

porter of the proceedings of the Society, and shall cause such abstract of the Proceedings to be published for the use of the members and for distribution to correspondents as the Secretaries may deem expedient or proper, or as the Society may direct; but no expense shall be incurred, or any contracts made for printing or publishing the same, beyond the sum appropriated by the Society for such purposes.

SECT. 9. He shall receive an annual salary of seven hundred dollars, to be paid monthly from the treasury of the Society, and his services shall commence the first Monday after his election.

The preamble and resolutions attached to the report of the Committee were also unanimously adopted.

All other business having been concluded, the ballot box was opened by the presiding officer, who declared that PROF. WILLIAM H. ALLEN, of Philadelphia, was duly elected a member of the Society.

Stated Meeting, May 7.

Present, twenty members.

Prof. CRESSON, Vice-President, in the Chair.

Letters were read:—

From Prof. W. H. Allen, dated Girard College, April 19, 1858, acknowledging the receipt of notice of his election as a member of the Society:—

From the Geographical Society of Paris, dated Nov. 24, 1857,—and from the Leeds Philosophical Society, dated Dec. 8, 1857, both returning thanks for Vol. XI. Part 1, of the Transactions of this Society:—

From the Horticultural Society at Berlin, dated Sept. 28, 1857, acknowledging the receipt of Nos. 51–55 of the Proceedings of this Society, and also announcing a donation for the library:—

From the Royal Academy of Sciences, at Amsterdam, dated Aug. 15, 1857, accompanying a donation for the library:—

From the Royal Norwegian University at Christiania, announcing the presentation by the University to this Society, of a Bronze Medal, struck on the occasion of the celebration of

the semi-centennial anniversary of the official term of Dr. Christopher Hansteen, Professor of Astronomy in that University:

From Col. J. D. Graham, dated Chicago, Illinois, March 10, 1858, accompanying sundry maps and charts referred to in his reports on lake and harbour improvements, presented for the library of the Society:—and from the same, dated Chicago, April 2, 1858, announcing a donation for the library, and containing a communication in reference to the determination of the longitude of the City Hall or Court House at Chicago:—

From Dr. Nicholas Manzini, dated Havana, Dec. 10, 1857, announcing the presentation, for the library, of two copies of his History of Inoculation as a preservative from Yellow Fever:

From the Boston Society of Natural History, dated May 1, 1858, returning acknowledgment for No. 58 of the Proceedings of this Society:—

From Prof. Zantedeschi, dated Padua, April 9, 1858, on transmitting a donation for the library;—and

From Dr. Isaac I. Hayes, proposing to make an effort to reach the north pole of the earth, and requesting to be informed of any measures which, in the judgment of the Society, it will be expedient for him to adopt, to promote the advancement of any of the sciences for whose interests it labours.

The following donations were announced:—

FOR THE LIBRARY.

Collections of the Massachusetts Historical Society. Vol. IV. of the IV. Series. Boston, 1858. (514 pages.) 8vo.—*From the Society.*

Thirteen Charts of Chicago, Sheboygan, Manitowoc, St. Josephs, Black Lake, Grand River, Kalamazoo, Kenosha, and New Buffalo Harbors, made under the direction of Br. L. Col. J. D. Graham. Chicago, 1855, 6, and 7.—*From Col. Graham.*

Geological Survey of Canada. Report of progress for 1853-6. Toronto, 1857. (500 pages, with a 4to. volume of plans.) 8vo.—*From Sir W. Logan.*

Plans of various Lakes and Rivers between Lake Huron and the River Ottawa, to accompany the Geol. Reports for 1853-6. 4to.—*From T. Sterry Hunt.*

Annales des Mines. V. Ser. Vol. X. 1, Vol. XI. 2, 3, 4, Vol. XII. 5. Paris, 1857. 8vo.—*From the Engineers.*

