

## NEW BOOKS.

**Chemistry in the High School.** By E. P. SCHOCH, Professor of Physical Chemistry in the University of Texas, Bulletin 329 and 375 University of Texas. Price, 50 cents.

The book is divided into three parts: I. Equipment; II. A Course of Lessons and Exercises in General Chemistry; III. Teachers' Manual. Part I consists of a general discussion of methods to equip the laboratory with respect both to efficiency and economy. In Part II we find a decided departure from the usual arrangement in texts on general chemistry. By omitting all descriptive chemistry the author has brought out in a very clear manner sequence in the development of the subject, leading from the simplest kind of chemical reaction gradually to the more difficult. In the treatment of each kind of reaction, exercises and experiments are given in considerable number illustrating that particular class to the exclusion of all others, as nearly as possible.

The subject is developed in general from the physical chemical standpoint. In the chapter on acids, bases and salts, much time is devoted to conductance experiments illustrating percentage of ionization and metathetical reactions with the idea of showing why the latter take place. In the treatment of oxidation-reduction reactions free use is made of the principles of the electric cell and several experiments are given to show the relation between chemical action in the cell and the general oxidation-reduction reaction. Practically no space, however, is devoted to the illustration of the fundamental laws.

The book gives many references to commercial applications, illustrating the processes used by well-selected experiments. A good descriptive text, as the author states, would have to be used in connection with it. In order to enable the teacher to better correlate the two, Part III is appended which gives many suggestions and ideas that will undoubtedly be of a good deal of help, especially to the inexperienced teacher.

GEO. W. SEARS.

**"Changes in the Food Supply and Their Relation to Nutrition."** By LAFAYETTE B. MENDEL. Yale University Press: New Haven, 1916. 61 pp. Price, 50 cents.

This essay, written for the Second Pan American Scientific Congress at Washington, December, 1915, discusses the production, conservation, preservation, transportation, canning, and refrigeration of food; the deficiency diseases, food requirements, one-sided dietaries, the chemistry of the proteins, the use of oils, customs in diet, and the effect of industrial and social changes as well as other economic and hygienic factors upon the nutrition of nations. These topics are woven together by the author into an exceedingly interesting and stimulating presentation of modern thought on the problems of nutrition and of food economics. The re-

sults of modern research in physiological science are brought to bear upon the problem of the world's food supply, and it is shown that it is idle to make such prophecies as that of Sir William Crookes that the world's wheat supply will soon prove inadequate for the maintenance of the world's inhabitants. It would be hard for both scientists and laymen to find a more illuminating presentation in so small a compass.

CARL L. ALSBERG.