

there is no part of the anatomy of the engine which has not a place in the work. Metric measures have been converted by the translator, but the tabulated dimensions of Continental engines have been retained in millimetres in parallel columns.

(5) The cost of mixing and laying concrete is essentially governed by local circumstances, and it would be unsafe to generalise from isolated results, however carefully they may have been collected. The authors have been at great pains to collect information based upon work done in the United States, and no doubt with due allowance for the difference in the cost of labour and materials and the varying rate of output of work, much of their conclusions would be applicable to other conditions and places. But the work is not wholly confined to questions of cost, for it contains much valuable, if incidental, information concerning the making of concrete in bulk, form of moulds, reinforcement for ferro-concrete and other matters pertaining to construction in this material. It is to be regretted that so much prominence was given to costs, though the title of the work very clearly points to this as the dominant feature. Nevertheless, with due allowances, as a reference book there is much in it for the architect and engineer, and it is eminently satisfying to know that the figures were obtained by close application and systematic study of construction work for many years.

OUR BOOKSHELF.

Manual Training Woodwork Exercises Treated Mathematically. A Scheme for Linking up Practical Mathematics with Woodwork; including a Complete Course of Mensuration. By F. E. Drury. Pp. xi+215. (London: G. Bell and Sons, Ltd., 1912.) Price 2s. 6d.

As is indicated by the title, the author's object in preparing this volume has been to show how practical mathematics may be linked up with woodwork in the form of mensuration, &c. The book is intended for use in preparatory day trade schools, some secondary schools, and in evening continuation and technical courses of an elementary character. It is stated that the work of calculation is intended to be an application of the principles received in lecture and experimental classes, but it will be seen that these may, in a large measure, be imparted by the woodwork teacher if he has a generous allowance of time. With this end in view, the book contains a very good systematic course in mensuration, elementary algebra, and the construction and properties of simple graphs; the application of these principles to the course of woodwork exercises provided is clear and good, and the book should be very useful to manual instructors who are expected to train boys both in practical mathematics and woodwork.

As to the desirability of adopting this course
NO. 2246, VOL. 90]

there may be difference of opinion, especially with reference to evening schools, where the time permitted for actual work in the wood shop is very limited. Any reason which may be advanced for bracketing together woodwork and mathematics may equally well be applied to other branches of practice, with a consequent multiplication of the number of classes in practical mathematics carried on in the same building, each no doubt selecting those portions which appear to suit the particular trade involved. It is fairly obvious that such a plan—already adopted in some institutions—cannot fail ultimately to lower mathematical standards. The author has been successful in carrying out his views in the book, and, if it be regarded as a further means of interesting students in the woodwork shop in their work in classes under the supervision of mathematical teachers, it can be highly commended. The woodwork examples are good, and the book is well and clearly illustrated.

Compendio Elemental de Zoología. By Ángel Gallardo. Pp. 360. (Buenos Aires: Ángel Estrada y Cia, 1912.)

PROF. ÁNGEL GALLARDO has prepared a useful elementary text-book of zoology, specially adapted for the Argentine Republic. After an introduction contrasting organisms and inorganic things, comparing plants and animals, describing cells and tissues, and the early stages of development, discussing the factors of evolution and other generalities, the author passes to a rapid survey of the animal kingdom. The book is very clearly and tersely written, with numerous illustrations, for the most part admirable. In the classification adopted, "Tipo vii., Lofostomas," includes the three classes—Rotifers, Bryozoa, and Brachio-pods—characterised by the tentacular apparatus at the mouth. Still more doubtful is "Tipo viii., Gusanos," which includes Annelids and Plathelminthes, characterised by having trochosphere larvæ.

Twelve Moons. By Frances A. Bardswell. Pp. 90. (London: Elkin Mathews, 1912.) Price 2s. 6d. net.

In twelve short sections devoted to the respective months of the year, the author expresses pretty sentiments upon the changing beauties of the countryside. She loves the poetry of nature; and her words will awaken sympathetic response in readers who are content to contemplate the surface of things. The old proverb "February Fill-dyke" leads her to say: "To brim the ponds and flood the waterways is the mission of the month." As a matter of fact, the average rainfall of February in England as a whole is less than that of either January, August, October, November or December, though there are local differences. Possibly the explanation of the proverb is not that "deluges of rain" actually fall in February, but that the water-courses begin to fill up during that month as the result of the rise of the water-table due to the rainfall of preceding months.