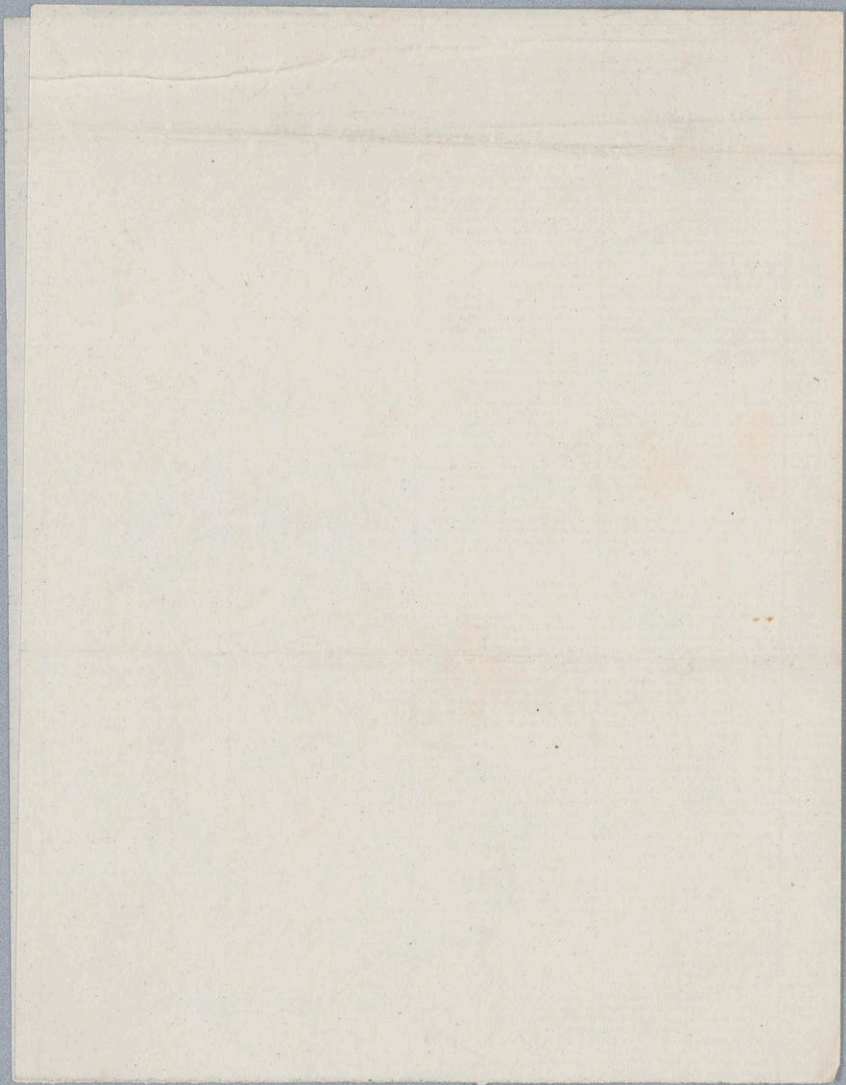
William B Rogers

Ernest W Bowditch











202 W. Rittenhouse Square.

Philadelphia, March 10th, 1881.

Dear Sir:

I shall be much obliged if you send me the amount of your annual tax for the National Academy of Sciences at your early convenience.

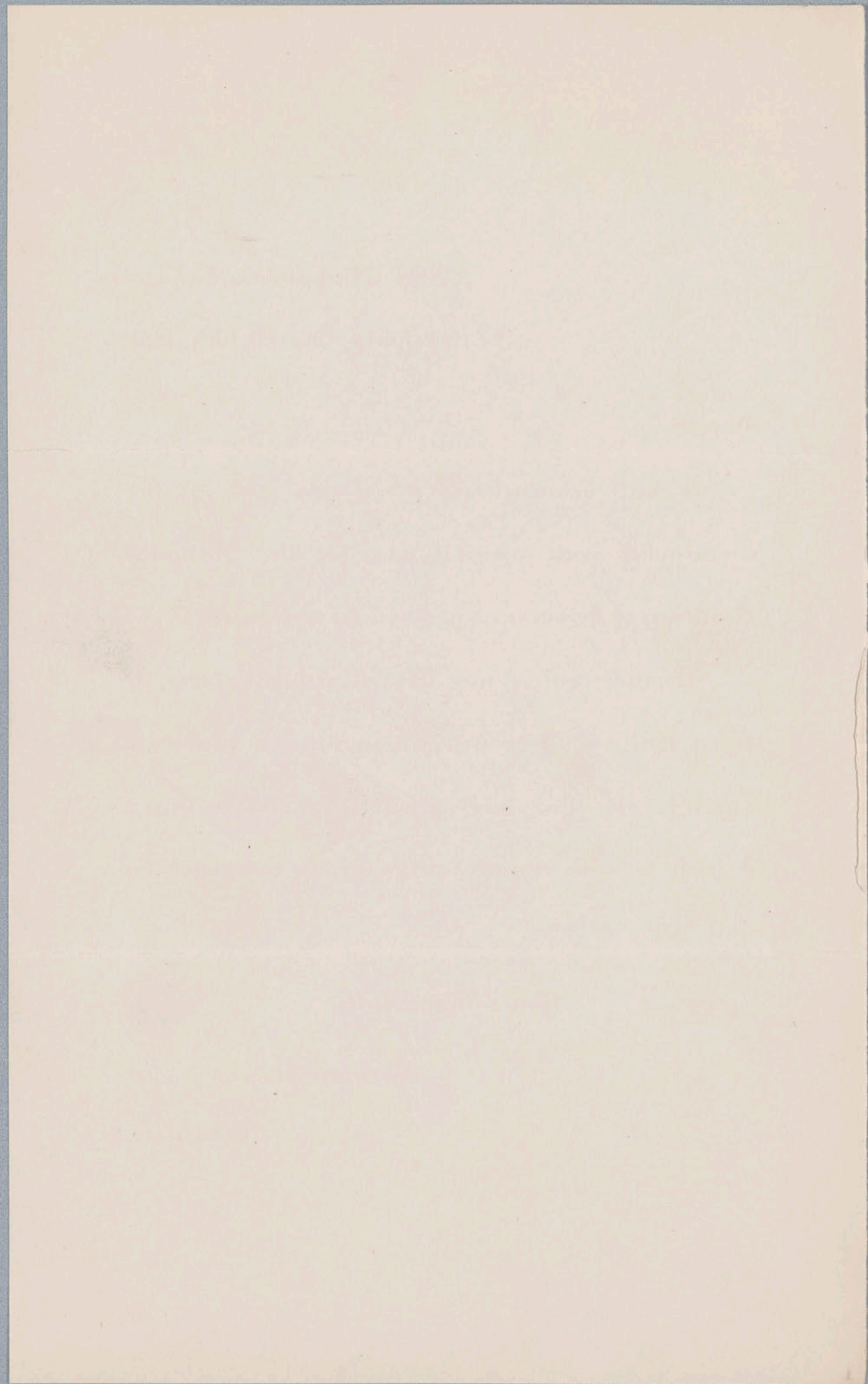
As the term of my Treasurership expires in April, 1881, and I do not purpose being a candidate again for the office, having held it for sixteen years, I wish to have my accounts entirely completed by that date.

