

tuation in the terrestrial magnetic force, which appears to be intimately connected with the joint action of atmospheric elasticity and solar differential-tidal attraction.

The coefficient of atmospheric specific gravity, 4, suggests the ratio of the length of a sonant aerial column to that of an equivalent sonorous wave, as well as the time of a complete oscillation of each magnetic pulse. During each vibration, from a maximum of condensation across the position of equilibrium to minimum, or *vice versâ*, the effect produced by any constant force would be four times as great as during the half oscillation, from either extreme to the point of equilibrium. The ratios of wave-velocity to elasticity and density, and of revolution to distance from the centre of motion, point to various experiments upon the relations of magnetic capacity to tenacity, in iron, and of magnetizing power to specific gravity or to specific heat,\* in coils of different metals. If such experiments should show any intimate connection between elasticity and specific magnetism (a result which it does not seem unreasonable to anticipate), some of the mystery in which an interesting physical fact is now shrouded will be happily dispelled.

The minutes of the last meeting of the Board of Officers and Council were read.

New nominations, Nos. 582, 583, 584, and 585, were read. And the Society was adjourned.

---

*Stated Meeting, December 6, 1867.*

Present, nine members.

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

Letters were read from John Stuart Mill, dated Avignon, November 10, 1867, acknowledging the receipt of notice of his election as a member of the Society.

From the Holland Society of Sciences at Amsterdam, January 13, and May 25, 1866; the Royal Society of Sciences at Amsterdam, April 15, 1866; from the Royal Acad-

\* The specific heats of iron, cobalt, and nickel are nearly the same, being each about 27 times that of hydrogen. Recently discovered cosmical affinities of hydrogen and iron, and the ratio between solar and terrestrial superficial gravitation, may, perhaps, some time lead to the recognition of a significance in relations which would now be generally regarded as fanciful and accidental.



emy of Sciences, &c., at Brussels and Ad. Quefelet, dated September 7, 1867; from Gustavus Henrichs, Iowa City, November 11, 1867; severally announcing donations for the Library. Also, from the Royal Academy of Sciences at Amsterdam, March 6, July 6, and October 11, 1866; and from the Batavian Society of Experimental Philosophy at Rotterdam, August 21, 1866, acknowledging the receipt of publications of this Society.

A photographic likeness of Dr. Henry Hartshorne, was presented for the Album.

Donations for the Library were announced: From the Royal Academy of Sciences at Amsterdam; from the Holland Society of Sciences at Harlem; from the Academy of Sciences, &c., of Belgium, at Brussels; from Ad. Quetelet, Brussels; from the Royal Prussian Academy of Sciences at Berlin; from the Massachusetts Historical Society; from the Editors of the American Journal of Science and Arts; from the Association of Medical Superintendents at Harrisburg, Pennsylvania; from the Board of Managers of the House of Refuge, and the Managers of the Home for Little Wanderers, Philadelphia; from Prof. William D. Whitney; from the Franklin Institute; and from the Publisher of the Medical News.

The Annual Reports of the Treasurer and the Publication Committee were read.

The Librarian was authorized, at his discretion, to publish the manuscript Journal of F. Pursh in some Journal.

Pending nominations, Nos. 582 to 585, were read.

And the Society was adjourned.

---

*Stated Meeting, December 20, 1867.*

Present, eight members.

Dr. Wood, President, in the Chair.

Letters were read and the donations to Library were announced.

The Committee of Finance reported, and the usual appropriations were made.

And the Society was adjourned.



1867. "Stated Meeting, December 6, 1867." *Proceedings of the American Philosophical Society held at Philadelphia for promoting useful knowledge* 10(77), 359–360.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/31414>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/211885>

**Holding Institution**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

**Sponsored by**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

**Copyright & Reuse**

Copyright Status: NOT\_IN\_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.