

*The Elements of Electro-Technics.* By A. P. Young. Pp. viii+348. (London: Sir Isaac Pitman and Sons, Ltd., 1920.) Price 7s. 6d. net.

THIS work is addressed as much to those connected with the electrical industry who are not directly associated with the technical side as to students about to embark upon an electrical career. The subject is looked at from the practical engineering point of view, but shows some departure from conventional lines. The elementary principles of currents and their effects are well set out, and of the later chapters those on the magnetisation of iron, measuring instruments, and insulating materials may be picked out as the best examples of well-selected information arranged with originality. In the last mentioned there is a good deal not found in the ordinary text-book, including a most useful summary of the composition, preparation, and properties of a number of insulating materials in common use. Another subject not always treated satisfactorily in elementary books is that of the magneto for ignition purposes, of which there is a brief but clear sketch.

The field covered is larger than would appear at first sight, and ranges over such diverse branches of electrical applications as Röntgen rays and electric furnaces. The continuous-current dynamo and motor are dealt with comparatively briefly, but alternating currents and their applications do not form part of the scheme. The student would be well advised to turn to Mr. Young for his introduction to the subject of measuring instruments.

*Modern Explosives.* By S. I. Levy. (Pitman's Common Commodities and Industries.) Pp. ix+109. (London: Sir Isaac Pitman and Sons, Ltd., n.d.) Price 3s. net.

THIS book gives a popular and interesting account of the manufacture of explosives, with special reference to the work carried out during the Great War in the national factories in this country. Although avoiding technical details, the author has given a reasonable and well-balanced treatment of his subject in the space at his disposal. One or two slips may be noted. The oxidation of ammonia was not "discovered by the German chemist Ostwald" (p. 28), but by the English clergyman the Rev. A. Milner, although it is usually attributed to the French chemist Kuhlmann. The phrase "Haber-Ostwald process," mistakenly adopted by the Department of Explosives Supply during the war, has doubtless led the author astray. The statement that "the contact process . . . was not successful when first attempted in this country, and was first applied in Germany . . . by . . . Dr. Knecht [*sic*]" (p. 35), is inaccurate in view of Messel's work. The final chapter, on "Chemistry and National Welfare," although not directly connected with the subject, is very apposite at the present time, when many of the lessons taught by the war seem to be receding into obscurity.

NO. 2663, VOL. 106]

*An Introduction to Entomology.* By Prof. J. H. Comstock. Part i. Second edition, entirely rewritten. Pp. xviii+220. (Ithaca, N.Y.: The Comstock Publishing Co., 1920.) Price 2.50 dollars net.

WE have no hesitation in commending this book as a clear and thoroughly up-to-date elementary account of the general structure and metamorphosis of insects. It constitutes the first part of a treatise on entomology that the author has in preparation. The section devoted to the external anatomy of insects is particularly valuable.

The detailed studies of recent morphologists have left the terminology applicable to the various sclerites and regions in a very confused state; the nomenclature adopted in this book is well chosen, and should contribute towards establishing stability. With regard to the internal anatomy we are of opinion that the author should deal with the muscular system more fully in the final work. Rather more detailed reference to the adipose tissue and a mention at least of the corpora allata are also called for. These points are raised in a friendly spirit, and in response to Prof. Comstock's invitation for suggestions of any desirable changes to be made before the present part is incorporated in the complete work.

Throughout the book the author exhibits clear insight in the selection of the essentials of his subject, and the printing and illustrations are particularly good; there is also a useful and not too lengthy bibliography.

A. D. IMMS.

*Physiography.* By Prof. Rollin D. Salisbury. Third edition, revised. (American Science Series, Advanced Course.) Pp. xv+676+xxvi plates. (New York: Henry Holt and Co., 1919.)

PROF. SALISBURY contrives to maintain the somewhat colourless subject of modern physiography as a study for the class-room by representing it as a description of the shaping of the present surface of the earth, and of the relations of air and water to the land. Questions of earth-history are left to geology, and of life on the globe to geography. His book might serve as an introduction to either of these sciences. Huxley's "Physiography" made a far wider appeal, and Prof. Salisbury has recently stated his own appreciation of geography as encouraging personal observation and verification.

We cannot help feeling that in the present work, the success of which is shown by its third edition, the author has been hampered by educational custom rather than by choice of subject. The small size of many of the illustrations of broad natural features is in keeping with the crispness of description. The use of parts of the maps of the U.S. Geological Survey as full-page plates is an admirable feature. The work has been brought up to date, with cautious references to the "upper air," and a description of the activity of Lassen Peak from 1914 onwards. May we suggest that the crystals shown on p. 71 should not be described as snowflakes?

G. A. J. C.