Yours Respectfully,

Fairman Rogers,

Treasurer.





March 10, 1881.

X

Dear Mr. Slack

After conferring with others  
connected with the Institute who  
are also friends of your Assoc.,  
I feel that it will be best  
that our students ~~should~~ not be  
called upon for the  
service you have kindly  
proposed.

With best wishes for  
yourself & for the Assoc.,

I am your faithfully  
William Rogers

Chas. W. Slack Esq. / 5  
Pres. Mass. Ch. M. Soc.



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MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION.

OFFICE OF THE PRESIDENT,

Boston, *McW 10* 1881.

To Mr. President:—

It would be a pretty  
and graceful act to let  
your boys descend for our  
Assn. next Tuesday, on the oc-  
casion of laying our corner-  
stone — say half-an-hour  
only, from 1.45 to 2.15. The  
Association would appreciate the  
kindness you may well believe!

Truly yrs.,

Robt. Rogers.  $\frac{2}{4}$  *Chas. W. Black, Pres.*



WILSON ASSOCIATION

M. C. W. Slack.



*[Faint, mirrored handwriting, likely bleed-through from the reverse side of the page. The text is largely illegible due to fading and bleed-through.]*



ERNEST W. BOWDITCH,  
Topographical Engineer and Surveyor,  
60 DEVONSHIRE ST., BOSTON.

Boston, 3-5-81

Dear Sir,

Very likely you are aware that for this year I am one of the visiting committee for the Lawrence Scientific School, Bussey Institution & Arnold Arboretum. So far as the last two Institutions are concerned, you probably are not specially interested, but with the first one it may be quite different.

There have been no regular Committee meetings as yet, and may not be for some weeks, so that my writing you this is entirely spontaneous and unbeknown to the other members of the Committee. Would you be willing to tell me, confidentially, or otherwise, under what conditions you think the School might be revived without interfering with the Institute? Several of the Committee I think might, under certain conditions, favor removing to Boston; could this be done, do you think without being detrimental to the Institute; if its scope were somewhat altered at the same time?

If you do not care to write to me about it, or would prefer to talk it over a little, I will come down to the Institute or to your home, and we will go over the whole question. I wish to be entirely just, but I should be very sorry to be even the indirect means of causing the slightest injury to the School that enabled me to take the position I now have.

Prof. Dr. B. Rogers.

Very truly  
Ernest W. Bowditch.



March - 5

From Elizabeth Roswell  
to Lawrence St. School



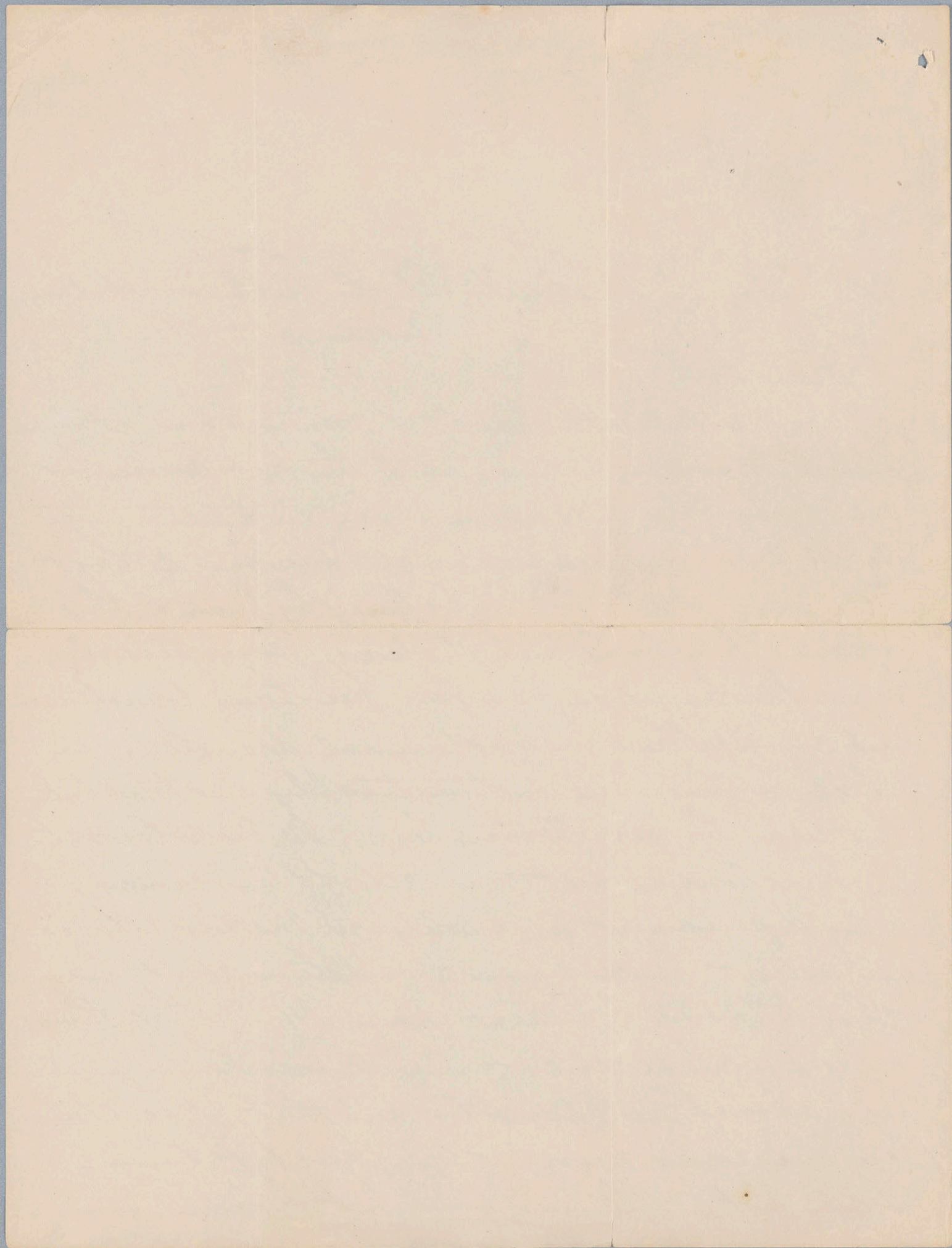
Trinity School, Tivoli-on-Hudson,  
March 10<sup>th</sup> 1841.

Dear Sir,

I take the liberty of writing to you at some length to make inquiry as to the best course for one of our boys to pursue. He intends to enter the M. S. T., was prepared in all our French last year, and will be fully prepared by June of this year. He is bright and studious, particularly so in Mathematics, is a fair free-hand draughtsman and very excellent in Mechanical draughting, in which he has been systematically instructed this year by our teacher here, M. Victor Prost.

