Franklin Institute.

[*Proceedings of the stated meeting, held Wednesday, April 18, 1894*]

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, April 18, 1894

MR. HENRY R. HEYL in the chair.

Present, sixty-five members and twelve visitors.

Additions to membership since last report, fifteen.

The Secretary announced the death of Mr. John Howard Gibson, a member of the Board of Managers, and reported that at its stated meeting, held on Wednesday, April 11th, the Board had taken suitable action in relation thereto, and had appointed a committee to prepare a memoir of the deceased for publication in the *Journal*. The Chairman, after an appropriate allusion to the loss which the Institute had sustained in the untimely death of one of its most active managers, directed that an election be held to fill the vacancy thus created in the Board.

The election resulted in the choice of Mr. Thomas P. Conard.

Mr. Clayton Beadle, of London, England, presented a paper describing some interesting newly-discovered cellulose derivatives, and products obtained therefrom, by methods devised and patented by Messrs. Cross, Bevan & Beadle, of London. Mr. A. D. Little, of Boston, supplemented the remarks of the previous speaker by giving an account of the properties of these products and of the various uses for which they were found adapted. The material, according to the manner of manipulating it, makes an excellent adhesive, taking the place of glue; it can be applied advantageously as a sizing in the manufacture of paper, in cotton goods, etc.; in massive form it can be moulded, pressed, turned, sawed, etc., and applied to the multifarious uses of hard rubber, vulcanized fibre, celluloid and similar products. It can be rolled into the form of plates or sheets of extreme thinness, the latter being almost transparent. It is capable of accepting various dyes, and of being mingled with mineral and other pigments. In these forms, the material may be made, by proper manipulation, to serve as floor covering, or leather substitute for bookbinders' and upholsterers' uses, etc.

A large number of specimens were shown, exhibiting various forms of these products and their applications.

Mr. F. E. Ives gave an interesting account of recent progress in the field of color photography, and described and exhibited the improved form of his photo-chroscope, and a simple method of projecting photographic images on the screen in the colors of nature with the ordinary stereopticon.

The Secretary's report embraced a reference to the subject of the corrosion of gas and water pipes and underground electric cables from the effects of leakage of the return current of the electric trolley lines. The trouble

from this cause, the Secretary remarked, had grown to serious proportions in certain cities where the surface electric roads had been for some time in operation, notably in Brooklyn and Boston. He presented some extracts from a special report on the subject that had been made by the "Board of Commissioners of Electrical Subways" in Brooklyn, illustrating the same by the projection on the screen of views of a number of telephone cables, water and gas pipes, which had been dug up in Brooklyn, and all of which exhibited evidences of extensive corrosion, ranging from superficial pitting to complete perforation.

The Secretary gave a brief summary of the recent investigations of Dr. Engler upon the origin of petroleum. Dr. Engler had succeeded, by subjecting animal fats and fatty acids to distillation under high pressures, in converting about seventy per cent. of these products into petroleum hydrocarbons, obtaining in the operation ninety per cent. of the theoretical yield. These experiments appeared to demonstrate that the origin of petroleum is to be sought for in the transformation of the fatty portions of the animal remains abundantly found in the rock formations, in, or contiguous to which, petroleum occurs.

The Secretary described and exhibited the Falconnier blown-glass bricks, which have been used with very satisfactory results in the construction of conservatories, greenhouses, etc. These bricks are hollow and are blown in various shapes, and principally with ribbed or corrugated exteriors. They are very light and strong, and when laid together present an ornamental appearance. They permit of the transmission of an abundance of light; their corrugations serve to scatter the light and to avoid its concentration. They are hermetically sealed while hot, thereby preventing the entrance into them of dirt or moisture, and are annealed to increase their power of resistance. The laying of these bricks is said to be plain bricklayer's work, interposing no difficulties. The vaults are built up over a wooden centre, and the joints are made with lime mortar, or light cement mixed with fine sand.

Adjourned.

WM. H. WAHL, *Secretary.*