

step in the right direction, and further improvements have furnished nickel-steel and Harveyized armor plates, both of which have given good results, so that now we can use armor of half the thickness and weight formerly used and still have as great protection, and as long as we can use armor around our gun stations to resist penetration, it gives us the advantage of having our guns protected and of being able to strike a blow at any enemy.

In conclusion, the writer hopes he has placed some points before you worthy of discussion.

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## Franklin Institute.

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*[Proceedings of the stated meeting, held Wednesday, May 16, 1894.]*

HALL OF THE FRANKLIN INSTITUTE,  
PHILADELPHIA, May 16, 1894

MR. JOSEPH M. WILSON, President, in the chair.

Present, forty-six members and six visitors.

Additions to membership reported since last meeting, nine.

The Secretary read a letter from Mr. Thomas P. Conard, conveying his acceptance of election to the Board of Managers.

Mr. E. P. Reichhelm, of New York, read a paper describing the system and apparatus of the American Gas Furnace Company.

Mr. Louis Krumbhaar gave a description of a new apparatus designed for manufacturing or producing a large number of printed copies of a document from a stenciled original made on the typewriting machine. The invention consists of an improved printing apparatus, called the "diagraph," which was exhibited and shown in practical operation by the inventor, Mr. Thomas H. Stackhouse.

Mr. Constant de Redon, of New York, exhibited a large number of specimens of aluminum soldered joints, made by the process and material used for the purpose by the Alsite Aluminum Company, of that city. He gave a practical illustration of the method of using the solder, by making a number of joints. Among the numerous exhibits presented by the company were specimens of articles of aluminum handsomely electroplated with gold and silver.

The subjects presented by Mr. Krumbhaar and Mr. de Redon were referred to the Committee on Science and the Arts for investigation.

Mr. Edward Brown described and showed the practical application of a new form of pyrometer devised by him for service in indicating temperatures up to about 2,000°.

The Secretary's report embraced an account of the salient features of the Manchester Ship Canal, which was illustrated with lantern views.

Adjourned.

WM. H. WAHL, *Secretary.*