

December 10, 1830

the imperfect tables prefixed to Gibson's Surveying¹⁷ & Bowditches Navigation.¹⁸ These only extend to 4 and 5 places of decimals and are consequently inapplicable to any very exact calculation.

The introduction of this work will I am confident have a tendency to induce a habit of more exact numerical calculation and enable the student to become more intimately acquainted with the use of logarithmic tables. The price of this vol. is \$2.50 and it is more minute in some cases and almost as extensive in every way as Hutton's Mathematical tables¹⁹ which cannot be procured in this country, and if ordered from England will cost at the least \$10.

In conclusion therefore I would recommend that Hasler's Arithmetic be used for the older students in the academy & that each student when commencing the study of Trigonometry or the higher parts of algebra be required to procure a copy of Hasler's Mathematical tables.

I am Gentlemen with much
Respect Your
humble serv^t
Joseph Henry

¹⁷ Probably Robert Gibson, *A Treatise of Practical Surveying, Which Is Demonstrated from Its First Principles*, 2d New York ed. (New York, 1803).

¹⁸ Nathaniel Bowditch, *The New American Practical Navigator* (Newburyport, Massachusetts, 1802), which quickly superseded its predecessors, became a standard reference work for seamen throughout the world, and, in

revised form, is still widely used. The latest edition available to Henry would have been the fourth, published in New York in 1817.

¹⁹ Charles Hutton, *Mathematical Tables; Containing the Common, Hyperbolic and Logarithmic Logarithms . . .*, 7th ed. (London, 1830). The edition cited here was the latest available to Henry.

TO BENJAMIN SILLIMAN, SR.¹

Silliman Family Papers, Sterling Library, Yale University

Albany Dec. 10th 1830

Prof. Silliman

Dear Sir

I have been engaged for some time past in a series of experiments on electro-magnetism and particularly in reference to the development of great magnetic power with a small galvanic element. The results I wish to publish if possible in the next No. of the Journal of Science. I am anxious

¹ Henry's retained copy of this letter, dated one day earlier, is in the Smithsonian Archives. It has been printed in Nathan Rein-

gold, ed., *Science in Nineteenth-Century America: A Documentary History* (New York, 1964), p. 65.

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that they should appear as soon as possible since by delaying the publication of the principles of these experiments for nearly two years I have lately had the mortification of being anticipated in part by a paper from Prof. Moll in the last No of Brewster's Journal.²

Please inform me if I shall be too late for the next no. of the Journal if I send my paper within two weeks of the date of this letter—it will probably make five or six pages. If it be not too late I should like to have a small wood cut of a powerful magnet which I am constructing on electro-magnetic principles.

Both Mrs. Henry and myself retain a lively recollection of the many polite attentions we received in New Haven last Spring. We join in a respectful remembrance to your self and family.

I am with much respect
Your humble serv
Joseph Henry

² Gerrit Moll, "Electro-Magnetic Experiments (Formation of Powerful Magnets by Galvanism)" *Edinburgh Journal of Science*, 1830, 3:209-218. Moll (1785-1838) was a Dutch physicist at the University of Utrecht. Pogendorff. Reingold, *Science in Nineteenth-*

Century America, pp. 62-65, discusses the impact of Moll's article on Henry and the problem of conflicting claims for priority in scientific discovery between American and European scientists.

FROM BENJAMIN SILLIMAN, SR.

Henry Papers, Smithsonian Archives

N Hav. Dec^r 17 1830

Dear Sir

Yours of the 10th ¹ reached me a few hours since. I write by return of mail to say that as Prof Moll's memoir is already printed in this N^o of the Journal² it is the more important that yours should appear also. Although we are already arrived at the *Miscellanies* I will reserve a form for you at the very end where you can come in by way of appendix.³ As a week is already

¹ See above.

² Gerrit Moll, "Electro-Magnetic Experiments," *Silliman's Journal*, 1831, 19:329-337. Both Henry and Silliman had noted this piece on its original publication in Britain. Moll, like Henry, was aware of the work of William Sturgeon. His paper is markedly different in style from Henry's. Henry is detailed and factual; Moll is more "literary" in his range of

allusions. And Henry's results were more spectacular in terms of lifting power.

³ Joseph Henry, "On the Application of the Principle of the Galvanic Multiplier to Electro-Magnetic Apparatus, and Also to the Development of Great Magnetic Power in Soft Iron, with a Small Galvanic Element," *Silliman's Journal*, 1831, 19:400-408.