

new observatory at Liverpool, adapted for astronomical purposes, and that he had been obliged to obtain it from Munich.

The British government had made, some years ago, large appropriations for the instituting experiments on glass intended for astronomical observations, but they had failed, though conducted by some of the most distinguished men of science.

The Treasurer informed the Society, that the debt due to the estate of Mr. Dunn, had been wholly liquidated.

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*Stated Meeting, September 18.*

Present, twenty-two members.

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

The following donations were announced :—

FOR THE LIBRARY.

Proceedings of the Royal Society of London. June 17, 1841. No. 49. 8vo.—*From the Royal Society.*

Monthly Notices of the Royal Astronomical Society of London. Vol. VII. May 8, 1846. No. 7. 8vo.—*From the Society.*

Memoirs of the American Academy of Arts and Sciences. New Series. Vol. II. Cambridge, 1846. 4to.—*From the Academy.*

Proceedings of the Boston Society of Natural History. January, February, March, December, 1845. 8vo.—*From the Society.*

Summary of the Transactions of the College of Physicians of Philadelphia. From April to August, 1846, inclusive. No. 12. 8vo. *From the College.*

The African Repository and Colonial Journal. Vol. XXII. September, 1846. No. 9. 8vo.—*From the American Colonization Society.*

The Electrical Magazine. Conducted by Mr. Charles V. Walker. Vol. II. No. 13. July, 1846. 8vo.—*From the Editor.*

Astronomical Observations made at the Naval Observatory, Washington, under Orders of the Honourable Secretary of the Navy, dated Aug. 13, 1838. By Lieut. J. M. Gilliss, U. S. N. Printed by order of the Senate of the United States. Washington, 1846. 8vo.—*From the Author.*

- Journal of the Franklin Institute of the State of Pennsylvania. Vol. XLII. No. 249. Third Series. Vol. XII. September, 1846. No. 3. 8vo.—*From Dr. Patterson.*
- The American Journal of Science and Arts. Second Series. No. 5. September, 1846. 8vo.—*From the Editors.*
- An Account of the Magnetic Observations made at the Observatory of Harvard University, Cambridge. Communicated by Joseph Lovering. 4to.—*From Prof. Lovering.*
- The Medical News and Library. Vol. IV. September, 1846. No. 45. 8vo.—*From Messrs. Lea & Blanchard.*
- Correspondencia con los Ministros de Inglaterra, y de Francia sobre los asuntos de la Pacificacion, presentada a la H. Sala de Representantes por el Gobierno de Buenos-Aires, encargado de las Relaciones Exteriores de la Confederacion Argentina. Buenos-Aires, 1846. 4to.—*From Don Pedro de Angelis.*

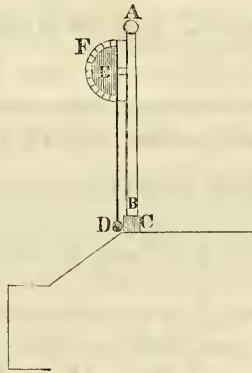
ADDITIONS TO THE LIBRARY BY PURCHASE.

- Scientific Memoirs, selected from the Transactions of Foreign Academies of Science and Learned Societies, and from Foreign Journals. Edited by Richard Taylor, F.S.A. &c. Vol. IV. Part XV. June, 1846. 8vo.
- Astronomische Nachrichten. Nos. 560 to 563, inclusive. Altona, May 30 to June 25. 4to.

Mr. Peale read the following letter from Dr. Franklin to Dr. Kimmersley, dated London, July 17, 1771.

Dear Sir,—I was much obliged by your account of the effect of the lightning on Mr. Holder's house. It will be in the Transactions here. I wonder it is not to be found in yours. Those here, who aimed at obtaining a very great electric force, have been much discouraged by the breaking of the bottles that composed their batteries. A gentleman of my acquaintance lost eight out of twenty at one stroke; another twelve out of forty. Having heard that Père Beccaria had lined the inside of a great iron kettle with cement, and then coated a part of the cement with tinfoil, from whence he could discharge a great stroke; and if any crack happened to his cement, he mended it again with a hot iron; I recommended trying to make batteries of paper, by straining the sheets on frames, drying them hot before the fire; then impregnating them with melted wax, and afterwards coating them with tinfoil. This another ingenious friend has

tried, and, as he writes me, it succeeds. The same (Mr. Henley) has invented an electrometer, which seems useful. I send you a draft of it. It shows in what degree a bottle is charged; that is, whether half, three-quarters, &c.: so that knowing the force of a full charge of any bottle or battery, you may by this, while charging, know the proportion you have of such force. Your experiment, showing that a stroke with black lead on paper would conduct a shock, was new to me. I mentioned it to some, who since tell me that they also find the solid black lead in a pencil conducts as well as wire; which, indeed (the other being true), is not to be wondered at. It is, however, the only property of metal black lead possesses, as far as we yet know it. Mr. Canton melts silver and gold wire by electricity, not only into fine white little globules, but also into spherules of glass, some of which he has shown me by his microscope. They were transparent, the light passing through them, and appearing in a focus on the paper. Mr. Henley has several times melted iron wire lying at the bottom of a white stone plate filled with water. The iron was destroyed, and marked the plate with an indelible black stroke. Sparks flew from it out through the water, and fell red-hot



A B, an ivory rod, round, with a knob at the top, six inches high.

C, a short tin socket, fixed to the prime conductor, to receive the end of the iron rod.

D, a cork or pith ball, at the end of a small ivory arm, turning on an axis at E.

F, a semicircular plane of ivory, graduated at the edge, to mark the rise of the ball by the small arm passing over the graduations.

on the table. I wish I had any thing of more importance to communicate. Business during the winter takes up my time, so that I make no experiments myself; but what I hear of I shall continue to send you.

Being with sincere esteem, dear sir,

Your most obedient humble servant,

B. FRANKLIN.

Dr. Patterson gave a general account of the mathematical inquiries recently conducted by Mons. Le Verrier, to explain the apparent diversity between the actual observed position of the planet Uranus, and the position it should occupy according to the laws of gravitation. Assuming that another planet exists beyond Uranus, at the distance from the Sun which the laws of Bode would indicate; that its orbit was nearly circular, and in the zodiac; and that its mass was equal to that of Uranus; he determined that a planet so assumed would account for the perturbations observed in regard to Uranus, from the position it should occupy, according to the laws of gravitation, if the planet was in a particular place at a given epoch.

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*Stated Meeting, October 2.*

Present, eighteen members.

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

Letters were announced and read:—

From the Royal Geographical Society of London, dated Feb. 21, 1846, acknowledging the reception of Vol. IX. Part 2d, of the Transactions of the American Philosophical Society, and of Nos. 32, 33, of the Proceedings:—

From the New Jersey Historical Society, dated Newark, Sept. 7, 1846, stating that they had sent their publications to the American Philosophical Society, and asking, in return, donations to their Library:—

From P. de Angelis, dated Buenos Ayres, Feb. 20, 1846, accompanying a donation to this Society of official documents: and,—