

ones that the Chief of the Drug Laboratory would hardly venture to make, even though they were all within his knowledge and experience. He would have lain himself open to violent attacks from many quarters but he knew that they were all true and the half had not been told.

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- (13) U. S. Stat. at L., 26 (1890), 414.
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Book Reviews

The Nature of the Chemical Bond and the Structure of Molecules and Crystals, by LINUS PAULING. 2nd Edition. xvi + 450 pages. Cornell University Press, Ithaca, N. Y., 1940. Price, \$4.50.

This book is a clear explanation of the different ways in which atoms are held together to form molecules. It takes up the structures of many inorganic and organic compounds in detail and, in so doing, it gives the results of electron diffraction measurements and descriptions of a considerable number of x-ray analyses of crystals. This, the second edition, contains 21 pages more than the first largely because of the addition of two sections and the discussion of some newly determined structures. The book is of particular interest because, although it outlines the ideas involved in the quantum mechanical treatment of valence and structural chemistry, it describes the new developments in a thorough and satisfactory manner without resorting to the use of higher mathematics.—A. G. D.

Annual Review of Biochemistry. Volume IX. JAMES MURRAY LUCK and JAMES H. C. SMITH, Editors. 744 pages. Annual Reviews, Inc., Stanford University P. O., Calif., 1940. Price, \$5.00.

This, the ninth volume of the series, covers the scientific contributions made during 1939. In

addition, reviews on the following topics have been included: plant pigments, biochemistry of the lower fungi, biochemistry of malignant tissue, organic acids of plants, clinical application of biochemistry, soil microbiology and the application of microchemistry to biochemical analysis. Three new topics are presented—the biochemistry of the viruses, application of radioactive indicators in biology and insect biochemistry. The volume contains both author and subject indexes.—A. G. D.

Kingzett's Chemical Encyclopædia. Revised and Edited by RALPH K. STRONG, Ph.D. D. Van Nostrand Company. 6th Edition. 1940. 1088 pages. \$14.00.

This, the sixth edition of Kingzett's Chemical Encyclopædia, presents a book considerably enlarged in size and contents over previous editions. Reference is made to many new industrial solvents and the section on chemical engineering has been expanded to include a consideration of materials, energy, apparatus and economics. The section on bacteria has been brought up to date, the section on coal carbonization has been completely rewritten and the sections on proteins and vitamins have been enlarged. A new feature of the book is its tabulation of production and imports by countries of widely used chemical commodities. One of the most valuable features of the book is believed to be its inclusion of many commercial names of chemicals, thus making it a commercial index to chemicals as well as a dictionary. The volume should prove to be useful as a reference work for every day use by pharmaceutical chemists and pharmacists.—A. G. D.

The AMERICAN PHARMACEUTICAL ASSOCIATION has received a copy of the annual report for the year 1939 of the Egyptian Government Central Narcotics Intelligence Bureau for the Alexandria, Port Said, Suez, Cairo and Provincial Branches. The report covers activities with respect to seizures on land and sea in the territory within the above jurisdiction. The narcotics named are Indian hashish, heroin, opium, etc. The records of the offenders are searched for prior offences and these are made of record. Information is also sought as to the history of the individuals—their trade or profession, habits, frequency of imprisonment, dosage amounts of the narcotics consumed—the dosage, if chemists are required to discover the addiction, determining the legal phase. Interesting illegalities of cases enter into the reports. The illegal drugs are hidden in various ways—in the stomachs of camels—illustrations show tins containing opium, hashish, etc.—E. G. E.

Reference Book of Inorganic Chemistry, by LATIMER and HILDEBRAND. The Macmillan Company. 4th Edition. \$4.00.

The fourth edition of this reference book follows the third by only two years, which is indicative of

its popularity. The new edition contains 120 pages more than the preceding one, but this is not due so much to an increase in the contents as to the use of larger and more legible type. Revisions have been made in the values of many physical constants, the chapter on atomic nucleus has been completely rewritten and other minor changes have been made. In the appendix, two little used tables have been dropped and replaced by tables on the structure of molecules and ions and on the co-valent bond energies and atomic radii. The book is recommended as being useful as a handy reference on inorganic chemistry.—A. G. D.

