

and machinery in house and field, largely by American engineering genius. The mass of data on cane-sugar technology is yet to be collected. It cannot be extracted from the present literature of Europe.

Practically all of the first and last chapters could be omitted to advantage, the subject-matter being far better treated in the text-books on sugar analysis. Some of the methods given are obsolete, and there is much that is unintentionally misleading and misstated. The space could be much better utilized in discussing from a purely technological standpoint the chemistry of beet and cane juice bearing on a comparative study of beet- and cane-sugar technology—simple and well-known principles, so often ignored, even by experts—and the general economic conditions which have been vital in the shaping of the two industries.

Naturally, some misprints have been found, most of them obvious from the context.

GEO W. ROLFE.

ELECTROLYTIC PREPARATIONS. Exercises for Use in the Laboratory by Chemists and Electrochemists. BY DR. KARL EIBS, Professor of Organic and Physical Chemistry at the University of Giessen. Translated by R. S. HUTTON, M.Sc., Lecturer in Electrochemistry, Owens College, England. New York: Longmans, Green & Co. Price, \$1.60.

This little work of 100 pages is divided into three parts. The source of current, resistances, measuring apparatus and apparatus for electrolysis are clearly and attractively presented in the first part. Thirteen examples from inorganic chemistry constitute the second part. They are arranged so that some of the experiments are made with unattackable and others with soluble anodes. The directions in each case are full and explicit. The third part consists of thirteen examples selected from the domain of organic chemistry. Three of these deal with the electrolysis of organic acids; the remainder consider electrochemical reduction and oxidation methods. Only two examples present the oxidation methods.

The reviewer was on the point of saying that this is regrettable, but instead would substitute that in this particular direction there exist great possibilities, awaiting the attention of those who will devote themselves to a study of this most promising field of research. At present, practical electrochemistry is receiving much

attention at home and abroad, and it would seem the part of wisdom to have the student of chemistry acquaint himself with some of the ordinary procedures in electrochemistry, which he can do by performing the experiments offered in a volume like this of Elbs. Examples in inorganic preparations, in organic preparations, in physico-chemical methods and problems form part of nearly every student's curriculum, and why not include a brief course, such as is here presented, from an equally important and instructive field? Nor should work with the electric furnace be omitted. However, the purpose of this review was not to offer a dissertation on the teaching of electrochemistry, but to indicate the character of the book so that to what has already been said of it may be added: it is well written, accurate in statements and the result of laboratory experience. The author and translator deserve much praise for their labors in the preparation of a suggestive and helpful book. EDGAR F. SMITH.

KALENDER FÜR ELEKTROCHEMIKER SOWIE TECHNISCHE CHEMIKER UND PHYSIKER. 1904. 8th year, 575 pp, with a Beilage of 416 pp. By DR. A. NEUBURGER, Editor of *Electrochemischen Zeitschrift*. Berlin: M. Krayn. Price, 4 marks.

This is the most complete electrochemical calendar known to the reviewer. It contains the general electrotechnical information found in technical calendars, but includes over 300 pages of chemical and electrochemical data, including information on quantitative analysis by electrolysis, technical electrolysis, electroplating, etc. Over 100 pages are devoted to accumulators. The Beilage contains data on hardness, elasticity, tensile strength and other mechanical data, together with 250 pages on German laws relating to electrochemical industries, including patent laws of the principal countries. W. R. WHITNEY.

UEBER DIE BASISCHE EIGENSCHAFTEN DES SAUERSTOFFS UND KOHLENSTOFFS. VON DR. JULIUS SCHMIDT. Berlin. Gebrüder Bornträger. 1904. iv + 111 pp. Price, 3.20 marks.

This interesting brochure gives a general, connected review of all the recent literature on the basic and tetravalent nature of oxygen and also on the trivalent and basic nature of carbon. Although the work done along these lines is all of very recent date, yet the literature is already sufficiently voluminous to justify the publication of the above-mentioned monograph. One need