QUANTITATIVE METALLURGICAL ANALYSIS. SELECTED METHODS FOR CHEMICAL ANALYSIS OF ORES, SLAGS, COAL, PIG IRON AND STEEL. Arranged by CHARLES FREDERICK SIDENER, B.S., Assistant Professor of Chemistry, University of Minnesota. Minneapolis: The H. W. Wilson Co. 1904. 58 pp. Price, $1.00.

This little manual contains, in compact form, procedures for the analysis of the different classes of materials indicated in the sub-title above. They have presumably been thus brought together for the convenience of the compiler's pupils. The methods selected are generally of recognized merit, and are in nearly all cases, given in careful detail. They are accompanied by references to text-book or journal literature. H. P. T.

VERFLÜSSIGTES AMMONIAK ALS LÖSUNGSMITTEL. Materialien über die chemischen Eigenschaften des verflüssigten Ammoniak-gases gesammelt. Von J. BRONN. Berlin: Julius Springer. 1905. 8vo., xii + 252 pp. Price, 6 marks.

Convinced that there is much promise of commercial use for a liquid exhibiting such valuable solvent properties as ammonia has been shown to possess, the author has been led to collect the widely scattered material bearing on the subject and to give in the little volume before us as complete an account as possible of our present knowledge of the properties of liquid ammonia. The contents of the volume will be sufficiently indicated by an enumeration of the headings of its seven chapters. 1. The Physical Properties of Liquid Ammonia. Transportation and Methods of Testing the Liquid. Experimental Technique. 2. Deliquescent Action of Ammonia Gas and the Absorption of Ammonia by Various Substances. 3. Liquid Ammonia as a Solvent for Metals and Other Substances (older investigations). 4. Metal Ammonias and Metallic Amides. 5. Liquid Ammonia as a Solvent (recent investigations). 6. Metathetic Reactions in Liquid Ammonia. 7. Physico-Chemical Investigations with Liquid Ammonia. Various Tables.

The work of the author has been carefully done and the result is a book which gives not only a good account of the investigations which have been carried out in this field during the past forty years, but which also serves as a complete bibliography of the subject. The book is remarkably free from errors of all kinds, but very few minor mis-statements having been noticed by the reviewer in a rather careful perusal of the book.

E. C. F.