14 Papers, November 1881

BOSTON SOCIETY OF NATURAL HISTORY,
Berkeley, cor. of Boylston St.

Boston, Nov. 1, 1881.

Prof. Wm B. Rogers:

My dear Professor —

The last time that I talked with you about the class in Mineralogy, as perhaps you may remember, I told you that, in view of what I should have to relinquish in order to do so, I could not take charge of the instruction in this department, except on condition that my pay should be increased to $1000.

With the understanding and expectation that my salary would be adjusted on that basis, I have gone to work; therefore you can

understand why, when the pay-roll came yesterday, I should have been surprised and disappointed to find that the Government has fixed my salary at $800.

The class in Mineralogy is nearly twice as large as usual, and consequently the labor involved is very much greater even than I anticipated; and I realize more fully than before that $200. is very inadequate pay for 90 hours of lectures, every hour of which involves at least two hours of preparatory work; and in justice to myself and wife I feel that I can not accept it.

The Trustees of the class of teachers which I gave up to accept this course, I should have received $400. Possibly $311. ~~dollars~~ for 60 hours of easier work.

I am exceedingly sorry, President, to trouble you so much about this matter; ~~but~~ and worried out, but for the fact that the reduction of my income by $200. is, for us, a very serious matter and will very materially mar our plans for the next year.

Very respectfully yours
W. O. Crosby.

Arnaud –

Boston 4 Nov '81

My dear Sir

Your kind letter of sympathy has given me great pleasure as was as my brother & sisters to whom I read it, and we thank you for your warm expression of affection for my Father. Few persons know what he was & did so well as you, & this gives to your tribute the sweeter value.

My Father's end was very peaceful & we could not have wished for him a longer life or

an easier release, but is hard to stifle the selfish feeling of of regret for the loss of one upon whose counsel & affection we have depended to an extent never fully appreciated until now.

I want to tell you, even if I may have done so at the time, how much pleasure you gave to my Father by your visit to him after my Mother's death. He spoke of it often & very much gratified for be entertained for you great fondness & respect.

With renewed thanks, my dear Sir, believe me to be

Yours very sincerely,

Boston
4 Nov '81

Augustus Lowell.

188

2100 Pine St
Phila. 11-7-1881

Secretary Nat'l Acadamy of Sciences

Sir: I enclose copies of papers read by me at the meetings of the Nat'l Academy of Sciences of Nov. 1880 & April 1881. The MS. of my paper for the meeting of Nov. 1881 not being ready, I

shall have to have
it to you at a
later date.

Very truly yours
E. D. Cope

Naval Observatory,

Washington, D. C., Nov 7th 1881

My dear Sir

I see no cause for changing the programm for the discussion of the transit of Venus by a committee of the National academy but on the contrary, every reason for adhering to it — I think as you suggested long ago Prof. Drapers name would be advantageously added

~~this field~~ — This knowledge and experience would be valuable to us —

You said you would be good enough to write Harkness to meet the committee at the meeting he being one of the legal commission appointed as provided by Congress —

The Superintendent of the Coast Survey Capt Patterson was also one of the legal transit of Venus commission

Hilgard is de-facto now Superintendent of the Coast Survey — but not de-jure, since he has not been nominated to the Senate and ~~not~~ of course not confirmed in his office: in the doubt as to the proper course it may be best to ask him to act with the commission

Prof Hilgard I am led to believe will act cordially with the observing but one must do as well as he can, and to invite

him in the present contingency I do not regard as absolutely his right; but only as the most expedient course under the circumstances

With my best regards to Mrs. Rogers

Very truly Yours

John Rodgers

Boston Nov. 9. 1881

Dear Prof. Harkness.

At the request of the Superintendent of the Naval Observatory I appointed, some months ago, a committee consisting of members of the National Academy, to co-operate with the Old "Comm: on the Transit of Venus Observations", of which I understand you are a member, — ~~and~~ for the purpose of considering the proposal to be made to Congress of 1882. It is observable that the joint Committee should take the opportunity of the coming meeting of the Nat. Academy

in Phila. to confer on & to discuss the preparatory arrangements ~~for the observation by Commercial Astronomers of the Transit of 1882~~.

I ~~hope that therefore that you may find~~ consider it convenient to attend and participate in these deliberations & discussions, in which I have no doubt ~~the~~ many members of the Academy will be greatly interested.