He is however not very well off in money, being dependant on a widowed Mother, who is an artist, hence comes a question about his going to the M. S. T. next year. His Mother thinks he is under excellent influences here and has improved in character, and that if he stays here one year more it will benefit him. I am not at the head here, but I take care







[3/10/1881]

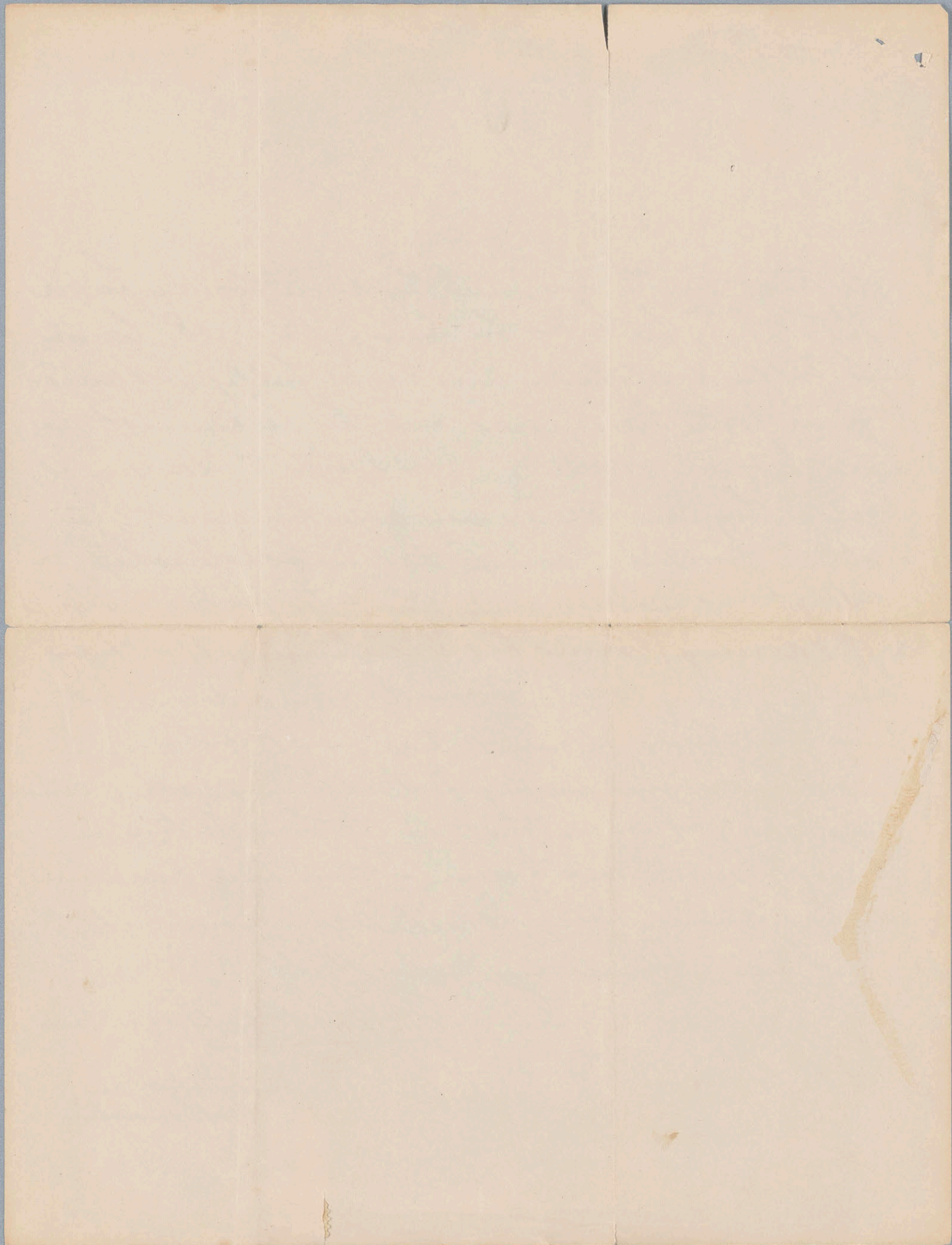
interest in the boy, and think the sooner he goes to the M. I. T., the better for him. He is 18, large and fully developed, also he is fully prepared to go on with his studies, and this he cannot do here, but only review. Now I wish to ask you if such a boy can receive any assistance at the Institute, provided of course that his scholarship be excellent, or in any case what his prospect should be of earning during his vacation, or of helping himself in any way? Again, do you, or do you not, think he should attempt to go on at once?

Pardon me for having intruded so much upon your time, but my interest in the boy's future has prompted me to write to you. I should have mentioned the boy's name, it is Israel Davy of Hydeville, Vt., I am,  
Yours very respectfully,  
Wm. B. Rogers (A.B. Harv.)

Wm. B. Rogers L.D.  
President of M. I. T.  
Boston, Mass.

Instructor in  
Mathematics.





X

Mass. Institute of Technology,

Boston, March 12 1881

President Rogers  
Dear Sir,

As the Committee on the School of Mechanic Arts have received no answer to the communication made some time ago to the Committee on the School of Industrial Science, it was voted at our last meeting to ask the Committee on the School, again, whether anything can be done in respect to an increase in the pay of the instructors in the School of Mechanic Arts.

These instructors are occasionally tempted by offers of higher pay in other places and we run the risk of losing them, to our very great inconvenience, unless we can pay them what good workmen are now



receiving elsewhere.

It is exceedingly difficult to find men who understand their trade and at the same time can give instruction to large classes. Our shops are going on very well now and it is to be hoped that the two permanent instructors may be retained. Were either of them to leave, it would be hard to fill the place with two new men. They have learned to teach and can therefore accomplish much more than any new instructor could be expected to do. There has been a decided gain from year to year in the amount of work done by the students and this is owing to the gradual development of the courses and of the instructors themselves. A change could not fail to prove detrimental to the interests of

the students and it would entail on the Committee, - that is the Chairman of the Committee, - a great additional amount of care and labor.

We cannot expect to retain instructors except by a reasonable amount of pay. Whatever our professors may do, we are not likely to find any instructors who will be willing to sacrifice themselves to sustain the school.

One of the instructors has just received an offer of ten dollars more per month than he is now receiving.

Respectfully yours,  
John M. Ordway  
Chairman of the  
Committee on the  
School of Mechanic Arts



from Prop. Ordway March 12, 1881



Mass. Institute of Technology  
Boston March 14<sup>th</sup> 1881

President W<sup>m</sup> B. Rogers

Dear Sir

In accordance with your suggestion I will put in writing the request I had the honor to make of you verbally a short time ago; that an assistant be provided for the department of Mechanics for the next school year.

This need I have seriously felt for a long time, and especially during the current year, and I have only refrained from asking for one thus far, on account of the poverty of the Institute, but now I do not see how I can possibly carry on the necessary work in the future, at all as it should be done, if aid is not provided.

The accompanying report explains what is now done in this department, and what immediate improvements are demanded.

In carrying on the instruction of the several classes (five or six in all) there is a large



amount of detail work, consisting of the making of computations and drawings, absolutely needed, as well as the examination of the problems handed in by the students, all of which might as well be done by an assistant as by myself. As matters now stand, a part of this work is left undone, a part is done rather hurriedly by me, and the remainder (by no means an insignificant amount) has to be done by the students themselves in order to prepare something to work upon; and this causes them a certain loss of time, for it is often of such a character as to give them no valuable information.

