

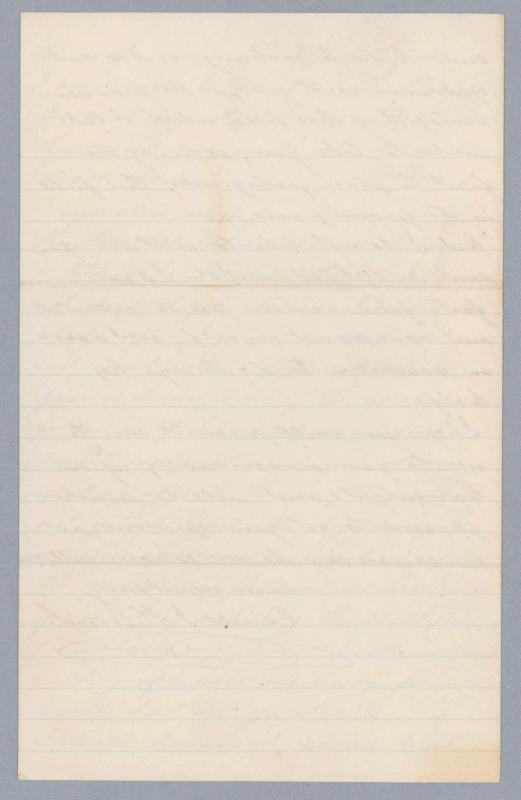
IJ Mid Sottino Varu. 5th 1873. Prof. W. B. Rodgers. Boston. Deartir. With the compliments of the ceason allow me the wish of a heappy new year to your. In receipt of yours of 16th Dec. I have not been able to answer get, and can only to it hastely now being in The midet of closing up account, At for anotall work it. The No. 105 in Sin King shaft must be at least 895 ft. below surface man, lee mon. I and now boring nearly due bout of ald pump shaft to the dig of what was called the grove that. at that point this strata appear to he at 577 10". I and unicing my strutas as soon as I can to take The reduction in the angle of dip in consideration, and may Then

to make some modifications. I hope soon to be at more laissie for such investigations, and will Then rend you such courts as I shall abtain I will also send your Diaroings of The two astreas as soon as I have a little more laissone time. I have not done it yet, because I have no view, after get all audent ical and identical information to give a description of the coul field as far as it has been modified by recent exploration. I am also making afford to see if we can not get, at least the beggining of a more systematic disection of The juranic format 'on here, which for want of noticing the stratifica, tion clarly and scientifically when sin thing of course no leady formely hardly had an appertunity. I shall be much pleased set

such times to exchange notes and oppinions with your, as the pioneer Geologist of This field which I take pride to take your, as being the first to place geologically this field in its proper position. But I do not like to venture upon such a subject until I have facts from various points calleded and compared myself, as I have an aunion to do things by hulfs. I hope you will pumite me to write you accassionally upon those subjects and will be much pleased to get your opinions, as for as you can do so conviniently. Jain respectfully

Oswald J. Hennis.

 $\langle \langle \rangle \rangle$



689 Rochester March 3. 1073 My Dear Fir When in Eductoryh I visited the Dean bennetery, and came unexpectedly upon the grave & your Comented hother Henry . I saw him last ar the Albany meeting of the American Apocation in 1856, as which Meluie you were also present, and I remember his fine figure, and pleas and addrep. I copied the mis aiption on his Tonet, and thought of uniting to good and sending you a apy, when it accounce to me that

you publicly had it, and perhaps prepared it. It seemed unfortunate that his semains thould should be in a distant land, so far from his Kundred; and you the place is remarkally lovely, and attached to one of the morbeautique citie on the Earth. His dauthter Edith, buried as his fide Seemed to splain his own bund there I segret to hear of your impaired health; but you have the Consolation of a long and usefue life were sperit in Scievel, None qui can seich the. Stream which is bearing us onward.

I am indelled to you per onally for the generous support you gave me as the meeting of the Academy in 1868, when I read my paper on boursanguinty. and Prof. Agassiz, made a wrathful attacte apon it, I lota him offerwards that he was wholly unable to appreciate an Ethnoligical fact. At this late day I desire to thank you for what you then said I sent the printice paper to Dariun and I am induced to think it did hind a good turn in the descent of Man. Unlephe had know that there Une good grounds against habieral

Lelection in Manique annug sarage, and barbanans, because z a system of requested promiscing. he would have been templed tohave made a string claim for hatural Seliction in the purpagation of human Kind, Of course I do nor know that he would have committed himself to such a uur. Muth grear sespeer Jours hug I A. Morgan

Pry W. B. Rogers.

Boston

653

1 Shalunt Street

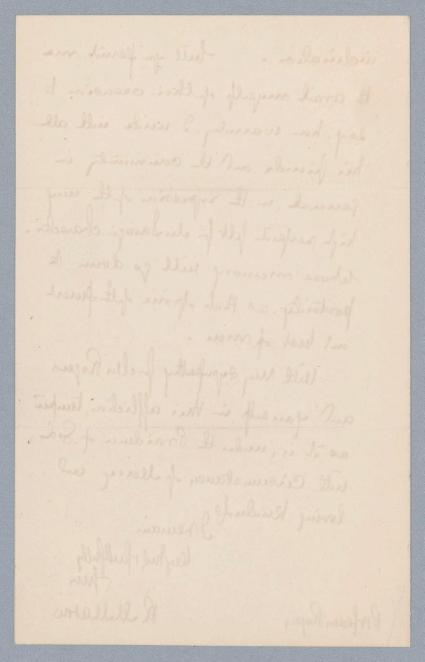
March 11. 1873

ley dear fri

The Monthly bleeting of the Mass. It's Dociety" meets all my house n Thursday avening 13th at Seven b a half o doch, n mhich occasion A death of ale Dawage - till of course be noticed. It is intimated that it might pratify for to hear what is fail and I therefore beg to ash you will come of it is appeable to your feelings and

victuation - buil que ferrit me to avail myself of this occasion to day, har warmly I write will all his field and the community in ferreral in the Expression of the reng high respect felt for elustanagis character. Whose memory fill go down la porteity, as that of me of the querk and best of men. Ult my sympathy feller Rogers and you self in this appliching, temper as it is, under the Providence of Sol, hitt Circumstancer of Menery and loving knicht Joheman leaghed rautifully Rellatio Profeson Ruger

seci-se



686 Brookline 17 March 73 -My dear tin: Jam mehaning, under order, a physical History of the Courts, and among other mat. ters which I am venturing to discup is the aspect of the cont reflection the namatives of the northmen, Champlain Jc. I make, I foney, and or two new Junto and of my own experience; and of you Thank This Chapter in to crude form, and he aproper Thing is read to your Club, I will bring to an the 20 th. I was very much gratified & the presend time of your note and the kind remembrance of my falter

- I know well his prendship with you and you good wife and her father Nen my you N. mitchell San quilt a nonce about clubs, in zon mush, 220 plane, instruct me - The.

