

Recent Books

Modern Inorganic Chemistry. J. W. MELLOR. Longmans, Green & Co., New York. New Edition, 1925. xx + 1103 pp. 13 × 20 cm. \$4.25.

In the midst of the task of producing his comprehensive treatise, Professor Mellor has somehow contrived to bring out a revision of his well known text-book of inorganic chemistry. The new edition differs only in detail from the older one; the titles and order of the chapters are unchanged and even the paragraph headings are the same in nearly all instances. The volume has been enlarged by nearly two hundred pages, the increase consisting in amplification and additions throughout the book. These changes bring the descriptive portions of the text up-to-date, for the most part.

Unfortunately, there are numerous indications that the revision has been hastily made, for one finds in the new edition many of the errors and obscure passages that were in the old edition. For instance, there is an error in the slope of one of the curves in the phase diagram for sulfur (p. 477), and the discussion of transport numbers (p. 374) is very confusing. On page 388 it is stated in both editions that silver deposits on the anode when the electrolyte contains potassium cyanide, this being given as evidence that the silver is in the anion. The statement (p. 410) that there may be a missing element between cadmium and mercury in the second group of the periodic system would appear to be rather mild in these days of atomic numbers. In the section on the preparation of fluorine (p. 330) there is no reference to the newer process depending upon the electrolysis of fused potassium acid fluoride. In the discussion of molecular weight determinations (pp. 257-8) only the older forms of apparatus are given, with no reference to those more recently developed by Cottrell and others. On page 411 there is an unfortunate repetition of several lines almost verbatim. In addition, typographical errors are sufficiently prominent to make one cautious in the use of the physical constants as given.

But in spite of its errors, which are generally obvious to a chemist, and regardless of the fact that the theoretical discussions are often inferior to the excellent portions of the book, the reviewer has been for years an admirer of Mellor's text. To the teacher of general chemistry it is almost indispensable. It contains historically interesting details which are very suggestive; it tells many of those practical minutiae which most texts take for granted without right but, as Emerson remarked, these are the most impor-

tant things in the world when you are confronted by them. Finally, Mellor is always the chemical philosopher: he never loses an opportunity to teach the method of science, to show its successes and failures, to point to its foundations and goals, and to scrutinize its implements of experimentation and logic.

While Mellor's text does not appeal to the reviewer as a suitable text-book for elementary students, every teacher should have a copy for the sake of the illumination and interest that it will add to his teaching.

G. H. CARTLEDGE

General Chemistry. H. I. SCHLESINGER. Longmans, Green & Co., New York. First Edition, 1925. vi + 631 pp. 31 figures. 21.5 × 13.5 cm. Price, \$3.75.

To the reviewer's knowledge this is the only text-book prepared "for students already somewhat familiar with the rudiments of the science." Quoting further from the preface, "Long experience in teaching chemistry to students who have had a year of the subject in high school has convinced the author that they should not be given class work or texts planned for those who have had no chemistry at all. College chemistry for such students should concentrate on the fundamental phenomena and principles, and on the simpler applications which can be discussed with some degree of thoroughness."

Following in the path of Doctor Stieglitz's procedure with his beginning analytical chemistry, the author suggests opening "the course with two weeks of daily lectures and no laboratory work." "The class-room work is, of course, supplemented by laboratory instruction" and a laboratory manual to accompany this text is promised.

The method of the text is that of the formal logical type using the definition and theory as a starting point in the largely deductive synthesis of the body of principles set forth. The language is generalized rather than specific; the illustrations, both in figures and appeal to specific experiences of the students, are scattering and almost negligible. In other words, the author has made no effort to "humanize" his subject.

Accepting his method, the author is to be commended for a book that is clear cut, concise, and consistent in its treatment. If appeal to students' experience is beneath the dignity of a college course in chemistry then each chapter's exercises are teachable and a great aid to further development in chemical abstract reasoning.

In content the following chapter headings indi-