3

Papers, Jan. - July 1864

23 Congratulation

[1/3/1864]

The Boston Society of Natural History having completed their new building on the ~~Back Bay~~ land granted them for that purpose on the Back bay have transferred their operations to that place and are now arranging their museum in the ample halls provided for its reception. A fresh impulse has been given to the labours of the Society by these extensive and appropriate accommodations, and much benefit may be expected to public education from the large & growing collections of the Society thus attractively displayed.

[1/3/1864]

The Mass. Inst. of Technology having complied with the conditions of the act assigning to its use a portion of the Back bay land, has been put in possession of the same and has commenced the erection of a building one hundred fifty feet long by one hundred feet wide midway on the space assigned to the association & the Soc: of Nat. History. This building designed especially for the accommodation of the School of Industrial Science will afford space also for the Museum of Arts & Manufactures until it shall be found expedient to provide for the latter a separate edifice to be erected at the western end of the assigned space in correspondence with the Nat: History building now completed at the other extremity.

The Institute has formally accepted the act of the Legislature assigning to its use a portion of the fund accruing from the Congressional grant of public lands - for the benefit of Schools of Agriculture & the Mechanic Arts.

Besides its operations as a Soc: of Arts begun last year & now in successful progress the Institute is preparing to open some of its ~~School~~ courses of practical instruction & to begin the organization of an Industrial Museum - in ~~the next month~~ & for the purpose has ~~[illegible]~~ the [illegible] in which its meetings are held.

The liberal constitution; which it has no power. The liberality with which the
The large fund
The ~~g~~ liberality with which
The munificent ~~bequ~~ contribution; which has been made to ~~the Institute for the~~ by
The munificent ~~gift which~~ ~~liberality of the Society~~ ~~which~~
~~has~~ enabled the Institute ~~[illegible]~~ then to
~~[illegible]~~ ~~[illegible]~~ ~~proceed~~ ~~[illegible]~~ its plans
of practical education — ~~[illegible]~~
Notwithstanding, the recent circumstances of the
times — is at once an evidence of the wise
foresight — that ~~[illegible]~~ blends with the patriotic
activity of the People — and a guaranty of
the ~~[illegible]~~ future ~~[illegible]~~ expenditure; which
of these ~~[illegible]~~

Rough draft of
notice of N. H. Soc'y
Institute - for Gov.'s
Message.
Jan. 3. 1864

(X)

Office of the Boston Gas-Light Company,

WEST STREET, BOSTON,

Jany 25th 1864.

My dear Sir,

A rumor has reached me this morning that you propose to resign your position as Inspector of Gas &c—

I most earnestly hope that this is not the case — and that I may have an opportunity to confer with you, provided you have such a step in contemplation.

With much regard,

Very truly yr

W. W. Kennedy

Prof. Rogers

January 27. 1864

Prof W. B. Rogers

My dear Sir,

I am greatly obliged to you for the very kind and complimentary letter you wrote to Mr Sumner in behalf of my brother. Nothing could have been more appropriate, or more favorable to my brother's interests. I shall take great pleasure in speaking of your kindness to him. With many thanks very truly

Your obt servant W. T. Poole

1)

1. Temple Place
Boston Feby. 1. 1864

Dear Sir:

I herewith enclose a copy of the proceedings of the Institute of Technology acknowledging your late ~~generous~~ offer of a fourth contribution to its objects. I may add that the subject has since been referred to the Gov^t with the request that steps be taken as early as possible to raise the additional sum needed to give effect to your liberality.

Permit me to say that this new mark of your confidence & sympathy in our plans is deeply gratifying to me personally as well as to the Gov^t & all the friends of the Institute. Be assured it will stimulate our zeal while it strengthens

our hands for the good work in which we are engaged.

We have now under consideration a detailed plan for the several departments of the School of Industrial Science, which when digested I shall be glad to submit to you. It will embrace, besides Drawing & Design as applied to the practical Arts, courses on Applied Mathematics & Industrial Physics Chemistry & Geology, ranging from the simple elements through the successive studies & laboratory & other exercises proper for the education of the Mechanical Engineer, the builder & Architect, the Civil Engineer, the worker in Chemical Arts & the Metallurgist & Mining Engineer. The more elementary & popular instruction will be given in part by lectures in the evening, which we hope to see largely attended by workmen Clerks & others of both sexes who cannot attend by day or who could not devote themselves to systematic class-room studies or exercises in the Laboratory. The more advanced studies, embracing a comprehensive course of practical Mathematics ~~[illegible]~~ will aim to give a solid education in the ~~practical~~ Sciences of the Construction & Manufactures, Arts & like other

professional ~~[illegible]~~ training studies will require a continuous & systematic course of application.

By this two fold plan - we may ~~[illegible]~~ hope to ~~to teach~~ to lay ourselves among the industrial classes the ~~[illegible]~~ principles the ~~[illegible]~~ long ~~[illegible]~~ the leading scientific principles of the arts. and at the same time ~~that~~ have ~~there~~ at a class of students ~~fitted for the~~ to take ~~charge~~ of the professional charge of the various departments of ~~manufacturing~~ the manufacturing & constructive arts.

J. Lyle Clarke
July 1. 1865

449 Strand London
4 Febr 64

Sir

Enclosed I send you a bill for Apparatus ordered by Professor W. B. Rogers of Boston which will leave for their destination by next mail. The same are securely packed in tinned case and will be directed to the agents at Liverpool,

Messrs D & C. McIver.

I have to write to Professor Rogers a letter about some other appts which will take me some little time, so that I will thank you to mention, ~~that~~ should you write earlier, that the long delay is owing to the difficulty of procuring fine pieces of Rocksalt.

I am Sir
your obedient servt
C Becker
pro Elliott Bros.

Professor Rogers

10th

I have just received a letter from Henry Hotel Anglaise, Mentone he accomplished the journey very comfortably & is delightfully situated. I think he will write to you this week.
It has cost him £20 already so he will of course need more.

The Right Hon.
449 Strand
London
Mrs Beaufort
Adderley

Rooms 5 & 6 Clinton Hall
Am Geo & Stat Soc
New York Feb 4. 1864.

Wm. B. Rogers Esq

Dear Sir,

I saw Mr Simon Stevens a few days ago & he said that your parcel came to New York & was by the Custom house returned to London, it having been addressed to a party there, that said parcel was received by your brother in London from his (Simon Stevens) brothers hands & what he did with it he does not know.

The Society would very respectfully request if you would take the trouble to procure for them the following works to keep in our Library and as we have the preceding Nos we would be pleased to keep up the chain viz't (all appertaining to your State)

"Public Documents" since Vol 2 1859
"Industry of Massachusetts" since 1855
"Agriculture of Massachusetts" since 1857. "2. series"
"Mass State Record" since Vol V 1851.
"Mass Acts & Resolves" since 1859
"Report of the Board of Education" wanted for 1853
"Registration Report, Mass" the last we have is the 18th 1859.

We have only "Abstract of the Mass School Returns" for 1845-6.

& we have no Statutes of Massachusetts whatever or any of the valuable and interesting documents showing the part your State ~~you~~ has taken in the present war or of Governor Andrews correspondence & acts in relation thereto.

If you can aid us in our wishes to place on our shelves the

above or any works whatever of interest especially of the Geology of your State we will appreciate it.

Yours Respy

J. Mudie

Clerk.

J. Mudre

Office of the Boston Gas-Light Company,

WEST STREET, BOSTON,

Feby 9th 1864.

Prof. W. B. Rogers.

Dear Sir,

I have read the order printed in the morning papers as having passed the Board of aldermen yesterday.

Any facts not now in your possession, relative to the result of our processes of manufacture, and of distribution, are freely at your service.

Yours very truly,

W. W. Greenough
Treas

(4)

(X)

Office of Gas Inspector
Boston Feb. 11. 1864

W. W. Greenough Esq.
Dear Sir.

I have rec^d your note of the 9th inst. placing at my disposal any facts not now in my possession relative to your processes of manufacture & distribution of Gas, and shall not hesitate to avail myself of your offer whenever a proper occasion arises.

~~Dear Sir~~

~~The last interview~~
~~I had with~~ ~~I~~ mentioning
to you
my long cherished purpose
of resigning the Office
of Inspector of Gas &
Meters ~~I have now done~~
~~I have sent my note~~
~~of resignation to the Gov.~~
I have sent in my resignation.
feeling that it has ~~not~~
~~not~~ been a matter
~~longer~~ ~~Compatible with~~
~~my~~ ~~the~~ ~~my~~ with the
Safety of my health
~~and~~ ~~my~~ duty to the
public ~~to retain~~ to
~~continue~~ retain the Office

Sincerely mentioning to
you my long-cherished
purpose of resigning the
Office of Inspector of Gas &
Meters I have sent in
my resignation, feeling
it to be incompatible
with the safety of my health
& a proper performance of
the duties of the Office
to retain it longer.
with best wishes
my dear Sir
W. B. P.