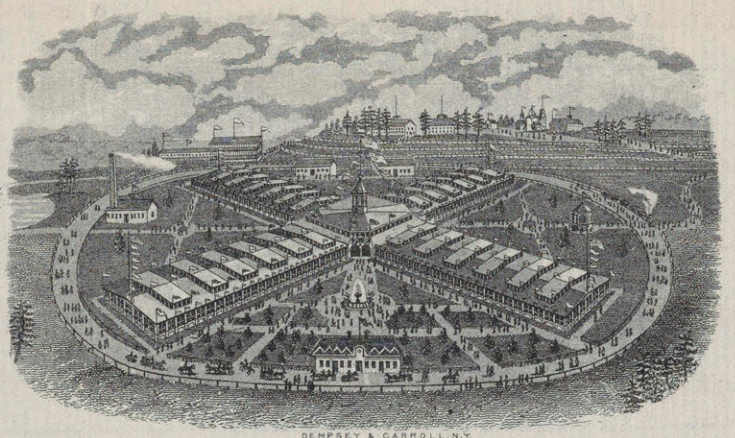
The session of the Academy will begin on Tuesday Nov. 15th & will probably occupy several days. The place of meeting is in the Univ. of Penn. West Philadelphia. I take for granted that Admiral Rogers ~~will be~~ as Pres. of the ~~the~~ Com. will attend by ~~order~~ of Congress. Will he present — ~~and will~~

Hoping ~~that I may~~ to see you ~~at this occasion~~ at the meeting in Phila. I am yours truly

W. B. P.

Prof. Wm Harkness U.S. Obsy
Wash. D.C.

Gov. Alfred H. Colquitt, President.
H. I. Kimball, Director General.



Saml. M. Inman, Treasurer.
John W. Ryckman, Secretary.

INTERNATIONAL COTTON EXPOSITION,

Office of the Director General

Exposition opens Oct. 5th closes Dec. 31st.

Atlanta, Ga. Nov. 9, 1881

Dear Sir:-

On behalf of the Massachusetts Institute of Technology, of which I am a Director, where we have a very perfect Mining School and Mining Laboratory, including a stamp battery and separating pans in which we can treat ores by the ton, I suggest that each of you to whom this letter is addressed make up a package of specimens of new ores, of refractory ores or of other minerals the nature and value of which you would like to have determined; that you send these to my address in Boston. I will submit them to the Professor of Mining and he will select such specimens as he would like to have sent in quantity to serve the purposes of study. A full report of the analysis to be r eturned to you in each case. I believe th t this may work to the mutual advantage of the school and of the railroads on whose lines the mines are to be found. I beg to add to this suggestion the only personal request which I may make, to wit, that you will each add to this collection a small package of ores or minerals for my boys who are studying Mineral-

Nov. 9,

Dear Sir:-

On behalf of the Massachusetts Institute of Technology, of which I am a Director, where we have a very perfect Mining School and Mining Laboratory, including a stamp battery and separating pans in which we can treat ores by the ton, I suggest that each of you to whom this letter is addressed make up a package of specimens of new ores, of refractory ores or of other minerals the nature and value of which you would like to have determined; that you send these to my address in Boston. I will submit them to the Professor of Mining and he will select such specimens as he would like to have sent in quantity to serve the purposes of study. A full report of the analysis to be returned to you in each case. I believe th t this may work to the mutual advantage of the school and of the railroads on whose lines the mines are to be found. I beg to add to this suggestion the only personal request which I may make, to wit, that you will each add to this collection a small package of ores or minerals for my boys who are studying Mineral-

[11/9/1881]

ogy, being boys not yet much skilled in their work, they will value the things which are curious and interesting perhaps more than those which are useful and will perhaps be more proud of bits of gold and silver ore or of ruby corundum than they would be of the more useful substances.

Very truly yours

Edwd. Atkinson.

ogy, being boys not yet much skilled in their work, they will value the things which are curious and interesting perhaps more than those which are useful and will perhaps be more proud of bits of gold and silver ore or of ruby corundum than they would be of the more useful substances.

Very truly yours

911 16th St. Washington D.C.

Friday – November 11 – 1881.

Prof. W. B. Rogers.

Pres. Nat. Academy of Science.