225 Pan Francisco 21 march 1873. hus Roque please hoadam. I have pise harmed of the dearth of your good facture. We was an old gentleman when firso lines him, vere to me for I was but a boy , - hus his ginal kindness and his warms believe of my boyich regard, won my appections, and have never and ho

buno him among my , muse ratured friends . my prist acquaintanco with her Sanage was through a note from my mother and when I must home i my course anations she would always ask he if I had de your faction latity, and how he was. my morten hard to a have vere auge, and mas later the hard only a you ago . it many of he family and demai frinds hun your before, that she wohed formand bilearts with an Eager heputation

taction than his qualities in migner. I do not believe that kuch friendships are Inded mit deach have haction hans fined banaction world. Often dring my life

i Cambridge on my laturary afterno of lisure, I would cult on your fartin and. apind . my pleasant hom - his striky on hbring ; and after my graduation when he asked he baint him is hunner hung, one of the happener muchs I my life has obring that visit . to is a holenn thought that I an the only knowing that lays cumpany -

Thur it is ideo to apper you any consolation ~ Jour loss, hui d'manleid blile you how much reakers and affer tim I had for the good als quitemen who was so him to me as a boy. and how as per veries and knew him hetter, how her how my manky hispurts for the stating words of his Chamter, the nee fulness I his life, and his constant thought for other people. hånden me if I have intruded where you and believe no with hims request for young and Professor Rayes any hit from prices 1 bonar hund -

[Apr. 1973+]

BULLETIN

OF THE

STATED SESSION

OF THE

NATIONAL ACADEMY OF SCIENCES,

HELD IN

WASHINGTON, APRIL, 1873.

OFFICERS.

JOSEPH HENRY, President, WOLCOTT GIBBS, Vice President, LOUIS AGASSIZ, Foreign Secretary, J. E. HILGARD, Home Secretary, FAIRMAN ROGERS, Treasurer. COUNCIL.

S. F. BAIRD, M. C. MEIGS, G. J. BRUSH, W. D. WHITNEY, BENJ. PEIRCE, J. H. C. COFFIN.

The following members were in attendance :

Messrs.-Alexander, Barnard J. G., Baird, Brown-Sequard, Coffin J. H. C., Gill, Guyot, Henry, Hilgard J. E., Humphreys, Lane, Le Conte, Meek, Meigs, Newberry, Newcomb, Newton, Peirce, Rodgers J., Rogers W. B., Schott, Silliman, Trumbull, Watson, Whitney W. D., Winlock, Woodward.

PAPERS READ.

A Biographical Memoir of the late Dr. John Torrey; by ASA GRAY.

The determination of singular points of curves and surfaces by the methods of quarternions; by BENJ. PEIRCE.

On the Meteoric Iron found in 1871 near Shingle Springs, Eldorado county, California; by BENJ. SILLIMAN.

Determinations of Longitude between Europe and America, by the U. S. Coast Survey; by J. E. HILGARD.

On the Structure and Age of the Cincinnati Anticlinal; by J. S. NEWBERRY.

On the need of more accurate investigations and tables of the celestial motions; by SIMON NEWCOMB.

Experimental and graphic results of distilling certain Hydro-Carbons by heat, with and without the aid of vacuum and steam; by C. F. CHANDLER & B. SILLIMAN. The Geodesy of the U. S. Coast Survey; by BENJ, PEIRCE.

On the General Atmospheric Circulation ; by A. J. WOEIKOF.

On Repeating Curves; by H. A. NEWTON.

Comparison of the spectra of the limb and of the centre of the Sun, made at the Sheffield Scientific School, by Chas. S. Hastings; read by H. A. NEWTON.

On the Observation of very small Stars near the Ecliptic and some peculiarities in two recently discovered Minor Planets; by JAS. C. WATSON.

On the altitude of Gray's and Torrey's Peaks in Colorado Territory, some questions connected with the determination of Barometric altitude in the interior of Continents; by A. GUYOT.

A Biographical Memoir on the late Prof. William Chauvenet; by J. H. C. COFFIN.

On the stability of the Meridian Circle of the Observatory of Harvard College; by J. WINLOCK.

On some experiments made in 1871, with a slitless spectroscope, in order to see the whole chromosphere of the Sun at once; by J. WINLOCK.

On a method of illuminating the threads of the reticule of a telescope by the electric spark; by J. WINLOCK.

On Observations of the Sun, made at the Observatory of Harward College in 1872, with the aid of the Bache Fund; by J. WINLOCK.

Report of progress of a Magnetic Survey made by the aid of the Bache Fund; by J E. HILGARD.

On certain Harmonies of the Solar System; by STEPHEN ALEXANDER.

On the reproduction in progency of defects produced by injuries in parents; by C. E. BROWN-SEQUARD.

Silt Analysis of Soils and Clays; by E. W. HILGARD; read by J. E. HILGARD.

On the Unity of the system of life in animals and the true principle of gradation in various animal types; by A. GUYOT.

MEMBERS DECEASED.

Messrs. Coffin, J. H. Frazer, J. F. Hadley, J. Stimpson, William Torrey, John.

MEMBERS ELECTED.

Messrs. Loomis, Elias Lovering, Joseph Gill, Theodore Norton, William A. Woodward, Joseph Janvier.

RESOLUTIONS PASSED.

Mr. Winlock moved, that a committee of the Academy be appointed to take into consideration the need of more accurate investigations and tables of the celestial motions, as represented by Mr. Newcomb and to devise such measures as may seem to it best adapted to improve the accuracy of astronomical tables.

The following committee was appointed : Messrs. Peirce, Winlock, Coffin, Newcomb.

Mr. Meigs stated, that a large Government expedition was fitting out to escort the Engineers of the North Pacific Railroad over the line from the Missouri to the Yellowstone, and suggested that it would be well for the Academy to advise the Government to take advantage of the facilities this would afford for scientific exploration of this comparatively unknown region, in the branches of botany, geology and fauna, and of the palæontology of the district which is said to be rich in fossils.

Mr. Peirce moved, that the President be requested to communicate with the Government and urge that the expedition be accompanied by men of special skill in those branches of science.