To Mr W. Greenough

2/

(X)

1. Somerset Place

Boston July. 10. 64

Dear Madam.

It gives me pleasure to convey to you the accompanying vote of thanks of the Institute of Technology and to add that as soon as our Museum is fitted for the reception of such articles we shall be glad to take charge of them & give them an appropriate place. ~~Meanwhile~~ If quite convenient to you we should prefer your

retaining these — but
if otherwise, we can
send them back at once.
Adding my love —

To Lydia T James

To Dr. L. T. Jennis

Utica Institute

Office of the Boston Gas-Light Company,

WEST STREET, BOSTON,

Feb 4 1864.

(X)

My dear Sir,

Since mentioning the fact to you this morning of the freezing up of our washers yesterday, it has occurred to me to suggest to you that it might be well to test the purity of the gas when it leaves our works — and then subsequently on the same day at your office. I have a suspicion that coal gas in distribution receives chemical changes from contact with metals, particularly after it enters houses, which introduce impurities not developed by any of the usual tests of the works.

Yours very truly,

W. W. Greenough

Prof. Rogers —

W. W. Greenough.

Report to Mayor &
Aldermen on the
Quality of the Boston
Gas, for Feby. 1864.

March 2. 1864.
Sent in Board 3d.
by the hands of F. E. S.

Frederick Stimpson.

[March 2, 1864]

Improved Apparatus for determining the Amount of Sulphur Contained in Coal Gas.

~~The arrangements generally used for this purpose~~ ~~All the arrangements in use for this purpose agree in~~ In all the arr. – the Gas is burned under a Bunsen funnel connected with a Liebig's Condenser ~~or~~ some equivalent apparatus ~~for the~~ intended to collect the products of the combustion in a liquid state ~~– As the~~ ~~any of the Carbon – in air alone~~ As however the Sulphur compounds contained in the Gas ~~form~~ give rise to Sulphurous, or, better, Sulphuric Acid, ~~when the~~ and ~~the~~ the presence of these products ~~by~~ a second gas at ordinary temperatures, ~~and by~~ ~~of the~~ could be only in part absorbed by the ~~gas~~ generated water as it trickles along the tube ~~– confirm some of the whole of the Sulphur it is evident that it has not been found necessary~~ ~~in addition – the invariable~~ ~~that some~~ It is evident that the process thus conducted would fail to ~~Bunsen~~ arrest in the liquid the whole of the Sulphur ~~originally contained~~ contained in the Gas. What has been consumed –

~~The loss~~ To prevent this loss, Ammonia ~~is introduced~~ into the funnel – which by combining with the Sulphurous Acids leaves their salts condensed in the cooled water ~~of the tube & their~~ ~~usual bottom fall~~ & the detection by the water as it accumulates in the receiving vessel.

~~Baryta = 108.4~~

Baryta = 76.6 } Sulphate = 116.6
Sulphuric = 40

Sulphurous Ac. = 32 } Sulphite = 108.6

Supposing all the sulphur to be obtained as Sulphite of Baryta which could not be so, ~~[illegible]~~ the error arising from considering it as being a Sulphate would be a deficiency of $\frac{8}{116.6}$ lbs of the whole. It would in other words be keeping to mean the correct S in the ratio of 108.6 to 116.6 that is 6.86 per cent or nearly 6 2/3 per cent.

```
116.6 / 8.000 ( 0.0686
        6996
        10040
         9328
          7120
```

differing not more than 1/4 in both the ratio of SO₂ the error involved would be less than 2 per cent of the whole which is not small when considering the limits of the error of observation.

Expt. to ascertain if the burning of sulphur had a be sulphur.

[March 2, 1864]

Improved apparatus for determining the amount of Sulphur in illuminating gas &c. by Carbon –

~~Instead of using a bottle used for this purpose~~

~~In~~ The apparatus generally used for this purpose, the gas is burned under a Bunsen funnel connected at 90 connected above with the central tube of a Liebig's Condenser, and Ammonia is supplied from a cup or bottle placed beneath the gas burner, being supplied with a strong Aqua Ammonia filled beneath the gas burner to ~~supply~~ supply is intended to supply gaseous Ammonia, to combine with the Sulphurous & Sulphuric Acids to secure the formation of the escape of Sulphurous Acid & to combine with the ~~to secure the formation~~ Carbonic Sulphur products of the combustion ~~by combustion in the form of~~ & it for Sulphite of Ammonia. which is ~~is converted to~~ capable to be the liquid which ~~distills by the~~ the water which ~~collects in the receiver~~

1 vol. Oxy. for produces 2 vols. CO_2
1 vol. Carb. Ox. produces 1 " CO_2
1 vol. Marsh gas produces 1 " CO_2

Suppose Oxy. = 6 f. c. water. 12
CO_2 = 6 f. c. 6
Marsh gas 6 f. c. 6
24 f.

That is — having the Bot. for the produce
amounts of 24 f. only the Bot. of CO_2
so that the 2 — 3 f. of product in the
form — the Bot. Naturally, and to the Chemically
effect of the Dissolving Oxy.

Office of Gas Insp'r, 323 Washington St.
March 2, 1864

To the Honorable Mayor and Aldermen
of the City of Boston -

Gentlemen.

In compliance with the request implied in your order of the 8th ult. communicated to me on the 12th, and in conformity with the Law relating to the Inspection of Gas which prescribes, (Sect 10), that "Whenever requested "by the Mayor and Aldermen of any City or the "Select-men of any town the Inspector shall "report to them whether the Gas supplied ~~to~~ the "respective City or town is of the legal standard, "and also whether its is sufficiently well "purified from Sulphuretted Hydrogen Ammonia "and Carbonic Acid", - I present the following Report of the quality of the Gas furnished by the Boston Gas Light Company as determined by observations made at the Office of the Inspector No 313 Washington Street, at various times during the past Month -

The Illuminating power of the gas, as tested by the Photometer on a number of different days within this period furnishes an average value of 16.28 Candles, that is, the amount of light produced by the gas when consumed at the rate of 5 cubic feet per hour in a standard Argand burner of 15 holes and having a chimney 7 inches high was equal by a mean of the observations to the light of 16.28 standard Candles each burning at the rate of 120 grains per hour. The lowest Candle power observed was 14.85, the highest was 18.69, but with a shorter chimney the former result was increased to more than 15 candles. It is proper to add that the minimum strength allowed by the Law for Merchantable Gas is twelve candles.

As collateral evidence of the degree of illuminating power, the volume of heavy hydrocarbons, determined by the use of Bromine in the absorption tube was found to range from 5.03 to 8.56 per cent, giving, as an average of all the observations, 6.68 per cent of the total volume of the gas.

As to the impurities in the gas, it was found that the volume of Carbonic acid varied from 1.41 to 3.32 per cent, making an average of 2.73 per cent of the whole bulk, an amount sufficient to make the illuminating power sensibly less than it would have been in the absence of this ingredient. As Coal gas in the act of burning generates a very large volume of Carbonic acid, in some cases even equalling, the whole bulk of the gas consumed, the presence of this substance in the proportion nearly passed in the gas must add materially to the constant effect of the surrounding air.

~~The Sulphur contained in the gas in the form of Sulphuretted Hydrogen & Bi-sulphide of Carbon. Scarcely a trace of Ammonia was at any time present in the gas, which in this respect maintained its customary purity.~~

~~For several days towards the middle of the month (Sulphuretted Hydrogen stained strongly in the gas shewed the presence of Sulphuretted Hydrogen in considerable amount, but soon that time it resumed its usual character of exemption from~~

In regard to Sulphuretted Hydrogen the results have been less favorable. For several days in the early half of the month, the indications of this impurity were more considerable than in any previous observations since the commencement of the Inspection. Since that time however the Gas has returned to its usual almost entire exemption from this ingredient. As commonly happens the sulphur contained in the Gas was found to exist chiefly in the form of Bi-sulphuret of Carbon, the removal of which is still a problem in the purification of Gas. The whole amount of sulphur contained in the Gas, determined by burning a large volume in the presence of Ammonia was found to range from 6.44 to 6.77 grains in 100 cubic feet.

In the British Inspection, 20 grains of sulphur to the 100 feet is the largest proportion allowed to Merchantable Gas, & considering the really noxious character of this impurity it is satisfactory to know that even in its recent less purified condition the Boston Gas has fallen so much within this limit.

