

urine, but those which the authors believe most valuable. The presentation of the subject is in a manner which is practically serviceable to the neophyte in clinical chemistry.

Although the book is intended primarily for medical students, those pharmacists who have wider interests than the bare requirements of the store will find the book a valuable handy reference for giving a concept of the meaning of such terms as "amino-acids," "split proteins," "monosaccharids," and similar terms, which are being frequently met in physiological and chemical literature. In addition the book furnishes formulas for a number of important reagents used in clinical and physiological chemistry which the pharmacist may be called upon to compound. The value of the book as a reference book we believe would be improved if a different form of type had been used for describing the experiments and if the index were made a little more elaborate.

The book is interleaved for notations by students and others using the book.

H. C. WOOD.

*Recent Advances in Physiology.* By C. Lovatt Evans, Prof. of Physiology, at St. Bartholomew's Medical College, University of London. Published by P. Blakiston's Son and Co., Philadelphia. 360 pages. Price \$3.50.

According to the author, this little book may be called an "elementary test-book of advanced physiology;" its aim being to serve as a bridge between the ordinary texts and the mass of current physiological literature. Writing with a style so often possessed by the educated Englishman, Professor Evans succeeds admirably in accomplishing this object. Evidently, the physiology of the circulation attracts him especially; nearly half of the book is devoted to a consideration of this phase of the subject, emphasis being placed particularly on the chemical rather than the physical phenomena. As would be expected from the important contributions to the physiology of muscular contraction which have been made by contemporary English investigators, the author gives considerable space for a consideration of this. Separated from the chapters on muscular contraction by a brief discussion of the endocrine glands, there follows a discussion of the views regarding muscular tonus; finally, there is a section on the physiology of the conditioned reflexes.

If any adverse criticism is justifiable, it is

on the ground of the omission of portions of the subject; the author forestalls this, however, by the intimation that he felt better qualified to discuss the parts to which he confined himself.

C. C. H.

*Elements of Chemistry*, by William Foster, Ph.D., Prof. of Chemistry Princeton University. Pp. XVIII + 576. D. Van Nostrand Co., N. Y., 1925. Price \$2.00.

This volume represents one of the many volumes on Elementary Chemistry introduced within the past year. Each text, despite the anticipated elementary character, nevertheless tends to aggravate the existant plethora of "acute electronitis!" It appears that writers pack their texts to fullest capacity with data and topics of no material value to the student commencing the study of chemistry.

Foster's volume devotes considerable space to the work of Laue, Rutherford, Mosely, Bohr, Lewis, Langmuir, the Braggs, and others, in the realm of pure physics, at the expense of other monographs in the text. For example, the treatment of individual elements, together with their compounds, is notably brief, only one or two compounds being described for the majority of the respective elements.

The writer states on p. 149 that hydrogen molecules sustain 9,520,000,000 collisions per second with other similar molecules in the same aggregate of the gas. No inkling is afforded as to the validity of such conclusion or even the principles of the method whereby the value was ascertained.

As to the commendably presented Electron Theory, which is a purely physical conception, Foster makes no allusion concerning the fundamental hypotheses whereby the mass of the electron can be estimated. He states this mass to be about 1/1850 that of the hydrogen ion in electrolysis. If the underlying principles are too complicated for the beginner in chemistry, then why even mention the elaborations of these principles in an elementary text?

The book, on the other hand, possesses innumerable redeeming features. Each chapter is concluded with summary, exercises and references for collateral reading, and is abundantly illustrated with cuts and half-tones. The treatment of colloid chemistry, spectrum analysis, and principles of metallurgy, are exceptionally well written.

Discussion of the elementary theories of

chemistry, as well as their application in agriculture and the industries, reflect the work of a master, but the other portions of the text present too great a variety in brief, to correspond with the title of the work.

SIMON MENDELSSOHN.

*Schlickum's Ausbildung des Jungen Pharmazeuten.* 13 Auflage unter Redaction von Prof. Dr. W. Böttger. Mit. 601 Abbildungen, 3 farbigen Tafeln. Lex. 959 pp. M. 33. Johann Ambrosius Barth, Leipzig.

