

The subject-matter is developed along the lines usually employed; A Consideration of the Laws of Gases, Energy and Its Laws, Solutions and Electrolytic Dissociation, Chemical Mechanics, Equilibrium and Electrochemistry. The choice of material considered under these different heads has been well made. No padding with useless commercial processes is visible. The book is a scientific treatise somewhat cramped for room. It may serve well when used in connection with a course of lectures or together with some more general work on the subject. A collection of 78 problems, with answers, completes the book. These problems are well selected to illustrate the most important laws of physical chemistry.

W. R. WHITNEY.

PHYSICAL CHEMISTRY AND ITS APPLICATIONS IN MEDICAL AND BIOLOGICAL SCIENCE. By ALEX. FINDLAY, M.A., PH.D., D.Sc., Lecturer on Physical Chemistry, University of Birmingham. London, New York and Bombay: Longmans, Green & Co. 68 pages. Price, 75 cents.

The matter in this little book was presented to students interested in subjects related to medicine, in the form of lectures which were later printed in the *Birmingham Medical Review*. As they now appear in book form they afford a very readable exposition of the elementary principles of physical chemistry in non-mathematical treatment. The author has made a good selection of material and has given enough of fact and theory to satisfy the needs of many students whose work touches chemistry but incidentally.

J. H. LONG.

RECENT PUBLICATIONS.

THE CYANIDE INDUSTRY THEORETICALLY AND PRACTICALLY CONSIDERED. By R. Robine and M. Lenglien. Translated by J. Arthur LeClerc with an appendix by C. E. Munroe. New York: J. Wiley & Sons. 1906. 11 + 408 pp. \$4.00.

ELECTRIC FURNACES AND THEIR INDUSTRIAL APPLICATIONS. By J. Wright. New York: Norman W. Henley Pub. Co. 1905. 10 + 288 pp. \$5.00.

URINARY ANALYSIS AND DIAGNOSIS BY MICROSCOPICAL EXAMINATION. By L. Heitzmann. Second edition. New York: W. Wood & Co. 1906. \$2.50.

TEXT-BOOK OF PHARMACOLOGY. By A. R. Cushny. Fourth edition. London: Rebman. 1906. 17/6.

THIRD TREATISE ON THE EFFECTS OF BORAX AND BORIC ACID ON THE HUMAN SYSTEM. BEING A CRITICAL REVIEW OF THE REPORT OF DR. H. W. WILEY, CHIEF OF THE BUREAU OF CHEMISTRY OF THE U. S. DEPARTMENT OF AGRICULTURE. By O. Liebreich. London: Churchill. 1906. 78 pp. 5/.

THREE YEARS' COURSE OF PRACTICAL CHEMISTRY. By G. H. Martin. Third year. London: Rivingtons. 1906. 2/.

DIE STRUKTURFORMELN DER ORGANISCHEN CHEMIE MIT BERÜCKSICHT DER OFFIZINELLEN ORGANISCH-CHEMISCHEN PRÄPARATE DER PHARMAZIE UND DER MEDIZIN. By Max Biechele. Halle: C. A. Kaemmerer. 1906. 7+198 pp. Marks 3.

DIE CELLULOSEFABRIKATION (ZELLSTOFFFABRIKATION). PRAKTISCHE HANDBUCH FÜR PAPIER- UND- CELLULOSETECHNIKER. By Max Schubert. Third edition. Berlin: M. Krayn. 1906. 12+301 pp. Marks 6.

CONVERSATIONS ON CHEMISTRY. PART 1, FIRST STEPS IN CHEMISTRY. PART 2, CHEMISTRY OF THE MOST IMPORTANT ELEMENTS AND COMPOUNDS. By Wilhelm Ostwald. New York: J. Wiley & Sons. 1906. 8+373 pp. \$2.00.

PRÉCIS DE DIAGNOSTIC CHIMIQUE MICROSCOPIQUE ET PARASITOLOGIQUE. By J. Guiart & L. Grimbart. Paris: F. R. de Rudeval. 900 pp. 15 fr.

PRACTICAL EXERCISES IN CHEMISTRY. By G. C. Donington. London: The Macmillan Co. 1906. 260 pp. 2/6.

RADIUM AND RADIO-ACTIVE SUBSTANCES: THEIR APPLICATION ESPECIALLY TO MEDICINE. By C. Baskerville. Philadelphia: Williams, Brown & Earle. 1905. 5+164 pp. \$1.00.

NEW KNOWLEDGE. POPULAR ACCOUNT OF THE NEW PHYSICS AND THE NEW CHEMISTRY IN THEIR RELATION TO THE NEW THEORY OF MATTER. By R. Kennedy Duncan. New edition. London: Hodder & S. 1906. 284 pp. 6/.

LEHRBUCH DER CHEMISCHEN TECHNOLOGIE DER ENERGIEEN. I. BUCH. DIE CHEMISCHE TECHNOLOGIE DER WÄRME UND DER BRENNMATERIALEN. By Hanns von Jüptner. Wien: F. Deuticke. 1906. 5+256 pp. Marks 7.

ÜBER DIE VORGESCHICHTE UND DIE ANFÄNGE DER CHEMIE. EINE EINLEITUNG IN DIE GESCHICHTE DER CHEMIE DES ALTERTUMS. By Franz Strunz. Wien: F. Deuticke. 1906. 7+69 pp. Marks 2.

CANNING AND PRESERVING OF FOOD PRODUCTS WITH BACTERIOLOGICAL TECHNIQUE: A PRACTICAL AND SCIENTIFIC HANDBOOK FOR MANUFACTURERS OF FOOD PRODUCTS, BACTERIOLOGISTS, CHEMISTS, AND STUDENTS OF FOOD PROBLEMS. By E. Wiley Duckwall. Pittsburg: Pittsburg Printing Co. 1905. 478 pp. \$5.00.

CHEMISTRY OF THE PROTEIDS. By Gustav Mann. New York: The Macmillan Co. 1906. 8+600 pp. \$3.75.

LEHRBUCH DER CHEMIE FÜR TECHNISCHE ANSTALTEN. By Prof. Dr. Düsing. Kiel: R. Cordes. 1906. 6+116 pp. Marks 2.70.

ANORGANISCHE CHEMIE. By Ira Reimsen. Third edition prepared by Dr. Karl Seubert. Tübingen: H. Laupp. 1906. 16+528 pp. Marks 9.40. (Bound, Marks 10-).

SYSTEMATIC INORGANIC CHEMISTRY. FROM THE STANDPOINT OF THE PERIODIC LAW. TEXT-BOOK FOR STUDENTS. By R. M. Caven and G. D. Lander. London: Blackie. 1906. 394 pp. 6/.

POLARISCOPE IN THE CHEMICAL LABORATORY. By G. W. Rolfe. London: The Macmillan Co. 1906. 8/.

METHODS OF ORGANIC ANALYSIS. By H. C. Sherman. London: The Macmillan Co. 1906. 7/6.

THE MICROSCOPY OF VEGETABLE FOODS WITH SPECIAL REFERENCE TO THE DETECTION OF ADULTERATION OF MIXTURES. By Andrew Lincoln Winton and Dr. Josef Moeller. New York: J. Wiley & Sons. 1906. 16+701 pp. \$7.50.

The following bibliographies have been published by the Carnegie Library of Pittsburg. These are not intended to be complete but are rather lists of recent publications on the subjects which are mentioned. They will be sent to any one who desires them and who will send a stamp for postage.

Sodium Nitrate Industry of Chile.

Steam Turbines.

Malleable Castings.

Water Softening.