I have the honor to remain
Your obedient servant
William B Rogers
late Insp. of Gas meters & Gas.

3)

Paris, March 26, 1864.

To the President of the Mass. Inst. of Technology,

Dear Sir,

Since leaving Boston, in November last, I have visited, & spent some time in examining several institutions similar in character to our own, and perhaps a few facts connected with them may not be amiss at the present time, when our new building is in progress, and when every improvement adopted by others should certainly receive attention, before arriving at such a point in the construction as would render a change impossible or expensive.

But, although I have found in each of the many schools in England & on the Continent, some special good points, yet there are none, so far as I have yet observed, which combine them all, each having some disadvantages which are to be avoided in seeking a model, — those which are the best lighted, lacking ventilation, perhaps, & some, although otherwise well arranged, are deficient in heating apparatus.

Moreover, the objects proposed to be compassed by the Mass. Inst of Technology are not exactly those within the scope of any institution I have seen, very little can therefore be learned from the general plan of their buildings, as applied to ours.—

I think the South Kensington Museum the one which approaches nearest in character to our own, as an institution, but not as to their buildings, and it is, I think, the one from which the most is to be learned, inasmuch as it is essentially a modern institution, and through the indefatigable energy of Mr. Cole, the Superintendant of the Museum, who is continually making experiments with regard to the best methods of lighting, heating, & ventilation, a great degree of perfection has been arrived at in the details of the building, which, although at first sight ~~they~~ appear of merely secondary importance, are in reality the things which give to the institution its good or bad character for the comfort of its occupants.

The most perfect heating apparatus I have seen is in this Museum.

The heating medium is water, the boilers being placed below ground in a building apart from the main construction.

They are six in number, upon the same principle as that adopted by the Boston Soc'y. of Nat. History, in their new building, thus enabling them to heat portions of the building separately, or to heat the whole to a greater or less degree, as occasion may demand.

In that part of the building which is divided into small class-rooms, the water-pipes which are of cast-iron, traverse each room from one outer wall of the building to the other, in the space included between the floor & the ceiling of the room below.

The groove thus formed for the reception of the water pipes, is provided with an iron grating, rendering the level of the floor unbroken; and at each end of this transversal space is an opening through the outer wall, provided with an iron shutter hung from the top, & the aperture may be lessened or increased at pleasure for the ingress of the outside air, by means of a simple attachment.

In the main halls, which are on the ground floor, the principle of heating is the same. There are trenches traversing them, about three feet wide and eight feet deep which contain all their hot-water heating-pipes, cold water & gas pipes, together with the air ducts, which latter being intended for the introduction of the external air are provided with openings at intervals for its escape, & are supplied by a powerful fan worked by steam-power.

This fan is used principally in warm weather, for, in winter, the air which is introduced through the same channels, & on account of the buoyancy acquired, attendant upon its passage over the hot pipes, sufficiently accelerates the ventilation, to do away with the fan.

Still, it is a valuable auxiliary during the summer heats, & is found, I believe, to be perfectly successful in its operation.

The halls, which are high & covered with glazed roofs, are provided with a large number of apertures constantly open for the exit of the heated air.

In addition to these, are "louvres," running the whole length of the halls, closed by small movable sashes which may be

regulated at the will of the attendant below; they all being provided with a connecting rod, & acting simultaneously.

The officials are evidently no participants in the theory of ventilation which is reduced in practice to letting the air get in as it can, and get out if it can; but they have, on the contrary, the very effective means to have a thorough circulation of the atmosphere.

All the smaller rooms have likewise apertures of ample dimension for the exit of the foul air.

The apparatus for illuminating the main halls during the evening, when the models &c. therein contained are studied principally by the working-classes, who are unable to quit their various occupations during daylight hours, is arranged in this way— The main pipe is suspended at a distance of about ten feet below the ceiling, in the form of a parallelogram, having an area of, perhaps, a third that of the hall. At intervals of a few inches the burners are adapted to this pipe, and when lighted the illumination of the hall is very brilliant.

The tops of the cases are of glass, thus throwing no shadows upon the objects contained within, which are seen with perfect ease. They have also a most ingenious apparatus for lighting the gas at all these burners, with practically no loss of time nor waste of gas.

One department of this institution is appropriated to the reception of objects of art & industry, the property of individuals who prefer to place them here, where they may be a source of pleasure & profit to the public, to keeping them in their own houses, carefully put away (as we know is often the case), where they will be perfectly safe, in dark closets or uninhabited spare rooms, & not seen from one year's end to another. This collection is composed mostly of such objects as beautifully carved & enriched cabinets, jewel-cases, splendid sets of china & cut-glass ware, often of great value in an artistic point of view; antique vases, & candelabra, tapestry &c. &c. These articles do not become the property of the museum on being placed here, but, after a certain length of time the depositor seldom fails to see how much more real use they are in this position, & a donation generally ensues.

The principle upon which this collection is formed appears to me a very good, as well as practicable one, for how many objects of art there are, even in Boston, which are virtually "under a bushel" and which their owners would gladly place in a position for public inspection if such an opportunity existed.

Connected with the Museum is a large & valuable library, containing works on art, science & manufactures, books of reference, &c. particularly

intended for the use of students, which it seems to me should not be overlooked in our Institute. A student makes far greater progress if the books of reference he may require are near at hand, & can be had without loss of time, but on the contrary he feels his ardor very much cooled, if obliged to go to a distance to seek them.

At Châlons sur Marne in France, is a school which, through the kindness of M. Aubré the Chief Engineer, I had the opportunity of examining very thoroughly.

It differs from that in London, to which I have just referred, in its being almost entirely devoted to the practical teaching of young men, in mechanical pursuits, comparatively little time being allowed for study; yet of its kind it is one most excellently conducted. Before entering, the pupils are required to have served an apprenticeship for a certain length of time, and, upon being admitted, continue to be instructed in the trade they have already entered upon. There is a large workshop occupied by those preparing themselves for carpenters, joiners or particularly pattern makers; these young men furnish all the patterns required for the foundry, which occupies a separate building, & has its own class of student-workmen who do all the labor required in every department of cast-iron work, from charging the furnaces & making the moulds, to finishing up the castings. I would remark that pupils remain here for three years, every year a new class coming in & another graduating

so that in each department, the new class is assigned all the rudimentary work, while those who have already passed a year or two, do the more difficult portions; thus in the course of the three years each individual has learned every department of his trade. This is necessary, because on graduating they are nearly all capable of filling the position of master-workman, & this knowledge of all the details is of course indispensable to them.

Contiguous to the foundry is the forge-shop supplied with trip-hammers, forges & everything necessary to prepare the raw material for the machine-shop, which is the largest, & most important of the different departments of the school. It is on the ground floor, is about 300 feet long by 75 wide, well lighted by large windows on either side, and containing a great number of lathes, planers, steam-drills, &c. &c for the students' use; and they are all, together with the engine, their motive power, the product of these young men's industry, & whenever anything additional in the way of machinery is needed for the shop, they are called upon to furnish it. This institution is complete in itself. The workmen require nothing but the raw material; having their own pattern-makers, foundry, forge-shop and finally the machine-shop, which latter, taking the products of the two preceding, finishes them up & completes the labor, thus producing a great number of machines in the course of a year, which are sold for the benefit of the school, or government.

The members of this school are chosen once a year, from those presenting themselves for examination, as candidates. On admission, they are dressed in uniform, after having been pronounced of sound constitution, & in good health, by the resident physician. Once installed they are not allowed outside the limits of the institution except on Sunday, when they go ~~for~~ in a body, for a walk, accompanied by their professors, & marching to the beat of the drum. They are also allowed a month in summer, to visit their parents, which constitutes all the vacation allotted to them. During the day their time is divided in this way — they rise at five A.M., study till half past seven, breakfast, and commence work at eight, which they continue till two P.M. At this hour they dine, the meal occupying half an hour; From half past two till half past three, they are allowed to amuse themselves, at the end of which time they return to their work & continue till seven when they repair to their class rooms & study or draw until nine P.M., which is the hour for retiring.

This is the rule, winter & summer, & it seems to be rather ignoring the principle, that "all work & no play makes Jack a dull boy," but it is in perfect accordance with the strict disciplinary system of the French government institutions — in fact, M. Aubré remarked to me after having completed our tour of inspection — "These French fellows are gay & light-headed, and we are obliged to keep them under

strict surveillance to insure their progress, but it would it do with you Americans" — I thought so, too!