Qualitative Analysis and Chemical Equilibrium, by T. R. HOGNESS and WARREN C. JOHNSON. xii + 417 pages. $5\frac{1}{2} \times 8\frac{3}{8}$. 1937. New York: Henry Holt & Co. \$2.75.

This book, intended as a textbook of qualitative analysis, aims to teach the underlying reasons of the reactions involved as well as methods of qualitative testing. Part I of the books deals with the general properties of solids, liquids and solutions, velocity of reaction and equilibrium, solubility product, colloids, ionization of water, hydrolysis, amphoteric substances, oxidation and reduction and sulfide precipitations. Part II deals with group precipitations in the usual order, except that the alkali metals are studied first, then the silver group, etc.—A. G. D.

The Chemistry and Toxicology of Insecticides, by HAROLD H. SHEPARD. iii + 383 pages. $8\frac{3}{8} \times 10\frac{3}{4}$. 1940. Minneapolis: Burgess Pub. Co. \$4.00.

This volume is intended as a textbook for students of economic entomology, but in reality, it is a compilation of a great deal of practical information on insecticides and should, therefore, become of increasing value to pharmacists whose business in this field is increasing. The contents are divided into chapters dealing with arsenical stomach poisons and non-arsenical stomach poisons such as fluorides, thallium, lead, mercury, copper and zinc salts, tartar emetic and borax. Contact poisons are also dealt with. Among these are sulfur, selenium and copper compounds, and substances used to increase their effectiveness, plant derivatives, insect fumigants, attractants and repellants and methods of testing fly sprays.—A. G. D.

The Badianus Manuscript (Codex Barberini, Latin 241—Vatican Library—An Aztec Herbal of 1552). Translated and annotated by EMILY WALCOTT EMMART. xxiv + 341 pages. $9\frac{1}{2} \times 12\frac{1}{4}$ in. 1940. Baltimore: The Johns Hopkins Press. \$7.50.

The Badianus Manuscript is a work on the medical lore of the Central American Indians. It was originally inscribed by an Indian physician in Aztec and translated by another Indian into Latin. The

Aztec portion from which the present translation was made was written by Martinus de la Cruz, a native medical teacher, and the botanical portion was translated by Joannes Badianus. The present volume is an English translation of the latter with annotations by the author. It gives a good picture of certain aspects of Aztec medicine practiced in the days of the Conquistadores. The book contains 117 color plates which reproduce in full size the illustrations in the original book. This is followed by a translation of the Latin chapter and descriptions of drugs and plants with accompanying translations. Explanatory comments by the author add to the value of the work. There is a comprehensive Aztec index followed by interesting botanical, materia medica and disease indexes.—A. G. D.

Chemistry and Medicine. Papers Presented at the Fiftieth Anniversary of the Founding of the Medical School of the University of Minnesota. Edited by MAURICE B. VISSCHER. 296 pages. The University of Minnesota Press, Minneapolis, Minn., 1940. Price, \$4.50.

This volume is a compilation of papers presented at the fiftieth anniversary of the founding of the Medical School of the University of Minnesota. The papers are arranged in four groups and deal with the progress in the application of physical chemistry to medicine, recent investigations in metabolism, some aspects of immunity in chemotherapy and some approaches to the nervous control of the organism. In the first section, there are papers dealing with the colloid structure of membranes, osmotic work in living systems and the function of the kidney in concentrated solutes. The second part deals with the more important subjects of vitamin research, the importance of fats in the diet and heparin. Papers on immunity and chemotherapy constitute the third part and the last part of the book presents the essential facts relating to nervous control in animals and the methods by which nervous action may be analyzed. All of the papers are supplemented by extensive bibliographies.—A. G. D.

Mineral Metabolism, by ALFRED T. SHOHL, M.D., Research Associate in Pediatrics, Harvard University. Published by Reinhold Publishing Corporation, New York. Price \$5.00. American Chemical Society series of Scientific and Technologic Monographs.

It is stated that the main purpose of the book is to describe the role of the minerals in the structure and function of the human body. The author has given much study to the subjects which is shown by the extensive bibliography appended to the discussions. Chapter I deals with the scope of mineral metabolism; the elements which occur in biological material are classed in five groups—Definition of Mineral Metabolism, Relations of Minerals to Water; Relation to Various Fields of Biology, to Animal Nutrition, etc. References under the