The Council having requested an expression of opinion on the part of members as to the desirability of holding a stated session in the Autumn, a general disposition in favor of such a session was manifested, in order that pending amendments and nominations might be acted on.

Officers and Council for ensuing year :

OFFICERS.

WOLCOTT GIBBS, Vice President,

LOUIS AGASSIZ, Foreign Secretary,

J. E. HILGARD, Home Secretary,

FAIRMAN ROGERS, Treasurer.

JOSEPH HENRY, President,

COUNCIL. S. F. BAIRD, J. H. C. COFFIN, M. C. MEIGS, SIMON NEWCOMB, BENJ. PEIRCE, W. D. WHITNEY.

AMENDMENT TO CONSTITUTION.

Mr. Peirce moved to amend the Constitution by striking out from Article IV. Section 5—the words and after that of April 1872 not more than five members shall be elected at any one session. The Council recommended that it be adopted—which was considered and adopted by the Academy in Committee of the whole, as provided by the Constitution Article VII; to be acted on at the next stated session.

NOMINATIONS PENDING:—Charles F. Chan ller, of New York City; George Davidson, of California; Asaph Hall, U. S. Navy; F. V. Hayden, of Washington, D. C.; George W. Hill, of Nyack Turnpike, N. Y.; T. Sterry Hunt, of Boston, Mass.; Charles S. Peirce, of Washington, D. C.; Edward C. Pickering, of Boston, Mass.; L. F. Pourtales, of Cambridge, Mass.; Robert E. Rogers, of Philadelphia, Pa.; William Sellers, of Philadelphia, Pa.; F. H. Storer, of Cambridge, Mass.; John Tyndall, of London, England, for Foreign Associate.

Harvard University,

CAMBRIDGE, MASS.

30 May 1873.

My dear hi, I trust that

275

The selection of the 100 books

fom Mr. Savage's library for

the University was accomplished

without putting you to

serious trouble. The books

have been received and will

be suitably marked with The

name of the giver.

Hoping that you and this

Rogers will annel enjoy the

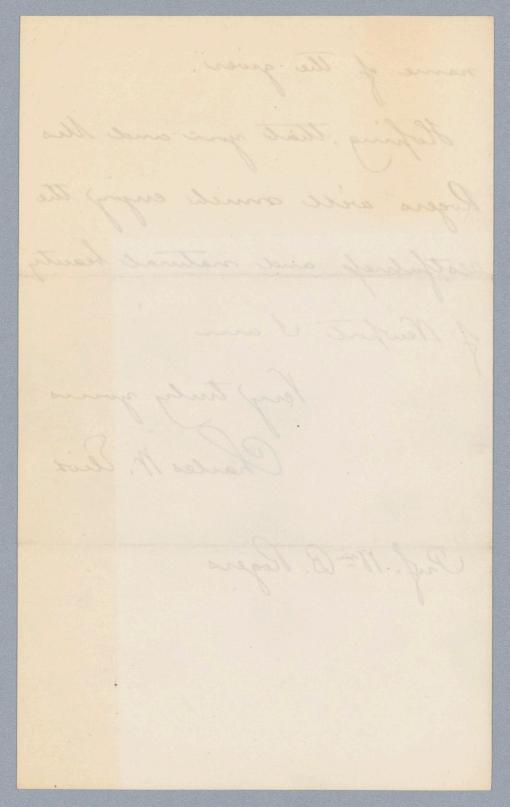
restfuhrefs and natural beauty

of Newfort I am

Very truly yours Charles M. Vioz

Prof. Mm B. Rogers

*



1873 Scottiburg Halifay bo Bi Lune 11th As you were once a. chigen of our that and Profeson at our hunsity I feel That I can take The liberty of witing to you, while a citizen of Virginico you no doubh saw the procep of curing tobacco and know That annually an inmense quantity of timber is distroyed in The process on This Section of The State Charcool is used to some eytent which dominity the consumption of wood to some extent, but I am of The opinion That Some Chernical agent could be employed (by furnigation which would still further reduce The cost and labor, the manufacturers of Throw hole and bonnets block them by fulphunic furnisation. The proces would no doubt bleach tobacco but

would unport to disagreeable a flavor as to diminish The market value of the crop-unlif The Lalphin could be com: = bined with some other substance That would modify it flowor Is there any preforation of time which could be made available Do you know a practical work on Chemistry applied to The arts and manufactures 2 & dope my Dear fir that you will pordon The liberty I take in writing this to you -I will be thankful for any infor - motion you may give me on The subject -An un Tricky DA Claiborne Prifipon mm Rogers

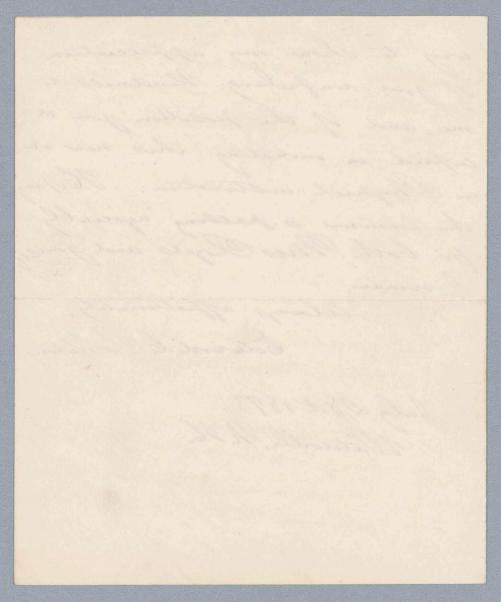
July 28. 173 3 My dear Profiler Hogels, Mullos Houghton & Co are going to lend you a copy of my work, the first part of which is just finished; my work on Thysical Manipulation, for use in our laboratory. I have inscribed it with gove name, for I knew of no better

way to chow my appreciation of your unfailing Kindness to me, and of the position you acupied in initiating this new da in Physical instruction. Horing the lumme is patting agreeably for both This Rogals and young I remain, always affectionality,

Edward b. Ciellering.

July 28th. 1873. Waterolle, M. 16.

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Muited States Engineer Office,

Fort Mouroe, Va., September 11, 1843.

Col. Mr. P. Graighill, Corps of Engineers, Baltimore, Md.

Colonel:

In reply to your letter of the 4th I have the honor to state that upon examination I have been mable to find when any openiments from or information about the Artesian Well were furnished to Prof Rogers from this office and therefore commence from the depth he indicates, 500 feet. Such openiments ap I have been able to find from that depth to the lowest reached are forwarded to you by express this day, the depth from which each openimen was obtained being marted on it.

