DIE ELEKTROLYTISCHE ALKALICHLORIDZERLEGUNG MIT STARREN METALLKATHODEN. By Dr. Jean Billiter. Published by Wilhelm Knapp, of Halle. 284 pages, 24.5 x 17 cm. Price, 16.50 marks.

This is part I of a comprehensive treatment of the subject of the electrolysis of the chlorides of potassium and sodium with solid metal cathodes. It forms No. 41 of Knapp's *Monographien über angewandte Elektrochemie*. Processes in which cathodes of mercury or of melted lead are employed are excluded, because they have already been treated in Lucion's monograph, which forms No. 23 of the same series.

With the exception of a brief but excellent introduction, the present volume is devoted to the patent literature of the subject. Four hundred and fifty German, English, and American patents are concisely and intelligibly discussed. Numerous diagrams add to the clearness of the text. The author has himself made important contributions to the subject, and some of the most successful processes described are his own.

Part II, which is ready for publication, will contain complete descriptions of the plants in which those processes which have found industrial application are carried out. The fact that a work which will probably approach 600 pages is necessary adequately to treat only one phase of the subject of the electrolysis of the alkali chlorides is impressive evidence of the activity of invention in the field. The book is an excellent one, which can be recommended without reserve to those interested in the subject. Since about 70,000 horsepower are devoted to sodium chloride electrolysis in the United States, it will probably be welcome to many American chemists. There is a list of the patents in order of number and a good alphabetical index.

ROBERT H. BRADBURY.

AN INTRODUCTION TO THE CHEMISTRY AND PHYSICS OF COLLOIDS. By E. Hatschek. Published by P. Blakiston, Philadelphia. 87 pages, 18.5 x 12 cm. Price, \$1.

An excellent and timely little book. Although it offers a surprising amount of information in small space, it is readable and interesting. The author is fully familiar with the present condition of his subject, and the reviewer has noted no misstatements. The book is not overloaded with terminology, and the essential things that everyone wants to know are presented clearly and well.

ROBERT H. BRADBURY.

ALLEN'S COMMERCIAL ORGANIC ANALYSIS, vol. vii, 4th edition, edited by W. A. Davis and S. S. Sadtler, published by P. Blakiston. 563 pages, 23.5 x 14.5 cm. Price, \$5.

The previous volumes of this indispensable treatise have been noticed. The present volume is devoted to Vegetable Alkaloids (Barger), Glucosides (Armstrong), Bitter Principles (Jones), Animal Bases (Taylor), Ptomaines (Barger), Animal Acids (Mandel), Lactic Acid (Davis), Cyanogen and its Derivatives (Philipp). Although the familiar order of the third edition has been retained as far as possible, the whole book has

been rewritten and brought abreast of the present state of organic analysis. It may be well to call attention to the fact that most of the more important vegetable alkaloids have already been handled under various headings in vol. vi.

ROBERT H. BRADBURY.

PUBLICATIONS RECEIVED.

An Introduction to the Physics and Chemistry of Colloids, by Emil Hatschek. Reprinted from *The Chemical World*. Text-books of Chemical Research and Engineering, 94 pages, illustrations, 12mo. Philadelphia, P. Blakiston's Son & Co., 1913. Price, \$1.

Allen's Commercial Organic Analysis, a treatise on the properties, modes of assaying, and proximate analytical examination of the various organic chemicals and products employed in the arts, manufactures, medicine, etc. Vol. 7. Vegetable alkaloids, glucosides, non-glucosidal bitter principles, animal bases, animal acids, lactic acid, cyanogen and its derivatives, by the editors and the following contributors: Frankland Armstrong, G. C. Jones, A. E. Taylor, G. Barger, J. A. Mandel, Herbert Philipp. Fourth edition, entirely rewritten. Edited by W. B. Davis, B.Sc., A.C.G.I., and Samuel S. Sadtler, S.B. 563 pages, illustrations, 8vo. Philadelphia, P. Blakiston's Son & Co., 1913. Price, \$5.

Mechanical Drawing, a treatise on technical drawing as expressed through the medium of the graphic language, by Otho M. Graves, Assistant Professor of Graphics, Lafayette College. 138 pages, illustrations, 8vo. Easton, Pa., The Chemical Publishing Company, 1912. Price, \$2.

U. S. Department of Agriculture, Forest Service, Henry S. Graves, Forester: Geographic Distribution of North American Trees. Part 1—Pines, by George B. Sudworth, Dendrologist. 36 maps, folio. Washington, U. S. Geological Survey, 1913.

Paving Brick: The Necessity of Uniform Quality. Tests for High-grade Paving Bricks, by J. W. Howard, C.E., E.M. 15 pages, illustrations, 8vo. New York, author, 1913.

North Carolina Geological and Economic Survey, Joseph Hyde Pratt, State Geologist: Economic Series No. 32, Public Roads are Public Necessities, by Joseph Hyde Pratt, State Geologist. 62 pages, 8vo. Raleigh, State Printers, 1913.

American Telephone and Telegraph Company, Annual Report of the Directors to the Stockholders for the year ending December 31, 1912. 47 pages, 8vo. New York, 1913.

U. S. Department of Agriculture, Forest Service: Review of Forest Service Investigations, vol. 1. 68 pages, illustrations, plates, 8vo. Washington, Government Printing Office, 1913.

U. S. Department of Agriculture, Office of Public Roads: Bulletin No. 47, Descriptive Catalogue of the Road Models of the Office of Public Roads, prepared in the Office of Public Roads. 29 pages, illustrations, plates, 8vo. Washington, Government Printing Office, 1913.