

The portrait which serves as frontispiece is an unfamiliar one, being from a painting by Jackson, taken at the age of 45. Davy appears less handsome than in the portraits by Sir Thos. Lawrence, Lonsdale, and others. The book has an index. The next volume of the series will be on Michael Faraday, by Dr. Silvanus P. Thompson. H. CARRINGTON BOLTON.

A HANDBOOK OF MODERN EXPLOSIVES. BY M. EISSLER. Second edition, enlarged. London: Crosby, Lockwood & Son; and New York: D. Van Nostrand Co. 1897. 8vo. 153 Figs. xx + 406 pp. Price \$5.00.

That there is a field for a book of this kind is shown by the fact that it has now gone to a second edition, the first edition having been published in 1890. In the preparation of this work the author has omitted all description of gunpowder, as it typifies the ancient explosives, and devotes his pages largely to nitroglycerine and guncotton and the preparation made from them, though some space is given to the nitrosubstitution explosives and the proposed substitutes for gunpowder. The scope of the treatment covers not only the methods of manufacture, the apparatus employed and materials required, the tests of the raw materials and manufactured products, and the properties of the explosives produced, but much space is given to the methods of using them in the industries and in war, while a goodly number of pages are devoted to the Explosives Act of Great Britain and other official regulations. In fact the book is written wholly from the English standpoint as regards this industry. This new edition is revised and contains about one hundred more pages and fifty more illustrations than the first edition. The most substantial addition is a chapter on nitrogelatine and gelatine dynamite in practical applications, while sections have been added on the tests of ingredients and concentration of spent acids in the nitroglycerine manufacture; apparatus for measuring the strength of explosives; properties of frozen nitroglycerine compounds and other minor topics.

It is to be regretted that many obvious errors which occurred in the old edition have been repeated in this, while new ones have been added: One remarkable error is in the cuts illustrating the manufacture of nitroglycerine by Mowbray's Process. The authority cited for the description is Mowbray's "Trinitroglycerine." The three cuts given bear the legends "Mowbray's

Nitroglycerine Apparatus, etc." We have Mowbray's book before us but, although he gives an illustration of his apparatus opposite page 68, we do not find in this or any edition of Mowbray's work the cuts Eissler gives. These cuts occur in Hill's Notes on Explosives, and we have always understood that Hill devised this special form of apparatus though it was based on Mowbray's principle. Eissler repeats the statement that Sobrero discovered nitroglycerine in Paris, though Guttman has some time since announced that "It was expressly stated to me by the late Mr. Sobrero that he made his invention in Turin, where he was professor, and not in the laboratory of Pelouze," and that a sample of the original nitroglycerine is still kept at Avigliana. Throughout the book there is a carelessness in the use of scientific and especially chemical terms, sulphate of potassa and potassium nitrate, for instance, occurring in the same paragraph, while in the description of the methods of analyzing acids such typographical errors as $180 \text{ BaSO}_4 = 42.06 \text{ H}_2\text{SO}_4$ are committed repeatedly.

The book contains much information and is useful, but it would have been a better book if the collated matter had been digested.

CHARLES E. MUNROE.

BOOKS RECEIVED.

Text-book of Physical Chemistry. By Clarence L. Speyers, Associate Professor of Chemistry, Rutgers College. 1897. New York: D. Van Nostrand Co. vii + 224 pp. Price \$2.25.

A Short Handbook of Oil Analysis. By Augustus H. Gill, S.B., Ph.D. Philadelphia: J. B. Lippincott Co. 1898. Cloth. 139 pp. Price \$1.50.

Introduction to Electrochemical Experiments. By Dr. Felix Oettel. Translated by Edgar F. Smith. Philadelphia: P. Blakiston, Son & Co. 1897. 144 pp. Price 75 cents.

Practical Exercises in Electrochemistry. By Dr. Felix Oettel. Translated by Edgar F. Smith. Philadelphia: P. Blakiston, Son & Co. 1897. 92 pp. Price 75 cents.

Electric Treatment in Gout and the Uric-acid Diathesis. By Robert Newman. Reprinted from the *Medical Record*, Dec. 11, 1897. New York: The Publishers' Printing Co. 16 pp.

ERRATUM.

In the last (January) issue of the Journal, p. 29, line 11, for the author's name read "H. D. Campbell" instead of "E. D. Campbell."