The first specimen is from a defeth of 504 feet, between this defeth and boot feet no specimens remain some were sent to the Engr. Defil. Mashington (a portion of which were submitted by Seul. Knupphreys to

Mr. Clarence King) the journal Kept, however, gives all changes in the strata that were noticed as the well progressed. I copy from it. From this depth (504 ft.) no change was observed until 515 feet when the opecimen obtained indicated a decided change. - " To the eye the material appears much like the day above, except that it has a lighter shade of green - To the fingers it is less tenacions and crumbles easily. It appears to be a soot of marl, mixed more or less with clay, free from sand and effervesces quite freely under the action of intric acid " from 515 ft. to 5-12 ft. there was no material change in the strata - at 572 feet a few pieces of a concretion of sand with shells imbedded in it and a few stranks health - two pieces of bone supposed to have been portions of the vertebra of a black fish or whale - The indications were that the stratum was changing - at 584 ft specimenowere brought up which on washing were found to contain 50 per cent. sand. Mashings of later specimens (599 fect) giving 80 to go per cerd sand - All specimens oblained about this time were forwarded to the Eugr. Defit Mastrington. It this time the water rose in the pipes above the level of the parade of

the boot for several days, it was lested at different depths and found to be very saline - Below this depth (599 ft.) the material became more tenacious and clayey and at 650 ft the boring was very difficult - at 654 ft slight indications of sand were noticed and continued to 66m feet when it was estimated there was 20 per cent. It 669 feet the day was free from sand and continued so with slight modifications to 830 feet when it was found after washing to contain 80 per cent. sand. From this depth to 851 feet only slight changes were noticed (in the proportions of clay and sand.) at 851 a few public were found and at 853 feet a conglomerate of day sand and small gravel- at 855 feet a hard must 3 feet thick was met with after which the day was stiff to 874 feet, when it became variegated in color and continued es to 885 ft. when a very dark stratum was struck which again changed (in color) at 890 feet. With slight changes this continued to goofeet when the day was again mixed with sand which continued to goy feet the depth of the well blow the parade of of the fool. With the hope that the information given may he satisfactory,

J am Very respectfly Yr obt est, (Signed) Des. H. Elliott,

to a file standing and a light a d The letter of Prof. Rogers and Col. Blunto note are herewith returned.

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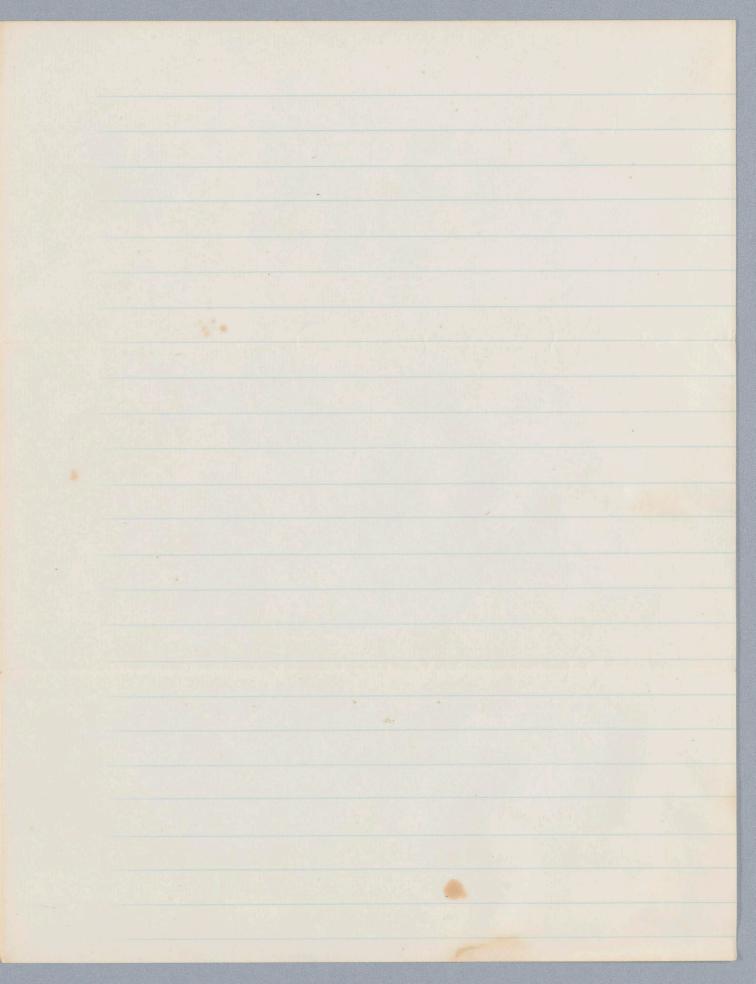
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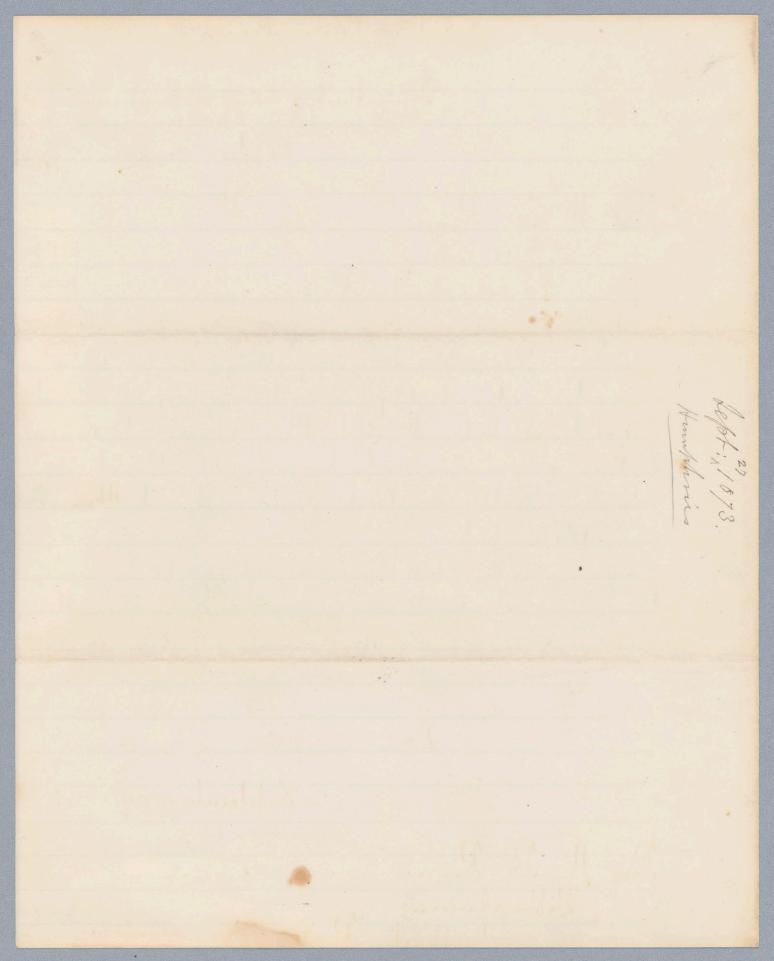
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bedention of chang and said of all 851 as fine bet

