

ABSTRACTS

The Editorial Office will welcome contributions of abstracts and book reviews from members and subscribers. Contributors to this section are urged to give correct and complete details regarding the reference. Items which should be included in abstracts are:

Title of article

Name of author as it appears on the article

Name of periodical and volume number

Date and number of issue

Page on which the reference is to be found

In book reviews, the following data should be given:

Title of book

Name of author as it appears on the title page

Name of publishing company

Date of publication

Edition

Number of pages and number of illustrations

The customary practice of initialing abstracts and reviews will be followed. Contributors to this issue are as follows: G. L. Chanier, E. E. Richardson, Clifton Tuttle, and the Monthly Abstract Bulletin of the Kodak Research Laboratories.

Camera Battery. K. STRUSS. *Intern. Phot.*, 1, July, 1929, p. 17. This describes a method of arranging a battery of cameras for simultaneous photography of action in dialog pictures. Six cameras were used in one scene and the total time required for completing the photography was reduced considerably.—*Kodak Abstr. Bull.*

Mitchell Camera Adapted to Multicolor. *Intern. Phot.*, 1, January, 1930, p. 15. The Mitchell camera has been adapted to multicolor photography. In three months of development, the principal difficulty overcome was caused by the back coating picking up on the aperture and pressure plates when the two negative films used in the process were put under pressure. C. M. T.

Optical Systems for Two-Colour Cinematography. *Brit. J. Phot., Colour Supp.*, 77, Jan. 3, 1930, p. 2. Two recently accepted patent specifications (see Br. Pat. 319,194) describe optical systems for the production and projection of two-color motion picture films. A prism light dividing system is designed to produce two-color component images, which lie corner to corner across the diagonal of the standard area. The twin lens system is intended for use interchangeably with the ordinary lens on a projector. C. M. T.

New Super Simplex Projector. *Bioscope (Mot. Cinema Technique)*, 82, Jan. 8, 1920, p. vii; *Projection Eng.*, 2, February, 1930, p. 29. An illustrated description of the Super Simplex 25 mm. projector. In this device the shutter, which is supplied with tilted blades, is mounted between the condenser and the aperture in such a manner as to direct a current of air on the film and surrounding

mechanism. Other features provide for automatic centering in changing over from silent film to sound-on-film and for the attachment of the magnascope lens.

C. M. T.

Photographic Aspects of Sound. A. PEREIRA. *Cinema*, 33, Dec. 4, 1929, p. xvi. Among causes of lack of quality of sound films are the following: imperfect contact between negative and positive in the printer; slipping between negative and positive; scattering of light in the film; irregular motion of the film in camera or printer caused by sprocket teeth errors; sharp focus of the "sound beam" in recording. Unwanted sounds are caused by splices, reflections from edges of printer gates, hair-like spaces between sound and picture caused by a convex-sided camera mask, and fine serration of the black line between sound and picture.—*Kodak Abstr. Bull.*

Photographing Sound. *Photo-Era*, 64, March, 1930, p. 160. Various methods of analyzing and photographing sound are discussed. Those considered are: Foley and Souder's method utilizing two spark gaps in which one produces the sound and the other furnishes the light (a record of the shadow of the wave being obtained); the method used by Koenig, Nichols, and Merrit, in which photographs are made of a gas flame, which vibrates in response to the sound waves; the phonodeik of D. C. Miller, which uses a vibrating mirror mounted on a tiny spindle; a similar system used by A. E. Bawtree; the sonometer of A. Hilger makes use of a platinized diaphragm as the refracting medium, and the system whereby the sound waves are converted into electromagnetic waves which in turn operate an oscillograph of the Blondel type.—*Kodak Abstr. Bull.*

Technical Problems of Talking Films. K. SCHINZEL. *Kinotechnik*, 11, July 5, 1929, p. 346. The first of this series of articles deals with the general methods used for production of sound films and considers in a general way the requirements as to frequency range, width of sound track available, and similar factors. He considers the use of paper film both for photographic and magnetic records.—*Kodak Abstr. Bull.*

Technical Problems of Sound Film. II. K. SCHINZEL. *Kinotechnik*, 11, Sept. 5, 1929, p. 464. This instalment is a discussion of photo-chemical problems.

C. M. T.

Making Sound Films. II. The Photographic Stock Factor. T. T. BAKER. *Kinemat. Weekly*, 155, Jan. 2, 1930, p. 125. For variable width sound recording, the necessary characteristics of the emulsion are freedom from fog and from graininess, while for variable density sound recording a straight line form of the characteristic curve is the ideal. Methods of examination of the characteristics of negative or positive stock are simply explained.—*Kodak Abstr. Bull.*

New Sound Picture Laboratory. H. A. PRICE. *Bell. Lab. Record*, 8, February, 1930, p. 257. This description of the new sound picture addition to the Bell Laboratories includes photographs and diagrams of the layout. Both film and disk recording and reproducing are planned, and a complete film finishing department has been installed in this model laboratory.

C. M. T.

The Decibel. JOHN DUNSHEALTH. *Projection Eng.*, 2, May, 1930, p. 15. The origin of the word *Decibel*.

E. E. R.

Architectural Acoustics. P. R. HEVL. *Projection Eng.*, 2, May, 1930, p. 15. A discussion in which the fundamental principles governing the construction of an acoustically successful auditorium are stated. An example is given which

illustrates the application of these principles in the planning of a new auditorium.