The lecture rooms in most of the German schools that I have visited are extremely primitive affairs, there being absolutely no arrangements for ventilation, the seats being uncomfortable, & the heating apparatus frequently consisting merely of a stove placed in the room. They are mostly small, & are used during consecutive hours, by different classes, of few pupils each. In fact, so little attention is paid to the subject of ventilation, that a student in one of the schools remarked to me, that at the session of the third class, when the room had already been ~~occupied~~ in use during two hours, the vitiation of the air was such as made the occupation of the apartment almost intolerable, especially to those on ~~occupying~~ the upper rows of benches — and this impardonable oversight occurs in a recently constructed hall! These remarks I apply, however, only to the German schools which came under my observation; in Paris & England they being provided with much finer & more comfortably arranged halls. The one, particularly, at the École des Arts et Métiers in Paris, is deserving of special notice, of which I shall speak hereafter.

This subject of heating and ventilation is certainly one of the first importance, for during a lecture, when all the attention should be concen-

trated on the speaker, how large a part of the discourse is lost upon the audience, by that inattention which is a certain consequence of the bodily discomfort attendant upon a vitiated state of the air, or upon a too elevated degree of temperature! And during the summer heats why might not a supply of cooled air be introduced into a lecture-hall, in the same manner as in winter we supply that which is heated? This principle is, I think, carried into effect in some public halls in Europe, which I propose investigating before my return.

Our proposed hall is certainly one of sufficient importance to justify the adoption of all known improvements for the comfort of the audience & it is incumbent upon us I think to make it a model one — at least for the Germans.

Yours very truly,

W. G. Preston.

Boston, Apr. 4, 1864.

To the Editor of the N.Y. Evening Post.

Dear Sir:-

I have this moment read in your paper of Friday, Apr. 1, an article headed "A proposed Institute of Technology", and finding the plan to be identical in every particular with that set forth in a pamphlet entitled "Objects and Plan of an Institute of Technology", issued in Boston in 1860, I beg to call the attention of your readers to the fact that such an Institute has already been organized in this city-that its Society of Arts has been in operation for the past two years and that the building for the accommodation of the School of Industrial Science and the Museum is now in process of erection.

I herewith send you the pamphlet referred to, of which copies were at the time sent to N. Y., and of which a part was reprinted with words of approval in the Report of the Cooper Institute of Jany. 1861. You will find an entire identity in the details of our plan, and those referred to in the article in your paper, extending to the peculiar titles of the Committees and Departments, and repeating the very language of the pamphlet.

The Mass. Institute of Technology will rejpice to welcome a sister Institute in New York, and cannot but be gratified at the reproduction in your city in such unchanged form of an educational plan in many respects new and which we feel proud to have originated.

William B. Rogers,
Pres. Mass. Inst. of Tech.

New York, April 11th, 1864

My dear Sir,

I published, as you have doubtless seen, your letter respecting the Institute of Technology, with some introductory remarks, the object of which was to cause proper credit to be given to you when the plan of the New York Institute should be printed.

I was surprised on looking over the pamphlet you sent me, at the perfect identity of the plan and the language used with those of the manuscript which had been put into my hands, and no longer wondered that the New York plan was so well drawn up. A German brought it to me-an artist. He said nothing of the authorship, but I knew, of course, that it was not his competition. I do not know what chance the project has of success, but shall not be surprised if it comes to nothing.

I am, dear sir,
truly yours,
W. C. Bryant.

1. Temple Place
Boston April 7. 1864

Dear Sir.

The death of the late Prof. H. Rose having caused a vacancy in Section III of our For. Hon. Members, the Council of the Academy desires to consult the Opinions of the Associate Fellows in the same Section, before nominating a Successor. You will therefore please let me know as early as possible, who would be your choice for the place referred to.

Yours very truly
William B Rogers.
Cor. Sec. Am. Ac.

Jos. H. Abbot. Esq.

To Mr Henry
Lieut. 1. & Adj
West Point
Apl. 1864

Books belonging to W. B. H. left at the Gas Works. Were during the summer. May 1864

Clegg on Coal Gas.

Guyotti Tables.

Graham's Elements — 1st Vol.

Abel & Blake on.

Elements of Physics. Pouillet 1st Vol.

Cornell. on Photogenic Oils.

Regnault's Chem. 2 vols.

Turner (Rogers').

Gas. Coke & Ammonia.

Wagstaff's Tables.

Hughes. Gas Works

Bunsen's Gas metry —

2 Vol. Royal Gas L Journal.

Coke: Gas L. Journal.

Brande on. Chemistry, (Ben.)

Annual Meeting of the Institute —
Monday, May 30th 1864.

1. Secretary's Order, Record &c.

2. Report of Nominating Com. for Officers & balloting thereon. The other business may proceed without interruption by this

3. Secretary's Annual Report.

4. Treasurer's Report.

5. Statement by the President in behalf of the Gov.t of the work done during the past year — of the present condition & future prospects of the Inst.

(a) — Success & value of the Meetings of the Soc. of Arts. The good begun made in organizing the Comm.n of Arts

(b). Need of a Journal. Mr. Runkles complete & valuable Report.
Intention to establish a Monthly or 2 Monthly next year, for which has been accumulated Materials

(c) — The additional rooms — preparations for a working museum — & the School of Inv. Sc.

(d) Read parts of the Scope & plan adopted by the Gov.t for the School — Enlarge upon those points by way of explanation.
Intention to open some of the proposed classes, & to begin in the regular 4 years course.

(e). Conclusion. I propose to give information in regard to Lab: & other universities abroad — & to select & probably purchase a series of models & other apparatus of practical instruction under the joint-direction of the Pres: of the Museum & of Instruction.

101 June 3 1864

Professor Rayner

My dear sir

I observe that the subject of Pompeii is exciting at this moment considerable attention, of which an index is found in a late article in the Quarterly review, now copied in Littell's Living Age.

I cannot but believe that the instrumentality of the noxious gases in this destruction of life on this occasion, has been overrated & send you for distribution if you think proper some few copies of a former article on Pliny

wishing you a pleasant and prosperous voyage

truly your Jacob Bigelow

[5/30/1864]

It is proposed to make a beginning in both the popular & the professional departments of the School: first Auditors, ~~as~~ by establishing systematic courses of lectures & class instruction, for the benefit of the general public — & of students wishing to commence at the regular 4 years course.

The lectures which ~~it~~ it has thus thought has proceeded are — with the following:

A course on Experimental Optics —

A course on Experimental & Applied Chemistry –

A course on Applied Mathematics –

[5/30/1864]

I. Evening Lectures

On Experimental & Industrial physics,

On Experimental & Industrial Chemistry,

On Geology & Mining,

and

Evening Lessons on practical Mathematics –

II. Besides these general or popular courses, it is especially desirable to commence the ~~Dynamical~~ systematic professional courses of the School, and have lecture rooms for Mechanics provision for Students who may desire to enter upon the introductory or first year's Course or upon the second year's course or upon parts of either – in order that they may

5

(x)

Dear Sir,

I think Mr J Elliot Cabot would like to become one of the Committee on Instruction of the Institute. I think he would be an invaluable assistant to you and I wish you would put him in my place.

I dont want to leave but as he is a man of leisure and thorough education I want to make room for him.

Yrs truly

Edwd Atkinson

Boston May 28. 1864

Edw. Atkinson

recommend:
J. Elliot Cabot
for Commercial
Instruction

May 26. 1864

26 F. For Geology Mining &c.

1. One room for Specimens of rocks, Ores &c & subject Maps &c.

~~One room~~ for

The Lecture room for Physics might be used for Class on the subject which then be open for a Special lecture room for this Department.

Accommodation for Museum.

A Room for the Meetings of the Institute as "Society of Arts".

Secretary's room adjoining the above.

Three rooms for Committee Arts.

Apartments for Janitor &c.

~~[illegible]~~

[5/30/1864]

Rooms which it is desirable to provide in the building for the School of Mines: Science

(A) – A Large general Lecture Hall – fully equipped, to accommodate 1000 or more.

(B) – The upper floor wholly in the great part – for a School of design –

(C) For Physics – Mechanics &c.

(1) Apparatus – room – lofty, & well-lighted – need not be large.

(2) Physical Laboratory, & preparing room

(3) Lecture & class room – for 150 students.

The rooms 1 & 2 should be adjacent to the great Lecture room – as well as to 3.

(D) For Chemistry & Chem. Arts.

1. Large long room for Laboratory.
2. Small adjoining " for Assists & App.
3. " " " for balances &c.
4. Furnaces & Metallurgy – room in basement
5. Lecture room for 150.

E. For Mathematics Engineering & Architecture

1. Two Lecture & class rooms of 100 each.
2. One room for Models, &c.

These rooms might usefully adjoin the School of design – in case a part of the upper floor need be spared.

wealth, who are [illegible]

cents in gold may buy an acre of excellent land.