Sir:

I take the liberty of addressing you in the hope that you will accept my object as a sufficient excuse.

It is to suggest in the interest of Science that the time of the transit of Venus may be made more satisfactorily ascertained automatically, by the combined use of instantaneous photography, clock-work, and Electricity, than by dependence upon the most practised hand and Eye —

The photographs may be taken either on fixed plates or upon plates moving through a given space in a time dependent upon their sensitiveness.

I believe instantaneous impressions of transits, eclipses, &c., taken on moving plates may, in the near future, be made to give reliable measures of time much more minute than the thousandth of a second —

The clock-work is to set the plates in motion at the will of the operator; and to record chronometer time at brief intervals, by electric sparks or phosphorus, upon their upper & lower face margins while in motion —

It is also to record, at the will of the operator, the instant of the beginning and ending of each exposure of the plates (whether at rest or in motion) to the objects to be photographed —

I think full reliance may be placed upon the invention and mechanical genius of our countrymen to surmount every obstacle to the practical application of these suggestions; and, as the time for the work to be done is limited, if they commend themselves to you as of scientific value, I would ask

that you will take early measures to direct public attention to them; so that the instruments they will make necessary may be speedily devised and perfected —

Respectfully, &c.,

Wm Hogan

A meeting of the Council of the National Academy of Sciences will be held at the University of Pennsylvania, Philadelphia, on Tuesday November 15th at 10 o'clock A. M.

S. Newcomb
Home Secretary

Washington, Nov. 11, 1881.

9 West 35th Street.
New York, Nov. 11. 1881.

Dear Mr Rogers -

I have been thinking what I should do in case the committee to whom were referred the papers the Corporation asked me for a couple of months ago should make a report that I could not accept. I have no reason to suppose that this will be the case, but committees are often very queer, as experience shows, and persons interested with the administration of charities will often

so things which in their personal affairs they would consider very hard measure. I can see that if the committee should make a report to the Corporation and the Corporation accept it, as they would do, and then I should find it necessary to ask a hearing, that it would be very embarrassing. Moreover I should be at an unfair disadvantage in having to ask a reconsideration of formal and decisive action. Besides, it would put me in an attitude of antagonism to the Corporation which I do not wish to take, and which I think I ought not to be obliged to take.

In this case it seems to me that it would be well for the committee to inform me of the nature of their conclusions before presenting their report to the Corporation, asking whether I have anything further to say. This would be civil and friendly treatment, such as I am sure I deserve, and I have no doubt the committee would do so willingly enough if they thought of it. The trouble in such cases is that people don't think of such things till too late.

I shall accordingly be much obliged to you, if you find they are disposed to economize, if you will make

this suggestion to the committee, if there seems to you no reason against it. I would rather the suggestion came from you than from myself for various reasons.

Nothing gives me more pleasure than what I hear from the school as to the working of the architectural scheme. Mr Clark was here a fortnight or three weeks ago and I have since heard from him & from Mr Longfellow, from Hooker & from some of the fellows. All seem to agree that things are going along capitally.

As for myself I still feel a little strange, but I am very well and very hopeful.

Please make my best regards to Mrs. Rogers. Yours always faithfully

Wm R. Ware.

The Columbian University
Washington, Nov 12. 1881.

My dear Prof Rogers,

The Board of Trustees of this University contemplate the establishment, at an early day, of a Scientific School, and they have directed me to ascertain, by correspondence, the probable cost of the apparatus indispensable to the equipment of

such a School.

The School is to be polytechnic in its character — looking to professional life, and not to abstract science, except as auxiliary to the former.

It is also desired to ascertain the cost of such an equipment as is <u>necessary</u>, out of such as might be <u>desirable</u>. In a word, we desire to practise the greatest economy that is consistent with the faithful performance of polytechnic instruction.

If you can give us such a general estimate, you are greatly obliged, my dear Prof Rogers,

Your friend & servant,

James C Welling.

Wm B. Rogers LL.D.

40, W 40th St
New York, Nov 12th 1881.

Prof Wm B. Rogers,
Dear Sir:

Some years ago you published in Silliman's Journal a series of papers on Binocular Vision. Have they ever been collected into book form? If so, will you be kind enough to let me know where I can obtain a copy?

I have been interested in this subject for some time past, and have just published in the American Journal of Science an article on "The Stereoscope, and Vision by Optic Divergence", which will be followed by another on

the same subject in the Dec No.