Besides this the part that I do myself uses up my time, and prevents me from writing a large amount of notes for the classes, which it is indispensable that I should write if we are to keep up with the times.

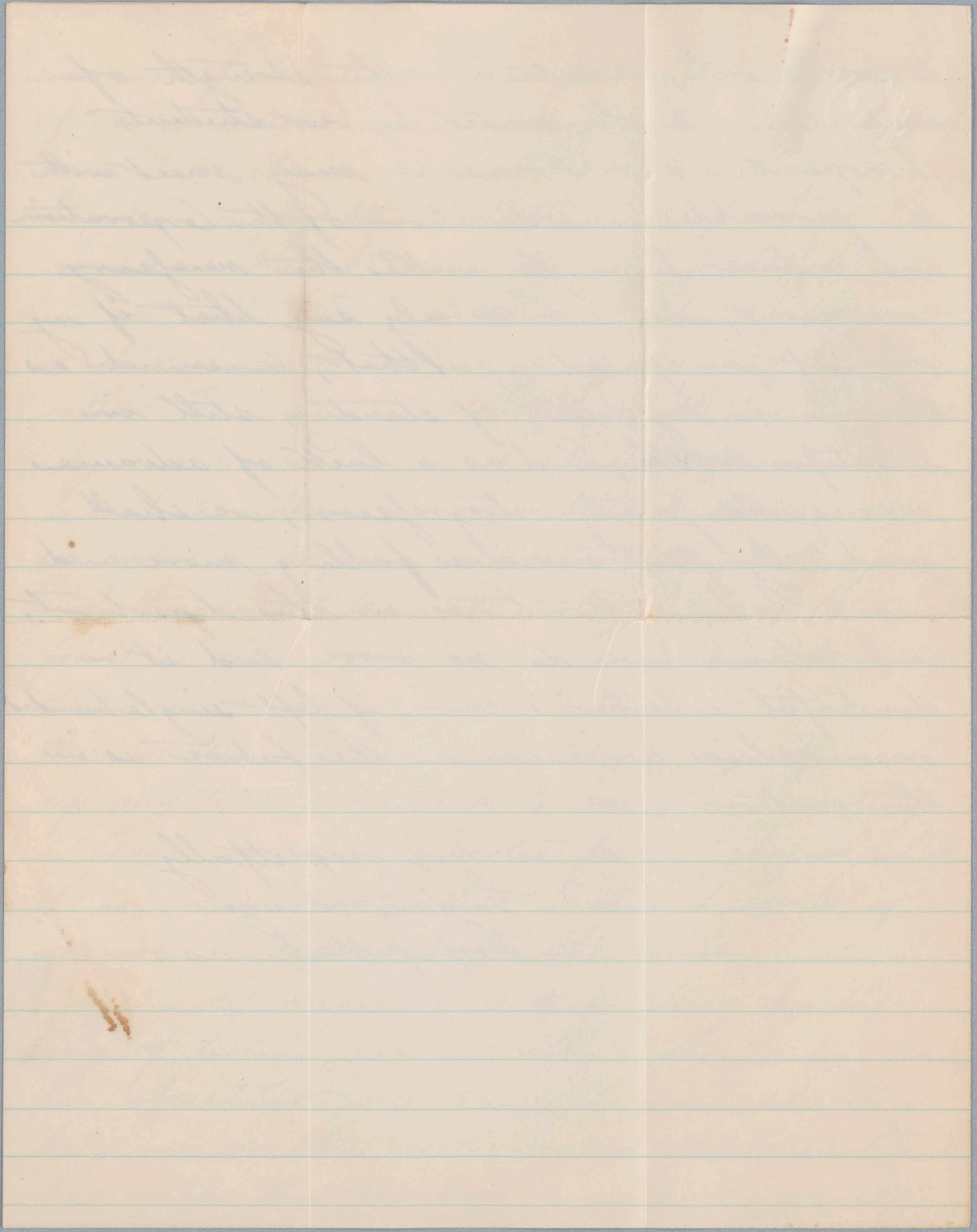
Again, if anything is to be done by the way of testing, and something should be done, an assistant will be indispensable to help me in this work; indeed this department has never thus far had a piece of apparatus

to work with, and testing the strength of materials is badly needed by our students.

I hope the above reasons may meet with the favorable consideration of the Corporation and induce them to make the necessary provision, and I can only say that if my request is refused I feel that, inasmuch as there is no possibility of standing still in scientific ~~work~~, and as a lack of advance means necessarily retrogression, we shall gradually find ourselves falling more and more behind the times in this department, as I certainly can do no more, and it is doubtful whether I can, if left single-handed, accomplish as much in the future as in the past.

Very respectfully  
Gaetano Lanza  
Prof of Mechanics.







Report of the Department of Mechanics.

[encl. 3/14/1881]

Mass. Institute of Technology  
Boston March 9<sup>th</sup> 1881

President W<sup>m</sup> B. Rogers

Dear Sir

I have the honor to submit a statement of the present condition and work of the department of Mechanics, together with some observations in regard to its proper scope in the near future, and its most pressing needs.

As to its past, and the various steps by which, from very small beginnings, it has, during the last nine years, developed into what it now is, I will not take the time to explain, but will proceed at once to its present condition. The instruction in Applied Mechanics is given to all the regular students of the third and fourth years of the courses in Civil, Mechanical, and Mining Engineering, Architecture and Physics. In the third year there is only one class, and although Rankine's Applied Mechanics is nominally the text book, it has, each year, been more and more displaced by my



2

own papyrograph notes, so that now the latter have almost entirely taken its place.

The instruction, of course, is not confined to recitations on the text, but includes also lectures, and the solution, by the students, of practical problems, both by computation and graphical construction.

The subjects studied in the third year are

1° Composition of forces (given wholly in notes).

In this connection the present attitude of the discussions now in progress as to what is force is recognized, and is explained to the students.

2° Determination of the stresses in roof and bridge trusses (given almost entirely in notes, a little of Rankine being used).

In roof trusses, both the methods of reciprocal polygons and of secondary trussing are used, the diagrams being drawn, and the stresses being computed from these diagrams. Time does not admit of giving the students much practice in purely graphical solutions, but this is made up in the fourth year.

In bridge trusses analytical methods are used.



2  
The first part of the paper is devoted to a general  
discussion of the various methods of determining  
the rate of reaction. It is shown that the rate  
of reaction is dependent upon the concentration  
of the reactants and the temperature of the  
system. The rate of reaction is also affected  
by the presence of a catalyst. The rate of  
reaction is increased by the presence of a  
catalyst. The rate of reaction is decreased  
by the presence of an inhibitor. The rate  
of reaction is also affected by the surface  
area of the reactants. The rate of reaction  
is increased by increasing the surface area  
of the reactants. The rate of reaction is  
decreased by decreasing the surface area  
of the reactants. The rate of reaction is  
also affected by the nature of the reactants.  
The rate of reaction is increased by the  
presence of a catalyst. The rate of reaction  
is decreased by the presence of an inhibitor.  
The rate of reaction is also affected by the  
surface area of the reactants. The rate of  
reaction is increased by increasing the surface  
area of the reactants. The rate of reaction  
is decreased by decreasing the surface area  
of the reactants. The rate of reaction is  
also affected by the nature of the reactants.