Each piece of the scrip is for 160 acres, and entitles the holder to locate upon any Government lands which are open to private entry at $1.25 per acre.

The title is direct from the United States to this Commonwealth, and the scrip by assignment in blank, under the hand and seal of the Commissioner, becomes a simple and sure title, which may be sold and transferred by mere delivery.

That our own citizens may have opportunity to purchase, I offer this scrip for sale to the highest bidder, upon the following conditions: —

1. The bids must be sent by mail or otherwise, to the subscriber, on or before the 23d day of July, 1864, in sealed envelopes, marked "Bids for Land Scrip," with the full name and residence of the party. The bids may be in this form: "I will take pieces of the Land Scrip, 160 acres each, at cents per acre, on the terms advertised." (Signed.)

The bids will be all opened and recorded at one time, in presence of a committee of the Council appointed by the Governor.

2. Bids can only be received for 160 acres, or multiples of that number.

3. One quarter of the price must be paid within ten days after notice of the acceptance of the bid shall be deposited in the post-office, and the balance on delivery of the scrip in twenty days more.

4. No bid of less than eighty cents per acre will be received.

5. Bids by persons or companies of other States must be guaranteed by citizens of this Commonwealth.

HENRY F. FRENCH,

6 and 7 Barristers' Hall, Boston, Mass.

JUNE 23, 1864.

Prof. Wm. B. Rogers.
Lunenburg, Mass.
Dated June 5, 1864.

T

Lenox Furn. June 5. 1864

My dear Mr. Rogers.

I regret that it will be out of my power to go to Boston in time to attend the meeting of the Govt tomorrow afternoon. So entirely have my time & little strength been demanded by home-affairs since coming here that I have been unable to prepare a proper report for the Committee of Instruction, on the subject of opening the School of the Institute next season; and such report ought to be submitted to the Committee for amendment and acceptance before being presented to the Govt.

The substance of what I intended to suggest for their approval is briefly this —

First. That the Committee are of opinion that the interests of the Institute will be materially promoted by the organization next autumn or early in the winter of such parts of the School of Industrial Science as it may be practicable to put in operation, in our present rooms in

Summer St. and of need be by the occasional occupation of the large lecture-hall, and that Secondly the Committee, to this end ask the Govt. for authority to take such steps as may be necessary for opening ~~[illegible]~~ in the rooms of the Institute at such times as they deem expedient – the following courses of Instruction –

I. Evening Lectures

On Experimental & Industrial Physics

On Experimental & Industrial Chemistry

On Geology & Mining

and

Evening Lessons on practical Mathematics.

II. The regular courses of Instruction in Mathematics Physics Chemistry Drawing French &c – laid down in the plan as belonging to ~~from~~ the Introductory or first years course of the Professional department – and also, if called for, the studies appointed for the 2d year; or special studies belonging to either or both years, according to the preparation & wants of the pupils.

In a word the Comm: ask authority to set on foot both the popular ~~courses~~, and the systematic professional courses so far as they may find it practicable or expedient to do so, during the coming season –

Thirdly. The Comm: of Instruction ~~[illegible]~~ recommend as a most important auxiliary to the measure just proposed the purchase at an early day of an ample series of Models of Machines, & Constructions & of their elements, and other apparatus especial to the various branches of instruction in the School — and that with this view the Govt. authorize the expenditure of such sum not to exceed [illegible] thousand dollars as may be deemed by the Comm. adequate to this purpose.

In making this recommendation the Comm: believe they ~~[illegible]~~ will have the earnest approval of the Comm: of the Museum — who will regard these Models & apparatus as an appropriate & philosophical basis for a Museum intended to illustrate the applied sciences & arts.

[45/1864]

I have thus hurriedly stated the main points of the proposed Report. Whether it be desirable to take immediate action upon it they can best judge. Please let Mr. Philbrick take charge of the proceeding - as representing the Committee during my absence.

I shall see you I hope early on Tuesday - not expecting to find you in the City on Monday Night.

I have written a long letter to Dr. Walker about the School - & shall send him our Scope & Plan as soon as it is ready.

Would it not be well to order a good large No. of Copies of this document?

I am not sure which will be best – whether to distribute the pamphlet ~~now~~ widely now, or to wait until we are getting ready to open the School.

With kind regards to all at home –

Faithfully yours

William B Rogers.

In great haste –

M. D Rogers Esq.

7)

Professor Wm. B. Rogers.

Sir,

As a /nominated/ member of the Institute of Technology, I ascertained at the annual meeting, that it is intended to establish a Professorship of French and German in the autumn.

I respectfully present myself as a candidate for that position.

I have now a Bureau of Translation in this city, I have pupils to whom I can refer for proof of my competency as a teacher. I have the honor, also, of the friendship of several of your distinguished scholars and professors, whose certificates and Letters as to my attainments I shall take pleasure in presenting to you.

I was educated at the best colleges of

Europe, and have Diplomas and Letters that bear unimpeachable testimony of my qualification for the position in your gift.

Not wishing to occupy your valuable time, until you are prepared to act officially, yet knowing that you may soon be expected to act in the matter, I thus address you, briefly to present myself to your consideration, and to say, that whenever it suits your convenience I shall be happy to wait on you, and present my Diplomas, Letters and other papers.

I have the honor to remain
with distinguished consideration

Your Obedient Servant

Dr. H. Askenasy

Boston June 6th 1864.

D. Arkoneay.

Offers for Prop.g Mod. Lay

in Institute

6th June 1864

(X)

8/

146

Office of the Mass. Institute of Technology.
Boston June 7th. 1864.

Prof. Wm. B. Rogers.

Dear Sir.

At the meeting of the Government of the Institute held yesterday afternoon the following Votes were passed; viz.

"Voted that the President be authorised to purchase for the Institute such Models and Apparatus as he may deem advisable, expending therefor an amount not exceeding £.1.000."

"Voted that the sum of £.250. be presented to the President of the Institute towards defraying the expenses of his contemplated visit to Europe."

It affords me pleasure to be the organ of communication on this occasion; and I avail of the opportunity to wish you a pleasant and prosperous voyage, an agreeable and satisfactory visit, and a safe return home with health regained, & strength renewed.

Respectfully and truly yours,
Thomas H. Webb, Secretary.

Prof. Wm. B. Rogers.

President of the

Mass. Institute of Technology.

1. Temple place
Boston Wednesday.
June 8. 1864

My dear Dr.

Please hand the enclosed note to Dr. Ashmead —

I have been so crowded with "last things" & the visits of friends that I have not been able formally to acknowledge your official & friendly note rec. yesterday afternoon.

I shall write on board the Steamer on my reaching Liverpool. The appropriation for Models & apparatus is most gratifying — The personal approbation so kindly & generously spoken — would alone swell the pecuniary & chemistry purpose.

Thanking you for your good wishes — which I heartily reciprocate, & hoping to meet you in the fall — at least your usual good health & vivacity of spirits I remain

Yours truly

William B Rogers.

Please remember me most kindly to W. Ruggles

Prof Wm B. Rogers.
Boston, Mass.
Dated June 8, 1864.
Rec'd " 9. "

27

Boston, June 9th, '64

My dear Sir,

I am extremely sorry not to have had the opportunity of seeing you and bidding you good bye, yesterday. But I had not the slightest idea that the steam-ship left before 12 M., and having been busily engaged finishing up the enclosed drawings, started, as I thought, in plenty of time to have at least three quarters of an hour with you before leaving. This hour, (12 M.) is the time of departure of the N. Y. Line & Phila. line of steamers, and I had no doubt they all went at 12.

I assure you I was very much vexed on crossing Chelsea Ferry at a few minutes past eleven, to see the Asia slowly backing out of her dock, and when I got to the ~~do~~ wharf, to ascertain if there were any way of sending a package on board, to see her under full steam going out of the harbour.

I had hoped to have had the pleasure of bidding you good bye, but as I was not able to, I can only wish you most heartily a pleasant trip, hoping soon to see you returned with renewed health.

Please give my respects to your brother.

I often think of the pleasant hours I spent with him at Ludbrook Park.

