

and clearly, and in a more intelligent and attractive manner with the subject of pig iron. Many excellent illustrations add to the value of the book. Although designed for iron founders, the work will prove of especial interest to chemists. F. C. P.

MANUAL OF PHYSIOLOGICAL AND CLINICAL CHEMISTRY. BY ELIAS H. BARTLEY, B.S., M.D., PH.G., Professor of Chemistry, Toxicology and Pediatrics in the Long Island College Hospital. Second Edition, Revised and Enlarged, with 47 illustrations. Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$1.00 net.

THERE is contained in concise form in this book the fundamental principles of physiological and clinical chemistry as adapted to the use of students and practitioners of medicine. The author's long experience as a teacher of chemistry in a medical school and as a practitioner of medicine has enabled him to select for inclusion in the book those subjects especially which bear upon the diagnosis and treatment of disease. This feature of the book makes it notably valuable to the medical man. The chemical methods are, in the main, well chosen; some, however, might well be replaced by newer ones which are more accurate, though more complicated. J. M.

FOOD INSPECTION AND ANALYSIS. For the use of Public Analysts, Health Officers, Sanitary Chemists and Food Economists. By ALBERT E. LEACH, S.B., Analyst of the Massachusetts State Board of Health. New York: John Wiley & Sons. 1904. Lg. 8vo. xiv + 787 pages, 40 full-page half-tones, 120 figures. Price, cloth, \$7.50.

IT seldom happens that a new book on a comparatively new subject, after a critical examination, can be laid aside with the conviction, that the whole field of research, indicated by the title, has been completely and satisfactorily covered. This is the case, however, with the work under consideration. The arrangement of topics is excellent, the instructions are explicit and nothing essential seems to have escaped the author's notice. In a word, the book combines American *clearness* with German *gründlichkeit*. The book is divided into nineteen chapters, which treat of state control, the laboratory and its equipment, the function, proximate composition and nutritive value of food, general analytical methods, the microscope in food analysis and the analysis of all kinds of food products with methods of examination for adulterations.

One important feature of the work is the publication of stand-

ards of purity of foods so far as they have been established. These standards are helpful not only to the analyst but also to those engaged in the enforcement of pure food laws. Another useful provision is an exhaustive list of references at the close of each chapter.

The figures in the text illustrating apparatus and analytical methods will be appreciated, especially by chemists who are about to engage in food analysis for the first time. The same may be said of the excellent drawings showing the microscopical structure of spices, etc., as well as of the forty plates of photomicrographs at the end of the volume.

Finally the embodiment in the text of tables, which are in constant demand in food analysis, makes the book complete in itself and enhances its value as a convenient guide and work of reference in the examination of food products.

The compilation of methods and results, widely scattered through all kinds of publications, into a single volume together with the author's own large experience in food investigations has been a desideratum, and for this reason the work will doubtless be welcomed by chemists in general, and especially by those who are not in possession of the many sources drawn upon.

H. A. WEBER.

NOTES ON ASSAYING AND METALLURGICAL LABORATORY EXPERIMENTS.

By RICHARD W. LODGE, Assistant Professor of Mining and Metallurgy in Massachusetts Institute of Technology. New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1904. 8vo. viii + 287 pages. Illustrated. Price, cloth, \$3.00.

This book is designed as a text-book for students who have already become familiar with the principles of chemistry, and is not intended for those who, without a previous knowledge of chemistry, desire to learn "practical assaying." Indeed there are a number of satisfactory books covering the subject sufficiently well for this latter purpose, but for those who desire information as to the principles involved, the variations in fluxes and manipulation necessitated by different materials, in short, those who really want to study the subject, this book is indispensable. Particularly valuable are the numerous tables of experimental data, such as those covering the effect of variations in the composition of the material assayed, and the losses in gold and silver during cupellation under various temperatures and conditions.