In both cases the effort is made to give the students, in as short a time as possible, the principle of the subjects, and to give these in such a way that the students may acquire a confidence in his own powers to determine the stresses in any ordinary roof or bridge truss that may be presented to him for solution even though he may not adopt the shortest or neatest solution in any particular case.

3° Rankine's discussion of Parallel Projections.

4° Centre of Gravity (given wholly in notes)

The general formulae are deduced, the usual theorems demonstrated, and a large number of examples worked out, especial attention being paid to the cross sections of beams, and to other cases that have the most direct bearing on practice.

5° The usual topics of the strength of materials are next discussed; viz: Tension rods, Riveting and Boiler shells. (given in notes and Rankine consulted); Strength of beams (given mainly in notes, a little of Rankine being used) In this connection care is taken to bring out prominently the assumptions on which the



ordinary theory depends, which are so often tacitly assumed as facts in the text books.

The amount of experimental proof that exists for each is also called attention to, as well as those points in regard to which our experimental knowledge is most defective. In this connection also a table of moments of inertia of cross sections is deduced which (I believe) includes almost all those that the student is likely to meet with in practice.

- 6° Deflection of beams (given mainly in notes but partly in Rankine)
- 7° Strength of columns & shafts (Rankine and Notes)
- 8° Thus far Rankine's discussion of the composition of stresses in the case of strips parallel to one plane has been given but I am now writing notes on the main principles of the theory of elasticity which I intend to substitute entirely for what has been heretofore given.

These notes will treat of (a) the composition and resolution of stresses and strains, and (b) the relations existing between the stresses and strains, (c) some practical applications



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of the theory. In this discussion the fact will <sup>5</sup>  
be taken into account that when a rod is  
subjected to a pull in the direction of its  
length there occurs, not merely an elongation  
of the rod in the direction of the pull, but also  
a contraction in directions at right angles  
to its length. This fact, which is not  
recognized in Rankine's Applied Mechanics is  
taken account of in the deductions of the  
most recent writers on the strength of  
materials, and alters many formulae  
heretofore differently given.

9° Whatever time remains is devoted to the  
main principles of theoretical Dynamics, and  
whatever part of this is left unfinished here  
is completed in the fourth year. This is  
given almost entirely in notes.

Of the notes given to the third year's  
class there are now over four hundred pages.



In the Fourth year's class the students of Civil, and Mechanical Engineering take Applied Mechanics throughout the year, while the Mining students drop it at the middle of the year, and the Architectural students soon after. Although I do occasionally teach two or more of these classes together they are for the greater part of the time taught in separate classes, and I will explain the course given to each class.

With the students of Civil Engineering I do use Rankine's Civil Engineering to some extent as a text book, but for the larger part of the instruction is given in the form of my own notes, of which I am now using with this class about 450 pages.

The subjects studied are as follows

- 1° Suspension bridges. A very meagre treatment mainly Rankine and a few notes. It ought to be more fully developed
- 2° Stability of Arches. In this connection I have taken pains to give all the principal theories viz: those of Poncelet, Scheffler, Villavecan and Rankine: the Catenary, Ellipse, Parabola and







the geostatic arch; and to make plain the points wherein they are all incomplete and indefinite. I also explain the assumptions that underlie each one, and how much, or rather how little experimental proof we have of these assumptions, and to indicate the information that we need to obtain from experiment. In this connection, a large number of pages of notes are given and the <sup>greater</sup> principal part of the instruction on this subject is treated in this way.

3° Continuous girders. A little instruction is given, partly in notes, and partly in Rankine and then, for lack of time to do better a series of problems suitable to develop the different cases are given, to be solved by the students.

4° The arched ribs; In this connection I have this year given the class (a) Rankine's discussion, (b) Weyrauch's Part of "Weyrauch's Theorie der Elastischen Bogenträger" (c) Weyrauch's computations of the bridge over the Douro in Portugal, <sup>an arch of 500 ft span and 160 ft rise</sup>. This is the best I can do under the circumstances but what is needed is that I should write a set of



8

notes on the subject, and prepare a set of problems systematically arranged to be worked out by the students and to illustrate all the different cases likely to arise in practice.

The difficulties with the present method are

(a) Rankine's discussion is ~~very~~ inaccurate, and unnecessarily so, as the introduction of the inaccuracies employed complicates instead of simplifying the equations, besides ~~this~~, it does not apply to ~~the~~ braced arches which are the very ones that are most generally used.

(b) I am now lending the class two copies of Weyrauch which I happen to have, and they have to pass it around among them. The discussion there, is in German, instead of English, and <sup>besides this</sup> I can see ways of shortening the deductions of the equations.

(c) The Douro bridge ought not to be the only ~~one~~ arch discussed, but a complete series should be calculated as stated above.

5<sup>th</sup> The pressure of earth against retaining walls



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[Encl. 3/14/1891]

is next-discussed, and the resistance of the retaining walls, and in addition to Rankine's theories on the subject as set forth in his book on Civil Engineering, I have given ~~in notes~~ the older theories viz: those of ~~Poncelet~~ Moseley and also Scheffler's criticisms on it.

6° Grasshof's discussion of the strength of flat plates and thick hollow cylinders is next-taken (given in notes entirely)

7° The remainder of the course is used up mainly in giving some of the chief principles of governors, flywheels &c, and the laws of friction, and a little hydraulics treated rather rapidly.

The course given to the students of Mechanical Engineering embraces

1° A study of the results of the experiments that have been made on the strength of wood, iron, and other materials used in construction. I have, thus far, used as a text book the first half of Anderson's Strength of Materials, and I have supplemented this by reading to them some extracts from Kirkaldy's



experiments. Nevertheless, Anderson's book is so very unsatisfactory being meagre, and containing many errors, that it will not do at all to use it any longer, and it is very necessary that I should compile a set of notes which should summarize the most important results of experiments made thus far. By so doing I can very much increase the amount of information they receive and save a considerable amount of time.

2° A little graphical work on bridges and some practical applications of the theory of elasticity computations for floors and shafts etc. arranged so as to complete whatever may have suffered from lack of time during the third year.

3° Boshop's theory of flat plates the strength of flat plates, and some other applications of the theory of elasticity, as thick hollow cylinders and pieces subjected to both twisting and bending.

4° Hydraulics - I am now using Cox's Weiskach as a text book, without any notes. Notes are badly needed here for several







[Encl. 3/14/1881]

reasons viz. The coefficients of efflux and the 11  
other constants which are determined by  
experiments refer to ~~experiments~~ ~~experiments~~ are deduced from  
experiments on small orifices and small  
heads of water. The students ought to have  
results for larger orifices also. Then again  
the subject of stream lines ought to be  
treated. Also the results of ~~more~~ recent  
experiments on the flow of water in  
large pipes; as well as other more recent and practical  
<sup>investigations.</sup>

5° Then follows a rather miscellaneous course  
giving the laws of friction and the main  
principles of the Flywheel Governor etc.  
As text books I have used partly Weisbach  
and partly Rankine, and also given  
practical problems, with verbal hints to  
their solution. A systematic set of notes  
written out would avoid probably save  
so much time as to enable this class to  
obtain some study of arches.

