

civilian accidents. The terminology employed is technical without being so narrowly so that it cannot be understood by students with a limited background in the medical sciences. Sufficient anatomy and physiology are woven into the text to give a solid basis for the first aid measures employed. Wounds, burns, hemorrhage and shock are discussed in sufficient detail without becoming controversial, a factor which is highly important in the teaching of a subject as practical as first aid.

The chapter on "Gas and Bomb Raids" was written by Major H. C. Lueth and is based upon army information coupled with the experiences of the British. The discussions of aerial bombardment and bomb shock are especially noteworthy. Although the section on war gases is thorough, it suffers from a common fault of discussions of gas attack, *i. e.*, too much attention is given to the identification and treatment of individual gases at the expense of emphasis on the general principles of gas treatment and prevention. To the reviewer, it appears to be more logical to know a few simple, general directions for behavior during a gas attack than to be able to distinguish between Lewisite and mustard gas by their odors.

The collaborators are to be congratulated for the superb quality of the many line drawings which add much of practical value to the treatise.—M. W. GREEN.

*Experiments in Organic Chemistry*, by E. WERTHEIM.

The Blakiston Company, Philadelphia, Pa., 1942. 221 pp., appendix, 23 x 16 cm. Price, \$1.35.

This manual is designed to accompany the text, "Introductory Organic Chemistry," by the same author and to be used by students interested only in a short course in organic chemistry. The experiments are primarily of the "properties and tests" type. The more difficult preparations, especially those requiring less common apparatus and large quantities of chemicals and also time-consuming experiments, have not been included. It is well suited for classes where chemicals and apparatus are limited. The average time necessary to perform each experiment is given. Directions are fully and clearly given and figures and illustrations of apparatus assemblies and manipulations are exceptionally good. The manual contains 62 numbered experiments, is well indexed, and contains an appendix in which are included a table of the essential atomic weights, directions for emergency treatments, necessary chemicals listed by experiments, and directions for preparing special reagents. Questions are occasionally included in the text of the experiments and lists of questions are also appended. The craftsmanship is excellent for this type of book.—E. B. STARKEY.

*Identification of Pure Organic Compounds*, by ERNEST HAMLIN HUNTRESS, Ph.D., Assoc. Prof. of Organic Chemistry, Mass. Inst. of Tech., and SAMUEL PARSONS MULLIKEN, Ph.D., Late Prof.

of Organic Chemistry, Mass. Inst. of Tech. John Wiley and Sons, Inc., New York, 1941. 691 pp., 15 x 23 cm. Price, \$7.50.

The scope of this volume is limited to 1364 organic compounds selected from the large group of substances containing carbon and hydrogen or carbon, hydrogen and oxygen. Gases and compounds which do not have a melting point or definite boiling point, or are of a syrupy consistency, are excluded. A comparison of this volume with Mulliken's original "Identification of Pure Organic Compounds" shows the deletion of many compounds of lesser importance and the inclusion of many substances now well known and commercially available which were formerly merely laboratory curiosities.

This edition introduces two new features. An index of chemical type has been placed at the opening of each chapter to facilitate rapid location of chemical compounds. An index containing tables of melting points of compounds and their derivatives arranged in a sequence of increasing temperature is given in Chapter XIII. All of the melting points found in the body of the book are classified and summarized in this chapter.

Compounds are classified by a method based upon chemical rather than physical properties and amply described in the first chapter. Each compound for which data are given has an arbitrary number consisting of a digit representing the order, followed by a colon and an arbitrary four digit number indicating the specific compound. Thus, all compounds of this book have the number "one" for the single digit. The system is analogous to a telephone number in which the single digit corresponds to the exchange and the four digits, the individual line. All compounds in the general index of the book are located by this number system rather than by the customary page reference.

Chapter II describes the common generic tests for the nine genres: (1) aldehydes, (2) carbohydrates, (3) acids, (4) phenolic compounds, (5) esters, (6) anhydrides and lactones, (7) ketones, (8) alcohols, (9) hydrocarbons, ethers, etc. Each genus is separately described in succeeding chapters in such a way that the qualitative identity of an "unknown" is easily established. The pertinent facts regarding each compound listed are: the name or names of the compound, structural formula, empirical formula, Beilstein number, physical properties, general information and properties and reactions, preliminary tests, derivatives, and literature references. All of the reactions cited have actually been carried out by the author, a valuable and almost unique contribution.

The reviewer has had numerous occasions to refer to this volume and can attest its applicability. Any library will be enriched by the possession of this book of general reference. For classroom use, it presents a technique for identifying organic compounds in a systematic manner, teaching the student a methodic approach to qualitative organic