

tions have been introduced, and the translators have used throughout a new system of notation, devised more methodically than any now in use. They have done an important service in thus calling attention to the need of a rational notation in electrochemistry, whether or not the special system which they propose be ultimately adopted.

GILBERT N. LEWIS.

J. G. Gentle's Lehrbuch der Farbenfabrikation, revised and enlarged. By DR. BUNTROCK, Erster Band, Die Erdfarben. Braunschweig: Friedrich Viewig und Sohn. 1906. Price, 6 marks.

The preparation of this book was undertaken by Dr. Buntrock at the solicitation of the publishers, Friedr. Viewig und Sohn, and the manuscript of this first part, covering the mineral colors, was delivered to them, according to the preface, by the author at the close of 1904, and according to the inscription of the publisher was published September 1, 1906. In view of the very rapid progress being made in the industries, much of the apparatus and some of the methods as well as the use of some of the products described have become obsolete, and the book will therefore be found by no means up to date by those engaged in the industries, and hardly a safe guide to those seeking direction in them.

This first volume is divided into five parts treating principally of the mechanical treatment of crude mineral colors to prepare them for use in the arts. Chapter V treats of the chemical changes which the earthy colors undergo under various conditions. The other chapters treat respectively of the mechanical means for preparation of these colors, as follows: Elutriation and elutriating apparatus, drying and drying apparatus, milling and mills, bolting and mixing, and the apparatus needed therefor. The apparatus described is such as is usually employed in the industries for the operations mentioned, and it must be said that the forms of construction described and recommended are rather crude as indicated in the illustrations presented. Many of the illustrations of apparatus are to be found in better shape in the catalogues of the manufacturers named in the book, yet for those desiring knowledge regarding the sources from which the apparatus and machines can be obtained, the book is by no means a bad guide. Yet this much may be said also of the advertising pages of the current technical chemical journals, while the information offered regarding the mineral colors may be found quite as fully developed and in as reliable a form in most of the encyclopedias and works already at hand in our libraries, public and private.

The part now published closes with extensive advertisements of makers of the machinery described in the text, preceded by an index of these advertisements arranged alphabetically. The book is by no means up to the high standard of the usual publications of Viewig und Sohn.

WM. McMURTRIE.