

pre-war days, but largely disregarded when labour was plentiful and when the need for its conservation was not so manifest.

An authoritative and informing manual dealing with the whole subject is at the present moment much needed, and Mr. Hutton's book is a useful contribution to the subject; probably he intended it for no more. But it cannot in its present form be regarded as a standard work on the subject. It is curiously uneven. The scope of "Welfare Supervision" is outlined in an early chapter, but only touched upon very inadequately later; the subject of factory medical service—a matter of the utmost importance—is dealt with by another writer, who is allowed but limited space; recreation, which is just receiving much attention, and being thoroughly organised in many industrial centres, is represented only by a few instances from some of the factories of Vickers, Ltd.; while the last chapter, which introduces industrial unrest, and deals with it haphazard by a series of quotations, might have advantageously been omitted, for it openly seeks to drag the peace-making influence of the welfare movement into the unsettled turmoil of economic strife, from which it should be ever guarded.

The six appendices which reproduce from Home Office publications legal and other information do, it is true, give condensed and useful information on many points, but appendices often escape the reader. In fact, we regret that Mr. Hutton did not use all the space he allowed himself for discussing at greater length those branches of the subject with which he is best able to deal—industrial housing, transit, and feeding. The chapters dealing with these subjects are the best, and the information they contain as to how Vickers, Ltd., have dealt with the difficulties they had to face will be turned to, both now and in the future, by others with similar problems to solve. They are undoubtedly of considerable value, but we should like to have learnt more of the workers' point of view—as to whether they take any share in organising and administering, or whether they are just housed and catered for "like dumb-driven cattle." The workers' point of view is too often neglected by those who take a paternal interest in them, and there is a tendency to forget that (using Dr. Renton's words) "there is an inseparable relationship in varying degrees between all work and health and disease, and it is only by intimate knowledge of both that a correct conclusion can be reached, especially if, added to this, one has knowledge of the home conditions and habits of the worker."

OUR BOOKSHELF.

Applied Mechanics. Second Year. By H. Aughtie. Pp. 227. (London: G. Routledge and Sons, Ltd., 1918.) Price 2s. 6d. net.

THIS book opens with a very good discussion on the relations between movement and force; experimental evidence is obtained by use of a trolley

and vibrator. Engineers' units are used freely, in which the unit of mass is *g* pounds. We are rather uncertain, however, as to what exactly the author wishes us to understand by "1 lb. weight." The poundal absolute unit of force is explained, and mention is made of the dyne, but the engineers' metric unit of force of one gram weight or one kilogram weight is not mentioned. There is a slip on p. 11, where, in dealing with momentum, W/g is described as lb., instead of engineers' units of mass. Despite these minor blemishes, this section of the book is a good deal clearer than many similar discussions in other text-books. Some very readable matter on hydrostatics and hydraulic appliances follows, illustrated by appropriate experiments. The chapter on materials will be useful in laboratories possessing but small equipment and under the necessity of using extemporised apparatus. The drawings of apparatus throughout the volume are such as to enable the appliances described to be constructed from them.

Some of the illustrations in the sections of the book dealing with the transmission of motion and power could be improved, especially in the isometric drawings of pulleys and wheels; the distortion in some cases strains the readers' eyes in examining the drawings. The remainder of the book is devoted to the motion of bodies subjected to alternately decreasing and increasing acceleration, motion in a curved path, centrifugal force, and the speed control of engines. The treatment throughout is simple, and the book contains sufficient to interest the student and induce him to push on to the study of the higher branches of the subject.

Glossary and Notes on Vertebrate Palaeontology.

By S. A. Pelly. Pp. ix+113. (London: Methuen and Co., Ltd., 1918.) Price 5s. net.

IN this little book Mr. Pelly has made a praiseworthy effort to help the inexperienced reader of works on fossil backboned animals and the visitor to museums. It is a laborious compilation, suggested by many visits to the British Museum (Nat. Hist.), and consists of a series of brief memoranda, often quotations, arranged under the names of various extinct animals in alphabetical order. Some of the notes are apt and excellent, but most of them are so inadequate and so lacking in essentials that it is difficult to understand to what type of student they can be of service. A special feature is made of the derivation of each technical name, and in most cases the original Greek words are rightly chosen, but the English equivalents given are not always appropriate to the occasion. There are, however, unfortunate instances of bad guesses (such as those under *Goniopholis*, *Tremataspis*, and *Uronemus*), and the author would have done well to consult the old glossaries of Owen, Page, and Nicholson, which he appears to have overlooked. The book is well edited and remarkably free from misprints, and of a convenient size for the pocket.

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