

and his point of view is indicated by his remark that the native women are better than the men. He widens his treatment by an account of work in other parts of Africa which is, however, largely an untrustworthy second-hand compilation. The author's views as to the future of the races in Africa are reminiscent of those of the early South African political missionaries, as shown by the stress he lays on the influence, which he regards as deplorable, of the "low whites," and his explanation of what are described as the poor effects of mission work as due to the Europeanisation of the natives. The colour difference he does not regard as a serious bar; he describes it as a "mere conceit," and according to him, it is an effect of sunlight and humidity and is easily varied. The physical differences between the African and the white races he says are no barrier to comradeship, and the importance attached to colour is only as a symbol of the differences in social standards. The most valuable contribution in the book is its brief account of the Ethiopian movement in South Africa.

*Essai de philosophie chimique.* Par Prof. Maurice Delacre. Pp. 170. (Paris: Libr. Payot, 1923.) 7.50 francs.

PROF. DELACRE of Ghent is in revolt against modern theories. In a "Profession of Faith" which forms the first section of his introduction, he asserts that "Every principle, every *a priori* conception, every theory, every system, however brilliant it may be, however fertile it may appear, is only an illusion." He questions even the *usefulness* of theories, on the ground that they have in the past often provided obstructions to the progress of new ideas, and quotes with approval the view that, if one makes use of theories, one should do so, in the words of St. Claire Deville, "without believing them." He appears to have reached this almost morbid point of view as a result of having devoted much time to the study of the pinacone-pinacoline transformation, one of the curious changes which (like the Walden inversion) have never yet found a clear interpretation on the basis of conventional views of atomic linking and molecular structure; but, whereas the average chemist (fortunately) is stimulated by such anomalies, and is always hopeful of finding some clue to the mystery which they conceal, Prof. Delacre prefers to "throw up the sponge" and to denounce all theories as useless frauds. Sir Joseph Thomson has recently stated that "A theory is a tool and not a creed"; this is at least a more cheerful and practical view than the exercise in which Prof. Delacre indulges of finding fault with tools in general, and especially with those of his own trade. They may not be perfect, but they are certainly not useless.

*Wireless for the Amateur.* By J. Roussel. Authorised Translation. Pp. xiii + 270. (London, Bombay and Sydney: Constable and Co., Ltd., 1923.) 14s. net.

THIS book has been written specially for the scientific amateur. It combines a reasonable amount of theory with definite constructional details. Practically all the apparatus mentioned has been constructed by the author himself, and so the reader can have confidence that similar apparatus will function efficiently. The author deals only with "resistance-coupled" high frequency amplifiers. As this method of coupling

valves is unsuitable for use on short waves, such as those used in Great Britain, the translator has added a chapter on amplifiers suitable for the reception of any wave-length down to about 150 metres. A further chapter is added describing methods of transmission for C.W. (continuous wave) systems on the wave-lengths allowed to English amateurs.

The author begins by describing a simple receiver. He then gradually increases the apparatus so as first to obtain better tuning, then to amplify the signals received, and finally to record them automatically. A chapter is added describing how to make the calculations required by the radio expert and how to make the rough measurements required in practice. The translation has been well done and the book will be useful.

*General Chemistry: an Elementary Survey, emphasising Industrial Applications of Fundamental Principles.* By Prof. H. G. Deming. Pp. xii + 605. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1923.) 17s. 6d. net.

THIS is a modern American text-book of the best type. The treatment is fresh and attractive, and innumerable examples of practical applications are scattered through the text, in fact an apology for the inclusion of nearly every section is first given on utilitarian grounds. The author hopes that "the book may be appreciated for the things it has left unsaid." Omission of important matter has left space for things not found in similar text-books, but this has sometimes been carried to such lengths that many statements are so condensed as to be virtually useless. Tabular summaries are a useful feature, but the exercises are often trivial, as is usual in American text-books. The author exhibits a fervid patriotism which, although gratifying to American readers, naturally brings with it the penalty of diminishing the value of the book in wider circles. English readers will find the book stimulating and most useful in supplementing the usual text-books, but unless they take a wider view than the author's, they will receive a false impression of the importance of European chemistry. In many cases the descriptions of illustrations do not refer to those actually given.

*Géométrie descriptive.* Par Gaspard Monge. Augmentée d'une théorie des ombres et de la perspective, extraite des papiers de l'auteur par Barnabé Brisson. (Les Maîtres de la Pensée scientifique.) Vol. 1. Pp. xvi + 144. Vol. 2. Pp. 138. (Paris: Gauthier-Villars et Cie, 1922.) 2 vols., 6 francs.

ALL mathematicians and others interested in the history of science will welcome this mathematical classic, both from the point of view of the personal interest in Monge himself, and also because of the occasion on which this book was originally written. The primary object of the book was purely utilitarian, namely, to make French industry independent of foreign enterprise, by "directing national education towards the knowledge of matters requiring exactness," and giving French artificers a greater command over materials and machines. Monge's object was to give a new aspect to French education, but he enriched mathematics with one of its classics.