- Histoire de l'inoculation preservative de la Fièvre Jaune, pratiquée, a l'hôpital Militaire de la Havane, redigée par Nicolas B. L. Manzini. Paris, 1858. (240 pages.) 8vo.—*From the Author.*
- A brief Memorial of the late Judge John K. Kane, Vice-President of the Pennsylvania Institution for the Instruction of the Blind, prepared by Robley Dunglison, M.D. Philadelphia, 1858. 4to.—*From the Author.*
- Notice sur les Mines de Cuivre du Cap de Bonne Espérance, par M. Delesse. Paris, 1858. (30 pages.) 8vo.—*From the Author.*
- Proceedings of the Royal Geographical Society of London. June, 1857. No. XI. London, 1858. 8vo.—*From the Society.*
- Report of the Proceedings of the Geological and Polytechnic Society of the West Riding of Yorkshire, 1856-7. Leeds, 1857. 8vo.—*From the Society.*
- Leeds Philosophical and Literary Society Annual Report for 1856-7. Leeds, 1857. 8vo.—*From the Society.*
- Maryland Institute. Transactions. Eighth Annual Report. Reports of the Committees on the Exhibitions of 1855 and 1856. Address before the Female Department of the School of Design. Baltimore, 1856. 8vo.—*From the Institute.*
- Maryland Institute Library Catalogue. Part 1. Alphabetical. Baltimore, 1857. 8vo.—*From the same.*
- Harbors of Lakes Michigan, St Clair, Erie, Ontario and Champlain. Last Annual Report of Lieut. Col. J. D. Graham. Cong. Doc. H. of Rep. Ex. Doc. No. 23. Jan. 11, 1858. Washington, 1857. (180 pages.) 8vo.—*From Col. J. D. Graham.*
- The American Almanac for 1848, with MSS. corrections by Col. Graham of the lat. and long. of Chicago, &c., dated Jan. 30, and June 5, 1857.—*From Col. J. D. Graham.*
- Memoirs of the Historical Society of Pennsylvania. Vol. V. Philadelphia, 1858. Large 8vo.—*From the Society.*
- Journal of the Franklin Institute. No. 5. Philadelphia, May, 1858. 8vo.—*From the Institute.*
- American Journal of Science and Arts. Vol. XXV. No. 75. May, 1858. New Haven. 8vo.—*From the Editors.*
- Notices of the Meetings of the Members of the Royal Institution of Great Britain. Part VII. Nov. 1856. July, 1857. London, 1857. 8vo.—*From the Institution.*
- A Catalogue of 3735 Circumpolar Stars observed at Redhill in 1854-5-6, and reduced to mean positions for 1850.0, by Rich. Chris. Carrington. Also 680 observed at Speyer by Prof. Schwers,

- and 50 observed at Markree by E. J. Cooper. London, 1857. (210 pages with 10 maps.) 4to.—*From the Board of Admiralty.*
- Edinburg Astronomical Observations. Vol. XI. 1849–54, by C. Piazzzi Smith. Edinburg, 1857.—4to.—*From the Royal Observatory.*
- Royal Astronomical Society. Monthly Notices. Vol. XVIII. No. 5. March 12, 1858. 8vo.—*From the Society.*
- Journal of the Society of Arts and of the Institutions in Union. Vol. V. No. 246 to 266. London, 1857. 8vo.—*From the Society.*
- Medical News and Library. No. 185. May, 1858. Philadelphia. 8vo.—*From Blanchard & Lea.*
- Illinois Geological Survey. By J. G. Norwood, M.D. Chicago, 1858. (100 pages.) 8vo.—*From the Chicago Historical Society.*
- General Notions of Chemistry by J. Pelouze and E. Fremy, translated by Edmund C. Evans, M.D. Philadelphia, 1854. (438 pages.) 8vo.—*From the Translator.*
- Calendrier de l'Instruction Publique pour 1858. Montreal, 1858. 4to.—*From L. A. Huguet Latour.*
- Estimate of certain expenses of the civil government of Canada for 1856. Toronto, 1858. (13 pages.) Large 8vo.—*From Capt. Huguet Latour.*
- Essai sur les Insectes et les Maladies qui affectent le Blé, par Emil. Dupont. Montreal, 1857. (40 pages.) 8vo.—*From the same.*
- Réponse a une adresse . . . relatifs a . . . le fief sillery, pres de Quebec. Par. H. Lemesurier et autres. Toronto, 1856. (85 pages.) Large 8vo.—*From the same.*
- Rapport Annuel du Magistrat Commandant l'Expédition pour la protection des Pecheries dans le Golfe St. Laurent, 1856. Toronto, 1856. (40 pages.) 8vo.—*From the same.*
- Nascita, Studij, Posizione sociale e Bibliografia delle principali opere e memorie di F. Zantedeschi. Padova, 1857. 8vo.—*From Prof. F. Zantedeschi.*

FOR THE CABINET.

A Medal struck in honor of the Fiftieth Anniversary of the Installation of Prof. Hansteen of Norway.—*From the Royal Norwegian University.*

Dr. Franklin Bache announced the death of the Hon. Charles Fenton Mercer, of Virginia, a member of this Society, who died on the 4th instant, in the 80th year of his age.

Dr. B. H. Coates announced the decease of Charles Nagy of Pesth, in Hungary, a member of this Society, who died in the year 1849.

Prof. Haldeman announced the death of Don Manuel de Naxera, of Mexico, a member of the Society.

