

reasoning. It is very well printed and illustrated, and is remarkably good value.

As a text-book for the general science student it is perhaps a trifle less satisfactory. The logical development is not always above criticism, as, for example, in the introductory paragraph of the section on heat, where the idea of quantity of heat is invoked in order to explain that of difference of temperature. Again, the theoretical justification of Archimedes' principle is not clearly set forth, and it is to be feared that the explanation of Newton's Third Law will leave the student just where he was in his acquaintance with those mysterious twins—action and reaction. Apart from these and one or two other exceptionable items, there is little to criticise and much to commend.

*Radio, Beam and Broadcast: its Story and Patents.*

By A. H. Morse. Pp. 192. (London: Ernest Benn, Ltd., 1925.) 12s. 6d. net.

THE author gives a good account of the art of radio-communication. In an appendix he quotes British and American patent specifications or gives extracts from them describing the main steps in the evolution of the art. Many wonderfully accurate guesses into the future have been made, but few are so wonderful as Du Maurier's drawing published in *Punch* of 1878 of what appears to be an elaborate home radio set and a lady telling her page-boy to turn on the tap for the concert from Covent Garden, etc., at stated times in the evening. Long-distance broadcasting was anticipated, as one of the panels is marked "Bayreuth." In 1892 Sir William Crookes, in a paper in the *Fortnightly Review*, makes an excellent forecast of radio-telegraphy, suggesting that 50 yards would be a suitable wave-length, and that the instruments for reception would have to be tuned to this wave-length. We are inclined to agree with the author that, in the near future, broadcasting of local urban interest only will be effected over existing telephone or lighting wires and so kept out of the ether. The ether is already becoming congested, mainly due to broadcasting. A single broadcasting station takes as much of the ether as would accommodate at least ten radio-telegraph stations.

*Why the Weather?* By Dr. Charles Franklin Brooks, with the Collaboration of John Nelson and others. Pp. xvi + 310 + 21 plates. (New York: Harcourt, Brace and Co., 1924.) n.p.

THE aim of this book is to present the elements of the physics of the atmosphere in a simple manner. It covers rather a wide field, and does not delve very deeply into any portion of the subject. The style is chatty, rather than simple, and gives the impression that the author has made a too strenuous effort to write down to the level of his public. While the author states a number of facts which would be unknown to the general reader, his theory is not always reliable. For example, he ascribes the "table-cloth" on Table Mountain to the cooling effect upon the air of the low temperature of the mountain top, instead of to adiabatic cooling of the air blown up the slopes of the mountain. It is stated that the earth has grown from a comparatively small cold body by the addition of mass by showers of meteors falling upon it, a theory

which is by no means so widely accepted as might be inferred from the author's bold statement of it. On the whole, the book can be recommended to the general reader as an introduction to the physics of atmosphere. The illustrations, mainly of cloud forms, are very well selected.

*Studies in the History of Political Philosophy before and after Rousseau.* By Dr. C. E. Vaughan. Edited by A. G. Little. Vol. 1: *From Hobbes to Hume*. Pp. xxix + 364. Vol. 2: *From Burke to Mazzini*. With a list of the Writings of Prof. Vaughan, by H. B. Charlton. Pp. xx + 6 + 339. (Manchester: At the University Press; London: Longmans, Green and Co., 1925.) 2 vols., 42s. net.

THESE volumes will be valued by all those who knew or who passed under the influence of the distinguished professor who held the chair of English first at Cardiff, then at Newcastle, and later at Leeds before he died in 1922. The books and articles published by him in his lifetime were all of the nature of students' manuals or were aids to study. Apart from his work in the classroom, he was engaged throughout the active period of his life in writing a "History of Political Philosophy," and the studies for this, some of which were left in a finished, others in an unfinished, condition, but none of them marked for press, have now been edited and published. The whole is a monumental work of the first importance.

*The Races of Man and their Distribution.* By Dr. A. C. Haddon. New edition. Pp. viii + 184 + 10 plates. (Cambridge: At the University Press, 1924.) 6s. net.

THIS is a new edition, entirely rewritten, of a small and very useful volume by the pioneer field-worker and veteran anthropologist of Great Britain. In its present form the book is the best succinct statement of the principles of racial classification, of the physical characters of each stock, and of the distribution of the varieties of man. In the analysis of the concept of "race" and the discussion of the main criteria of physical anthropology, which form the first part of the volume, the modern theories and points of view of cultural anthropology have been taken into account. In the description of the main races which follows, the book does not go beyond the limit of physical anthropology. Within these, it is the best and most authoritative statement of the subject. Mainly designed as a text-book for the beginner and the general reader, it will be also valuable as a handy work of reference for the specialist.

*The Match Industry: its Origin and Development.* By W. H. Dixon. (Pitman's Common Commodities and Industries Series.) Pp. x + 150. (London: Sir Isaac Pitman and Sons, Ltd., 1925.) 3s. net.

THE author gives an interesting account of the manufacture of matches. The style suffers owing to the breaking up of the text into a large number of very short paragraphs, generally single sentences. The historical part is incomplete and disconnected, and in future editions more attention might be given to this side, and in particular the claims of Walker should be more critically examined.