

trachytes, tuffs and other volcanic rocks which play an important part in Europe. Copious lists of American references are given, as well as statistics of production quoted from official publications.

In another edition, "White Man's Field, Red Man's Field and Yellow Man's Field," misquoted on p. 159 from Beare's table, should be transformed from their present "Wild West" state into the more readily recognisable "White Mansfield Stone," etc.

PHYSICS FOR CHILDREN AND STUDENTS.

- (1) *The Boy's Playbook of Science*. By John Henry Pepper. Revised, rewritten, re-illustrated with many additions by Dr. John Mastin. Pp. x+680. (London: George Routledge & Sons, Ltd.; New York: E. P. Dutton & Co.) Price 5s.
- (2) *Examples in Applied Electricity*. By C. G. Lamb. Pp. iv+61. (Cambridge: The University Press, 1912.) Price 2s. 6d. net.
- (3) *Manuale di Fisica ad Uso delle Scuole Secondarie e Superiori*. Volume Primo. Meccanica. By Prof. Bernardo Dessau. Pp. xii+500. (Milano: Societa Editrice Libreria, 1912.) Price 12 lire.

(1) **T**O say that this book is a remarkable one would in a sense be true, but might at the same time be misleading. If the term be used it must be qualified by saying that the remarkable features are mainly undesirable. No doubt the object of the book is commendable, for no one denies that it is an excellent thing to interest youth in the wonders of natural phenomena, and, further, that the treatment should be as comprehensive as possible. At the same time, it is surely better to explain a few things well than to give loose and inadequate explanations of many.

In this respect the book in question is not at all successful. A very large number of phenomena are dealt with in a manner which is often too cursory to be clear, and is sometimes, indeed, actually erroneous. Thus in treating the subject of gravitation the author, after regretting the fact that there are not many good lecture-table experiments illustrating this effect, goes on to say that "attention may be directed to the fact of a piece of potassium thrown on the surface of water in a plate generally rushing to the sides, and, as if attracted, attaching itself with great force to the substance of the pottery or porcelain." Although not an absolute statement of fact, this is at least a suggestion that the movement is the result of gravitational attraction between the potassium and the sides of the vessel. The N rays of Prof. Blondlot are spoken of as though

their existence had never been disputed, and heat is spoken of as a force.

Another curious feature is the order in which the various subjects are taken. For some unaccountable reason a chapter on aerial flight—in which several pages are wasted upon an absurd and unnecessarily long list of persons who have at various dates been killed in attempting to fly—is sandwiched in the section on chemistry between the liquefaction of gases and the halogens.

It should be said that the contents of the book are limited to the consideration of the science of inanimate objects, and undoubtedly convey much useful information. Nevertheless, the weaknesses which have been referred to above render it impossible to bestow upon the book any hearty recommendation.

(2) The author of this little volume has compiled, mainly from test papers set to the students in the Cambridge Engineering Laboratory and from the papers in the Mechanical Science Tripos, a considerable number of numerical questions in electrical engineering. They are arranged in the form of papers of some eight questions each, and the answers are given at the end of the book. The questions are varied in character and, although they do not include the subjects of polyphase currents and wireless telegraphy, should prove very useful in engineering schools.

(3) This first volume of Prof. Dessau's Manual of Physics includes rather more than what is usually denoted by the title of "Mechanics" in England. Besides the ordinary mechanics of solids and fluids we find treated in an elementary manner—as, indeed, is the whole book—such phenomena as gravitation, elasticity, diffusion of gases, and the interference of waves. The book is exceedingly well printed and the diagrams are uniformly good.

OUR BOOKSHELF.

Science from an Easy Chair. Second Series. By Sir Ray Lankester, K.C.B., F.R.S. Pp. xiii+412. (London: Adlard and Son, 1912.) Price 6s. 6d. net.

SIR RAY LANKESTER'S weekly contributions to *The Daily Telegraph* represent the high-water mark of popular papers on scientific subjects. The general public has in recent years been infected with a feverish desire for sensation; and as science can offer little to gratify that appetite, thoughtful articles upon its achievements are now relatively much fewer in the periodical Press than they were a generation or two ago. Possibly men of science are partly to blame for this state of affairs. They must be specialists in order to make progress in their own particular fields of inquiry; and they are often not only themselves