

## BOOK REVIEWS

**Photography—Its Principles and Practice.** C. B. NEBLETTE. 2nd edition. *D. Van Nostrand Co.*, New York, N. Y., 1930, 615 pp., \$6.50. The original 1926 edition has been a useful textbook for the beginner and even more advanced students of photography. New material in the 1930 edition includes information on the modern theories of latent image formation, the theory of sensitivity of emulsions, the constitution of color sensitizing dyes, and the theory of development and fixation. The author appears to be unaware of the existence of the *Transactions* and *JOURNAL* of the Society of Motion Picture Engineers, and it is unfortunate that the extensive information on the theory and practice of photography which they contain has been overlooked.

The chapter on color photography is inadequate and could have been extended at the expense of some of the chapters dealing with little used processes.

Any book for the student which deals with practice should dwell, if at all, on those applications which are of importance in every-day life. The most important applications of photography are to photomechanical methods and motion pictures, neither of which are mentioned. However, a perusal of the book and especially the chapters on sensitometry and the theory of development is recommended to all motion picture technicians.

J. I. CRABTREE

**Introduction to Physical Optics.** JOHN KELLOCK ROBERTSON. *D. Van Nostrand Co.*, New York, N. Y., 1929, \$4.00. Optics is unquestionably the most difficult branch of physics for the reason that there are no simple phenomena with which the student may begin his study of the subject. He must begin to study it all at once, so to speak, whereas in mechanics, for example, he may begin with statics and leave the more difficult concepts of dynamics until later. In this sense, any work on optics must of necessity be more in the style of a treatise than a textbook. It seems fair to say that the "Introduction to Physical Optics" by John K. Robertson is the closest approach to a textbook that the reviewer has examined. The author has managed his material so skillfully that it seems to satisfy well the avowed purpose of the book, namely, to supply "the needs of two classes of students: (1) those who, at the outset of an intensive study of physics, are laying a thorough foundation for subsequent work in the theory of optics; (2) those specializing in other branches of science, for whom a general knowledge of modern views of light is desirable and, indeed, frequently indispensable. It is hoped, too, that the treatment is such that an appeal may be made to the general reader who desires to have some acquaintance with the fascinating problems of modern physics—problems many of which are most directly approached through the study of light."

The early chapters of the book deal with wave motion and the interpretation of the phenomena of reflection and refraction on this basis. This is followed by a short discussion of lenses and optical instruments. There are then six chapters dealing with the classical phenomena such as interference, diffraction, and polariza-

zation, which are followed by a discussion of the electromagnetic theory of light, the origin of spectra, the quantum theory, and radiation potentials. The volume ends with a discussion of the more recent attempts to fuse the two conflicting theories concerning the nature of light.

The author has given particular attention to the clarity of presentation, which is assisted by a large number of excellent photographs and line drawings. A set of problems *with answers* is given at the end of each chapter. These are always useful for classroom instruction but perhaps even more for the technical man whose optics are a bit rusty and who desires to work up the subject by himself.

A. C. HARDY

**Fabrikation und Prufung der photographischen Materialien (Manufacture and Testing of Photographic Materials).** W. NAUCK AND E. LEHMANN. *Union Deutsche Verlagsgesellschaft*, Berlin, Germany, 1928, 274 pp., 68 illustrations. The first section of this book is intended for the beginner and contains little of interest to those engaged in manufacture. It deals with the manufacture of photographic materials and contains the following chapters:

(1) The Preparation of Sensitive Emulsions and Photographic Papers and Plates; (2) Photographic Raw Stock and Baryta Paper; (3) The Manufacture of Film Base; (4) Recovery of Solvents Used in Film Manufacture; (5) Coating Emulsions on Glass Plates; (6) Coating Emulsions on Paper; (7) The Coating of Emulsions on Films.

The second section of the book, which deals with the testing of photographic materials, is of much greater value and is a creditable assemblage of the published information on the testing of gelatin and chemicals used in photographic manufacture, the analysis of film base materials, the testing of their physical properties, the analysis of emulsions, and the sensitometry of photographic materials.

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