Colonel Graham, in alluding to the well known accuracy afforded by the electric telegraph in determining differences of longitude, said he had understood that the British authorities were now testing the accuracy of a number of points, determined in longitude by the officers of engineers attached by the American and British governments to their respective commissions, for ascertaining and marking the boundary under the Treaty of Washington of 1842. These points are on and near the river St. John, and at other stations where the telegraphic wires have been extended.

The tests, he understood, were being made by electric connections with the meridian of Harvard College Observatory at Cambridge, Massachusetts. Whenever the results, which may be thus obtained, shall be announced, it may be a matter of some interest to compare them with those obtained before the invention of the electro-magnetic telegraph. Previous to this invention we were obliged to depend on direct observations upon the heavenly bodies, for determining initial or primary longitudes at suitable intervals apart, and then generally to obtain intermediate points by the transmission of chronometers to and fro between these primary meridians. Now the chronometers remain at rest at the observing stations, and are compared by electric signals transmitted along the telegraphic wires, thus avoiding all errors in the run of the chronometers, produced by the jolting of vehicles, and other accidents incident to travelling with them.

Col. Graham concluded by saying that the table at pp. 366 to 369, of the American Almanac for the year 1848, gives the positions of a number of points in New Brunswick, Canada, Maine, Vermont, New York, &c., as determined by himself and his assistants on the part of the American commission of boundary, which are now being subjected to the tests above alluded to.

The following is a copy of the letter from Col. Graham, read this evening.

Chicago, Illinois, April 2d, 1858.

To PROFESSOR E. O. KENDALL,

Corresponding Secretary of the Am. Philos. Soc. Philada.

Dear Sir,—I forward herewith to your care, for the library of the American Philosophical Society, two volumes, as follows, viz.

1. A bound copy of the American Almanac for the year 1848, containing, at pages 366 to 369, a table of latitudes and longitudes of a number of places in the United States, Canada, New Brunswick, and Texas before it became a State of our Union, determined by myself and my assistants, to which I wish to invite the attention of the Society. This table stands, in this volume, corrected of a few typographical errors.

2. A bound copy of my Annual Report on Lake Harbour Improvements, for the year 1857, 8vo. pp. 174, besides an "Addenda" and an "Errata" at the end of the volume. I wish to invite the attention of the Society, also, to a report at pp. 12 to 21, and 56 to 60, of this volume, upon the determination of the longitude of the City Hall or Court House of Chicago, west of Greenwich, giving it as $5h. 50m. 32s.08$, or, in arc, $87^{\circ} 38' 01''.2$.

This result is based upon the longitude of the centre of the citadel of Quebec, as determined by myself in the year 1842, while employed in ascertaining the north-eastern boundary of the United States, under the treaty of that year with Great Britain. It will be found announced in the American Almanac for the year 1848, at pages 368, 369, as west of Greenwich,

| |
|------------|
| h. m. s. |
| 4 44 49.65 |

To this, assumed as a primary meridian, was added the difference of longitude obtained in May, 1857, by Lieut. E. D. Ashe, of the British Navy, and myself, by means of electric signals transmitted along the telegraphic wires, between the British Observatory at Quebec, of which he is the Director, and my observing station at Chicago, which

| |
|------------|
| h. m. s. |
| 1 05 41.51 |

was thus found to be

| | |
|--|-------|
| Lieut. Ashe's observatory is east of the meridian of the centre of the Quebec citadel, | -0.17 |
|--|-------|

| | |
|--|---------|
| And the dome of the City Hall or Court House, of Chicago, is west of the meridian of my observing station, | + 01.09 |
|--|---------|

Hence the dome of the Chicago City Hall or Court House is west of the centre of the Quebec citadel, - - 1 05 42.43 +1 05 42.43

Longitude of the dome of the City Hall or Court House of Chicago, west of Greenwich, - - 5 50 32.08

I will remark that the longitude of the citadel of Quebec is given, under the authority of Bayfield, in the *Connaissances des Temps* for the year 1842, and in the subsequent numbers, as *h. m. s.*
west of Paris, - - - - - 4 54 26

Difference allowed at the time for reducing from the meridian of Greenwich to that of Paris, + 9m. 21s.5, and hence to reduce back to Greenwich, - - - - - 9 21.5

Bayfield's longitude of the citadel of Quebec, west of Greenwich, - - - - - 4 45 04.5

Graham's determination of the longitude of the same point in 1842, - - - - - 4 44 49.65

Difference of determinations, Bayfield west of Graham, + 14.85

The latitude of the centre of the citadel of Quebec was observed by me in the year 1842 (see the American Almanac for 1848, pp. 368, 369), with portable instruments, to be 46° 48' 17".3 N.

