

The Electronic Engineering Master Index

A Subject Index to the Contents of Electronic and Allied Engineering Publications printed throughout the World from January 1947 through December 1948. Pp. xiii+339. (New York: Electronics Research Publishing Co., Inc., 1950.) 19.50 dollars.

THIS book is the third of a series covering electronic and allied engineering literature published throughout the world from 1925 onwards. It contains a cumulative index by means of which all entries pertaining to a given subject, whether they appear in this or in the earlier volumes, may be rapidly located. The present volume contains more than 18,000 entries taken from 230 major publications issued during 1947 and 1948, including 5,500 electronic and allied patents issued by the United States Patent Office. In addition, there is a bibliography of engineering books, but this is limited almost entirely to books published in the United States, although the editor expresses the hope that subsequent editions will include the books of all the technical publishers of the world.

The system employed in the "Master Index" is the simple one of classification in alphabetical order of main subject headings with sub-headings where necessary; for example, "ACOUSTICS" is followed by "ACOUSTICS, Electrical Analogies", "ACOUSTICS, Electroacoustics", "ACOUSTICS, Hearing", etc. As one would expect, with such a system a given entry may appear more than once. Thus, some of the entries under "AIRCRAFT Direction Finders" also appear under "DIRECTION FINDERS". Those entries which do not so appear seem to be of lesser importance; but in any event they are readily found if the user first consults the cumulative subject index, where he finds the numbers of all pages on which appear entries relating to direction finders. In some cases the classification may be a little surprising; thus articles on diversity reception are listed under the heading "RECEPTION, Selectivity"; but again use of the cumulative subject index ensures that the references are not missed. Cross-referencing is not dictated solely by the wording of the title; thus, an article entitled "Dipole with unbalanced feeder" appears under "ANTENNAS", and also under "TELEVISION, Antennas", since, as reference to the article shows, it is concerned with a form of antenna commonly used for television reception.

The book should be of great value to workers in the electronic field, and particularly to documentation units and patents departments.

Boron Trifluoride and its Derivatives

By Prof. Harold Simmons Booth and Prof. Donald Ray Martin. Pp. ix+315. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1949.) 40s. net.

THE chemistry of boron trifluoride has progressed rapidly during the past twelve years, and a monograph on this subject is very timely.

The preparation, analysis, physical and general chemical properties of boron trifluoride and the fluoroborates are dealt with concisely and adequately. The key sections of a book on boron trifluoride must, however, be those dealing with its use as a co-ordinating agent and in catalysis, and it is this part which is most open to criticism. While it is clear that the authors have covered the literature in detail, they make little attempt to present a critical, balanced and correlated account of the vast amount of pub-

lished work, good, bad and indifferent. The main value of the monograph thus lies in the bibliography of almost a thousand references going up to January 1948; the patent literature, in particular, has been thoroughly surveyed and indexed. The majority of the errors in the monograph are small and obvious; it is to be hoped, however, that a later edition will include the evidence which refutes claims to have prepared compounds of argon and boron trifluoride.

Merely by reading this book, one can see many topics for fundamental research on the chemistry of co-ordination compounds, and for the further use of boron trifluoride as a catalyst. The task of collecting all the relevant data can have been no easy one, and the authors are to be congratulated on producing a book which, if not stimulating, is thought-provoking and invaluable to those interested in co-ordination or catalysis.

R. N. HASZELDINE

An Introduction to Electronics

By J. Yarwood. Pp. ix+329. (London: Chapman and Hall, Ltd., 1950.) 28s. net.

THIS book was primarily written for use by physics and engineering students, either post-graduate or at the universities, who are finding a knowledge of electronics of increasing importance in their work and in preparing for their final examinations. It does not pretend to contain original work, but the author has succeeded in presenting his subject in a very lucid and logical manner, so that the book can be read with interest not only by students but also by all new workers in the electronics field.

In the preparation of his subject-matter, Mr. J. Yarwood has successfully drawn on his experience as a lecturer on this subject to technical college students. He has treated the subject from a physicist's rather than from an engineer's point of view, and has been careful to avoid getting involved in detailed descriptions of engineering applications of the principles that in general he so admirably describes. The first few chapters on basic electronic theory, including fundamental electricity and magnetism and alternating-current theory and the emission and motion of electrons, form an excellent introduction to the operation of thermionic valves and their uses in amplifiers, oscillators and modulators. Other chapters describe the operation of photo-electric and cathode-ray tubes, electron optics and the electron microscope, and the operation of ultra-high-frequency devices including the magnetron and the klystron.

A chapter on contact rectifiers and amplifiers would be a useful addition, but otherwise the book is a very good "Introduction to Electronics".

L. E. RYALL

Insect Life

By Arthur Smith. (Puffin Picture Book 66.) Pp. 32. (Harmondsworth: Penguin Books, Ltd., 1950.) 2s.

SOONER or later it was inevitable that one of the popular Puffin books for children should deal with insect life. This has been prepared by Arthur Smith and maintains the generally high standard of its predecessors. The treatment of each insect or family of insects usually begins by consideration of its better-known characteristics—the chirping of the grasshopper, the long proboscis of the hazel-nut weevil, the 'cuckoo spit' of the frog-hopper—and details of life-history and anatomy are given after the young reader's attention has been caught. Nearly every example chosen is beautifully illustrated in photogravure and can scarcely fail to capture the interest of anyone who opens the book.