Office of the Chief of Figureers, Washington, D. C., September 27, 1873. Prof. W. B. Roguo, Gibbe Avenue, Newfort, R. S. In reply to your letter of the 30th of August, relative to the prosecution of operations at the Artesian Well at Fort Monroe of late years, I take pleasure in enclosing copy of letter of Mr. Des. N. Elliott, Assistant Engineer at Fort Mourse, upon the subject. Shall the specimens referred to be sent to you at Newport on Boston? If at the latter place will you please send me your address: Very truly yours alethumphago Drig. Genel. & Chief of Engineerp.

internet in a Sublember 24, 1973. Joseph B. Hogers 3 9. Tribunte allit. to availared to instruction of it of instaling lawards all partille particular minature in month Nint & to il un it I wooden Seal 11 18 opening and the business





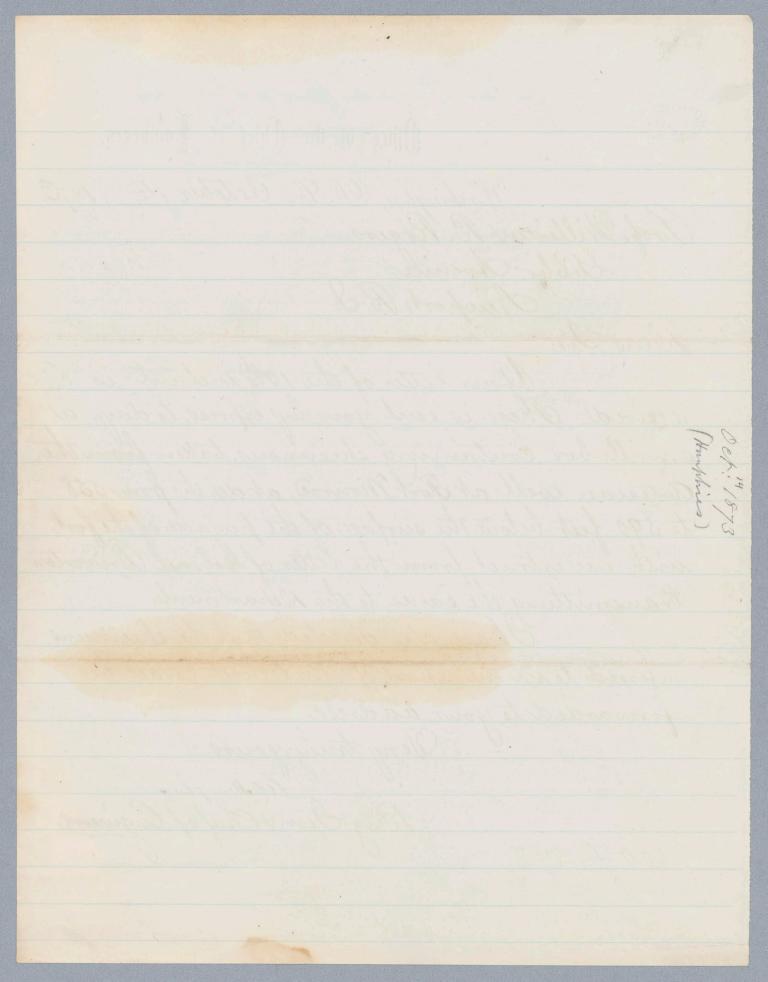
5/ hewport Och. 11, 1873. My dear Prof. Bust. I thank you for your Interesting letter & for the Report of the meeting of the lifsoo? at 12 Portland, if which I had before 6 read Only a few imperfect fragment. 9 I have been Breech Alcested in your papers wheel Wate to regions and phenomen a with which my lanly labours made the Sementhat of assultain, and I anterpate quet enjoy at a well as profit hi talking over these Subjects with you, to her love hert, as hust las Shale often the Porning Winter, I may ledd that nef as an Institute - Mich I was happy to see our scientific

Character- So ably represented at the atland meeting . Oh regard to the Coal region to Which your letter refers I am whable to five you any detail, for permin a branching, and Juck Rotes as wer tallow by One of they affected, and hat the in herefront during the Lang her Doster. One lifterching i The lock Region of the W. Com of the State love only of the ground Chanceling as It Country at 15time we a lorder of the the postfor the that furthe Iscan the the Closing labour, of the hour, Which hours The degistation did additate faits to provide for. The letter of the load Took, is the best represent or K Map, by thet is land doe

a the feel flet lot me. Whit form the S Earle boundary of Mc Doweled Wy oning Counter Bet the lifter Shaly & Achecion mercher of the lendere-Oprover wide the NW hart of Marcar Co. Cov? hiplaces by The Level group of Sutteres de forming the back of the derce -Latain artani one a two there Port deans, court IES W enting Theyshall Co - the timber a lock, are Consoly lokes & faults with a hanselfer he toter Conferity harrow Interne hahre thips Viden & the Sug Ridger at the I w base of Wheel in paper any then long fearly They that an begins the of those lines of Dilocetion of there are to many i No Vit Easter Juna:

A a grante Way the Difference way the Cost hearing Coal measures proper by affirmately the of the Constan long It plat lof + trig ledges, A the lover of the D. AN Corates Ben the her to the find by The love love group - as -accupied by the lower local he you have surnered, the Aron on Which is four hi holle Vitte hog hansy Pa hear the lofe of the timbre Sham not bet with hi ing marked hat in the legion of the here Marin Sw q the here theme, Thank the safe the inflaction

Office of the Chief of Figineers, Washington, D. C., October 14, 1873. Prof. William B. Rogers, Gibbs Avenue, Newport, R. J. plear Dir: your letter of the 10th instant is received. There is sent you by express, to day, a small box containing specimens taken from the artesian well at Fort Monroe, at depths from 558 to 590 feet below the surface of the parade of the fort, with an extract from the letter of bolonel Brewerton transmitting the same to the Department. Thave also directed that the specimens referred to in the report of Mr. Elliott shall be forwarded to your address. Very truly yours, Brig. Gen. & Chief of Girgineers. 609 Ft. 187 3.