The students of Mining Engineering have the  
following course.

1° and 2° The same as Nos 1° and 2° above

3° I then give a rather promiscuous course



differing somewhat from No 5 of the previous course, and intended to be more specially adapted to those cases that are liable to arise in mining - I have managed thus far, as the classes have been small by lending books, ~~and~~ while I feel that I have done the best I can I am conscious of the fact that notes are badly needed.

The course given to the students of Architecture includes

- 1° and 2° Same as Nos. 1° and 2° above
- 3° Scheffler's deter mode of determining the stability of an arch; and in this connection practical cases are worked out <sup>graphically</sup> by the students
- 4° Scheffler's determination of the stability of a dome, and in this connection practical examples are worked out graphically by the students
- 5° A short discussion ~~on~~ the flow of gases, and ~~on~~ chimneys.





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The fourth year students in Physics, when there are any, usually keep with the students of Mechanical Engineering until they have partly finished hydraulics, and then they read Maxwell's theory of heat with me.

To sum up, the notes that I ought to prepare in order to give the course properly are as follows, viz:

For the third year. The notes which I am now writing on Theory of Elasticity, and also the notes on Proof & Bridge Trusses should be rewritten and arranged and extended, as they are at present rather scattering.

For the fourth year Civil Engineering students Notes on the arched ribs should be written; and a number of problems prepared and solved to illustrate the different cases. This would involve a very large amount of computation and graphical construction, much more than I can possibly do. Also, a better set of notes should be given on Suspension bridges.



For the fourth year Mechanical Engineering students Notes giving an account of the results of experiments, and the present state of our experimental knowledge ~~in~~ regard to the strength <sup>and properties</sup> of wood, iron, steel etc as materials of construction.

These also Notes on Hydraulics, giving the results of experiment on the coefficient of efflux of large orifices; the laws of flow of water in large pipes, the subject of stream lines etc. Also Notes on the <sup>other practical matters</sup> promiscuous course in Dynamics of machines systematizing it.

For the fourth year Mining students, besides the first of the above set - a complete set of notes somewhat different from the last of the above set, and more specially adapted to mining students should be prepared.

For the fourth year Students of Architecture Besides the first of the above set a initial set of problems on arches and domes should be prepared; This preparation would save the students a considerable





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amount of time now spent in determining what are the data and other questions whose solution does not give them any instruction.

Notes should also be prepared on the flow of gases and on chimneys.

Another all important matter of which I ought to speak is the following.

It is very important that the students of the Engineering courses should, before leaving the school have some instruction in testing the strength of materials, so that they may have a better understanding, not only of the mode in which the testing is to be performed, and the cautions necessary to observe, but also of the properties of the materials themselves as shown by the testing machine. Indeed almost every one of the Scientific Institutions of the country have at least one, and the absence of such a machine at the Institute is putting us at quite a disadvantage, not only by our being thus unable to give the students this part of their



instruction but also because there are a great number of questions which should find their answer at the solution at the Institute of Technology.

As an instance, we have, that one of the students who has put up such apparatus merely as he could erect in the Physical Laboratory, and carried on a series of experiments on the deflection of beams on such a scale as he could test with his apparatus, has apparently obtained some results of such importance that they ought to be ~~rep~~ tested with on a larger scale and more thoroughly to ascertain their truth and their extent.

As another instance a problem suggested by a member of the ~~the~~ ~~Corporation~~ led to the making of some computations by means of which it appears that probably a large saving can be made in the cost of beams for warehouse floors.

Then again Col Proset the director of the Arsenal at Turin states as the results of his experiments certain laws in regard







to the stretch of iron rods under tension, which should be confirmed or disproved by other experiments.

These are merely questions that come to my mind at the present moment, but the number of such questions that we ought to try to solve is immense, and indeed the solution of any one is likely to suggest a number of others.

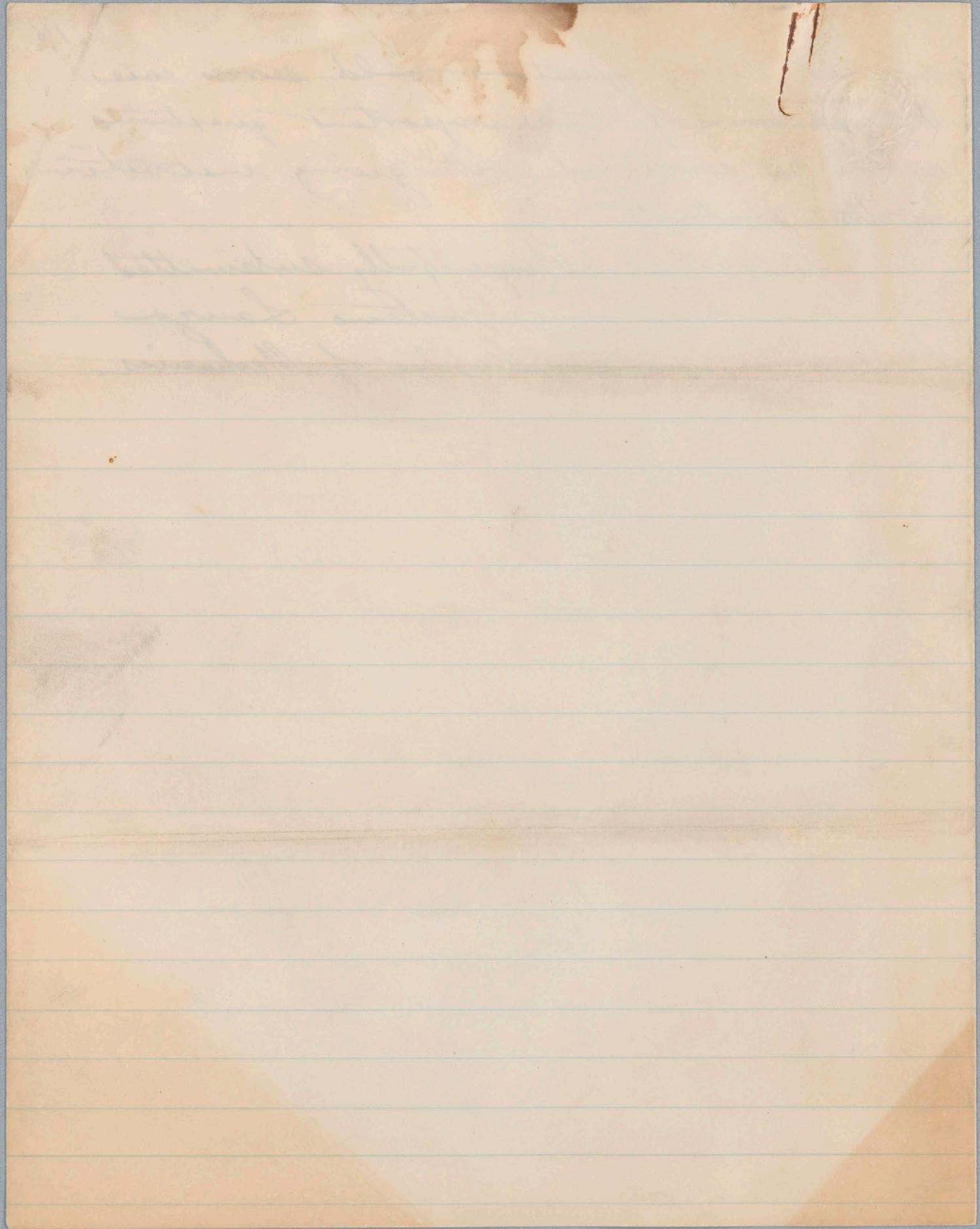
With so many notes which I ought to write, and which I cannot on account of ~~the~~ my time being wholly taken up by, 1<sup>o</sup> my lectures which I remember during a part of the year eighteen; and 2<sup>o</sup> by a large amount of detail work which might as well be done by an assistant as by me and which I now find it impossible to do as it should be done, it would be impossible for me even if we had a machine, to find the time to do any thing with it. But if I can be relieved from this detail work, I shall certainly endeavour to undertake with the students whatever work I can in this direction. Indeed I believe that



