

to methods of chemical and bacterial examination of water which were a part of the earlier edition are now omitted, as they have since been expanded and published as a separate work. Much new matter has been added, however, to this third edition, and all important recent discussions seem to have received attention. At the present time few topics are of greater public interest than are those connected with questions of water purification on the large scale. The chapter dealing with this subject is full of timely information and is quite sufficient to give the general scientific reader a good idea of various practical methods and appliances.

J. H. LONG.

NOTES ON LEAD ORES. BY JAMES FAIRIE, F.G.S. London: Scott, Greenwood & Co. 62 pp. 16mo. Price, \$1.00.

The book consists of a collection of information concerning all the lead minerals, including occurrence, hardness, specific gravity, blowpipe tests, and composition—just what is to be found in any standard work on mineralogy. It is well printed in large type.

E. H. M.

GAS AND FUEL ANALYSIS FOR ENGINEERS. A compend for those interested in the economical applications of fuel. BY AUGUSTUS H. GILL, S.B., Ph.D. Third edition. New York: John Wiley & Sons. 1902. iv + 104 pp. Price, \$1.25.

According to the preface the substance of this book was given in the form of lectures to students in the courses of chemical, mechanical and electrical engineering at the Massachusetts Institute of Technology, Boston.

The author discusses in an exceedingly brief and yet clear and satisfactory manner the common forms of apparatus for technical gas analysis, their manipulation and uses. The methods of taking gas samples, their analysis, the measurement of the temperature of chimney gases, the preparation of reagents, the arrangement of the gas laboratory, and the calorimetric determination of fuel values are treated in separate chapters. Useful calculations in relation to the combustion of fuels together with some valuable tables add to the merits of the book. The illustrations serve fully for the elucidation of the text. The treatment of the subject is excellent and the book can be recommended as a useful aid to students of gas analysis.

F. C. P.