

in using the phrase "*manner of manufacture*" when they mean simply "*manufacture*"—an error due to a misunderstanding of the archaic English used in the Statute of Monopolies.)

Compactness has been obtained by the use of a very direct style, in which words are economised, and by the omission of such padding as the Acts and Rules, which can be purchased for a small sum from H.M. Stationery Office. The selection of leading cases is judicious, and is presented in a form which enables their relevance to be readily understood. The book contains, in addition, a number of sensible suggestions, put forward with becoming modesty, as to the right determination of various unsettled points of law. It can be recommended with confidence not only to students, but also to manufacturers and others who may be interested in the movement for the reform of the patent system which was inaugurated by the British Science Guild's recent report on this subject.

*Mechanical Aptitude: its Existence, Nature, and Measurement.* By John W. Cox. (Thesis approved for the Degree of Doctor of Science in the University of London.) Pp. xiii + 209. (London: Methuen and Co., Ltd., 1928.) 7s. 6d. net.

THE object of this research was to inquire into the existence and psychological nature of what has been variously called 'mechanical ability', 'mechanical ingenuity' or 'mechanical sense'. A clear understanding of this would certainly be of great value in vocational guidance and selection and in certain branches of educational practice. The general lines of the research, method of treatment, and argument follow those already laid down by Prof. Spearman in his studies of intelligence. A number of tests demanding ability to handle and interpret mechanical models, diagrams, etc., was given to different groups and the results subjected to detailed statistical treatment. The author draws the conclusions that there does seem to be evidence in favour of the reality of a special mechanical ability not dependent on general intelligence alone and that this can be measured. If this work should be substantiated, the consequences will be very valuable, for it will be possible to select those children with the ability and give them every opportunity for its development, while those lacking it can be diverted from occupations where success depends upon it. The research is a very valuable piece of pioneer work and its conclusions may be pertinent to psychological theory.

*Einleitung in die physiologische Zoologie (Physikalische und chemische Funktionen des Tierkörpers).* Von Prof. Dr. Hans Przibram. Pp. vi + 182. (Leipzig und Wien: Franz Deuticke, 1928.) 10 gold marks.

THE increasing tendency of zoology to turn from the more purely morphological towards the functional aspects of the subject, and to utilise the data of chemistry and physics in their study,

has induced Prof. Przibram to write an introduction to physiological zoology which can act as a companion to his introduction to experimental morphology, and enable the student to gain a comprehensive outline of the subject before turning to one of the larger treatises. The work is divided into some thirty short chapters arranged in pairs, and dealing respectively with the physical and chemical properties of the different organs of the body: numerous references are given throughout the text: notes on the chemical composition, including formulæ, of substances referred to in the text are collected together in an appendix. In a small space the author has succeeded in covering a very large field and in giving an excellent outline of the subject of general physiology. The work could be read with profit by all students of physiology or zoology, but in the short time at their disposal will probably be found to range the field too widely to appeal to those studying within the narrower limits of human physiology. However, for all those who wish to know something of how animals of different species live, of their varying types of respiratory apparatus, of their modes of digesting and assimilating their food, of their secretions and excretions, their sense organs, or their reproduction, this short treatise can be thoroughly recommended for perusal.

*A Comprehensive Treatise on Inorganic and Theoretical Chemistry.* By Dr. J. W. Mellor. Vol. 9: *As, Sb, Bi, V, Cb, Ta.* Pp. xiv + 967. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1929.) 63s. net.

THE ninth volume of Mellor's "Comprehensive Treatise" covers the tervalent and quinquivalent elements, arsenic, antimony, bismuth, vanadium, columbium, and tantalum. These elements do not possess the exceptional interest of the earlier homologues, nitrogen and phosphorus, which were described in a separate volume, but they are very fertile in producing chemical compounds of the type of vanadium heptabromo antimonite,  $VBr_4$ ,  $SbBr_3$ ,  $7H_2O$ , which are vouched for by chemical analysis but have not yet been provided with satisfactory structural formulæ. In these circumstances the volume is likely to pass more quickly than would otherwise be the case to the bookshelf which contains the earlier members of the series, there to await trial by usage as a work of reference.

Even so, there are sections which can be read with interest and pleasure, since arsenious oxide has a lurid history as a poison, and the sulphide has played a large part in the development of our knowledge of the laws which govern the behaviour of colloidal suspensions: the allotropy of the elements also presents an interesting problem, as the term 'explosive antimony' reminds us, and finally, these metalloids have given rise to some of the best examples of compound formation in alloys. These details are, however, unimportant compared with the main fact that the author has completed another section of this task, and thereby increased proportionately the obligation of his fellow chemists to him.