

physical properties and constitution of motion-picture film, Mr. Hill discussed some of the controls which are possible with chemicals and the precautions necessary to avoid difficulty with developer and fixing solutions.

A second paper, "A History of Color Film Reproduction," was given by Ray Balousek, President of Grossman-Knowling, Detroit. The first part of this paper was concerned with the historical highlights of color cinematography from the first two-color Kodachrome and two-color Technicolor imbibition process up to the present 35mm negative-positive color films. The second part discussed present-day problems in regard to color slide film animation, particularly with negative-positive films. Illustrative slides were shown on all phases of these processes and a slide film reviewed some of the historical color procedures.—*K. M. Mason*, Secretary-Treasurer, Central Section, 137 North Wabash Ave., Chicago.

Obituaries

George K. Spoor, one of the pioneers of the motion-picture industry, died November 24, 1953. He was 81 years old.

He was born in Highland Park, Ill., left school at 16 and went to work for the North Western Railroad. At the age of 23 he met the inventor of the magniscope, a precursor of the moving picture machine. George Spoor invested in it and in 1897 he and Gilbert M. (Broncho Billy) Anderson founded the Essanay Film Company in Chicago. Two years later he bought the rights to the kinedrome, a moving picture projector, and during the succeeding years, until the lot closed in 1916, the Essanay Company was the proving ground for many of the greatest stars of the silent films.

Also prominent as an inventor of motion picture equipment, Spoor worked for years on the three-dimensional process known as Natural Vision. A description of his achievements, after 7 years of experimenting, was published in the *New York Times* of August 21, 1923. In 1925 he showed 3-D films to an invited gathering in Chicago and comments such as "Clear as real life!" "This puts ordinary movies in a class with lantern slides!" and "Just like looking through a plate glass window!" flew thick and fast. However a 3-D film entitled

Danger Nights, which was offered for public consumption in 1930, proved an economic failure.

Hyman Goldin died on January 6, 1954, in Toronto. He was 48 years old.

Mr. Goldin received his early education in Montreal and graduated from the University of Toronto. Until 1946 he was with Dominion Sound Equipments (Canadian Westrex), from 1946 to 1951 he was Chief Engineer of Gaumont-Kalee, Toronto, and since 1951 Chief Engineer of Perkins Electric Co., Toronto. During the war he was loaned to the Canadian Government and assisted in perfecting the intercommunications system used in Lancaster bombers. For the past three years he had been working as a consulting engineer on acoustic problems. He served on various committees of the SMPTE and in Canada was an active member of the Canadian Standards Association Committee Z7.1 on Motion Picture Photography.

Book Reviews

Television Broadcasting

By Howard A. Chinn. Published (1953) by McGraw-Hill, 330 W. 42 St., New York 36, N.Y. i-ix + 690 pp. + 10 pp. index. 346 illus. 6 × 9 in. Price \$10.00.

This book is intended for the television broadcast operator. It should be particularly timely for the many radio engineers who face television operations for the first time, in the hundreds of new stations being built. It is a single complete reference volume covering the practical problems of television broadcast station construction and operation.

Mr. Chinn writes with authority befitting his stature and vast experience in the broadcast field. Those who share an acquaintance with Mr. Chinn can appreciate the patience and diligence which have gone into the book's preparation.

The book is readable. It is not so theoretical as to be discouraging, and yet the meat is there. For example, the synchronizing generator, which is the most difficult piece of equipment for the uninitiated to comprehend, is adequately explained. Sufficient information is given for a basic

understanding of the gross differences among equipment types, so that the new engineer can choose. The presentation is exactly at the proper level for the intended audience.

The content runs the complete range from television fundamentals to color television. Considerable space is devoted to the image orthicon tube and the camera in which it is used. Field pickups and the appropriate equipment are discussed in some detail. Studio equipment, lighting, projectors and film problems are well treated, as are the TV transmitter, antennas and feed lines. Even building planning is presented, with many helpful hints for the new broadcaster. The chapter on color television covers the field-sequential system which was the law of the land at the time of the manuscript, but which has since been replaced by the compatible system of NTSC. However, there are many applications of the field-sequential system which well justify the treatment.

All through the chapters runs the theme of achieving a professional level of operations. It is clearly demonstrated that care with small matters will automatically resolve system difficulties and result in an operation of which the newcomer to television can be proud.

This volume deserves wide distribution in the radio and television field as a thoroughly practical operating handbook. It proves that television, while an electronic miracle, is still a creature of ordinary man; and that ordinary man can understand and control it. This book is wholeheartedly recommended to the membership of the Society for interesting reading and conscientious study. In preparing it, Mr. Chinn has rendered a valuable service to the television broadcast industry.—*A. E. Hungerford, Jr.*, General Precision Laboratory Inc., Pleasantville, N.Y.

Thermionic Vacuum Tubes and Their Applications, 6th ed.

By W. H. Aldous and Edward Appleton. Published (1952) by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N.Y. 151 pp. + 98 illus. 4 × 6½ in. \$2.00.

This little book treats conventional vacuum tubes, including magnetrons, klystrons and traveling wave tubes as to internal electron action and the applications

thereof as amplifiers, rectifiers, frequency changers, oscillators, reactance tubes and relaxation devices.

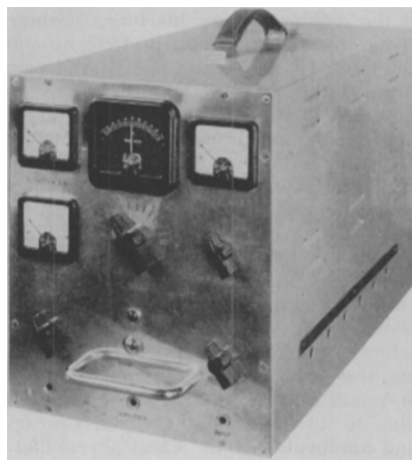
Numerous equations are given in explanation of the phenomena to the physicist and for purposes of design for the engineer. A terse approach has been taken and more factual information has been provided than would be surmised from the size of the volume.

The book is British: W. H. Aldous being on the Research Staff of the M. O. Valve Co. at the G.E.C. Research Laboratories, Wembley, England; and Sir Edward Appleton being Principal and Vice-Chancellor of Edinburgh University.

Over a hundred references are listed for further reading.—*Harry R. Lubcke*, Reg. Patent Agent, 2443 Creston Way, Hollywood 28, Calif.

New Products

Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products.



The Gaumont-Kalee Flutter Meter is designed to measure small frequency variations of a given carrier frequency. If the meter is provided with