U. S. ENGINEER OFFICE,

THIRD STORY, UNION BANK BUILDING,

FAYETTE, NEAR CHARLES STREET.

Baltimore, Md. Oct 75 - 1873.

Very up, grotdilseit.

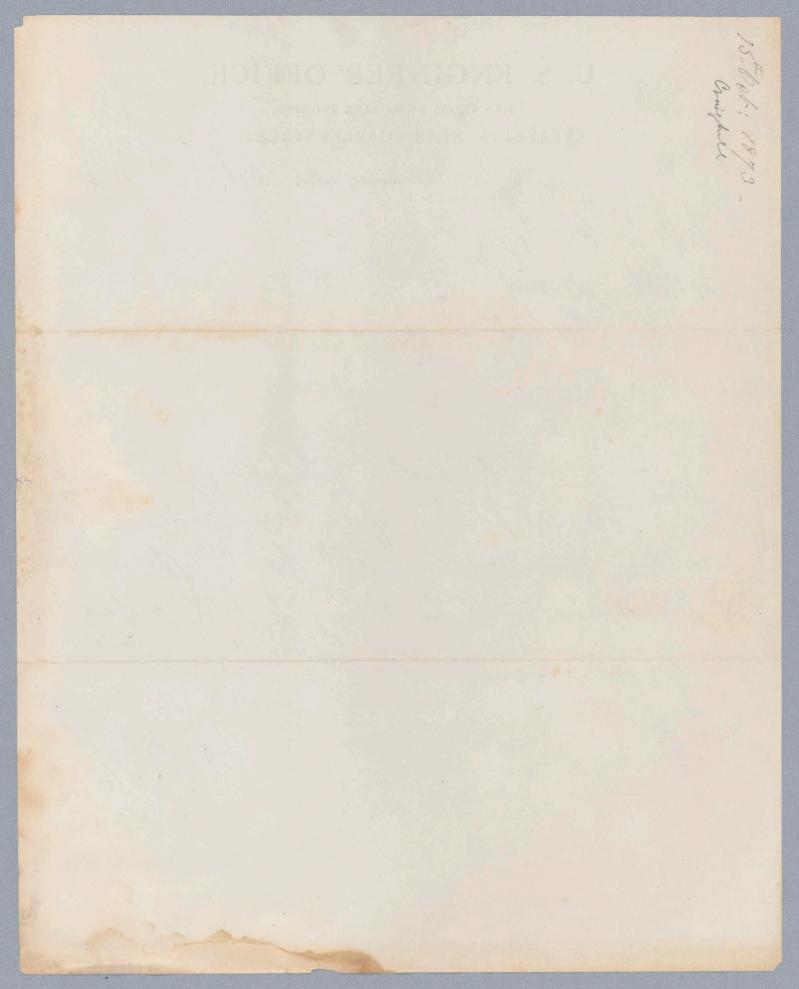
Mr. Cumphile

Majn & tug

Prof. Mr. B. Argus Gibbs Streme

Henport. R. J.

By direction of the Chief of the , a box is todas sent pontins office to your address as above, containing some speciments taken from the Arterian Well at Ft Monroe . The charges in pright we find here.



BULLETIN

[Oct. 1873 +]

118

OF THE

NATIONAL ACADEMY OF SCIENCES.

A stated session of the Academy was held at Columbia College, in New York City, on October 28th, 1873, pursuant to a resolution of the Council.

The session was attended by the following members :---Messrs. Abbot, Barnard F. A. P., Baird, Coffin, Crafts, Gibbs, Gill, Guyot, Henry, Hilgard J. E., Le Conte, Loomis, Mayer, Newberry, Norton, Peirce, Rogers F., Rood, Silliman, Trowbridge, Trumbull, Whitney W. D., Woodward, Young.

The amendment to the Constitution striking out the provision "that not more than five members shall be elected at any one session," proposed by Mr. Peirce at the last session, was taken up for final action, and was rejected—there being nine votes in the affirmative and thirteen in the negative.

The election of Foreign Associates was postponed until the next stated session.

The Treasurer's report for the year ending April 1st, 1873, was read and accepted.

A letter from the President of the Academy to the Secretary of the Treasury was read, relative to experiments on "Boiler explosions."

A report of the Committee on the "Polaris" expedition was read.

A paper by S. W. Burnham, in reference to a general Catalogue of Double Stars, was presented to the Academy, and referred to Messrs. Coffin, Winlock and Newcomb for examination, and a report as to whether it is worthy of acceptance, by the Sinithsonian Institution for publication. A letter was read from Mr. Peirce, announcing his withdrawal from membership in the Academy; which was laid upon the table.

THE FOLLOWING PAPERS WERE READ:

- 1. Sound in relation to Fog Signals—by Joseph Henry.
- 2. Results of explorations of the deeper portions of the Gulf of Maine with the dredge—by A. S. Packard, Jr. (Read by Theodore Gill.)
- 3. On the constitution of the Sun's surface-by C. A. Young.
- 4. On the admeasurement of volume-by J. E. Hilgard.
- 5. On the determination of the volume of a sphere—by J. Homer Lane. (Read by J. E. Hilgard.)
- 6. On the distribution of the thoracic spiracles of Insects—by A. S. Packard, Jr. (Read by Theodore Gill.
- 7. Some results derived from an examination of the U.S. Weather Maps-by Elias Loomis.
- 8. Circles of Deposition in American Sedimentary Strata-by J. S. Newberry.
- 9. On the Relations of the Different Classes of Vertebratesby Theodore Gill.
- 10. On a new method of Analysis of Composite Sounds, and on experiments elucidating Helmholtz's Hypothesis of Audition—by A. M. Mayer.
- 11. Experimental Researches on Fluorescence-by Henry Morton.

The two last papers were read at the Stevens Institute of Technology in Hoboken, to which the Academy had adjourned, in order to afford Messrs. Mayer and Morton the opportunity of using their apparatus.

The President announced the decease of the following members, viz :

> Messrs.—W. S. Sullivant, H. J. Clark, Joseph Saxton.

Mr. Le Conte presented a biographical memoir of the late John F. Frazer.