A paper, read two weeks ago before the N.Y. Academy of Sciences, will be published in "Science", (John Michels, Editor, 17, Tribune Building, N.Y. City) the medium of publication of the proceedings of the Academy, being divided into two or more articles which will appear at intervals of a few weeks.

Before offering anything more for publication I wish to read what you have written on this subject. My investigations were started by certain statements found in the writings of my uncle, Prof Joseph LeConte, who has contributed a number of articles on Binocular Vision during the past dozen years, these having been expanded into a volume published last Spring by D. Appleton & Co.

I wish to know more particularly what you may have written about Optic Divergence.

With much respect, dear Sir, I am,

Very truly Yours,
W. LeConte Stevens.

404

U. S. Naval Observatory
Washington, Nov. 12, 1881.

Dear Prof. Rogers

In reply to the kind invitation contained in your note of the 9th inst, I have much pleasure in saying that I will endeavor to attend the meeting of the Academy in Philadelphia on Tuesday next.

As you have not mentioned the hour of meeting, I will call on you at the Continental Hotel on Tuesday morning.

Yours &c

Wm Harkness.

Office of the U.S.
COAST AND GEODETIC SURVEY
Washington, D.C.

13 Nov. 81

My dear President Rogers,

In acknowledging your kind letter of 9th inst. I will first explain that I cannot be quite sure of attending the Acad. meeting in Philad.: The new Secretary of the Treasury, Judge Folger, has just arrived here, and it appears every way advisable that I should be formally presented to him by Mr. Windom. This may happen on Monday, in which case I might get to Phila. on Tuesday evening. I hope, in any case to be with you on Thursday, if not on Wednesday.

Next, as to the Transit of Venus Commission, I really do not know whether the Superintendent of the Coast Survey is a Member of the Old Com^n, but I believe he is so named. At all events, there is no occasion to add my name to the Committee on the part of the Academy.

As the Memoir of Mr. Homer Lane I believe it is sufficiently ready to allow me to read it at the meeting, if I can get there.

The Memoir of Watson I presume I ought to undertake. B. A. Gould would be the proper member but as he has no access to materials, I will take it.

I presume that an appointment of Superintendent of the Coast Survey will now be made soon, and I am much encouraged to believe that I will be the one to receive it. The delay has been entirely owing to adventitious causes.

With best regards to Mrs Rogers, I remain, my dear President

Yours faithfully

J. E. Hilgard

Prof. W. B. Rogers. LL.D &c
Continental Hotel
Philad^a.

258

271 Madison Avenue,
New York.

Nov 14th 1881

Wm. B. Rogers Esq.
Pres^t National Academy Scien

Sir

It will give me great pleasure to serve on the Committee for the Transit of Venus

I expect to attend the meeting in Philadelphia and hope to have the pleasure of seeing you there

Yours truly
Henry Draper

Phila. Nov. 17

Wm. Hogan Esq.

Dear Sir

Your letter of the 11th inst has been received, & I thank you for the trouble you have taken in giving your suggestions.

The application of photography & electrical tests to their best form for the observation & record of the phenomena of the Coming transit of Venus will undoubtedly be carefully considered by those charged with preparing for the work. Believe me dear Sir Yours very respectfully

W. Bond.

C B 12

For the Dean of the
Lawrence Scientific School.

Nautical Almanac Office,
Navy Department,
Washington, D. C., Nov. 17th 1881.

Dear President Rogers

I am much annoyed to find that my sickness at this inopportune moment has resulted in the enclosed paper not being sent you before. If not in time to read please consider it as having been presented.

Very truly yours
S. Newcomb

President W. Rogers
Continental Hotel
Philadelphia,
Pa.

U.S. Naval Observatory,
Washington, Nov. 29, 1881.

Dear Sir:

You have doubtless been notified by the President of the National Academy of Sciences that you were appointed one of a Committee to consider the subject of the approaching transit of Venus in December 1882.

It is necessary that any appropriation by Congress must be made this Session, if made at all, for the purpose of defraying the expenses of observing the transit.

If foreign stations are occupied, a considerable sum will be needed; and if such stations be not occupied, the expenses of observing will be very small.

The country is filled with Observatories which will no doubt observe the transit, and I presume willingly give the results of their work; so that the cost for observing in the United States will be very moderate. Few new instruments will be needed in any case.

