THE FRANKLIN INSTITUTE.

(Proceedings of the Stated Meeting Held Wednesday, November 19, 1919.)

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, November 19, 1919.

PRESIDENT DR. WALTON CLARK *in the Chair.*

Additions to the membership since last report, 9.

The following gentlemen nominated by the Board of Managers for Corresponding Membership were unanimously elected:

Dr. A. S. Eve, Professor of Physics, McGill University, Montreal; Dr. John S. Townsend, Professor of Physics, Oxford University; Professor Charles Fabry, Professor of Physics, University of Marseilles.

Reports of progress were presented by the Committee on Library, and the Committee on Science and the Arts.

The Chairman then announced that the next business of the Meeting would be the presentation of the medals and certificates to the gentlemen whose inventions had been examined, by the Committee on Science and the Arts, and found worthy of recognition by the Institute.

Mr. Benjamin Franklin, Chairman of the Committee on Science and the Arts, then introduced Mr. Harvey D. Williams and Mr. Reynold Janney, who had been recommended jointly for the award of the Potts Medal, for their inventions embodied in what is known as the "Waterbury Hydraulic Speed Gear." The President then presented the medals and certificates to Messrs. Williams and Janney.

Mr. Clarence P. Landreth, of Philadelphia, whose "Electrolytic Sewage Process" had also been recommended for the award of the Potts Medal, was next introduced, and the medal and accompanying certificate were presented to him by the President.

Mr. Franklin was again recognized, and described the invention in the art of radiography, made by Mr. H. Clyde Snook, of New York City. Mr. Snook was recommended for the award of the Edward Longstreth Medal of Merit, and this with the accompanying certificate was presented to him by the President.

Rear Admiral J. A. Hoogewerff, U. S. N., Superintendent of the U. S. Naval Observatory, Washington, D. C., then presented the paper of the evening, entitled "The Relation of the U. S. Naval Observatory to the Navy and Shipping Interests of the Country." The speaker referred to the dependence of the sailor on the practical applications of astronomy, and gave an account of the work of the U. S. Naval Observatory. After reviewing, briefly, the history of the Observatory, he described its various activities, including its time service, the publication of the American Ephemeris and Nau-

tical Almanac, its work in connection with navigational instruments, and its library. The war-time activities of the Naval Observatory were also reviewed. The subject was illustrated by lantern slides. After a brief discussion, the thanks of the Meeting were extended to the speaker.

Adjourned.

R. B. OWENS,
Secretary.

COMMITTEE ON SCIENCE AND THE ARTS.

*(Abstract of Proceedings of the Stated Meeting held Wednesday,
November 5, 1919.)*

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, November 5, 1919.

MR. BENJAMIN FRANKLIN *in the Chair.*

The following report was presented for first reading:

No. 2713: Kemp Gas System.

A report was presented by the Special Committee on the Louis Edward Levy Memorial.

R. B. OWENS,
Secretary.

SECTIONS.

Section of Physics and Chemistry.—A meeting of the Section was held in the Hall of the Institute on Thursday evening, October 23, 1919, at 8 o'clock, with Dr. George S. Crampton in the Chair. The minutes of the previous meeting were approved as published.

Augustus Trowbridge, Ph.D., D.S.M., D.S.O., Chev.L.H., Professor of Physics in Princeton University, and late Lieutenant Colonel of Engineers, attached to the General Staff and in technical charge of Sound and Flash Ranging in the American Expeditionary Force, delivered an illustrated lecture on "Flash and Sound Ranging Apparatus for the Location of Guns." The development of modern methods for locating the position of enemy artillery, and directing the fire of friendly artillery was traced. A description was given of the principles of both flash and sound ranging, the methods and apparatus used by the ranging troops of the American Expeditionary Force in France, and the quality and quantity of the information thus obtained. The paper was discussed; a vote of thanks was extended to Doctor Trowbridge, and the meeting adjourned.

JOSEPH S. HEPBURN,
Secretary.

Electrical Section.—A joint meeting of the Section and the Philadelphia Section American Institute of Electrical Engineers was held in the Hall of the Institute on Thursday evening, October 30, 1919, Mr. W. C. L.