

longer views are taken in the course of time. The biographical notes might be improved, at least to the extent of mentioning the best English biography, when there is one. The bibliography also might be made more valuable, both by omissions and by additions. It is rather a sorry jest to include Libby's "Introduction to the History of Science" while omitting Dannemann's "Geschichte der Naturwissenschaften," which is the best book of its kind.

Our Bookshelf.

An Introduction to the Principles of Mechanics. By J. F. S. Ross. Pp. x+400. (London: Jonathan Cape, 1923). 12s. 6d. net.

THIS book is roughly of the intermediate standard of the universities and deals with most of the general principles of mechanics usually studied by engineering students prior to embarking upon the more highly specialised engineering subjects. The author has some very decided views upon the teaching of mechanics, and does not lay stress upon laboratory work since "it seldom achieves the results intended—too often students treat it as routine work, to be struggled through by following imperfectly comprehended instructions." This denunciation is too sweeping, and we are inclined to believe that in those cases where experimental work fails in its object, the cause may often be found in the lack of that inspiration which a competent teacher may communicate to his students. The author has compiled his book for the use of engineers, and we cannot welcome too strongly his courage in throwing over so-called "engineers' units" and his use of absolute units throughout in the development of the principles of the subject. The confusion which has resulted from engineers' units has become deplorable. There are several recent text-books on engineering subjects which are almost unreadable on this account. We have therefore every confidence in recommending this book to all teachers who have to handle engineering students and desire that their fundamental knowledge of this important subject shall be sound.

Principles and Practice of Wireless Transmission. By G. Parr. Pp. vi+163. (London: Ernest Benn, Ltd., 1923.) 5s. net.

THE author gives a popular account of the principles underlying the art of radio transmission and radio reception. He confines himself, however, closely to the scientific theory of the subject and does not give loose analogies. He states that mathematical treatment is "apt to irritate" the non-technical reader, but nevertheless he introduces the main formulæ. No attempt is made to prove the formulæ, but their practical use is explained with sufficient clearness to help the amateur. In no branch of electrical science is the theory of electrons more helpful than in radio communication. Hence although the author starts with discussing the electrifications produced by rubbing a stick of sealing-wax with a piece of fur, yet the phenomenon is pictured as giving or depriving atoms of the materials of their electrons.

It is a pity, however, that no attempt is made to

describe the modern molecular theory of magnetism, which is based on the electron theory of matter. We think that students and amateurs who are familiar with the practice of radio communication will find this book helpful. There is every prospect that in the immediate future radio-telephony for everyday commercial purposes will be widely adopted.

History of the Great War: Based on Official Documents. Medical Services: General History. Vol. 2: *The Medical Services on the Western Front, and during the Operations in France and Belgium in 1914 and 1915.* By Maj.-Gen. Sir W. G. Macpherson. Pp. x+510+17 maps+14 charts. (London: H.M. Stationery Office, 1923.) 21s. net.

THE present volume deals with the medical services of the British Expeditionary Force in France and Belgium and is a study in the methods of medical organisation on active service. Special chapters are devoted to the administration of the medical services on the western front, medical units in army areas and on lines of communication, medical services of the Indian contingent and of the labour corps. The organisation of nurses and women workers is also considered. The medical aspects of the actual engagements constitute interesting reading and include the retreat from Mons, the advance to the Aisne, the period of trench warfare and the battles of the Aisne, Neuve Chapelle, Ypres, Festubert, and Loos. A large number of charts, diagrams, maps, and illustrations help to make this volume one of the most interesting in the series.

The Fundamental Ideas of Chemistry. By Dr. Alfred Benrath. Translated by Jethro Bithell. (Harrap's Bilingual Series, German-English, Text and Translation on Opposite Pages.) Pp. 160. (London: G. G. Harrap and Co., Ltd.; New York: Brentano's; Sydney: The Australasian Publishing Co., Ltd., 1923.) 2s. net.

THE content and purpose of this book are clear from the title. It is sufficient to say that the text is interesting and that practically all the words and idioms of theoretical chemistry are covered. The book may be warmly recommended to chemical students. The translation is generally fairly accurate, but in several places could have been improved by a chemist. E.g. "Wage" is "balance," not "scales"; "Schwefelverbindungen des Eisens" does not mean "sulphuric compounds of iron," etc. The editor of the series would do well to see that the translations are revised by specialists.

Südamerika. Von Bernhard Brandt. (Jedermanns Bücherei.) Pp. 140. (Breslau: Ferdinand Hirt, 1923.) 2.50 marks.

DR. BRANDT has written an interesting sketch of South American geography which appears to be one volume in a series of handbooks of geography. The book is short but covers most successfully the important aspects of the continent and deals particularly well with questions of population and immigration to Brazil and temperate South America. There are diagrams, sketch maps, and a few well-chosen illustrations. A list of works for further reference includes a few in English but omits others of equal or greater value.