When Oskar Schlickum (1838-1889), Apotheker in Winnigen a. M. in 1877 published the first edition of his "Ausbildung des Apothekerlehrlings," the book at once was a success. This being the 13th edition, speaks for a well-deserved popularity. Beginning with the 11th edition the work was broadened so as not only to be a textbook for the apprentice, its original aim, but also for the young pharmacist. The work is so well classified and written that every student in German speaking countries reads and studies or reviews from "Schlickum."

The division of the book is as follows:

I. Physics pp. 1-164, written by Hof-Apotheker Dr. W. Arnold in Munich and L. Schiller, Assistant at the Physical Institute, University of Leipzig.

II. Chemistry pp. 165-503, prepared by Apothekenbesitzer Dr. C. Jehn in Geseke, Apotheker Dr. W. Böttger, Professor University of Leipzig, Oberstabsapotheker Dr. Telle in Leipzig and Dr. H. Trunkel, in Leipzig.

III. Botany pp. 504-646.

IV. Pharmacognosy pp. 647-754. Both chapters are prepared by Apothekenbesitzer L. R. Schlickum in Winnigen, a descendant of the original author.

V. Pharmacy and Jurisprudence pp. 755-851, prepared by Apothekenbesitzer A. Roderfeld in Ludwigsdorf, Dr. H. Telle and Dr. H. Trunkel, Leipzig.

VI. Tables for the Review of Chemistry and Pharmacognosy.

a. Inorganic Chemical—Pharmaceutical Preparations pp. 852-879, by Dr. H. Telle.

b. Organic Chemical Preparations pp. 880-905, prepared by Apotheker H. Bauer, Professor at the Technical High School, Stuttgart.

c. Vegetable Drugs pp. 906-926.

d. Animal Drugs pp. 927-928. Both chap-

ters by Apotheker L. R. Schlickum. Chapter VI is an entirely separate part of the book, so it can be carried and studied by the young pharmacist without interference with the big volume, a novel feature in pharmaceutical bookmaking.

An index in three columns occupies 31 pages, a splendid testimonial on the contents of the book. The two colored plates represent poisonous medicinal plants and are real works of art.

This book, in its 13th edition, is a distinct contribution to pharmacy. It is one of the few books where the student will find everything necessary to the study of pharmacy in one single volume.

OTTO RAUBENHEIMER, PH.M.

#### INAUGURAL DISSERTATIONS.

*Contributions to the Research of the Active Constituents of Cape Aloes.* By Hans Kiefer, Apothecary at Basel. One of the purposes of the dissertation is the acquisition of the Doctor's degree. Thanks are extended to members of the Faculty of Pharmacy—Prof. Dr. H. Zörnig and Dr. P. Casparis. Among the references cited is the foregoing dissertation, the method of C. H. Briggs for the estimation of aloin in aloes, p. 774 of September JOUR. A. PH. A., 1923, and reinvestigation of the proximate composition of *Rhamnus frangula*, by John A. Gunton and Dr. George D. Beal, September JOUR. A. PH. A., 1923, pp. 669-682.

*Pharmaco-chemical and Physiologic Investigation of the Bark of Frangula* is the subject of Apothecary Rudolf Maeder of St. Gallen. Thanks are given the same members of the Faculty. The dissertation makes a book of more pages than the others and more references are given in which those mentioned in the preceding dissertation are included. The candidate for the degree names "glucofrangulin" = frangulin plus glucose =  $C_{27}H_{30}O_{14}H_2O$  as the principal active constituent.

The last one of the dissertations is by Apothecary Karl Schulte at Ohle in Westphalia. Special thanks are given Prof. Dr. H. Zörnig. The subject of research relates to the *Anatomy of the Seeds of Monocotyledons*. The dissertation concludes with a key for determining the seeds in powder form; twenty illustrations follow—the more important seeds of the drug plants illustrated are colchicum and veratrum.