1952 Nominations

Candidates for election to national office of the Society are now being considered by the Nominating Committee. The eleven vacancies which will occur at the end of 1952 and are to be filled by this year's election are the offices of President, Executive Vice-President, Editorial Vice-President, Convention Vice-President, Secretary, two Governors from the West, two Governors from the Central area, and two Governors from the East. Names of the incumbents will be found on the inside back cover of each issue of the *Journal*.

Members in the Honorary, Fellow and Active Grades are invited by the Chairman of the Nominating Committee to submit their suggestions for candidates at the earliest possible dates. Address them to Earl I. Sponable, Movietonews, Inc., 460 W. 54th St., New York 19, N.Y.

Papers on Photographic Instrumentation

Instrumentation is the subject of this year's symposium of the Society of Photographic Engineers, to be held on June 4 and 5 at the Naval Ordnance Laboratory, White Oak, Md., according to information from SPE President Edward K. Kaprelian. The symposium will cover equipments, materials and techniques involved in the recording of data. Papers relating to high-speed cinematography will not be presented. Information about possible instrumentation papers will be welcomed by the symposium chairman, D. Max Beard, 4304 S. Capitol, Washington 20, D.C.

Book Reviews

Television Engineering (Second Edition)

By D. G. Fink. Published (1952) by McGraw-Hill, 330 W. 42 St., New York 36. i-xiv + 690 pp. + 12 pp. appendix + 19 pp. index. 512 illus. 6 × 9 in. Price $8.50.

Mr. Fink is one of those all too rare individuals—an engineer who can write. His previous books have been noted for their clear, lucid style and one would be disappointed if this one were not up to his previous standards. As a matter of fact, it is, if anything, superior to his earlier books in this respect and he has succeeded in turning out a text book for television engineering which is extremely clear and well written.

The book covers the entire field of television engineering starting with the fundamentals and progressing to a fairly detailed description of commercial television transmitting studio and receiving equipment. Two chapters of the book are devoted to an especially good description of color television which includes a consideration of color fundamentals and an objective study of the various systems which have been proposed for the transmission of television pictures and color. Television engineering covers such a wide variety of subject matter, drawing as it does upon combinations of practically all of the physical sciences, that any attempt to cover the entire system in one book will inevitably result in treatment which will seem superficial to the specialists. For example, in his discussion of radio wave propagation, Mr. Fink barely mentions the important work which was done by the FCC Ad Hoc Committee in connection with the determination of a terrain factor which describes the deviation of the median signal intensity from the smooth earth value because of the irregularities in the earth surface. Again, his discussion of the definition obtainable from the various components in the television system is entirely in terms of the resolving power of the various components. He must be ignoring the important work of Schade and

others who have shown that this is not an adequate criterion for picture definition.

The treatment of such a wide variety of subject matter probably leads inevitably to errors of fact which occur from time to time in the book. For example, an equivalent circuit which is supposed to show the input impedance of a balun is shown in Fig. 283; this circuit has a series LC circuit presumably resonant at the center of the frequency band shunted across the input terminals, so that input impedance of this frequency can be a short circuit. Again, on page 326, there is the following description of defraction of energy past the horizon: "Defraction occurs when the instant energy, following tangentially on the rim of the obstacle, is re-radiated from absorbing points on the rim." Even aside from the contradiction in terms involved in re-radiation from an *absorbing* object, this is surely not an accurate description of the phenomena of defraction.

The criticisms of the book described above were meant to illustrate the inevitable difficulties which arise in covering so much territory in one volume and not to deprecate what, in general, represents a very excellent job in doing what it was intended to do. The beginning student of television engineering or the specialist attempting to obtain a broad background in fields other than his own will find the book well organized, readable, and, with a few exceptions such as those noted above, accurate.—*McIntosh & Inglis*, Consulting Radio Engineers, 777 14th St., N.W., Washington 5, D.C.

Prism and Lens Making (Second Edition)

By F. Twyman. Published (1952) by Hilger & Watts Ltd., 98 St. Pancras Way, London, N.W. 1. Distributed in U.S.A. by the Jarrell-Ash Co., 165 Newbury St., Boston, Mass. i-viii + 590 pp. + 27 pp. appendix + 5 pp. bibliography + 7 pp. index. 260 illus. 5½ × 8½ in. Price $11.25.

Although this is called a second edition of Twyman's 1942 book on prism and lens making, it is so much larger than the original (629 pages against the former 178) that it might almost be regarded as a new work. Where the previous treatment was stilted and severe, the new is easy to read and full of anecdotes and illustrative material of every kind. Indeed, the number of references to both ancient and recent authorities is extraordinary, and the writing is in the best tradition of Rayleigh or Dennis Taylor.

