

easily attained by one more intimately connected with the development of the subject.

The present volume is admirable, and covers a considerably wider field than might be expected from its title. It opens with an excellent synopsis of the chemistry, electrochemistry, and classification of the radio-elements leading up to a study of the radioactive isotopes. The following section deals with the isotopes of the non-radioactive elements, and the experiments of Aston, Dempster, and others. A third brief section is devoted to some interesting speculations on the structure of the atomic nucleus, and the volume concludes with a critical account of the methods adopted or proposed for separating the pure isotopes from the mixed element.

A full bibliography is appended. Unfortunately, there is no index. The book is clearly printed and well illustrated with diagrams and plates, and its value is enhanced by numerous well-displayed tables. Mme. Curie has collected in these 210 pages a mine of information, much of which can only be consulted elsewhere in original publications. Both physicists and chemists should find this volume a valuable addition to their bookshelves.

J. A. C.

*Electrical Machinery and Control Diagrams.* By T. Croft. Pp. xii+305. (London: McGraw-Hill Publishing Co., Ltd., 1924.) 15s. net.

In practice, an electrician sometimes merely requires a circuit diagram of the apparatus or equipment with which he is working. He must therefore use symbols to denote electric bells, dynamos, etc., and show how they are connected with the accessory apparatus, such as switches, fuses, and regulating resistance coils. It is of importance that standard symbols should be internationally adopted. Considerable progress has been made in this direction by the International Electro-technical Commission, and the leading countries of the world have sent in suggested symbols. Complete agreement, however, has not yet been obtained.

The symbols adopted by the author are those used by the Electric Power Club of America. They are very similar to those used in other countries. The 500 circuit diagrams given cover practically all of the apparatus used in a modern power or super-power electric station. The diagrams are of all degrees of complexity, beginning with the simple manually controlled starting rheostat and going on to the automatic substation. To the practical engineer they will be helpful. We hope that in the second edition of this book the author will be able to adopt international diagrams, and that he will also include diagrams for radio communication circuits.

*Psychological Tests of Mental Abilities.* By Prof. A. S. Woodburne. Pp. v+232. (Madras: Government Press, 1924.) 2.8 rupees.

ALTHOUGH the method of mental testing is a comparative innovation in the field of education, its use is already almost ubiquitous. Most people know that it is widely employed in Europe and America, but perhaps fewer realise that its use has spread to Japan, China, Turkey, and, as the book under notice shows, to India.

Prof. Woodburne was invited last year to give a course of lectures on intelligence tests at the University

of Madras, and he has extended his remarks to form a book. The larger part of it is a lucid description of the general principles of testing, and it shows evidence of wide reading and careful discrimination. Ample illustrations are given of the various types of linguistic, performance and vocational tests.

Some good work has already been done in India along these lines, and it is interesting to read of the necessary adaptations of standard tests in order to make them suitable for that country. Particularly illuminating also are the investigations of Prof. Haylands and of the author for the purpose of comparing the mental processes of the Indian and English adolescent. Indian educationists are keeping well to the fore in mental testing, for they have already planned a central clearing-house for results, and have suggested adequate instruction in testing methods for all their training college students.

*In an Unknown Land.* By Thomas Gann. Pp. 263+32 plates. (London: Duckworth and Co., 1924.) 21s. net.

THE unknown land of which Mr. Gann writes is Yucatan, which he visited with Dr. S. G. Morley for the purposes of archæological investigation. From Belize the party went northward and then westward on a two months' trip round the coast, making several inland expeditions to visit ruined Maya cities. Incidentally the book contains a great deal of information on a part of Central America that is little known and not easy of access, but its main value is the account the author gives of the Maya ruins and the Santa Cruz Indians. These form an independent tribe, since the Mexican government virtually evacuated their province, and represent the purest descendants of the Mayas. A great deal of work was accomplished, including visits to Chacmool, a previously unknown ruined city, Tulum, which has always been difficult to reach owing to Indian hostility, and two minor new discoveries at Cancuen and Playa Carmen. All these are fully described. Of great interest are the accounts of the remarkable mural paintings of human figures and gods executed in bright colours on a hard stucco, found at Tulum in a fresh condition despite their age of four centuries. The elucidation of the Maya method of dating in Yucatan was another striking discovery.

*Graphic Statistics in Management.* By W. H. Smith. Pp. vii+360. (London: McGraw-Hill Publishing Co., Ltd., 1924.) 20s. net.

THE recording of business activity by graphical means is extending rapidly among the controllers of large businesses, and a book like the present volume, written primarily in the atmosphere of American big business, should be of especial interest in Great Britain. The whole subject is treated in picturesque graphical fashion; no mathematical symbol appears anywhere, and yet a considerable degree of analysis of financial and business activity, production, sales, markets, and costing is successfully effected. The chapter dealing with graphical statistics in advertising is capital, a large number of illustrations of varying character being shown, including one demonstrating the effect of advertisement on church attendance and Sunday morning offerings!