

Practical Five-Figure Mathematical Tables

By C. Attwood. Pp. v+74. (London: Macmillan and Co., Ltd., 1948.) 3s.

ALTHOUGH the contents of this volume do not differ essentially from those normally to be found in books of this kind, many innovations have been introduced in the arrangement and presentation, and the author has spared no pains to ensure that the comparatively limited space available is utilized to maximum advantage and efficiency. In addition to the ordinary tables of common logarithms, there is a supplementary table covering the range 1.000-2.099 at intervals of 0.01, and a similar feature appears in the trigonometrical sections, where entries are provided at 1'-intervals for cotangents and cosecants up to 18° and for secants and tangents in the range 72-90°.

Great emphasis has been laid, both in the preface and in a final explanatory section, on the use of proportional parts. The author explains, by means of well-chosen examples, the various methods that are available for avoiding or reducing the inaccuracies produced by mean proportional parts. The use of smaller ranges, where necessary, has already been mentioned and occurs constantly throughout the book. Other methods include backward interpolation, the use of inverse tables, and Bessel interpolation with second-order differences. Several illustrations compare and contrast the results of their application.

Other tables supplied include squares, cubes, square and cube roots, reciprocals, exponentials and hyperbolic logarithms; and the author has been wise enough to ensure that all differences to be subtracted are printed in red. He claims that more than 95 per cent of the 160,533 possible combinations of mean proportional parts produce no error or an error of one unit in the last figure, while less than 0.6 per cent produce an error in excess of three units. In a few cases, where the error is liable to exceed five units, italic type has been employed as a warning.

The book is beautifully printed and should prove a valuable asset in all elementary numerical work.

J. H. PEARCE

Technical Literature

Its Preparation and Presentation. By G. E. Williams. Pp. 117. (London: George Allen and Unwin, Ltd., 1948.) 7s. 6d. net.

MR. G. E. WILLIAMS' book is an expansion of his paper "The Presentation of Technical Literature", published in the *Journal of the Institution of Electrical Engineers* in 1944. To the extended sections of that paper Mr. Williams has now added chapters on the preparation of manuscripts, the art of sub-editing and on illustrations, and he also appends some notes on editing standards. In these respects his book differs from that of Prof. Kapp on "The Presentation of Technical Information", and although similar in scale and alike in their emphasis on the technical ideal that the treatment of a theme and the choice of words should be determined by their fitness for the purpose to be served, there are marked differences between these two books. Mr. Williams is concerned only with the writer, whereas Prof. Kapp deals with the lecturer also.

While the psychological approach is not overlooked, Mr. Williams emphasizes the factor of interest in his introduction—psychological principles bearing on the communication of knowledge are discussed separately in an appendix. Here Mr. Williams seems to be less successful than Prof. Kapp, though it is only fair to point out that these few pages are intended to

serve no more than as an introduction to the subject, and that, unlike Prof. Kapp, Mr. Williams gives his readers clear guidance as to where further help may be sought. He includes a bibliography which, if not extensive, is adequate and discerning. The book is severely practical. It is lucid, well written and much to the point. For all the merits of Prof. Kapp's book, that of Mr. Williams will be preferred by many—and those not only the engineers and physicists primarily addressed—because, although slightly shorter, it is comprehensive and guides the student to the further sources where he may study in greater detail, particular questions that arise in writing technical literature.

R. BRIGHTMAN

Notions fondamentales sur les vernis et peinture
Par Louis Kientz. Pp. xxi+234. (Paris: Gauthier-Villars, 1947.) 475 francs.

THE purpose of this book is "to inform the technician on the nature and properties of paints and varnishes". Such a limited aim the work fairly well achieves. Thus there are chapters on resins, oils, pigments, paint testing and the like, where the information, if not novel in tenor or presentation, is of the kind likely to be useful to the paint technologist. However, some unfortunate statements have found their way into the text. Thus, to condemn fillers as solely useful for cheapening a paint, and as finding no place in a first-quality product (p. 70), is unnecessarily exclusive. It is a great pity that nothing better to illustrate the text could be found, assuming that illustrations are necessary, than a handful of ill-executed and uninformative line-drawings. The title is most misleading. It is true that a section will be found devoted to the theoretical concepts of physical chemistry, and throughout the text are scattered discussions on such matters as the mechanism of oil oxidation, structural formulæ of complex molecules, etc.; but these disquisitions are marred by a diffuseness and a lack of precision that render them more confusing than enlightening. Reference may be made, in illustration, to the inadequate treatment of viscosity and "rigidity" [*sic*] (p. 16), by which is meant anomalous viscosity, and of the classification of drying, semi- and non-drying oils (p. 45). Such imprecision, it must be admitted, is inescapable in a work almost purely descriptive; even the section on paint-testing is almost wholly uncritical. The absence of an index must seriously limit the value of this book as a work of reference.

Brachiopoda and Mollusca from the Productus Limestone of the Salt Range

By Dr. F. R. Cowper Reed. (Memoirs of the Geological Survey of India. Palæontologia Indica, New Series, Vol. 23, Memoir No. 2.) Pp. xii+596+65 plates. (Calcutta: Geological Survey of India, 1944, distributed 1948.) Rs. 63.2 or 96s.

ONLY a palæontologist who has lived through much of the development of his science could produce a volume such as this. The brachiopod and molluscan fauna of the Productus Limestone is described in detail with a wealth of references. Though only two new genera, *Blandfordina* (Limidæ) and *Palæolecanites* (Lecanitidæ), and one new sub-genus, *Haydenella* (*Productus*), are found necessary, there are no fewer than 177 new species and 114 new varieties. In this revision of the fauna certain of the conclusions reached by Waagen in an earlier monograph are rejected. In particular, the supposed