

but is in two parts, with numerous sub-sections. Commencing with a historical résumé and account of early types, the modern bucket dredger is then subjected to analytical description, followed by similar treatment of the sand pump, the suction dredger, and the suction cutter dredger. There is no reference to the dipper dredger, the type so prominently in vogue in North America. No doubt this is due to the author's Dutch nationality and his intention, expressed in the preface, of giving solely an account of the development of dredging appliances in Holland. He points out that "as regards the more recent development, England and Holland may safely claim to have made the greatest progress." A number of interesting photographs and line drawings enhance the attraction of the book.

BRYSSON CUNNINGHAM.

The Father in Primitive Psychology. By Prof. B. Malinowski. (Psychic Miniatures, General Series, No. 8.) Pp. 93. (London: Kegan Paul and Co., Ltd., 1927.) 2s. 6d. net.

SAVAGES, to use a popular term, are no more logical and consistent than civilised peoples. This is a point which is often overlooked and has been usefully emphasised by Prof. Malinowski on more than one occasion. Ever since it has been recorded that some primitive peoples are ignorant of the part of the male in procreation, certain obvious difficulties which it is thought should inevitably arise have caused some doubts as to the completeness of this alleged ignorance. In this book Prof. Malinowski records the results of his inquiries on the subject among the people of the Trobriand Islands, with special reference to its bearing upon the position of the father as a purely sociological and not a biological factor in the family group. The results are extremely interesting, and if Prof. Malinowski has not been successful in disposing of all, he has at any rate solved some of the more serious difficulties. The case of the unmarried mother is still a stumbling-block, and the author has to fall back upon the explanation that a birth is contrary to the custom of society, a force which, when everything is taken into account, does not seem quite adequate, strong as it undoubtedly is. Prof. Malinowski has some illuminating remarks to make on the relation of this lack of physiological knowledge to the attitude of the natives towards Christianity.

Relativity: an Exposition with the Mathematics. By Prof. James Rice. (Benn's Sixpenny Library, No. 105.) Pp. 79. (London: Ernest Benn, Ltd., 1927.) 6d.

In this paper-covered pamphlet of eighty pages, which is sold for sixpence, Prof. Rice sets forth the doctrine of relativity: and not only this, but also (as preliminary to it) the principles of Newtonian physics, the history of optics in the nineteenth century, and the Maxwell-Lorentz theory of electricity. It is a wonderful performance—judicious, scholarly, well written, and sparkling with apt comparisons and illustrations. A little masterpiece in every way.

In the expectation that it will be continually

No. 3030, Vol. 120]

reprinted, and translated into every language under the sun, we venture to point out one or two things which might be amended. On page 13, after correctly describing FitzGerald as "an Irish physicist," the author refers to Larmor as "an English mathematician at Cambridge." Larmor is, however, another Irishman. On pages 51-52 we are told that the mass of the electron has been proved by experiment to be wholly electromagnetic: we do not understand what Prof. Rice means by this: at any rate, the Kaufmann-Bucherer experiments on the mass of β -particles merely show that their mass varies with velocity in the way that any mass, whatever be its origin, must do according to the relativity theory. On page 73, *latitude* is obviously a slip for *longitude*.

Elementary Practical Physical Chemistry. By Dr. James Frederick Spencer. (Bell's Natural Science Series.) Pp. viii+263. (London: G. Bell and Sons, Ltd., 1927.) 5s.

DR. J. F. SPENCER has written a very attractive book of practical exercises in physical chemistry. It is an elementary book, describing experiments which can be performed by boys and girls in the upper forms of schools. For this reason, complicated apparatus and tedious experiments have been avoided, and in certain cases new types of simple apparatus have been designed and put on the market, to enable additional experiments to be made. Since the requirements and possibilities of an elementary course in physical chemistry have now been to a large extent standardised, the detailed setting out of the work is more important than its scope, and for this reason Dr. Spencer may be congratulated on the clearness of the 89 diagrams which serve as illustrations to the 100 experiments, for which detailed instructions are given in the narrative of the text. The final test of such a book can only be applied under conditions of 'active service' in the laboratory, but from a preliminary inspection it appears likely that this test will be passed with credit, to the mutual advantage of all those who may be concerned in the enterprise.

Über die Wärme-Leitungsfähigkeit der Metalle. Arbeiten von G. Wiedemann und R. Franz. Herausgegeben von Prof. Dr. Arthur Wehnelt. (Ostwald's Klassiker der exakten Wissenschaften, Nr. 242.) Pp. iii+39. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1927.) 2.80 gold marks.

THE first requirement of any theory of the conduction of heat and electricity in metals is that it shall satisfy the law discovered by Wiedemann and Franz in 1853, that metals have the same conductivity for heat and for electricity. Although modern determinations have shown that the law is approximate only, it is most appropriate that the original paper should be republished and made widely available. The editor, Prof. Wehnelt, has added a short life of Prof. Wiedemann and a few notes as to more recent work on the same subject.