in a great many questions could serve cases,  
the ~~study~~ <sup>investigation</sup> of these important questions  
could be combined with giving instruction  
to the students.

Respectfully submitted  
Gaetano Lauza  
Professor of Mechanics.





*[Faint, illegible handwriting in cursive script, possibly bleed-through from the reverse side of the page.]*

*[Faint, illegible handwriting in cursive script, possibly bleed-through from the reverse side of the page.]*



Meeting of Comm: on School - March 15 - 1881  
Present Carson, Cummings & S. S. Philbrick & P. P. P.

1. ~~Further additions to No. Students since last meeting~~  
raising the total list to 356?
2. Mr. Mudge's Letter of Resign. - asks to allow time  
to resign, as requested, his withdrawal to take effect April 1<sup>st</sup>
3. Authorize the employment of Mr. C. L. Adams <sup>of Linn. Hill.</sup> as  
assist' in Drawing, for the remainder of the term, commencing  
from 15 or 7 weeks after Apr. 1 - at compensation of  
\$25 per week - (Show specimen of his Skill.)
4. As Mr. Burrison's duties & responsibilities <sup>after Apr. 1</sup> will be the  
same as Mr. Mudge has been - asks that he be allowed  
for that term compensation at the rate of 900 dollars instead  
of 800 as per rec<sup>d</sup>. - By the arrangement the expense  
of this dep<sup>t</sup> for the remainder of the Session will be a trifle less  
than would have been with Mr. Mudge remaining.
- 5 - Comm: on, for year's Slack & P. P. P. response, See letter  
in pocket adjacent  
*which suggests Mr. Mudge's resignation as desired etc. on May 25th 1881*
- 6 - Speak of Application of Lieut. Brant & Lieut.  
Homer for post of Military Instructor <sup>See copy of report a passing app: on</sup> - I can learn from  
Secy of War if a military officer will on our request be ordered to the Post
7. Mention subject of E. Bowditch's Letter, & read my  
response. I am to have an interview with E. B.
8. Letter from Comm: on Mechanics asking that the pay  
of Two of the Teachers be increased. (Old way's letter.) Present  
pay 75 per month \$3 per day for 25 work days. Could be raised at all  
to 3.25 or 3.50. Referred to the Sub-committee consisting  
of S. S. Philbrick & Mr. Carson. Agreed to raise the Sal. to 100 per month



9. Application of Geo. H. Snow to have the sum W. K. Snow -

(a regular student of 3<sup>rd</sup> year in Res. and Study) allowed

the benefit of a Scholarship of \$125. He has already paid  
\$125. Agreed to allow the abatement for second half of the term of  
the fall on both years then with W. Snow.

10. Shall any thing be done at present in regard to contributing

materials from the School to either or both of the  
expositions of Mech. Arts & Manufactures to be  
held next August - W. Cobb, Chairman of the Com.

on Museum. thinks we should wait until we are

apprehended - Pollock will say more

11. Application of Chap. of St. for land to use for  
Linnæus Terrain, the space between the Gymnasium &

the Shops buildings. Reported the Com. on

the grounds. Pollock, Pop, Flint & Atkinson



X

117 Marlborough St.  
Boston March 19. 1881

Dear Mr Mudge

The Comm: of Instruction  
of the Institute, at a meeting held  
on the 16<sup>th</sup> inst., voted that your  
resignation, to take effect on the  
first of April next, be agreed  
to and accepted.

In communicating this  
action of the Comm: I wish to <sup>express</sup>  
~~express~~ <sup>regret at losing your services</sup> ~~express~~ <sup>to you</sup>  
(from ~~city~~ <sup>city</sup> ~~of~~ <sup>of</sup> ~~the~~ <sup>the</sup> ~~institute~~ <sup>institute</sup> ~~and~~ <sup>and</sup> ~~be~~ <sup>be</sup> ~~lieve~~ <sup>lieve</sup> ~~you~~ <sup>you</sup> ~~of~~ <sup>of</sup> ~~the~~ <sup>the</sup> ~~institute~~ <sup>institute</sup>)  
faithfulness with which for many  
years you have discharged your  
duties as ~~an~~ <sup>an</sup> Instructor, <sup>with the best</sup> and the  
earnest wish that your new  
career may bring you the fullest  
measure of success & happiness.  
Yours faithfully  
William B Rogers.

Mr. Henry N Mudge



To Henry W. Munger  
March. 1896

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TENTH CENSUS  
of the  
UNITED STATES.

[7-463.]

Department of the Interior,

CENSUS OFFICE.

*Brookline, Mass., March 19, 1881.*

DEAR SIR: It has been necessary for the investigation into the Forest Wealth of the United States, undertaken in connection with the Tenth Census, to make large collections of the wood of all indigenous North American Trees. I have had such portions of these collections as have not been used up, in the experiments made with the view of determining the comparative value of our woods, worked into museum sets, which I am instructed by the Superintendent of Census to distribute among the Agricultural Colleges and Technical Schools of the United States established by the acts of 1863-'64, and among other institutions of learning in this country and Europe. These sets are generally quite full, and contain a large number of rare and little-known species. The specimens have been carefully prepared; they are six inches long, but vary somewhat in size; generally, but not always, they show the bark, sap, and heart-wood of the tree, and are admirably adapted to illustrate the characters of North American woods.

Recipients of these sets will be expected to pay the cost of packing-cases and transportation from Brookline.

Should you desire to receive one of these sets for the establishment over which you preside, you are requested to inform me of the fact at your early convenience, and instruct me in what manner you desire to have them sent to you.

The sets will be ready for distribution during the month of April.

Yours, very truly,

C. S. SARGENT,

*Special Agent Tenth Census*



Campy's

500 Shen.

for Clark R. Messer

\* Alfred Fairbank.

