

To the technical chemist the book may prove to be of some value. For the organic investigator or teacher (Academiker) the reviewer does not see the demand for such a book as the author has produced. With the means already at hand, "Beilstein, Centrall-Blatt and Richter's Lexicon," the reviewer fails to see how the book will be of immediate help to the organic chemist.

TREAT B. JOHNSON.

A SHORT HAND-BOOK OF OIL ANALYSIS. BY AUGUSTUS H. GILL, S.B., PH.D. Third edition. Philadelphia: J. B. Lippincott Co. 1903. Cloth. 159 pp. Price, \$1.50.

This handbook, the first edition of which was reviewed in this Journal (20, 237), "has been thoroughly revised and, by consultation with the literature, brought up-to-date; some sixteen pages of new matter have been added, including the latest methods of carrying out the iodine test, the bromine number, Halphen's test for cotton-seed oil, and minor changes throughout the volume."

Professor Gill's book is in no way intended to replace the larger treatises on this subject, such as Allen and Lewkowitsch, but is merely intended to be introductory to them. Necessarily, in such a small handbook, much of interest and value has been omitted, but the analytical methods that have been outlined are all of primary importance to the oil analyst.

Besides the physical and chemical tests (the discussion of which occupies a little over one-half the book), a brief résumé of the technology and properties of the more commonly occurring oils is given.

This handbook will be found particularly valuable to those just entering on a course of study in this line of work.

FREDERICK L. DUNLAP.

DISINFECTION AND THE PRESERVATION OF FOOD. Together with an Account of the Chemical Substances Used as Antiseptics and Preservatives. BY SAMUEL RIDEAL, D.SC. (Lond.). New York: John Wiley & Sons. 1904. Third edition. 504 pp. Price, \$4.00.

The resetting of the type of this book in its third edition has given the author the opportunity of altering and revising the text wherever necessary, and adding to it whatever was thought best to make it correspond with our present-day knowledge of the subjects of which it treats. The scope of the book is wide and

includes Mechanical Disinfection, Sterilization by Heat, Chemical Disinfectants, Metallic Salts, Organic Substances, Compounds Related to the Alcohols, Practical Methods, Personal and Internal Disinfection, Preservation of Food, Legal Statutes and Regulations, and Methods of Analysis. The text shows evidence of having been written with a decided view towards accuracy of statement. It is a book that recommends itself in the highest degree to chemists interested in the subjects of which it treats; to sanitary officers; to inspectors of meat and milk and foodstuffs in general; to medical men, and to those engaged in the various industries in which disinfection and preservation of substances are concerned.

JOHN MARSHALL.

BONE PRODUCTS AND MANURES. BY THOMAS LAMBERT. London: Scott, Greenwood & Co. 162 pp. Price, \$3.00.

The system of intense cultivation, practiced by the farmers of England, renders the contents of this book especially valuable to English farmers. American farmers, however, are rapidly coming to the same system of culture and hence the book does not come amiss for this country.

The methods of preparing bones for fertilizing purposes and the characters of manure produced therefrom are treated rather from the popular than from the strictly scientific point of view.

The relation of manures to soils and plant life form the subject of Chapter V and are of especial interest. The author says: "As the rich soil of a country becomes exhausted through centuries of crude agricultural working, so agriculture declines if no means are taken to restore by artificial means that wealth of nutriment which it formerly possessed, and, as it declines, so must the nation's money be increasingly spent abroad to supply the necessary food."

While this remark is particularly true of England, it is not without significance for every country. It is stated on page 66 that "The mineral constituents on which the fertility of a soil depends are confined to phosphoric acid, potash, nitrogen in the form ammonia, and, to a lesser extent, lime. This statement would have been somewhat more accurate if it were modified to read, "nitrogen in the form of nitric acid," as ammonia is not known to be a direct fertilizer for green plants. The importance of providing these mineral substances for plant growth is illus-