

must be explained." Chapters i.-vii. are concerned with various aspects of case-hardening processes, and these are followed by others dealing with methods of testing, automobile steels, hardening and tempering, and finally surface hardening without cementation. No attempt is made to separate the subject into practical and theoretical divisions, and the author's treatment presupposes an elementary knowledge of metallography on the part of his readers.

In a book of this kind it is gratifying to find the following opinion (p. 77): "The most helpful of all generalisations in metallurgy is the one based on observations made with the pyrometer and confirmed by the microscope, known as the equilibrium diagram." Mr. Brearley is to be congratulated on the production of a book that was well worth writing, and one which should certainly be of use to those for whom it is intended. It will repay studying, moreover, by others than case-hardeners.

H. C. H. CARPENTER.

OUR BOOKSHELF.

*The Principles of Fruit-Growing.* By L. H. Bailey. Twentieth Edition. Pp. xiv+432. (New York: The Macmillan Co., London: Macmillan and Co., Ltd., 1915.) Price 7s. 6d. net.

THIS book has in its different editions been used for nearly eighteen years as a standard text-book on commercial fruit-growing, in the Agricultural and Horticultural Colleges of the U.S.A., Canada, and England.

For the present edition the work has been largely re-written; it deals with important subjects, such as the choice of locality and site; the setting out of orchards; the principles of vegetable physiology involved in the cultivation, pruning and thinning of the fruit, and so on. The question of manuring of orchards, based on experiments at the American Experiment Stations, gives clear general reasons for the effect or non-effect of the fertiliser. The phenomenon of self-sterility of varieties and the advantage of cross-pollination are discussed. Examples of score cards dealing with the growth and character of the tree as well as the fruit show that this is a valuable method for comparison of varieties; an example of a work sheet of an orchard, together with cost and return, show what may be advantageously learnt from keeping such a record. Cover crops and protection from frost by orchard heating are described; control of insect pests and fungoid diseases, and the choice of pumps and nozzles, are well treated; harvesting, packing, and fruit storage houses, also special points of interest such as the origin of varieties, are discussed.

The book is one to interest any English apple grower (it is the apple that is chiefly dealt with); it presents new aspects of things different from

those we are accustomed to see in current English fruit-growing literature.

The application of principles may need slight modification in this country as the work is in the first case written for North America; the main general principles, however, hold good the world over.  
CECIL H. HOOPER.

*Infant Mortality.* By Dr. H. T. Ashby. Pp. x+229. (Cambridge: At the University Press, 1915.) Price 10s. 6d. net.

THE appearance of Dr. Ashby's book is very well timed, for in these days of human wastage it behoves a nation to conserve its resources. It is true that in recent years there has been a slight drop in infant mortality, but it is still disgracefully high, and is largely counterbalanced by a fall in the birth-rate. The word disgraceful is the correct one, because the vast majority of deaths are due to preventable causes, of which the most important is diarrhoea due to bad feeding and especially to bad and infected milk. Dr. Ashby shows that much may be done by the proper instruction of the mothers, but by far the greatest responsibility falls on public bodies and the Government, for it is only they who can deal with the larger questions of hygienic precautions, such as regulations of cleanliness in food depots, and the prevention of fly-borne disease; the call for proper regulation of the milk traffic is an urgent one; the provision of shells is important, but the provision of a healthy race to make and use them is even more pressing. We trust that useful books such as the one under consideration may bear fruit in the proper quarters.  
W. D. H.

*St. Bartholomew's Hospital in Peace and War.* The Rede Lecture, 1915. By Dr. Norman Moore. Pp. 56 (Cambridge: At the University Press, 1915.) Price 2s. net.

WE welcome the publication of this Rede lecture delivered on May 6, 1915, in the Senate House, Cambridge, by Dr. Norman Moore. Such a charmingly written history of a great hospital will appeal to a wide circle of readers. As Dr. Moore says, the history shows "how in a free country such as ours, where everything is not dominated by Government, an ancient institution like St. Bartholomew's Hospital, whether in peace or war, lives with the nation and is in touch with the national life in every period."

*Educative Geography.* A Note-book for Teachers. By J. L. Haddon. Pp. 76 (London: G. W. Bacon and Co., Ltd., 1915.) Price 1s. net.

It is to be hoped that this little book may secure a wide circulation among teachers of geography in elementary schools and the junior classes of secondary schools. It should convince all who read it that lessons in geography become both more valuable and interesting when they include simple practical exercises to be worked by the children themselves, and that the provision of such work is neither expensive nor unduly troublesome.