E. E. R.

Monitor and Recording Room. *Cinema*, 33, Dec. 4, 1929, pp. xv and xvi. At the Wembley studios, a mobile monitoring box containing the amplifiers is used. Klangfilm recording apparatus will be used. British Talking Pictures recording system, using the "photeon" lamp is at present employed. The sound record is identified by photographing on the film at intervals of an inch or two a lantern slide carrying the scene and shot numbers. Each half minute, figures up to ten in Morse code are printed on the side of the film opposite the sound track. Corresponding figures are recorded on the picture negative in the space to be occupied by the sound track. Between shots, a punch hole is made on the edge of the film, indicating where cuts can be made in processing. The "photeon" lamp is in the anode circuit of a single L. S. 5 valve, having 900 volts anode potential, and an output of 15 milliamperes. The lamp resembles a minute arc lamp, with a fine iron cathode and tungsten anode.—*Kodak Abstr. Bull.*

Britain's Latest Sound Studio. *Cinema*, 33, Dec. 4, 1929, p. xii. The article presents a description of the new sound studio of British Talking Pictures, Ltd., at Wembley. All lighting is controlled from overhead, and there are no cables on the floor. An outstanding feature is the use of intercommunicating telephones. The Plenum ventilation system is used. For sound insulation, the walls consist of one main shell of brick. The structure is of concrete blocks with triangular breeze blocks inside. Eight inches away from this is a lining of insulite, supported on a light wooden frame, and having no mechanical connection with the main structure. The wood floor rests on a three-inch layer of a kind of tarmac. The studio is 120 by 90 by 30 feet, to the top gallery, and about 20 feet to a second gallery running round the wall. A tank 33 feet square by 9 feet deep is provided.—*Kodak Abstr. Bull.*

Lighting a Modern Studio. *Cinema*, 33, Dec. 4, 1929, p. xii. At the Wembley studios of British Talking Pictures, Ltd., incandescent lighting is used throughout. Lamps are massed in banks hung on cables which travel on overhead rails. The banks can be tilted to any desired angle. In the galleries, twelve switchboards feed eight mobile trucks each capable of handling 3000 amperes. The lamps are 500 watt, arranged in banks, and each lamp is provided with a reflector following the shape of the bulb. Lamps consuming several kilowatts are also available. Ventilation is so efficient that the heating is not noticeable on the floor.—*Kodak Abstr. Bull.*

New Fearless Silent Camera. A. REEVES. *Intern. Phot.*, 1, January, 1930, p. 34. It is claimed that this sound and picture camera can be used at a distance of ten feet from the microphone. It is equipped with a high pressure oiling system, a unique focussing arrangement, and an automatic film tension control. Accessories are furnished which can be used for wide pictures and for Multicolor.

C. M. T.

Continuous Projectors and Colour. *Cinema*, 33, Dec. 4, 1929, p. vii. The Photo-Vision continuous projector, invented by W. E. John, was demonstrated in London on Nov. 7, 1929. It uses a series of lenses, each independently mounted, moving in a D-shaped slot. The frames are centered to the lenses by lengthening or shortening the path of travel of the film from one reel to the other. A special mirror gives an elongated image of the arc, and the carbons are arranged so as to

cast no shadow on the mirror. For wide film, it is proposed to use standard stock run through the projector sideways. The advantages of the continuous projector for additive color cinematograph projection are indicated.—*Kodak Abstr. Bull.*

Excellence in Auditoriums. W. A. MACNAIR. *Bell Lab. Record*, 8, March, 1930, p. 325. MacNair gives a review of work done to decide on a criterion for good quality of reproduction of music and speech. It has been found that the product of the reverberation time and the loudness sensation produced by a standard source is constant for all good auditoriums. The absorption characteristics for each frequency can be deduced from known data and the results check the known fact that an extremely reverberant room is usually acoustically good with a large audience present.—*Kodak Abstr. Bull.*

A Year of Talkies. Survey of New Systems and Working Conditions. R. H. CRICKS. *Kinemat. Weekly*, 155, Jan. 2, 1930, p. 133. Eighteen sound reproduction sets are available to the British exhibitor, of which eleven are British products, six American, and one German. The use of selenium cells instead of photo-electric cells is being developed. C. M. T.

Moving Picture Industry Has Four Billion Capital. *Projection Eng.*, March, 1930, p. 32. A summary of the report of the International Labor Bureau on classified statistics regarding the motion picture industry. G. L. C.

Birth of the Cinema. W. DAY. *Intern. Phot.*, 1, July, 1929, p. 3. Neglecting certain primitive steps we can view the invention of the camera obscura about 1437 as the first step in the development of modern moving pictures. Early in the seventeenth century Athanasius Kircher described a primitive magic lantern. To Wedgwood, Niépce, Daguerre, and Fox-Talbot we are indebted for the beginnings of modern photographic processes. To bring about the invention of motion pictures, knowledge of persistence of vision was necessary. Roget apparently first recorded observations on this subject in a paper read before the Royal Society. The Thaumatrope, Phenakistoscope, Stroboscope, Daedaleum, and Zoetrope were early instruments using this effect to give the appearance of movement. John Rudge first portrayed movement using successive lantern slides, but his successors, Friese-Greene, Beale, Linnet, Ross, and Edison, made improvements which culminated in Marey's Stereo-Zoetrope. Muybridge first used pictures taken in rapid succession with a number of cameras whose shutters were electrically controlled. C. M. T.

Simulating Sunlight. M. LUCKIESH. *Gen. Elec. Rev.*, 33, February, 1930, p. 89. The new General Electric "Sunlamp" is described.—*Kodak Abstr. Bull.*

Glossary of Cinematic Terms. II. *Amat. Films*, 2, January, 1930, p. 110. This is the second installment of a series of technical and general phrases used in cinematography. C. M. T.