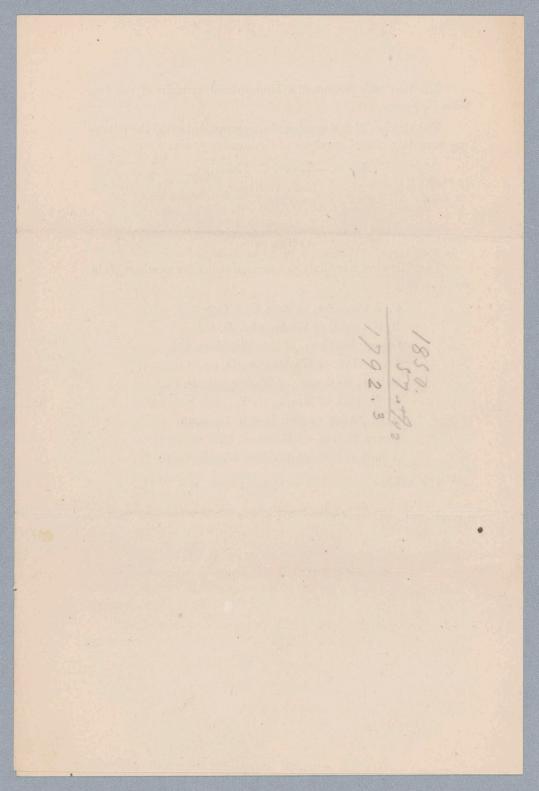
The election of new members being proceeded with, the following were duly elected members of the Academy, viz:

> Messrs.—Edward C. Pickering, L. F. Pourtales, F. V. Hayden, T. Sterry Hunt, William Sellers.

The following were duly put in nomination for membership in the Academy :

C. F. Chandler, of New York City.
B. F. Craig, of Washington, D. C.
George Davidson, of San Francisco, Cal.
Asaph Hall, of Washington, D. C.
William Harkness, of Washington, D. C.
G. W. Hill, of Nyack, N. Y.
O. C. Marsh, of New Haven, Conn.
Henry Morton, of Hoboken, N. J.
Arthur W. Wright, of New Haven, Conn.

The Academy adjourned on October 30th, at 4 P. M.



6/ Mid Lothian Nov. 1st 1873. Prof. W. B. Bodgers. Dear Sir. I took the liberty about 12 months ago to address you upon the subject of some samples of rocks formerly Rept at This place at the sim ting of a new thaft termed the Tinking pit. Unfortunally, I was informed by Mrs. Rodges that you were very ill at the time, and strictly forbidden to attend to any business matters. I met at our last meeting of the " American Institute of mining Engineer." one af our members and acquaintance of your Mr. Sterry Hunt of Dorton, who informed me of your better here the at present and handed me your address. I shall the negore make an ather effort to trouble you to see if yac could and would be tind enough to help me out of neg " scientific trouble" if I may call it so. Saw may remember that when this new shaft, the deepert shaft sunk in this district, were in progress of sinking, Col. We Woold ridge, Then Susident of the Which Lattican coal mining company, had a collection Rept of the stratas penetrated by the shaft, and as he informed me had a deplicate sample of each strata forwarded to gav. Most of the samples are still here, but during the as me, leg removal of the affice, some of them have been lost, and unfortunatly no witten read heing kept,

I can not even substitute The measurment, still less The character of racks. I am now for our Lycars in charge of this mines, bought by a new York capitalist. I am now again developing some of the new ground, also with an intention here after to sink that shaft lower. You can therefore perceive of what importance it is for me to obtain this most which in formation amongst the mass of most unreliable which can be obtained here from the minus. I therefore apply to you again to see if you could and would be third enough to send me either a full list of your records or at least if this should be to much Trouble for you, or other, wise not consistent with your views, at least a list Those missi g samples of which I give you a list, ory. on tiple. 1, 2, 3, 4, 5, sight from surface, The next sample I find here is a soft buff colored conglomerate with quarty publies comental by talcore and feld spatic cement. Then again is missing wat flo. 35. preceded by No. 34 dark grey state with grains of generity and succeeded by No. 36. grey anyill. Sandstone with fossil impressions. Then again wanting Mo. 38. and No. 105. I am now explaining by boring with Diamond Dill The stratification which must lay below the bottom of sid shaft and as a discreet compensation for your Winness, I would be glade to send you a complet list of the borings, or if you derive specimens of the cous.

I am also glade to informe you that I have been able to proceen two specimens of lestrea, usembling almost enterly, lestrea limbat a and lestrea confluence, of our german jurassic formation. To face I have not found it mentioned any wheres, and I only abtained them by chance. I hope you will not consider me to intrude to much

upon your valuable time, by my binging this subject up again befor you. But I am sine you will appreciat my arraicty to keep a correct record of an stratas, which I may now be able to complet for nearly 1500 ft. and which, if kept up closely at other places will theom much light upon and formation and may in future saw a good deal of money in lacesting that. Auxious to give me an oportunity to do likewice in case my experience can be of any araail to you

Jauno most requirt fully Oswald & Heinrich

Supert. Engineer Mid Sattian Colliery. Chartufield Co.

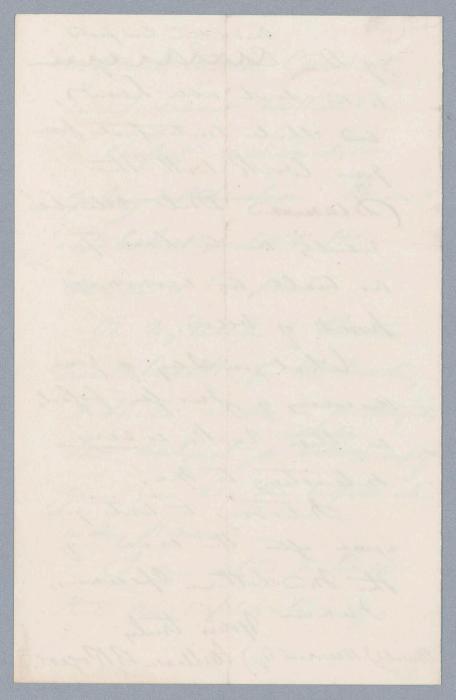
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4 and the core in 11/5 the is truly to cal. 2) Reence N. en DO

8/ newport- nor. 88. 1873. My dear for you letter of the 1" The ". prosing durine home in this place. While in Boston and this during of four, during my desife, a number of specimen belonging to The modestrian Suite to What you lefer . They were however minghed with other u m.

materials in the Cabinet, and count without h Carful chamender 7 In Colentra, Know to what estent the deries in Complete. On my return to Boston hent love of for the worter, I shale at on en mustigate The Subject, & the prostog give you all the Information hi my power. I han glad to Raw that the captor divin of

of the SAX Carpin to in deat able hands, and Shale Contrat to form you work with the Drannon Dule Valuable results in a Saco Typic as hele as economic hout of breed. What you say of your diservery of Jurafai bofails hi then took in very taleresting to Bre. Interding to write you aguan after the exam. T the hid dethin specimens, Iremain yours truly Osweld J. Henrich Eng) William BRogers.



