

April 24, 1849

The institution is now in as prosperous a condition as I could reasonably hope for and I think notwithstanding much more has been spent in ornamental architecture than should have been the funds will be sufficient to do much good.

I remain with much
respect truly yours &c
Joseph Henry

Charles Ellett Jr
Wheeling Va

Ellet Papers, Department of Rare Books and Special Collections, University Library, University of Michigan.

Inside address in another hand, possibly Edward Foreman's.

1. There were bridges at Fourth, Seventh, Twelfth and Fourteenth streets. The institution proposed a bridge at Tenth Street, opposite the Smithsonian Building.

On April 6, the day that Henry began to move into the east wing, he decided to petition the common council for a bridge. Henry was

concerned about the public programs of the institution, a lecture series by Edward Hitchcock of Amherst College being scheduled to commence April 30. The city erected an iron bridge several years later. Desk Diary, April 6, 20, 27, and 30, 1849; October 5, 1850; Rhees, *Journals*, p. 702.

288. TO EPHRAIM GEORGE SQUIER

Smithsonian Institution
April 24 1849

My Dear Sir

I am most anxious to have a set of Meteorological observations made in Guatemala, but perhaps it might be best to send the instruments round Cape Horn. The boiling apparatus you mention,¹ I am not sure you will find as convenient as you anticipate. Its character for much accuracy has not been fully established; and for portability, it has not much to boast of over the Barometer. The bulb of the Thermometer is necessarily very large & from the inertia of the mercury, is very liable to be broken, whilst the observations are far less conveniently made than those with the barometer. Green² does not keep them on hand, but makes them to order. The cost of one is \$40.

We have ordered from Edinburgh an instrument for measuring the direction and intensity of the Earthquake, for the Expedition under Lieut Gilliss.^{3A} I know not what will be the cost, & it will however be paid for by the Secretary of the Navy. In default of a better instrument, a hemispherical vessel such as an ordinary wash bowl of a white color,

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would serve the purpose for observations of this kind. The bowl being partially filled with molasses, or some sticky substance, will record the effect of the Earth wave. The direction of the motion will be indicated by a point on the side of the vessel which is the apex of the stain of the wave of molasses, and the intensity of the shock by the distance up the sides of the bowl to which the molasses was thrown.⁴

Your letter⁵ has been delayed, and to save time I have concluded to send the wood cuts you mention directly to New ~~York~~ Haven from whence they can be returned to me.⁶ Before you start I shall expect to receive your paper on the Explorations in Western New York.

Very respectfully
Your obedient Servant
Joseph Henry
Sec. Smithsonian Institutⁿ

E G Squier
New York

Squier Papers, Library of Congress.
In Edward Foreman's hand, with Henry's signature.

1. A hypsometer.

2. James Green.

3. In a letter of October 25, 1848, Gilliss had applied to Edward Sabine for assistance in procuring geophysical instruments. He in turn directed the question of design and construction of the seismometer to James David Forbes of Edinburgh, who had published "The Theory and Construction of the Seismometer" (*Transactions of the Royal Society of Edinburgh*, 1844, 15:219-228). The instrument proved inadequate, however.

Gilliss to Edward Sabine, October 25, 1848, and February 19, 1849, BJ3/25, Letters from Americans re Magnetic Observatory in US, 1839-1854, Sabine Papers, Records of Kew Observatory, Public Record Office, London; Gilliss, *The U.S. Naval Astronomical Expedition to the Southern Hemisphere, during the Years 1849-'50-'51-'52*, U.S. House, 33d Congress, 1st Session, House Executive Documents, No. 121, 4 vols. (1855-1856), 1:105, 508.

4. Squier did make observations of earthquakes, especially one of October 27, 1849. Although he reported the direction the earth wave moved, there is no indication that he used a seismometer. E. G. Squier, "On the Volcanoes of Central America, and the Geographical and Topographical Features of Nicaragua, as Connected with the Proposed Inter-Oceanic Canal," *AAAS Proceedings*, 1850, 4:101-122, especially pp. 110-111.

5. Not found.

6. Squier had evidently requested Henry's assistance with a paper he was publishing in *Silliman's Journal*: "A Monograph of the Ancient Monuments of the State of Kentucky" (1849, 2d ser. 8:1-14). That article was illustrated with two woodcuts, which Henry supplied directly to Benjamin Silliman in New Haven. Desk Diary, April 25, 1849.