It seems very lonesome at the Rooms in Summer St. to think that you are away, but, hoping to hear from you frequently, indirectly if not directly, I will again wish you a very pleasant trip,

and remain,

Yours most truly,

W. S. Preston.

To Prof. Wm. B. Rogers.
Glasgow.

from Wm. Preston

Rec'd. June 24. 64

Glasgow

9)

(X)

Boston June 14. 64

My Dear Sir

A few days since Capt. Anderson, of the Phenix, came to my rooms: I showed him the Instr. for déviation (the Electrometer as Admr. Davis names it) — he told me it is not new, a similar one was made by an officer of the Navy several years ago — he termed it a "dummy card" — he could not tell me how the mechanical construction was made, but the principle & mode of use is the same: I hasten ~~to let~~ you know it — he says ~~that~~ it is not, on some accounts, so good

as an Azimuth Compass — This I thought might be the case. It was intended however for the Monitors where an Azimuth could not be used — I had not heard of the English invention except once in Washington when showing mine to Admiral Davis — a Mr Fry spoke of the dummy card arrangement — but that mine differed materially, and much more convenient. I dont know how much Mr Fry knew of the dust — I dont want you to bring it forward as new if it is not so —

Capt Anderson was highly pleased with the Steering Compass & had seen one on board the Niagara — & had said so much to the "Governor" as he called the Agent of the Company at Liverpool, that he wish^d Capt A. to bring one — he also likes the Monitor Compass & is very desirous to have one on his Ship, — he sails entirely by his Mast Compass elevated to same height — but it is very troublesome to observe it & the vibrating motion is also very great to it — I am to send drawings to show the "Governor" — (By singular coincidence Mr Prescott has just come in & says the Agt in Lpool is Chas MacIver of the firm of D & C. MacIver Lpool) to explain its use and mode of attachment — The form will be different — (longer, and leaving off the large outer tube)

Please excuse my long letter about my compasses — Since you sailed there has nothing of interest transpired here — The Russians have received attention in a quiet way & enjoyed themselves — I had the officers at my rooms & showed them the 2 Monitor Compasses, since sent to St Petersburg.

No News from the Army of importance has come, but we are expecting

Heavily to hear of hard fighting
You will get later dates from papers -
I go to Washington this day & write earlier

I wish you would send me
some commission to attend to
for you in Boston.

Mr Dorr & Thomas desire
to be remembered to you

Remain
Very sincerely
Yours
E. S. Ritchie

Prof W B Rogers

Hon E S Ritchie
Rec'd Jan 27. 64
Stamp.

On board Steamer Asia
Friday June 17. 54

My dear friend.

The voyage is approaching close, and as an opportunity of mailing letters to America, till present only on the arrival at Queenstown, probably tomorrow afternoon, I desire to send you my early greetings, & good wishes from the Eastern side of the Atlantic.

Our passage has been a prosperous one thus far, though not without the common incidents of rough weather, and the challenge which even in summer attends the crossing of the great Artic Current, with its grand processions of Icebergs. Of these we saw many at a distance & one superb specimen quite close to

Note of an object, we by Lord, is a Mailing the enclosed Note. Mr. Phillips is at Queenstown to receive them

Letters

Mr Appleton

the Ship. But for the last three days we have been hoping into the warmer atmosphere and water of the broadly spreading Gulf Stream which so tempers the climate of the British Islands.

I do not know that it will be necessary for me to make any more formal acknowledgement than I have done in my note to Dr. Webb of the liberal action of the Govt. on the subject of purchasing for the Institute & of their generous vote in reference to myself. As regards the latter you ~~[illegible]~~ know my views already expressed & from which I am unwilling to depart – The thoughtful consideration in my behalf is none the less grateful to my heart on that account.

The voyage has agreed well with me. My strength has increased, & I am sure that the freedom from cares & tasks, which I shall claim to enjoy, will build up my health so solidly as to enable me here after to do good work – without sacrificing what I have gained.

Mrs Rogers has suffered less than in former voyages and has today enjoyed the promenade on the upper deck where all have been exhilarated by the balmy air & the warm sunlight flashing on the sea. By breakfast-time tomorrow we

expect to come in view of the Green Hills of the County Clare, the first land seen in approaching the Southern end of Ireland.

I shall write you from time to time of my movements & especially of matters interesting to our great enterprise — & trust hope to receive an occasional line from you in reply —

Should you happen to meet with Dr. Walker during the Summer please present my regards.

Mrs Rogers joins me in kind remembrances to Mrs Roff & the Children — wishing you all a healthful happy Summer — I remain as ever

Faithfully yours
William B Rogers.

M. D. Roff Esq.

The Steamship Pilot, leaving the Shannon Bar off Kilkee by illegible Jerrold.

LAND SCRIP FOR SALE.

The subscriber, having been appointed by the Governor and Council, Commissioner to sell the scrip for 324,000 acres of land, granted by the Act of Congress of 1862 to this Commonwealth, for the promotion of Agriculture and the Mechanic Arts, now offers the scrip for ONE HUNDRED THOUSAND ACRES at public sale.

The income of the fund thus to be raised has been devoted by the Legislature to the support of the Agricultural College and the Institute of Technology. It is believed that no safer investment of money can be made, in these unsettled times, than in this scrip. It is no figure of speech now to say, that land is the only *real* estate, — the only property of reliable permanent value. The scrip may be located at once, or it may be held without care, or risk of loss, or the payment of taxes, for location at any future time. Capitalists or companies, by locating these lands in large tracts, in those States where slavery is going out, may find rich rewards for their enterprise by organizing settlements upon them. The erection of a school-house in place of a slave-pen, in any locality, soon doubles the value and price of land.

Citizens interested in the Agricultural College and the Institute of Technology are urged to attend to this matter. Every acre of this land ought to be taken by the people of our own Commonwealth, who are its real owners, and whose interests require its immediate sale at a fair price. Fifty cents in gold may buy an acre of excellent land.

Each piece of the scrip is for 160 acres, and entitles the holder to locate upon any Government lands which are open to private entry at $1.25 per acre.

The title is direct from the United States to this Commonwealth, and the scrip by assignment in blank, under the hand and seal of the Commissioner, becomes a simple and sure title, which may be sold and transferred by mere delivery.

That our own citizens may have opportunity to purchase, I offer this scrip for sale to the highest bidder, upon the following conditions: —

1. The bids must be sent by mail or otherwise, to the subscriber, on or before the 23d day of July, 1864. in sealed envelopes, marked "Bids for Land Scrip," with the full name and residence of the party. The bids may be in this form: "I will take pieces of the Land Scrip, 160 acres each, at cents per acre, on the terms advertised." (Signed.)

The bids will be all opened and recorded at one time, in presence of a committee of the Council appointed by the Governor.

2. Bids can only be received for 160 acres, or multiples of that number.

3. One quarter of the price must be paid within ten days after notice of the acceptance of the bid shall be deposited in the post-office, and the balance on delivery of the scrip in twenty days more.

4. No bid of less than eighty cents per acre will be received.

5. Bids by persons or companies of other States must be guaranteed by citizens of this Commonwealth.

HENRY F. FRENCH,

6 and 7 Barristers' Hall, Boston, Mass.

JUNE 23, 1864.

Boston June 28 / 64.

The 20th. Meetg. of the Buildg. Com. was held at 12 M. this day.
Present Messrs. Davies, Little, Robs & Ruggles.

On motion of Mr. Little it was
Voted that M. D. Robs Esq. be chosen Chairman to fill the vacancy occasd by the absence of Prof. Rogers.

The Records of the last Meetg. were read & approved.

The Secy. stated that at a Meetg. of the Govt. of the Inst. held on the 6th. inst. J. P. Ruggles Esq. was added to the Buildg. Comtee

The Comtee appointed to exam. the contract existg. with Mr. Grant, & rept the result of the examinat, & the course under the circumstances recommended to be pursued in relat. thereto, made a verbal statement of their doings & submitted as embodying their recommendat. sundry papers; viz. 1. An Assignment by Michael Grant to Messrs. Brainards & Co. of Portland, Conn. all his interest in the contract between him & the Inst. of Tech. for furnishg. prepar'g. & hauling free stone for their Buildg. on Boylston & Newbury sts. with the understandg. that said Brainard is to do all the work of preparg. & haulg. said stone.

2d. An agreement betwn said Inst. & Messrs. Brainards & Co. with the assent of said Grant, whereby said B. & Co. are to furnish instead of said Grant all the Brown free stone required to erect & complete the Inst. Buildg. above referd to, of the quality & dimens., & at the times specified in the contract with Grant; the other terms & conditions bind'g. on the Parties being set forth in detail in said agreement bearing date the 6th. of May 1864 & signed by Brainards & Co.

Jona Preston Agt
Michael Grant.

3d. An Agreemt. of the same date made betwn the Mass. Inst. of Tech. & Messrs. Brainards & Co. whereby on cert. condit. said Inst. is authorized to make weekly payments to M. Grant for the labor of cutting the stone to be used in the constructn. of the Inst. Building.

The Rept was accepted, & the doings of the Com. were confirmed, & the Contracts & Agreements made in accordance therewith were ratified.

