

university examination, and is well produced for its price. The style is clear and interesting, but a lack of original and more inspiring illustrations does not aid its favourable comparison with some other recent text-books of similar character. The statement is made on p. 198 that the absorption of bromine vapour by iron filings produces ferrous bromide, FeBr_2 ; the compound formed is Fe_3Br_8 , and is an important source of potassium bromide. The paragraph on sulphur heptoxide, S_2O_7 (p. 347), gives the impression that no further work has been carried out since Berthelot's supposed discovery in 1877.

An Introduction to the Chemistry of Plant Products.

By Dr. Paul Haas and Dr. T. G. Hill. Vol. 1: *On the Nature and Significance of the Commoner Organic Compounds of Plants.* Fourth edition. Pp. xvi + 530. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1928.) 18s. net.

NOTWITHSTANDING the systematised courses in biochemistry which are now available in many centres, the new edition of this book will continue to subserve the authors' original aim of providing students of biology with an account of the chemistry and physiological significance of some of the more important substances occurring in the plant. It contains sections on fats, oils, and waxes, aldehydes and alcohols, carbohydrates, glucosides, tannins, pigments, nitrogen bases, the colloidal state, proteins, and enzymes; there is also an appendix on hydrogen ion concentration. It has been brought up-to-date, and although necessarily it contains a good deal of somewhat elementary matter, one may suggest that it could be read with profit by organic chemists who are wishful to view their subject from a biological outlook. J. R.

Engineering.

Foundations: the Examination and Testing of the Ground preliminary to the Construction of Works—Methods and Appliances. By William Simpson. (The Glasgow Text-books of Civil Engineering.) Pp. xviii + 256. (London: Constable and Co., Ltd., 1928.) 18s. net.

THIS book is the latest addition to the well-known series of civil engineering text-books produced under the general editorship of Prof. Moncur, of the Royal Technical College, Glasgow. Its scope is well indicated by the sub-title. It is wholly concerned with the study of the ground and of those methods of examination and test to be followed in the collection of essential data on which to base the design of the foundation arrangements for heavy structural work. The first chapters deal with the features of geological surveys, and, indeed, the whole book gives a very clear impression of what the author refers to as "the intimate relationship which exists between Structural Geology and Civil Engineering." The development of the subject proceeds through a very complete discussion of boring and test shaft methods under all conditions, both on land and under water. The final section provides a clear treatment of the pro-

cedure and appliances necessary for testing the bearing capacity of the ground by direct loading on open areas, and by test pile or exploratory tube methods in deep foundations.

The book throughout is concerned with the practical problems, apparatus and operations of search. There is no collection or classification of specific ground data; but the care with which the detail appliances and methods are explained, the descriptive excellence of the text and the clearness of the diagrams, combine to make the book eminently suitable for students.

Television. By Alfred Dinsdale. Second edition.

Pp. xx + 180 + 33 plates. (London: Television Press, Ltd., 1928.) 5s. net.

IN a foreword to this little book, Dr. J. A. Fleming recommends it to those who desire an all-round view of the art of television as it exists at present, and of the problems and difficulties which still face the inventors in this novel field of adventure. We entirely agree with him. He also points out that in all inventions like the telephone, radio telegraphy, and television, there are two stages of development. First of all an idea strikes some one; then various people try to realise it in practice. The next stage is when an inventor like a Bell, a Marconi, or a Baird, makes an invention or discovers a device, sometimes very simple, which opens up a new pathway, and then progress is rapid. When the right clue is obtained, success follows, provided financial aid is forthcoming and systematic experiments are undertaken. The history of the past furnishes many similar cases.

The reader, even although his knowledge of physics is limited, will have little difficulty in understanding this book. There is a great demand by the public for anything new, for anything which contributes to the convenience of life, to entertainment, and to the dissemination of instruction and news. The physical importance of the new discoveries and inventions is considerable, and unlike many theories they are built on a sound experimental basis. The great obstacles to radio television to great distances at present are the disturbances caused by fading, Morse signals, atmospheric, and all the other causes which mutilate the broadcasting of speech and music.

A Text Book of Telegraphy: Theoretical and Practical. By A. E. Stone. Pp. vii + 455. (London: Macmillan and Co., Ltd., 1928.) 20s. net.

THIS book can be recommended to the student who has some previous electrotechnical knowledge. He will find that it is easy to understand. The descriptions of the apparatus and the systems in practical use can be readily grasped as only essential parts are shown in the diagrams. Special attention has rightly been given to multiplex systems and to type-printing telegraphs. Only the most modern methods are described. Alternating currents, the transmission of signals, submarine and radio telegraphy, are all touched on and the main theorems in connexion with them are given. The mathematical proofs in several