It is stated in the *Connaissances des Temps*, from 1842 to the present time, under the authority of Bayfield, at - - - - - 46° 49' 12"

Difference, Bayfield north of Graham, - - - + 54'.7

The American Almanac had adopted Bayfield's latitude and longitude of this position in its general table, previous to my contribution to that work published in the number for the year 1848; and since that time it has continued Bayfield's determination in preference to mine. I should be pleased, however, if the Society should think proper to notice this paper, giving the results of my observations, made in 1842, in its proceedings.

The Latitude of Chicago.

I was induced, in January last, to make a few observations, with portable instruments, for ascertaining approximately the latitude of the City Hall or Court House of Chicago. The instruments used

were a sextant of $7\frac{1}{4}$ inches radius, made especially for me by Simms (of the late firm of Troughton & Simms), of London, divided on *pal-ladium* to read by aid of the vernier to ten seconds of arc, with an artificial horizon of mercury, and a good chronometer by Parkinson & Frodsham, of London. The observations were made on Polaris (α Ursæ Minoris), north, and (circum-meridian) on β Orionis, south. The results were as follows, viz.

| | |
|---|----------------|
| Latitude of station, by observations on the 20th of January, 1858, - - - - - | 41° 53' 53" N. |
| Do. by observations of January 21st, 1858, | 41 53 54.6 |
| | <hr/> |
| Mean, - - - | 41 53 53.8 |

By triangulation, based for orientation on the true meridian ascertained with the astronomical transit, the dome of the City Hall or Court House was found to be 4462.49 feet south of the parallel of the observing station; or, in arc, of the meridian,

 — 44.1

| | |
|---|---------------|
| Latitude of the City Hall or Court House of Chicago (approximate), - - - - - | 41 53 09.7 N. |
|---|---------------|

In the American Almanac for 1858,* the longitude of Chicago is given west of Greenwich, - - - - - 5h. 50m. 20s.

And the latitude, - - - - - 42° 00' N.

Graham & Ashe west of the American Almanac for 1858, in the longitude of Chicago, - - - + 12s.08

Graham south of American Almanac for 1858, in the latitude of Chicago, - - - - - — 6' 50".3

The Magnetic Declination at Chicago.

This was ascertained on the 23d of July, 1857, by placing a circumferenter, furnished with a transit telescope and with a magnetic needle $4\frac{1}{2}$ inches long, upon a station in the true meridian line determined with the astronomical transit. By a mean of four readings of the needle, two with the zero (o) of the azimuth circle north, and two others with it south, the following result was obtained, viz.

1857, July 23, at 4 o'clock P. M.—Magnetic declination at Chicago (observing station as before), $5^{\circ} 46' 07\frac{1}{2}''$ E. of N.; or, say five degrees forty-six and one-tenth minutes east of north.

Very respectfully yours, &c. &c.

JAMES D. GRAHAM,

Member of the Society.

* See the table of latitudes and longitudes of places, p. 45.

Dr. Le Conte offered the following resolutions, which were read, considered and adopted:—

Resolved, That the Society receives, with much gratification, the announcement made by Dr. Isaac I. Hayes, of his purpose to attempt a further exploration of the Arctic regions, and, if practicable, to reach the north pole of the earth.

Resolved, That in the opinion of this Society such an exploration merits the zealous co-operation of the scientific men of the United States, and that at a convenient time, the Society will communicate to Dr. Hayes such suggestions respecting the promotion of its objects as may be considered useful.

Resolved, That a committee of five be appointed to co-operate with the committee recently appointed with reference to this subject by the American Association for the Advancement of Science; and to take such measures, from time to time, on behalf of this Society, as shall be deemed expedient.

The committee appointed under the above resolution consists of Prof. Frazer, Prof. Cresson, Mr. Colwell, Mr. Foulke and Dr. R. E. Rogers.

Stated Meeting, May 21.

Present, nineteen members.

Dr. DUNGLISON, Vice-President, in the Chair.

A letter was read from Prof. John F. Frazer, dated May 8, 1858, expressing his regret at being obliged to decline the honour of serving on the committee appointed at last meeting in relation to the proposed attempt of Dr. I. I. Hayes to make a further exploration of the Arctic regions.

The following donations were announced:—

FOR THE LIBRARY.

Almanaque Náutico para 1859. Cadiz, 1857. 8vo.—*From the Observatory.*

Osservazioni ai nuovi sforzi fatti dal belli a difesa dei due esperimenti contro la simultanea esistenza di due opposte correnti elettriche, &c. Nota 2, del Prof. Zantedeschi. Vienna, 1858. (8 pp.) 8vo.—*From the Author.*