Mr. Preston of the Com^tee to procure estimates of the for the timber flooring submitted the proposition of Hiram Emery, approved by the Com^tee, to furn. all of the spruce timber required for the floor & roof of the build^g, of good sound merchantable timber also all of the spruce boards required for under floors; the timber to b^e deliv^d at the build^g lot for $302 50/100 dolls. per M feet, & the bds. deliv^d at the plang. mill for $19. per M feet. all b^d meas. & sound stock.

The above proposit. was accepted by the Bd. Com^tee

On motion of Mr. Davies it was

Voted that a Committee be appointed to procure Estimates & report the same to the Build^g Com^tee for framing & putt^g on the floorings & roofs of the Inst. Build^g, laying the under floors, boarding the roof, making & setting window frames boarding up the same, & putting in old sashes.

Messrs. Davies & Preston were appointed s^d Com^tee

Mr. Preston called the attention of the Com^tee of the ornamental work for the keystones of the windows, & exhibited a specimen of proposed work the cost of which would not exceed $.150. the key-stones.

It was voted that the keystones be thus ornamented

It was also voted that Messrs. Little & Ruggles be a Committee to examine & select designs for the key-stones.

The Sec^y stated that at the last meet^g of the Gov^ts Mr. Beebe said that at a recit interview Dr. Walker had expressed a wish to examine the Plans & Drawings of the Institute Build^g whenever they could be spared sev^l days for that purpose that the Gov^ts thereupon had requested the Build^g Com^tee to take the necessary action to accede to Dr. W's wish.

On motion of Mr. Little it was

Voted that the Architects prepare as soon as may be a set of the Plans & Drawings to be placed at Dr. W's disposal

He also moved & it was so

Voted that the Sec^y advised Dr. Walker of the views & intent. of the Gov^ts & Build^g Com. of the Inst.

Mr. Preston, in reference to fill^g & grad^g the Inst. lot, stated that the Commonwealth would give us 7000 yds of gravel the cart^g of which would be a trouble at 25 cts per yd upon this, as the Com^tee already have cost the Inst. $.2450. The expense of 2 teams with 1 man would be $.6. pr day. No act^n was taken, as the Com^tee

Minutes of Meetings

LAND SCRIP FOR SALE.

The subscriber, having been appointed by the Governor and Council, Commissioner to sell the scrip for 324,000 acres of land, granted by the Act of Congress of 1862 to this Commonwealth, for the promotion of Agriculture and the Mechanic Arts, now offers the scrip for ONE HUNDRED THOUSAND ACRES at public sale.

The income of the fund thus to be raised has been devoted by the Legislature to the support of the Agricultural College and the Institute of Technology. It is believed that no safer investment of money can be made, in these unsettled times, than in this scrip. It is no figure of speech now to say, that land is the only *real* estate, — the only property of reliable permanent value. The scrip may be located at once, or it may be held without care, or risk of loss, or the payment of taxes, for location at any future time. Capitalists or companies, by locating these lands in large tracts, in those States where slavery is going out, may find rich rewards for their enterprise by organizing settlements upon them. The erection of a school-house in place of a slave-pen, in any locality, soon doubles the value and price of land.

Citizens interested in the Agricultural College and the Institute of Technology are urged to attend to this matter. Every acre of this land ought to be taken by the people of our own Commonwealth, who are its real owners, and whose interests require its immediate sale at a fair price. Fifty cents in gold may buy an acre of excellent land.

Each piece of the scrip is for 160 acres, and entitles the holder to locate upon any Government lands which are open to private entry at $1.25 per acre.

The title is direct from the United States to this Commonwealth, and the scrip by assignment in blank, under the hand and seal of the Commissioner, becomes a simple and sure title, which may be sold and transferred by mere delivery.

That our own citizens may have opportunity to purchase, I offer this scrip for sale to the highest bidder, upon the following conditions: —

1. The bids must be sent by mail or otherwise, to the subscriber, on or before the 23d day of July, 1864, in sealed envelopes, marked "Bids for Land Scrip," with the full name and residence of the party. The bids may be in this form: "I will take pieces of the Land Scrip, 160 acres each, at cents per acre, on the terms advertised." (Signed.)

The bids will be all opened and recorded at one time, in presence of a committee of the Council appointed by the Governor.

2. Bids can only be received for 160 acres, or multiples of that number.

3. One quarter of the price must be paid within ten days after notice of the acceptance of the bid shall be deposited in the post-office, and the balance on delivery of the scrip in twenty days more.

4. No bid of less than eighty cents per acre will be received.

5. Bids by persons or companies of other States must be guaranteed by citizens of this Commonwealth.

HENRY F. FRENCH,

6 and 7 Barristers' Hall, Boston, Mass.

JUNE 23, 1864.

The Institution of Civil Engineers,

25, Great George Street, Westminster, S.W.

23rd July 1867

Dear Sir,

I have now the pleasure to inform you that Mr Wesley has received for transmission to your Academy, through the Smithsonian Institution, Washington, two packages containing a complete set of the publications of the Institution of Civil Engineers as under:-

"Transactions" 3 vols 4to 1836-42
(this series discontinued)

"Minutes of Proceedings" 25 vols 8vo 1837-66.

Do. General Index Vols 1 to XX. 1865

"Catalogue of the Library" 8vo 1866.

"Charter. Byelaws. List of Members" 8vo 1867

I trust that these volumes may reach you without delay & in good condition. May I ask to be favoured with a note on this subject in due course.

We shall await anxiously the arrival of the copies of your publications destined for our library

I am, dear Sir,

Yours faithfully

James Forrest

Secty

Professor William B. Rogers
Corresponding Secretary
American Academy of
Arts & Sciences
Boston U. S.

From James Forest
Lieut. Mont. Cavalry

Answered Oct 10, 67

Forest, James
Letter to Prof. Wm. B. Rogers.

10 (p. 3 only)

151

Institute's Rooms
Boston July 19, 1864.

Prof. William B. Rogers.
My Dear Sir.

Although you rely on others than the Secretary to keep you posted up in relation to matters here, and though I have but little of interest to communicate, I venture to address to you these few lines.

The Institute's vacation has commenced, & I rarely have a call from a member; the Government meetings have not been suspended & consequently I shall remain in the City during the hot term. I cannot say, as was said of one of England's celebrities, the Secretary stands alone; but he certainly for the most part sits alone; & as in the other case, I trust modern degeneracy has not reached him.

Your note, in reply to mine on the eve of your departure, has not yet been presented to the Government, there having been thus far no opportunity for so doing. The stated meetings as you are aware are held on the first Monday in every month; that day of the present month was the anniversary of our National Independence, & although Notices were duly issued, no one, as might have been anticipated, obeyed the summons.

There has been one meeting of the Building Committee, at which the Architects offered for examination and approval, a sandstone block intended as the keystone of one of our windows, the face of which is ornamented with emblematic representations of the Square, Compass, & other working tools.

there are to be thirteen of these key-stones; as ornaments for which, the Architects stated they had made drawings. I suggested to the Chairman, that this was a matter of too great moment to act upon hastily; that it required much thought & careful consideration, and had better be deferred until your return, or if that could not be, it should be referred to a special Committee. The latter course was adopted, & the subject has been placed in the hands of Messrs. Little & Ruggles. I still hope, for reasons which will readily occur to you, that no definitive action will be taken before you are again with us. If the stones must be in place ere that, why not insert them plain, & ornament them afterwards; this course would render the job a little more laborious to be sure, but on the other hand might be the means of guarding against any exhibition of eyesores that would prove injurious to aesthetically sensitive visual organs. This ornamental work will cost, on an average, $.150. the window. By the new Tariff, which went into operation the first of this month, there is a Government tax of 5 per ct. on this description of work, and a similar tax on all faced stone in addition. Also by said Tariff there will be an ad valorem duty of 15 per ct. on all Apparatus, &c. imported for Public Institutions; the Law, heretofore making a discrimination in favor of such Institutions, having been repealed.

I am reminded that our friend E. B. Bigelow Esq. has favored me with a visit, and requested me so to frame the vote authorizing the purchase of Models, &c. as to include photographic illustrations, it being his intention to make a motion to that effect, at the next Government meeting. I told him that I would advise you in regard to it, but that the vote was sufficiently broad to empower you to purchase whatever in your judgement is deemed advisable.

The Committee on Instruction have held but one meeting since you left; at which were present Messrs. Philbrick & Sherwin. Of the "Scope & Plan" a thousand copies were ordered to be printed, which are now ready for delivery. Of the "Outline of Studies" five hundred copies have been struck off at the request of Mr. Rolfs.