The chief charge against the previous edition was that only the procedures and techniques in use by Adam Hilger Ltd. were described. This was not very surprising as Mr. Twyman is the *emeritus* Managing Director of Hilger's, but in the new edition this is no longer the case. The author has gone to the greatest trouble to ascertain the methods used by other manufacturers (mainly, however, in England), and has described them impartially. This of course increases the value of the book very greatly, since Hilger's production is small in quantity but wide in variety and of the highest quality, while in some other companies the need for large-scale or mass production of lower-grade lenses has led to the development of entirely different manufacturing procedures.

In addition to a survey of the regular methods for the grinding, polishing, centering and cementing of lenses and prisms, several new chapters have been added dealing with such subjects as optical crystals and plastics and the manufacture of optical elements from them, microscope objectives, large astronomical objectives and mirrors, the surface treatment of lenses, spectacle lenses, and an excellent summary of the methods available for the generation of nonspherical surfaces. Almost 100 pages are devoted to the testing of optical work, both on the individual surfaces and on the completed systems. The tests of Fizeau, Foucault, Newton, Hartmann, Zernicke, and others are fully described, and in a separate chapter the applications of the author's well-known interferometers receive extensive treatment. The nature of glass and its annealing, and workshop tests for optical glass, are well covered.

Among the useful appendices there is a glossary of equivalent terms used in the optical industry in English, French and German. There is an extensive bibliography, and a good index. The paper and printing are excellent, but the review copy as received was poorly bound and

the cover was already falling off. Misprints are negligibly few. This excellent book can be very strongly recommended to all who have a close connection with the optical industry, or any occasion to grind and polish a lens.—*R. Kingslake*, Optical Design Dept., Hawk-Eye Works, Eastman Kodak Co., Rochester 4, N.Y.

Dynamics of the Film

By Joseph and Harry Feldman. Published (1952) by Hermitage House, 8 W. 13 St., New York 11. 241 pp. + 3 pp. bibliography + 2 pp. periodicals listing + 7 pp. index. Illustrated. 5½ × 8 in. Price $3.50.

The main risk in attempting to "popularize" a difficult subject, especially in the field of aesthetics, lies in depriving it of all human and artistic warmth and in reducing it to a mere mechanical stratagem.

In this pitfall is precisely where the Messrs. Feldman have landed. Their book, intended purposely "for the BIG audience of movie-goers," fails to convey the meaning and essence of a film's overall dramatic impact. It is a case of not seeing the forest for the trees, and their analysis of the basic elements of a film constitutes a *reductio ad absurdum* of the approach they have chosen.

To some extent, they seem aware of their predicament. They try to tone down their dogmatic over-simplifications by hedging with carefully worded reservations. One must regretfully state, however, that the book's worthy aim of explaining the nature of film art to the general public falls very short of its fulfillment.—*George L. George*, Screen Directors Guild, 133 E. 40 St., New York 16.

Standards for single-line diagrams for use in both power and communication work combined in one volume in The American Standard Graphical Symbols for Single (One) Line Electrical Engineering Diagrams, Z32.1.1-1951, published by the American Standards Association, 70 E. 45 St., New York 17, at $1.40 per copy. This standard coordinates and modifies the single-line diagrams contained in the American Standard Graphical Symbols for Electrical Power and Control, Z32.3-1946, and for Telephone, Telegraph and Radio Use, Z32.5-1944.

The American Institute of Electrical Engineers and the American Society of Mechanical Engineers were sponsors of the new standard, which contains 81 sections covering symbols for almost all electrical engineering work in the fields of power and communication. Sample diagrams show the use of the single line drawing in illustrations of a laboratory sound system, a microwave test setup telephone repeater and line equipment, and power equipment.

Test films are the customary tool for checking picture and sound performance in theaters, service shops, in factories and in television stations. Twenty-seven different test films in 16mm and 35mm sizes are produced by the Society and the Motion Picture Research Council. Write to Society Headquarters for a free catalog.

Six American Standards have been added to the Motion Picture Set of 60 which the Society has had available for sale. To holders of the present set the Society has made available the six new standards: PH22.11-1952, PH22.24-1952, PH22.73-1951, PH22.74-1951, PH22.76-1951 and PH22.82-1951. The price is $1 plus 3% sales tax on deliveries in New York City.

The new set of 66 standards in a heavy three-post binder with an index is available at $14.50 plus 3% sales tax on deliveries in New York City; foreign postage is $.50 extra.

All standards **in sets only** are available from Society Headquarters. Single copies of any particular standard must be ordered from the American Standards Association, 70 East 45th St., New York 17, N.Y.