Arthur Hotel.

Com. Post:



1901 J  
Washington D.C.  
March 22, 1881

Prof. W. B. Rogers

My dear Sir

Circulars for the  
upcoming meeting, for the  
Academy of Sciences will  
be issued tomorrow. An  
unlucky accident prevented  
what delayed them.

I am conferring with Messrs.  
Baile, Hilgerson, Newcomb  
& Woodward with regard  
to arrangements for the  
meeting. I have ventured  
to add the last named on  
account of his connection  
with the Scots Church, where  
we shall probably meet.

We shall divide the work



of arranging between us.

Mr Hilgord will have  
some statement to present  
respecting Prof. Watson's bequest  
to the Academy. He, Newcomb  
& myself thought it best  
to decline acting as Executors,  
as the property is in two States  
& at a distance from us.

But this will not interfere  
with our acting as Trustees  
when any of the property  
comes to the Academy.

It is understood that Mrs  
Watson claims her third in  
lieu of the small fortune  
left her.

Very truly yours  
J. H. C. Coffin



1901 I Street  
Washington D.C.  
March 23, 1881

Prof. W. B. Rogers

My dear Sir

Yours of the 19<sup>th</sup>  
to Prof Baird has been for-  
warded to me. My health  
is much better than it was  
a year ago: Still I have peri-  
odical ailments from 9 $\frac{1}{2}$  to  
11 A.M. which are partly  
dyspeptic, but do not change  
hours by change of breakfast  
hour, & may therefore be  
partly malarial. My out-  
door movements are much  
impeded by rheumatic  
weakness of muscles.  
I hope to attend the



meetings of the Academy.

Yours of the 11<sup>th</sup> directed  
to No. 9 Rhode Island Ave.  
was delayed two or three  
days. I have never resided  
on that Avenue, but my  
home for the last eight years  
has been 1901 S Street.

Circulars for April Meeting  
have been issued & I suppose  
will reach you before this.

Very truly yours  
J. H. C. Coffin



78:17

NATIONAL ACADEMY OF SCIENCES.

NOMINATIONS

Made at the April Session, 1880, to be voted on at the April Session, 1881.

CONFIDENTIAL.

Absent members may inscribe on a ballot the names of nominees, not exceeding five in number, and send it to the Home Secretary, 1901 I street, Washington, D. C., before April 18.

\* ALVORD, BENJAMIN, U. S. A., Washington, D. C.

Proposed by—Barnard, J. G. Coffin, J. H. C. +  
Barnard, F. A. P. Hilgard, J. E.  
Trowbridge, W. P.

BILLINGS, J. S., U. S. A., Washington, D. C.

Proposed by—Baird, S. F. Newberry, J. S.  
Gill, Theo. Newcomb, S.  
Woodward, J. J.

BROOKS, WILLIAM K., Baltimore, Md.

Proposed by—Baird, S. F. Gill, Theo.  
Coues, E. Haldeman, S. S.  
Newberry, J. S.

\* CLARKE, THOMAS CURTIS, Philadelphia, Pa.

Proposed by—Hilgard, J. E. Rogers, Fairman  
Meigs, M. C. Sellers, William  
Trowbridge, W. P.

COOK, GEORGE H., New Brunswick, N. J.

Proposed by—Hall, James Hunt, J. Sterry  
Haldeman, S. S. King, Clarence  
Marsh, O. C.



\* DANA, EDWARD S., New Haven, Conn.

Proposed by—Barker, G. F.      Brush, G. J.  
                  Baird, S. F.      Newton, H. A.  
                                  Pumpelly, R.

EASTON, D. C., Yale College, New Haven, Conn.

Proposed by—Agassiz, Alex'r      Newberry, J. S.  
                  Brush, G. J.      Scudder, S. H.  
                                  Trowbridge, W. P.

\* EGGLESTON, THOMAS, Columbia College, New York, N. Y.

Proposed by—Barnard, F. A. P.      Hayden, F. V.  
                  Gill, Theo.      Newberry, J. S.  
                                  Trowbridge, W. P.

MITCHELL, HENRY, U. S. Coast Survey.

Proposed by—Gibbs, W.      Lovering, J.  
                  Hilgard, J. E.      Peirce, C. S.  
                                  Rogers, W. B.

REMSEN, IRA, Johns Hopkins University, Baltimore, Md.

Proposed by—Barker, G. F.      Chandler, C. F.  
                  Brush, G. J.      Draper, Henry  
                                  Mayer, A. M.

\* ROWLAND, H. A., Johns Hopkins University, Baltimore, Md.

Proposed by—Barker, G. F.      Mayer, A. M.  
                  Draper, Henry      Newcomb, S.  
                                  Pickering, E. C.

STORER, FRANK H., Harvard College.

Proposed by—Brush, Geo. J.      Hunt, J. Sterry  
                  Cooke, Josiah P.      Johnson, S. W.  
                  Dana, James D.      Lyman, Theodore  
                  Gibbs, Wolcott      Verrill, A. E.

\* SMITH, SIDNEY J., New Haven, Conn.

Proposed by—Barker, G. F.      Marsh, O. C.  
                  Baird, S. F.      Walker, F. A.  
                  Brush, G. J.      Scudder, S. H.

\* WHITE, CHARLES A., Washington, D. C.

Proposed by—Baird, S. F.      Haldeman, S. S.  
                  Cope, E. D.      Hayden, F. V.  
                  Coles, E.      Newberry, J. S.  
                  Gill, Theo.      Woodward, J. J.

\* WRIGHT, ARTHUR W., New Haven, Conn.

Proposed by—Barker, G. F.      Mayer, A. M.  
                  Brush, G. J.      Newcomb, S.  
                  Draper, Henry      Newton, H. A.  
                  Hall, A.      Pickering, E. C.

NOTE.—The lists of published works of nominees marked with a \* are in the hands of the Home Secretary. These, however, in some cases, extend only to early in 1879.

Nominations not acted on favorably are dropped unless renewed.

Absent members may also vote *aye* or *no* on the proposed amendments to the Constitution, contained in the Circular announcing the time of the Annual Session, 1881.

J. H. C. COFFIN,  
*Home Secretary.*

1901 I STREET, WASHINGTON, D. C.,  
*March, 1881.*



Wm. C. ... Washington, D.C.

Proposed by—H. ...

... ..

... ..

... ..

Proposed by—Wm. ...

... ..

... ..

... ..

Proposed by—P. ...

Note—The list of published works of members included with a ... in the hands of the ... These, however, in some cases ... and only to copy in 1872.

Members not included only as they are not included.

Proposed by—W. ...

Abstract members may also vote for or against the proposed amendments to the Constitution contained in the ... Annual Meeting, 1872.

Proposed by—J. H. ...

... ..

Proposed by—H. A. ...

Proposed by—D. ...

Proposed by—D. ...

Proposed by—H. ...

Proposed by—B. ...

Proposed by—C. ...

Proposed by—D. ...

Proposed by—E. ...

Proposed by—F. ...

Proposed by—G. ...

Proposed by—H. ...