

careful attention is paid to the question of action at a distance and ether. The controversy with Leibniz and the alleged 'occult powers' reveal the keen discussion in matters of natural philosophy which took place in the period under discussion. The 'active principles' of Newton receive careful treatment in this chapter, which closes with the mathematical theory of gravity.

The fourth chapter naturally deals with the metaphysical doctrine which Newton's theory suggests; attention is directed to the mystic influence of Jacob Boehme.

The last chapter discusses the relation of mathematics and physics to philosophy in general, and deals with the opposition which Newton's use of hypothesis met with in the polemic directed against him by the Cartesians.

H. D. A.

*Plato's American Republic.* Done out of the Original by Douglas Woodruff. (To-day and To-morrow Series.) Pp. 122. (London: Kegan Paul and Co., Ltd.; New York: E. P. Dutton and Co., 1926.) 2s. 6d. net.

THIS delightful little book improves on a second reading. It is a mock Platonic dialogue—not pedantically close to the Greek—purporting to give Socrates' account of a lecture tour he has just taken in the United States, accompanied by Xantippe, who also lectures, with much more popular acceptance than her husband. The fun of the book runs fast, but is not furious. It is based on a subtle and penetrating but not unfriendly criticism of the prevalent mind in the United States. Much of it deals with familiar topics, Prohibition, card-indexes, the worship of numbers, facts and size, and, above all, of the new god 'Progress.' But it is all done more charmingly than we remember to have ever seen before, and it winds up with a companion picture of the mechanical and Philistine side of British civilisation. The remedy is to be found in the real education, on Greek lines, of young American women, who may be trusted afterwards to rule their husbands. The men are to be left for their own training to the discipline of football and baseball. The address of Socrates at the luncheon of the Rotarian Club in Hootsville is the gem of the book. He is finally shouted down when he urges that they "should do business" with the three weaving sisters of Greek mythology, Clotho, Lachesis, and Atropos with her dreaded shears. Did he not know, he was asked, that they in Hootsville, and everywhere else in the States, had machines which spun, measured, and cut thread in the single operation?

The concluding sentence of the book is typical of its combined seriousness and wit,—“For there are times when it is important to know the truth, and life is one of them.”

F. S. M.

*Cement, Concrete and Bricks.* By Alfred B. Searle. (Outlines of Industrial Chemistry.) Second edition. Pp. xi+441. (London: Constable and Co., Ltd., 1926.) 24s. net.

SOUND information about the materials named in the title of this book is badly wanted, and every effort to interpret the latest research work in a way

which can be applied in practice should be welcomed. Mr. Searle in this new edition of his book directs attention to the work of Prof. Duff Abrams on the effect of the amount of mixing water in concrete. There is no doubt of the importance of this. The chapter on the chemistry of cements is much improved, but seems still rather overloaded with the work of W. and D. Asch.

There are, however, many statements in the book which are misleading. The description of a rotary kiln and the diagram on page 26 does not convey much impression of a modern plant. The statement on page 83 that the allowable limit of 2.75 per cent. for sulphur trioxide (SO<sub>3</sub>) in Portland cement laid down by the British Engineering Standards Specification does not include the gypsum added to control the setting time, is incorrect. Again, the statement on page 111 that no standard specification for cements other than Portland has been issued by British Engineering Standards Association is incorrect. A standard specification for Portland Blastfurnace Cement was issued by this body in 1923 and revised in 1926.

The chapter on reinforced concrete is not helpful, and in many cases is misleading. It bears too much resemblance to a compilation from makers' catalogues. Much more work has been done on cement and concrete since the first edition of this book than has been noted in the revision, and it is regrettable that the work has not been brought up-to-date and the inaccuracies corrected.

*Practical Hints to Scientific Travellers.* Edited by Prof. H. A. Brouwer. Vol. 4. Pp. v+171+11 plates. (The Hague: Martinus Nijhoff, 1926.) 5 guilders.

A NOTICE of the first three volumes of this series appeared in NATURE, vol. 118, p. 44 (July 10, 1926); the fourth volume, now before us, deals with travel in Egypt, Angola, Australia, Antarctica, Venezuela, and Haiti. Doubtless the various articles are being published in the order in which they come to hand, but the result, in the case of the present volume, has been too miscellaneous a grouping. In any further edition of the whole work it would obviously be an improvement to redistribute the articles among the several volumes, in order to bring together those having some bearing on one another.

Like its predecessors, this volume is packed with useful and very much up-to-date information, although the sections on Venezuela and Haiti are short and scarcely enter into sufficient detail. In the section on Australia several pages are devoted to hints for botanical collecting, but most of the articles, being written by geologists, will probably be of especial help to members of geological expeditions. Prof. Griffith Taylor gives an interesting account of the experience gained by Capt. Scott's last antarctic expedition; his remarks should be very helpful when the preliminary arrangements are being made for any further expeditions to that part of the world. The illustrations in this book are well reproduced, and give a good idea of travelling conditions in the various regions.