

*Thorpe's Dictionary of Applied Chemistry. Supplement.* By Prof. Jocelyn Field Thorpe and Prof. M. A. Whiteley. Vol. 1: A-M. Pp. xxi+680. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1934.) 60s. net.

In order to make up the lee-way developed during a period of 7-13 years, two additional volumes are being provided as supplements to the original seven volumes of Thorpe's "Dictionary of Applied Chemistry". The present volume of about 700 pages is issued at the same price as the original volumes and covers the literature from A to M. Since the list of contributors to the new volume occupies five pages, an individual review of the articles which they have written is scarcely practicable; but the reader naturally turns at once to a 20-page supplement to the article on carbohydrates in vol. II, by Dr. E. F. Armstrong, to find the new ring-formulae fully described and discussed. On the inorganic side, articles on hafnium and illinium are contributed by Prof. G. T. Morgan, whilst a long supplementary article on hydrogen by Prof. J. R. Partington includes ortho- and para-hydrogen, but was evidently completed at too early a date to include the isotopes discovered in 1933. Recent technical developments are represented by well-illustrated articles on coal gas and coke manufacture, on explosions and explosives and on iron and steel. A long supplementary article on analysis by Prof. G. T. Morgan is devoted mainly to the organic reagents which now play such an important part in the detection and separation of the metals, as well as of certain acid radicals. There are also many brief entries and cross-references which maintain the essential character of the dictionary as a work of reference for unfamiliar, as well as for the more familiar, names and subjects.

A very attractive feature of the new volume is provided by the use of heavy capital letters, not only for the main headings of the various entries, but also for the chemical formulae, which are thereby rendered exceptionally clear and easy to pick out from the lighter type of the ordinary text.

*The Casting of Brass Ingots.* By R. Genders and G. L. Bailey. (Research Monograph No. 3.) Pp. xv+191+63 plates. (London: British Non-Ferrous Metals Research Association, 1934.) 15s.

THE attention being paid at the present time to the production of sound ingots of all kinds is well illustrated by the remarkable reports which are being issued by the Heterogeneity Committee of the Iron and Steel Institute, and by the work done on brass by the Research Department at Woolwich for the British Non-Ferrous Metals Research Association. Since a sound ingot is the essential starting point for sound products to be produced therefrom, this type of research, slow and tedious as it may be, finds most ample justification. The book under review is, in a collected form, the reports which have been prepared for the latter of the two research programmes mentioned above. To manufacturers of brass ingots for rolling it will be essential, but its importance extends much further than this. When at length the individual

links can be welded into a comprehensive theory of the solidification of metals in moulds, the present work will not be the least useful. The amount of experimental information contained is large, the work has been well and patiently done, and the authors may be congratulated on the production of a volume of real value. The fact that the separate portions of the work were made the subjects of individual reports may possibly be the explanation of the one criticism which may be made, namely that there appears to be a certain lack of cohesion.

F. C. T.

*The Rôle of the Deserts.* By A. J. McInerny. (The Channing Useful Pocket Series, 7.) Pp. 51+6 plates. (London: The Channing Press, 1933.) 4s. 6d. net.

MR. MCINERNY here develops further his theories of the part played by the great deserts in human evolution. He holds that these great arid stretches of land in the Old World, extending from North Africa to Central Asia and from the Hindu Kush to Manchuria, are zones of disinfection which, by purifying the infected air coming from the tropical zones of jungle and swamp and causing it to be then distributed in the upper air to zones of development, have been the principal, though not the sole, factor in the evolution of man from the negro of the jungle to the yellow man of sub-arid areas and then the white race. Heidelberg man and Neanderthal man and related forms of extinct man are premature escapes from the zones of development. Mr. McInerny also turns his attention to America. Here, he holds, the influence of the deserts has not been strong enough to produce races capable of an advanced civilisation. In consequence, he is dubious as to the future of the white races now living on that continent. His views in their application to the question of ethnological affinities produce some new and startling results.

*Perkin and Kipping's Organic Chemistry.* Entirely new edition. By Dr. F. Stanley Kipping and Dr. F. Barry Kipping. Part 3. Pp. viii+615-967+xlii. (London and Edinburgh: W. and R. Chambers, Ltd., 1934.)

THIS volume deals with the more advanced parts of organic chemistry in the same clear and practical manner as the first two parts. A short but adequate account of the electronic formulae of organic compounds precedes the consideration of various types of isomerism, and the discussion of important groups of compounds such as the monosaccharides, polysaccharides, cyclic hydrocarbons, terpenes, carotinoids, pyrones, anthocyanins, organo-metallic compounds and some selected heterocyclic compounds. There are several chapters on important theoretical matters, such as optical activity, isomeric change, the structure of benzene, and steric hindrance. The book gives in a reasonable space such information as an honours student may be expected to assimilate in the field covered, and it may be warmly recommended. In future editions, the structure of pyrones should be explained on a more modern basis, since quadrivalent oxygen is no longer admitted.