BOOK REVIEWS

Photocells and Their Application. V. K. ZWORYKIN AND E. D. WILSON. *John Wiley & Sons*, New York, N. Y., 1930, xi + 209 pp. (illustrated), $2.50. The authors have succeeded in their avowed attempt to present their material in a manner "not too technical for the untrained man nor too shallow for the specialist." The untrained reader is lead by logical and natural steps to an understanding of photo-electric theory as he follows the historical development of the science through the experiments of Hertz, Hallwachs, Elster and Geitel, and Lenard. The inadequacy of classical physics to explain black body radiation and the release of electrons in the photo-emissive effect becomes apparent and thus the reader sees the necessity for quantum theory as proposed by Planck and applied by Einstein.

Most of this first section is devoted to photo-emission though two chapters are devoted to photo-conductive and photo-voltaic effects.

Commercial photo-cells, their manufacture, and characteristics are discussed in some detail and in a manner which should prove valuable to the research worker as well as to the less trained user.

The use of the photo-cell in conjunction with thermionic tubes is described in the second half of the book. In this part also there appears to be a happy blending of the theoretical and the practical. Some of the applications which are treated are: sound motion pictures, facsimile transmission, television, relay devices, automatic inspection and control devices, and mechanical reading. While the description of these devices is not specific enough to enable "the amateur to build his own set," the details given do impart a fair amount of information as to the general principles involved.

The authors have combed the literature for material to supplement their own broad experience in the field. Over one hundred references are cited and a comprehensive bibliography is given. C. M. T.