Please answer at your earliest convenient moment whether any foreign stations

[11/29/1881]

should be occupied by parties from the United States; and if so how many and what ones, — also what methods should be employed?

Unless the photo-heliograph be used, there seems no sufficient reason to incur the expense of sending parties abroad, since Europe will observe fully in the southern hemisphere; but apparently does not intend to employ photo-heliographs — which seem to promise better results than have been reached by other photographic methods.

Yours very respectfully,
John Rodgers,
Rear Admiral,
Pres't of Transit-of-Venus Commission.

Prof'r William B. Rogers,
Pres't of Nat. Acad. of Sciences,
Member of Transit-of-Venus Commission,
117 Marlborough Street,
Boston, Mass.

[Encl. 11/29/1881]

Memorandum respecting proposed observations on the Transit of Venus occurring December 6, 1882.

The proper observation of the coming transit of Venus is so important that in Europe an International Conference was held to consider the whole subject. The instructions formulated by this Conference contemplate only the observation of contacts, and recommend the use of telescopes having clear apertures of from 4 3/4 to 6 inches, armed with positive achromatic eye-pieces, magnifying about one hundred and fifty diameters. (Comptes Rendus 1881 Tome 93, pp. 569-572.) No mention is made either of heliometers or of photography.

As there are few heliometers in the world, and nothing has

[Encl. 11/29/1881]

been published respecting the results obtained from them during the last transit of Venus, it may be wise to pass them over in silence; but the photographic method should not be so summarily dismissed. A careful consideration of the contact observations made during the last transit of Venus shows that their probable error is ± 0".15, that there may always be a doubt as to the phase observed, and that a passing cloud may cause the loss of the transit.

On the other hand, the photographic method can not be defeated by passing clouds, and when carried out by the horizontal photo-heliograph, is not liable to any uncertainty of interpretation; it seems to be free from systematic errors, and is so accurate that the result from a single negative has a probable

[Encl. 11/29/1881]

error of only ± 0.55. If the star is visible for so much as 15 minutes during the whole transit, 32 negatives can be taken, and they will give as accurate a result as the observation of both internal contacts. In view of these facts, can it be doubted that the photographic method offers as much accuracy as the contact method, and many more chances of success? If it be asked why so promising a method was rejected by the International Conference, the answer is not far to seek. When that Conference met the accuracy attainable by the horizontal photoheliograph had not been made public, and it is generally understood that all other photographic methods have been failures.

Under existing circumstances,

[Encl. 11/29/1881]

it is not probable that the parties of any European Government will employ the horizontal photo-heliograph upon the coming transit of Venus and it is therefore all-important that the United States Commission should take proper action in the premises. The questions to be decided are two in number:—

1. Should the United States Government send photographic parties outside its own territory?

2. In the event of such parties being sent out, what should be their number, and what stations should they occupy?

Respecting these questions, the United States Commission asks the opinion of the Advisory Committee appointed by the National Academy.

With regard to the location of the stations, it may be

[Encl. 11/29/1881]

remarked that during the transit of Venus in December 1882, three base lines will be available, all having their northern extremities in the United States, and their southern extremities lying respectively in the region about Madagascar and the Cape of Good Hope; in the region about Cape Horn; and in New Zealand and eastern Australia. The base, Cape of Good Hope — United States, will be available only at the beginning of the transit; the base - Cape Horn — United States will be available for the whole transit; and the base New Zealand — United States, only for the end of the transit. If trigonometrical considerations alone were regarded, it would be best to locate all the stations about Cape Horn; but the weather there is so notoriously

[Encl. 11/29/1881]

bad that it may be prudent to avoid this region entirely. By going as far north as Buenos Ayres, better weather will be secured at the expense of some shortening of the base. Good weather may also be expected in Madagascar, the Cape of Good Hope, New Zealand and Australia. If only four stations are occupied, Cape Town, Santiago in Chile, Buenos Ayres and Queenstown New Zealand, are suggested. If a greater number of stations be thought desirable, some place in Madagascar, Sandy Point in the Straits of Magellan, or the Falkland Islands and Sydney, Australia, should be considered.

U. S. Naval Observatory,
Washington,
November 29, 1881.

Navy Department.

U. S. Naval Observatory.

OFFICIAL BUSINESS.