The latter part of June, I thought I would mail a copy of the Scope & Plan to Dr. Walker, & ask his opinion of it; advising him at the same time, of the intention to send him, for inspection, Drawings of the Building now in the course of construction. A transcript of his reply which was very promptly made, I send on page 3, thinking it will be not altogether unrefreshing.

LAND SCRIP FOR SALE.

The subscriber, having been appointed by the Governor and Council, Commissioner to sell the scrip for 324,000 acres of land, granted by the Act of Congress of 1862 to this Commonwealth, for the promotion of Agriculture and the Mechanic Arts, now offers the scrip for ONE HUNDRED THOUSAND ACRES at public sale.

The income of the fund thus to be raised has been devoted by the Legislature to the support of the Agricultural College and the Institute of Technology. It is believed that no safer investment of money can be made, in these unsettled times, than in this scrip. It is no figure of speech now to say, that land is the only *real* estate, — the only property of reliable permanent value. The scrip may be located at once, or it may be held without care, or risk of loss, or the payment of taxes, for location at any future time. Capitalists or companies, by locating these lands in large tracts, in those States where slavery is going out, may find rich rewards for their enterprise by organizing settlements upon them. The erection of a school-house in place of a slave-pen, in any locality, soon doubles the value and price of land.

Citizens interested in the Agricultural College and the Institute of Technology are urged to attend to this matter. Every acre of this land ought to be taken by the people of our own Commonwealth, who are its real owners, and whose interests require its immediate sale at a fair price. Fifty cents in gold may buy an acre of excellent land.

Each piece of the scrip is for 160 acres, and entitles the holder to locate upon any Government lands which are open to private entry at $1.25 per acre.

The title is direct from the United States to this Commonwealth, and the scrip by assignment in blank, under the hand and seal of the Commissioner, becomes a simple and sure title, which may be sold and transferred by mere delivery.

That our own citizens may have opportunity to purchase, I offer this scrip for sale to the highest bidder, upon the following conditions: —

1. The bids must be sent by mail or otherwise, to the subscriber, on or before the 23d day of July, 1864, in sealed envelopes, marked "Bids for Land Scrip," with the full name and residence of the party. The bids may be in this form: "I will take pieces of the Land Scrip, 160 acres each, at cents per acre, on the terms advertised." (Signed.)

The bids will be all opened and recorded at one time, in presence of a committee of the Council appointed by the Governor.

2. Bids can only be received for 160 acres, or multiples of that number.

3. One quarter of the price must be paid within ten days after notice of the acceptance of the bid shall be deposited in the post-office, and the balance on delivery of the scrip in twenty days more.

4. No bid of less than eighty cents per acre will be received.

5. Bids by persons or companies of other States must be guaranteed by citizens of this Commonwealth.

HENRY F. FRENCH,

6 and 7 Barristers' Hall, Boston, Mass.

JUNE 23, 1864.

(Copy)

"At Home Newport, R.I. July 2, 1864.

Dear Sir.

I received your note of June 29, with the pamphlet accompanying it: 'Scope and Plan of the School of Industrial Science of the Mass. Institute of Technology.' I have read the same with great pleasure and am neither able nor desirous of altering it in any point for the better. It meets my unqualified approbation = God speed the Institute.

I should not wish the Plans copied on my account. I am satisfied all is going on well. I can do but little mental labor.

When you write Professor Rogers give him my best compliments, and wishes for health, happiness, and prosperous visit to Europe, with safe return.

I am Dear Sir

truly and sincerely

Yours,

(Signed) William J. Walker."

To Thomas B. Webb
Sec'y &c.

"When can we complete & collect the Subscription for Second Building? I wish to have it done."

This inquiry led to my addressing the Dr. again; since which I have not heard from. In the second Letter, I mentioned the action taken to procure Models, &c. and the great importance of having these, & other apparatus. — I regret exceedingly that anything has interfered thus far, to prevent our securing the $20.000 to which Dr. Walker alludes. He had a right to look for prompt action in the case; & I doubt not that he is much disappointed, as he has more than once spoken to Mr. Beebe & others about it. I am convinced that he is only awaiting our final movement, to make another offer for the benefit of the Institute. I trust we shall not let so golden an opportunity slip from us. By the printed page on this sheet, you will see the diminished prospect of a large realization from the Land Scrip. With respects to Mrs. Rogers, I am very truly yours,

Thomas B. Webb

1161

Corehouse 7 July 64
Lanark

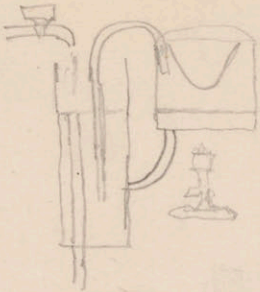
My Dear Professor

My continuous absence from Glasgow has prevented me offering my services to your Brother to visit the Cathedral or the School of Art. He has gone I hear to Edinr. to come back I hope to Glasgow, where I may hope to be of use.

The School of Art in Edinr is perhaps the most complete in many respects in the Kingdom & I can give him its history - but in the meantime he will I hope see it & I can if he wishes it give him a letter to the Honble Bouverie Primrose the Secretary who I am sure would be glad to afford every facility to his most minute enquiries, there is much in Edinr bearing on the subject of his general enquiry. We remain here probably a fortnight, the beautiful scenery here is doubtless known to you. With my respects to the Professor your Brother & to his Lady

Ever truly yours
C Heath Wilson

Professor Henry Rogers



6

Lunenburg, June 8, 1864

My dear Mr. Rogers,

I regret that it will be out of my power to go to the City in time to attend the Meeting of the Govt tomorrow afternoon. So entirely have my time & little strength been demanded by home affairs since coming here that I have been unable to prepare a proper report for the Committee of Instruction on the subject of Opening the School of the Institute next season, and in strictness such report ought to be submitted to them for amendment & acceptance before being presented to the Govt.

The substance of what I intended to submit for their approval was this —

First that the Committee are of opinion that the interests of the

of the Institute could be materially promoted — by the ~~[illegible]~~ organization ~~[illegible]~~ next Autumn or early in the winter of such parts of the School of Industrial Science as it may be in our power to put in operation, and —

Secondly — that the Committee, to this end, ask the authority of the Gov't. to take such steps as may be necessary for opening in the rooms of the Institute the following courses of instruction. viz.

1 — A course of Evening Lectures on Experimental Physics & Applications.

2 —

Estimate of the Annual expense of the School of the Institute on the Scale of Organisation which will be necessary at the begin.g of the Sessn. of 1866.7

Salaries

Prof. of Mathematics & Anal. Mechanics	2500.
Prof. of Physics & Geology	2500
Prof. of General & Indust. Chemistry	2500
Prof. of Analytical Chemistry & Metallurgy	2500
Prof. of Mechanical Engineering	2500
Prof. of Civil Engineering	2500
Prof. of Architecture & free-hand drawing	2500
Prof. of Mining Engineering	2500
Prof. of English Language & Lit.	2500
Prof. of Modern Languages	2500.

Assistant Prof. of Math. & Intendant of the School	1500.

Assistant Prof. Geol. & Palaeontology
Assistant Prof. Physics
Prof. Botany, which may for the present be paid out of the Salary of the Prof. of Physics & Geology.

$26.500.00

Bro't. over	26 500.
Cost of Heating ventilating lighting water &c.	4.000
Janitor & other servants	1200
Catalogues & other printing for School	500.
Consumption & wear of Chemicals & Apparatus not charged to Students	300
Wear of furniture requiring repair.	300
	32.800

Income Appropriated to the School;
or to be relied on next Season.

Fees of 80 students at 100	8000
" " 80 " 125	10000
From the Trustees of the Lowell fund	3000
From the Walker fund	10.000
From Land scrip fund about	1500
From Evening Classes	1500
	34000

Estimate of Cost of Apparatus of Instruction.

1.. Physical Appa: & fittings .. with a Set of large Drawings for the Lecture room.
In General Mechanics — Hydrodynamics — Pneumatics Acoustics Molecular Action, Thermotics Optics Electricity &c.. 15000

2.. Chem: Apparatus .. & Agents & fittings including ~~a Set of Chyml. Models~~ of Specimens for Dr. Chem: & a Set of Tables with a Collection of Diagrams & Models. 9.000

3 Models of Machinery - with Sets of large Drawings 5000

4 - Instruments for Topograph: Surveying 1000
Models & Drawings of Framing .. Masonry 3000
&c -- - - - - - - - - - -

5.. Drawings & Models - for Architecture & Building - 3000

6 ... Models & Drawings to illustrate Mines - Mining Machinery &c 3000

7... Minerals - Fossils .. Set of Models of Crystals - Geological Drawings & Sections ... 6000