The Reversible Copper Oxide Plate, by W. McA. Johnson, Hartford, Conn.

A Thermodynamical Note on the Theory of the Edison Battery, by Dr. E. F. Roeber, Philadelphia.

Electrolysis of an Aqueous Solution by Alternating Current, by J. W. Richards, Ph.D., Lehigh University.

The Atom of Electro-Chemistry, by Arvid Reuterdahl, Providence, R. I.

The papers presented were all freely discussed, and the discussion, being taken down stenographically, will be published with the papers.

On the afternoon of April 3rd, a party of about thirty visited the chemical works of Harrison Bros. & Co., Inc., where various chemical processes were seen, particularly the manufacture of sodium and nitric acid by Darling's process of electrolyzing fused sodium nitrate. On the afternoon of the 5th, over thirty participated in a trip to Bethlehem, Pa., where an hour was spent in the works of the Lehigh Zinc and Iron Co., two hours in the armor-plate and heavy-forging plant of the Bethlehem Steel Co., and a short visit was made to the Lehigh University.

Altogether, nearly 100 members of the new society were in attendance; every paper presented was received attentively and discussed freely, and the membership dispersed, feeling that a move had been made which will react with great energy on the development of the youthful science and industry—that of Electro-chemistry.

NEW BOOKS.

THE LETTERS OF JÖNS JAKOB BERZELIUS AND CHRISTIAN FRIEDERICH SCHÖNBEIN, 1836–1847. Edited by GEORG W. A. KAHLBAUM, Bâle. Translated by FRANCIS V. DARBISHIRE and N. V. SIDGWICK. London: Williams and Norgate. 1900. 112 pp. 12mo. Price, three shillings.

Schönbein, the illustrious discoverer of ozone, guncotton and collodion, was a voluminous letter writer; he corresponded with Faraday and other Englishmen, with Eisenlohr of Karlsruhe, Liebig, Pettenkofer, Wöhler, and other eminent German physicists and chemists, with some Swiss, including Marig-

nac, de la Rive and Agassiz, with Henri Sainte Claire Deville and Dumas, in France, as well as with the great Swede Berzelius. Of these letters, numbering more than 1500, two groups have been published by Prof. Georg W. A. Kahlbaum and others, those exchanged with Faraday and those with J. J. Berzelius.

The first six letters of the series in the volume under review refer to the passivity of iron, independently observed, but not discovered by Schönbein, as the phenomena had been described by James Keir as early as 1790. The balance of the correspondence concerns chiefly ozone. In the long letter, dated April 14, 1844, Schönbein writes he has finally decided that the odoriferous principle produced by electrolysis of water, etc., is identical with chlorine, and he gives five reasons for believing this. The fact that ozone is a form of oxygen was suggested to Schönbein on April 20th, in the following year by Plantamour of Geneva.

The discovery of parchment paper is announced in a letter dated March 5, 1846. Three months later Schönbein refers to guncotton as a substance already known, and mentions experimenting with it in small firearms, large guns, and using it for blasting purposes in a tunnel.

This exchange of letters was terminated only by the death of Berzelius in 1848.

Chemists will find this volume an interesting contribution to the history of the science during the period embraced.

HENRY CARRINGTON BOLTON.

A TRAVERS LA MATIÈRE ET L'ENERGIE. PAR LE DR. F. E. BLAISE. Paris: Librairie Ch. Delgrave. 1902. 8vo. 344 pp. Prix, broché: 12 fr.

This volume is another example of that strong tendency which is at present manifesting itself on the part of scientific men to write on general philosophical themes. After an introduction covering six pages, the subject matter is treated in six parts, as follows: electrochemistry and mechanics, 122 pp.; matter, 20 pp.; the formation of bodies in space and their luminosity, 8 pp.; electricity, 39 pp.; electrical induction, 102 pp.; philosophical views and conclusions, 34 pp.

The author assumes the existence of a prime ether and then seeks to explain all phenomena as resulting from movements of