

1½ inches in diameter, from the want of proper arrangement on the part of the riggers for securing the regular and equal lowering at all points of suspension, an excess of weight was thrown upon the hooks on one side, by which one of them was broken, and almost at the same instant all the hooks gave way, either breaking or bending open, and the machine was allowed to fall about fifteen feet. The weight of the falling mass was about 90,000 lbs., but part of this, about 28,000 lbs., was counterbalanced by twelve weights attached to it by chains passing over pulleys. The gravitating force being about 62,000 lbs. acting upon a mass of 118,000 lbs. The damage to the machine was inconsiderable, and no person received any injury, although nearly a hundred men were at work around and within it. The gasholder, of which this is part, is believed to be the largest in the world; its diameter is 140 feet, height 70 feet, and capacity over a million cubic feet.

The weight of iron used in its construction is 330,000 lbs., chiefly sheet and bar. The guide frame contains over a million pounds of cast iron; it is composed of 144 columns arranged in twelve stands or groups placed all around the tank; each group consists of four tiers of columns and entablatures, the lower tier fashioned after the Tuscan order, the second Doric, the third Ionic, and the upper Corinthian. The cost of the entire structure, including the excavation and walling of the tank, is about \$85,000, which is about \$40,000 less than the cost of an equal quantity of gas store room in gasholders of the usual capacity, say 200,000 cubic feet.

The pending nominations were read.

Stated Meeting, November 1.

Present, thirteen members.

Dr. FRANKLIN BACHE, Vice-President, in the Chair.

Letters were read:—

From the Royal Society of Edinburgh, dated Edinburgh, 20th December, 1848, acknowledging the receipt of Vol. IX. Part 3, of the Transactions, and No. 34, of the Proceedings of this Society, and announcing a donation to the Society:—

From the same, dated Edinburgh Royal Society's Apart-

ments, 1st July, 1848, announcing the donation to this Society of a medal bearing the effigy of Napier, of Merchiston, the inventor of Logarithms: and—

From the Etat Major of the Corps of Mining Engineers of Russia, dated St. Petersburg, 8th October, 1849, accompanying a donation to this Society.

The following donations were announced:—

FOR THE LIBRARY.

Philosophical Transactions of the Royal Society of London, for the year 1850. Part 1. London. 4to.—*From the Royal Society.*

Proceedings of the Royal Society of London. Nos. 73, 74, 75. London, 1850. 8vo.—*From the same.*

On the Means Adopted in the British Colonial Magnetic Observatories for Determining the Absolute Values, Secular Change, and Annual Variation of the Terrestrial Magnetic Force. By Lieut. Col. Sabine, R.A. For. Sec., F.R.S., &c. &c. London, 1850. 4to.—*From the Author.*

On the Automatic Registration of Magnetometers and Meteorological Instruments by Photography. No. 3. By Charles Brooke, M.B. F.R.S. London, 1850. 4to.—*From the Author.*

Papers on Meteorology, relating especially to the Climate of Britain, and to the Variations of the Barometer; Communicated to the Royal Society at various periods, from 1821 to 1845. By Luke Howard, Esq., F.R.S. London, 1850. 4to.—*From the Author.*

Essay on the Modifications of Clouds. By Luke Howard, F.R.S., &c. London, 1832. 8vo.—*From the same.*

Transactions of the Royal Society of Edinburgh. Vol. XVI. Part 4, for the Session 1847-8. Edinburgh. 4to.—*From the Society.*

Proceedings of the Royal Society of Edinburgh. Vol. II. Nos. 31, 32. Edinburgh, 1847-8. 8vo.—*From the same.*

Observations in Magnetism and Meteorology, made at Makerstoun in Scotland, in the Observatory of Sir Thomas Makdougall Brisbane, Baronet, &c. &c., in 1844; forming Vol. XVIII. of the Transactions of the Royal Society of Edinburgh. Edited by John Allan Broun, Esq., Director of the Observatory. Edinburgh, 1848. 4to.—*From the same.*

Astronomical Observations made at the Royal Observatory, Edinburgh, by the late Thomas Henderson, F.R.S.L. and E., &c. &c.

- Reduced and Edited by his successor, Charles Piazzi Smyth, F.R.S.E., &c. &c. Vol. IX. for 1843. Edinburgh, 1850. 4to.—
From the Observatory.
- Annuaire Magnétique et Météorologique du Corps des Ingénieurs des Mines; ou Recueil d'Observations Météorologiques et Magnétiques faites dans l'étendue de l'Empire de Russie, &c. Par A. T. Kupfer, Directeur de l'Observatoire Physique Central. Année 1846. Nos. 1 & 2. St. Petersburg, 1849. 4to.—*From the Etat Major of the Corps of Mining Engineers of Russia.*
- Notice des Monuments Exposés dans la Salle des Antiquités Américaines (Mexique et Pérou) au Musée du Louvre. Par Adrien de Longperier, Conservateur des Antiques. Paris, 1850. 8vo.—
From the Author.
- Annali di Fisica dell' Abbate Francesco Cav. Zantedeschi, Prof. di Fisica nella I. R. Università di Padova, &c. Fascicolo V. Padova, 1849-50. 8vo.—*From Prof. Zantedeschi.*
- Flora Batava, of Afbeelding en Beschrijving van Nederlandsche Gewassen; door Jan Kops en J. E. van der Trappen. Aflivering 161, 162, 163. Amsterdam. 4to.—*From H. M. the King of the Netherlands.*
- Brasilien-Nachträge, Berichtigungen und Zusätze zu den Beschreibung meiner Reise in östlichen Brasilien. Von Max, Prinz zu Wied. Francfort am Main, 1850. 8vo.—*From the Author.*
- Monthly Notices of the Royal Astronomical Society. Vol. X. No. 8. June 14, 1850. London. 8vo.—*From the Society.*
- Transactions of the American Medical Association. Instituted 1847. Vol. III. Philadelphia, 1850. 8vo.—*From the Association.*
- Journal of the Franklin Institute. Third Series. Vol. XX. No. 4. Oct. 1850. Philadelphia. 8vo.—*From the Institute.*
- The Plough, the Loom and the Anvil. Vol. III. No. 5. Nov. 1850. Philadelphia. 8vo.—*From J. S. Skinner, Esq., Editor.*
- Characteristics of the Age. An Address delivered before the Linnæan Association of Pennsylvania College, at the Annual Commencement, Sept. 18, 1850. By the Hon. William D. Kelley, of Philadelphia. Gettysburg, 1850. 8vo.—*From Prof. M. L. Stoeber.*

FOR THE CABINET.

- A Medal recently struck, bearing the effigy of Napier, of Merchiston, the Inventor of Logarithms, taken from an authentic contemporary picture.—*From the Royal Society of Edinburgh.*

The pending nominations were read.