Any Person using this envelope to avoid the payment of postage on private matter of any kind, will be charged the sum of Three Hundred Dollars.

WASHINGTON, D.C.
NOV
30
7PM
1881
4

Professor William B. Rogers,
President of Nat. Acad. of Sciences,
Member of Transit-of-Venus Commission
117 Marlborough Street,
Boston, Mass.

12-2 91
8A

Naval Observatory,

Washington, D. C., Nov 30th 1881

Dear Sir

I sent you today a copy of the Circular Memorandum respecting measures to be recommended for the action of Congress —

I have sent them to Prof Hilgard, to Draper, Hall Harkness Langley — Peters Young Newcomb, Newton, Pickering — then with yourself and myself make 12 —

I suppose that we may

you have an answer from Leach — It would be scarcely possible to have a meeting, since there is no money available, for travelling expences —

Have I omitted any names? I think not —

With best regards to Mrs. Rogers,

Very truly yours

J Wm Redfield

Prof. Wm. B. Rogers,
Pres't Nat. Acad. of Sciences, Boston.

N.Y. 1881

Dear Admiral Rogers

I wish some days since to ask whether anything has been done by the Bureau of Yards & Docks & Construction with the Com. of Co. of the Lackawanna?

Do you propose carrying out the suggestion which you made last May, that the subject of the prep. for the Coming Naval Work should be considered and discussed during the meeting of the Ass. now approaching – If so please let me know your wishes.

In your letter of May 19 you state that the Sec. of the Navy approved your paper relating to the Coming Work & intended to show it to the Pres. It was also approved by Mr Collins –

Perhaps I have the pleasure of hearing from you when I return to Phila. – Meantime address as above.

Yours very truly
W. H. Hunt

Dear Prof. Newcomb -

I thank you for kindly sending me the copy of the work & your address - I have read the first part with great interest - & return it to you at once - asking you to inform me of its safe arrival. The latter paper you ~~wrote~~ ~~send~~ in behalf of the ~~Wolf~~ ~~society~~ I think ~~it~~ may properly be included in the Annual Report -

I regret that my office ~~last~~ ~~at the~~ at the Central Meeting to assume the Presidency of Prof. Watson - & I shall hope to be with you at our coming Meeting -

[NOV. 1881]

(2)

Mr Barker announced that Genl. Thomas Eckert of the Western Union Tel. Co & Prest. N. J. Phillips of the Amer. Dist. Tel Co. had offered to the members of the Acad the use of their respective services both Teleg. & Messenger during the present session.

Scientific Proceedings –

The Prest. in opening the scientific session made a brief reference to some points of recent scientific interest, after wh following the reading of papers was begun

The following are the titles of the papers, 21 in number presented to the Academy during the several days of its session –

1. Remarks by Mr Morse –
2
3. " " Mr Cope –
4 read by the Secy –
5 " " Mr Morse.
6 " " Genth & Barker –
7 " " Marsh –
8 " " Cope –
9 " " Silliman
10 " " Marsh & Cope –
11
12 (Langley) Roland, Gibbs, Agassiz & Able.

[Nov. 1891]

13.
14 read by the Sec^y.
15
16. remarks by Peirce & Silliman
17 " " Abbe.
18 " " Rowland Morton & Barker
19 presented by ~~Silliman~~ invitation of the Academy & read by Mr Parsons.
~~20~~ Remarks Chandler & Abbe
20 remarks by Abbe & Rowland –
21 (Cope)
22 R E R }
23 J P L – }

The last two named papers tho' entered on the list of the Sec^ys were not read –

Biographical Memoir

At the meeting on Nov: 16th – a Biographical Memoir of the late S. F. Baldwin prepared by Mr J. P. L. was read by Mr ~~J. P. Lesley~~ author.

[Nov. 1881]

Amendment to the Constitution

The amendment to Sect: 1 Art: 1 approved at the meeting of the Academy April 1881. proposing to add at the close of the original sentence the words

"Members shall be citizens of the U. S. or shall have declared their intention to become such" was not adopted, but as a substitute the following amendment was adopted in Committee of the Whole, to be voted on at the next Stated Session.

"A Candidate for Membership in the Academy must be a citizen of the United States".

Resolutions.

Mr Silliman offered the following resolution –

Nat Bank

May 25