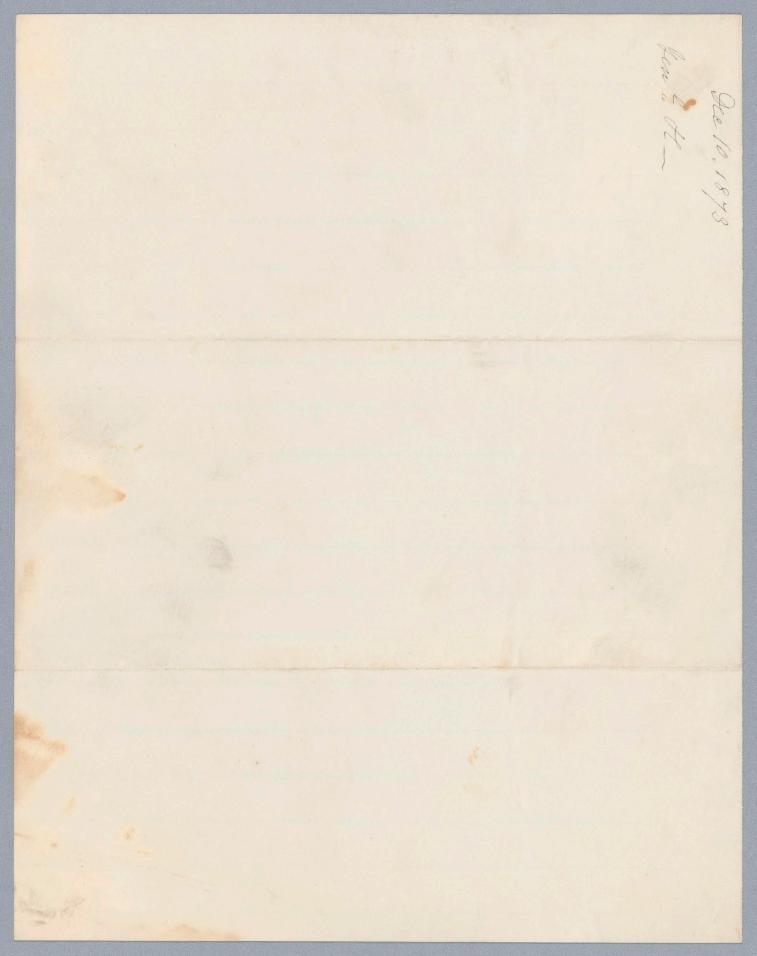
Office of the Chief of Kngineers,

Washington, D. C. December 10, 1873.

Prof. M. B. Rogers, Newport, R. J. Dear Sir: In reply to your letter of October 25th, it affords me pleasure to inform you that there will be forwarded to your address by Major Un P. Graighill, Corps of Engineers, specimens from the Artesian Well at Fort Monroe between the depths of 150 and 210 feet. Very truly yours, AheHumphrege Brig. Denl. Ind Chief of Engineers. 740- 5-1873.

And a stand of the second of t

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9/ 3 Fairfuld Stud Boston dec. 22-7873 My dear Sin, Sheg you to believe that nothing but the presture of unerond duties finer ley appointment apon the hew Fai Board, Could have prevented my acknowledging prompty your being kind letter and thanking you for the very friendly warmen hi which you an perale to speak of me. Somed my appointment at the Institute originally to

San that Jest. Mung 9. Rogert the Wayn de l' n. h · An ... Sour ? nic

your favorable estimate of my abilities and attancents and fam the more gratified by your letter at Law about relying. Than at all times trick puttfully berne The Justitute and leave at 2m

with repet, ready always to do what I can be the

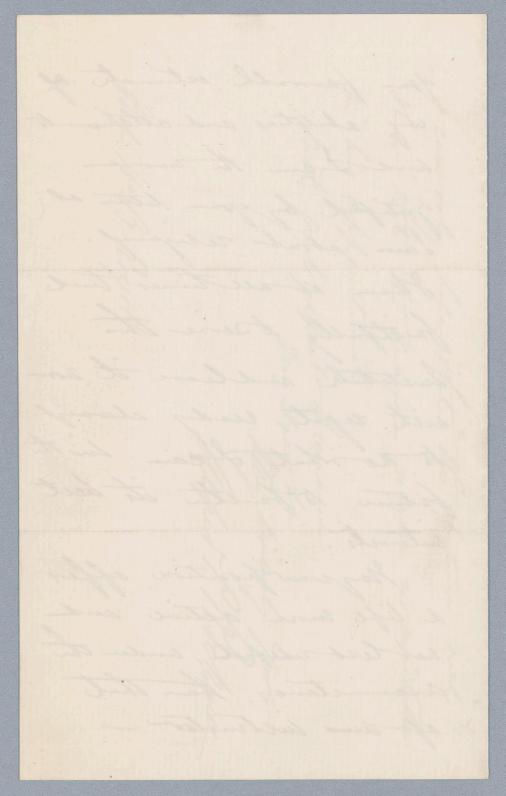
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of and haltmeter -



15 X American Social Science Association. FPEMBERTON SQUARE, BOSTON, Dec. 30. 1873 Prof. W. B. Bogers Boston. Dear Sir: a section of this association has been organized with its committee which when full will consist of twelve membus to consider questions of Social Economy and to be known as the Section or department of Social Economy. The mem bers already chosen are yourself, Dr S. G. Howe, Dr S. et. Greene, Moes Parkman Mees Holmy Whitman, Miss Mary Flarker and Mer John agrest, all of Boston, and myself. It is hoped that you will accept the appointment, and be able to meet with the bommittee certain after-

pr c'lk.

noons at 32 o clock, which will probably be our time of meeting. If this is not a convenient hour for you, will you please name one that will be, and also say whether any particular day in the week will suit you beffer than another? The next meeting of the Committee will be on Juesday, Jan 6, 1874, at 32 PMa 1

yours very buly F. B. Sanborn Sec'y amer. S.S. Associa.

