BOOK REVIEWS

Bluebook of Projection (Sixth Edition). F. H. RICHARDSON. *Quigley Publishing Co.* (New York, N. Y.), 1935, 709 pp. The new sixth edition is essentially a revision and modernization of the earlier fifth edition which appeared in three volumes in 1929. The new edition, complete in one volume, is written in a manner that is informal, understandable, and, as far as possible, non-technical.

Each of the thirty-two chapters is prefaced by a group of questions, the answers to which are found in the text. The first thirteen chapters cover: the fundamental concepts of electricity and electrical engineering; illumination, including source, projection lens, and screen; film; the projector and the projection room. The remaining nineteen chapters cover the various phases of sound reproduction. In contrast to the earlier edition, little space has been given to sound recording, and more space to generalized discussions of the electrical and mechanical fundamentals involved in sound reproducing equipment, as well as its servicing and maintenance. J. STREIFFERT

Agfa Schmal-Film Handbuch. H. LUMMERZHEIM. *Walther Heering Verlag* (Harzburg, Germany), 1935, 118 pp. This book is addressed to the beginner and also to those who have had some amateur or professional experience with 16-mm. film. In the first chapters the dimensional, economic, and safety aspects of using 16-mm. amateur standard film are discussed in contrast with those of 35-mm. film. The familiar matter on cameras, projectors, and handling film is included. Short, separate chapters are devoted to single-frame enlargements and reproduction of sound and color.

The beginner is provided with a clear, detailed description of the processes that he will use. No effort is made to treat the more advanced phases of photoplay production, trick work, or special technics.

The American reader will be interested in the description of Agfa equipment for European use, the chapter on Ozaphane film, and one on German legal regulations affecting "public showing." C. E. IVES

The Ciné-Amateur's Workshop. D. C. Ottley. *Geo. Routledge & Sons, Ltd.* (London), 1935, 138 pp. This little book should delight the heart of the man who likes to "tinker around" and who also is interested in amateur movies. The essential tools necessary for building many accessories are described. Some of the equipment for which detailed working directions are given are: the tripod. the lens hood; an iris diaphragm for "fades"; a mask box; processing apparatus for development; editing equipment, such as a splicer, rewinder, and "cone enlarger" for projecting single frames. The construction of a printer and a titler is described. Several chapters are devoted to the presentation of the finished picture. A model theater for the home is treated in detail. Making sound pictures with the disk recording system is discussed and, finally, storage of films. The book is indexed, and contains a number of interesting photographic illustrations. G. E. MATTHEWS

A Fugue in Cycles and Bels. J. MILLS. *D. Van Nostrand Co.* (New York,

N. Y.), 1935, 269 pp. Although the author's intent was obviously to present his material for the benefit of those whose interest lies mainly in music—and it was for that reason that technical material such as plots and graphs was relegated to a special "Part Four" of the book—there is much of interest and value to anyone whose business it is to deal with sound, by whatever mediums it may be recorded and reproduced.

The four main divisions of the book are: From Pythagorus to Bell; Telephonic Studies of Hearing; An Electrical Future for Music; and Plots and Graphs. The approach is generally historical, and many analogies to everyday experiences are used for the benefit of those who are more musically minded than technical.

The first section discusses the physiological perception of musical tones, simple apparatus for reproducing tones, and musical scales and harmonics. In the second section is a simple discussion of the range of aural perception, loudness, and the translation and transmission of sound. The third section is devoted to the power output of musical instruments, acoustics, noise, and teaching aids. The technical charts, tables, and diagrams concentrated in Part Four constitute a valuable collection of data for motion picture engineers. S. HARRIS

Einführung in die Angewandte Akustik. H. J. VON BRAUNMÜHL AND WALTER WEBER. *S. Hirzel* (Leipzig), 1936, 216 pp. The field of acoustics has in recent years been covered extensively in various German books of the "Handbuch" type. While such treatises are invaluable for reference purposes, they are generally too comprehensive for the reader who wants to gain a general knowledge of the more important developments in the several divisions of modern applied acoustics. It is to this type of reader that this book will appeal particularly.

It begins with a short discussion of the fundamental physical and physiological principles of acoustics. This is followed by chapters dealing with sound measurements, microphones, loud speakers, sound recording, the composition of sound waves of speech and music, sound reproduction, and the acoustics of rooms. The chapter on microphones is especially good, a subject to which one of the authors, Dr. Von Braunmühl has made notable contributions by the development of directional condenser microphones. Less satisfactory is the section on loud speakers, which contains little of the more recent European and American advances. The various methods of recording sound are discussed briefly but rather broadly. Among the optical or semi-optical systems are described such recent developments as the multi-track, variable-width, the push-pull, and the Miller mechanographic methods. The lateral-cut type of phonograph record is discussed in considerable detail, whereas the hill and dale record is mentioned but briefly. Several pages are devoted to a discussion of magnetic recording on steel tape. The chapter on sound reproduction discusses various types of distortion and their effect upon sound quality. The important subject of the acoustics of rooms is treated in a single chapter, but the authors have used excellent judgment in the choice of the material discussed.

An American reader may feel that the European developments have been given undue emphasis, as evidenced by the fact that by far the majority of references are to German sources. This, however, should not detract from the value of the book to the sound technician, as he has readily at hand a number of excellent books in which the American contributions, except those of most recent date, are adequately covered. E. C. WENTE.