A Text-book on Crystal Physics

By Dr. W. A. Wooster. Reprinted, with corrections. Pp. xxii+295. (Cambridge: At the University Press, 1949.) 21*s*. net.

THIS book still remains the only British text-book entirely devoted to crystal physics. It can also claim the merit of being the first to be written with a clear understanding of the relationship between the physical properties of crystals and their atomic structure. This appears to advantage in the treatment of the relations between structure types and optical properties. Interest in the experimental work is particularly well conveyed by the author, who has been largely responsible for the excellent laboratory course of crystal physics in the University of Cambridge. He has incorporated the essential principles of Voigt's standard treatise and achieves considerable condensation of the essential mathematics by the use of tensor notation.

It is assumed from the outset that the university student to whom the book is addressed has mastered the elements of physics and crystallography, so that his knowledge of mathematics includes vectorial algebra and can be readily extended to co-ordinate geometry and Cartesian tensors. Even so, the brevity of the more difficult passages gives the impression that they are intended to supplement a course of lectures conscientiously attended. It is to be hoped that a new edition will seek a happier solution of how to present the necessary mathematical equipment. Further chapters on the magnetic properties of crystals, on ferro-electrics and the physical problems of crystal growth are topics which the author may also be tempted to include, if only on account of their possible application to industry.

F. A. BANNISTER

Fertility and Hatchability of Chicken and Turkey Eggs

Edited by Lewis W. Taylor. Pp. xi+423. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1949.) 40*s*. net.

IT is rather unusual for so many experts to take a hand in the production of a book of the kind under review. This should make it much more valuable. Dr. Taylor has been instrumental in securing the services of nine of America's leading experts in their own particular sphere.

At first glance the book gives one the impression that it is 'dry' and not easily understood; but, as one dips into its pages, each chapter becomes more fascinating and exceedingly helpful to those concerned with the problems dealt with. While admitting that there are certain pages in the book which are of a technical nature, a large amount of the material can be understood by the average layman. Nevertheless, it undoubtedly is a book for the teacher and student, and I should imagine that it will find a place on many library bookshelves.

It is difficult to refer to any particular chapter, because all are well written, and the matter equally well arranged. There is no doubt, however, that Chapter 6, "Physical Conditions in Incubation", is of great value to the practical man. The writer alludes to many important points in connexion with successful incubation, some of which are still doubted by operators.

The book is illustrated by a series of excellent photographs. It is well printed and the general make-up is very pleasing to the eye. There are many reference tables and a good index. The glossary puts a finish to a book which is likely to enjoy a good sale. It certainly should find a place in all agricultural colleges and farm institutes. H. HOWES

Rinehart Mathematical Tables, Formulas and Curves

Compiled by Prof. Harold D. Larsen. Pp. viii+264. (London: Chapman and Hall, Ltd., 1949.) 15*s*. net.

THIS book, as its title suggests, contains much information not normally included in a book of mathematical tables, and, although there are volumes in existence in which tabular material is supplemented by lists of formulæ, the latter usually occupy a few pages at most, and do not form a main part of the work.

In this case, 160 pages of tables are provided, leaving a further hundred pages for the formulæ and curves. The selection of the contents (to quote the preface) is based on a survey specifically carried out in order to determine which tables and formulæ are most frequently needed for use in mathematics, engineering and physics. Part 1 contains the usual tables of logarithms, trigonometrical functions, exponential functions, etc., to five-figure accuracy, and also some statistical information, nowadays of increasing importance. It would be impossible in the space of a short review to list in detail the contents of Part 2, which are wide and varied. In particular, there are forty-three derivatives, 430 indefinite integrals and sixty-four definite integrals, fifty-two series, and about eighty diagrams of well-known mathematical curves.

The book is well bound, and the general arrangement and the quality of the reproduction are most commendable. J. H. PEARCE

British Fishing-Boats and Coastal Craft

Part 1: Historical Survey. By E. W. White. Pp. 54 + 20 plates. (London: H.M. Stationery Office, 1950.) 2*s*. net.

THE first impression given by this catalogue is that it is just a paraphrase of the earlier work, "British Fishing and Coastal Craft", by the late Mr. G. S. Laird Clowes. This is unfortunate, for it conceals much useful new material which has been put into it. I feel that it could have been re-cast in such a way as to do more justice to both authors. This is only a very minor grumble. The catalogue is a most valuable work at a most reasonable price.

There are some small points which might be given more consideration in a future edition. First, I do not feel that enough attention has been paid to Captain H. Lovegrove's article in the *Mariner's Mirror*, which appears to give a clear picture of lute sterns on the Sussex coast in Elizabethan times. Secondly, William Daniell's prints show many illustrations of Scottish fishing boats on the west coast of Scotland in the early nineteenth century which could be consulted with advantage. Double-ended decked smacks, Norse-type open boats rigged as two-masted luggers, and large cutters are all in evidence. Finally, if it was necessary to cite the testimony of Julius Cæsar three times to prove the existence of early curraghs, use might have been made of the Massiliote "Periplus" to show that they were employed in the tin trade with Brittany five hundred years earlier. T. C. LETHBRIDGE