

ABSTRACTS

The Editorial Office will welcome contributions of abstracts and book reviews from members and subscribers. The customary practice of initialing abstracts will be followed.

Contributors to the abstract section of this issue are as follows: G. L. Chanier, Clifton Tuttle, and the Monthly Abstract Bulletin of the Kodak Research Laboratories.

Solving the "Ice Box" Problem. W. STULL. *Amer. Cinemat.*, 10, September, 1929, p. 7. An account of the various methods which have been used to silence the motion picture camera. Present-day practice attempts to stop the noise as near the camera as possible. Various types of sound absorbing casings for the camera are replacing the old type of sound booth. C. M. T.

New Portable Model RCA Photophone. H. L. DANSON. *Ex. Herald World*, 97, Sect. 2, Oct. 26, 1929, p. 58. The entire projector and sound reproducer system is housed in an all metal cabinet 24 inches square and 12 inches wide, mounted on four adjustable telescopic legs. The amplifier is housed in a separate metal cabinet of similar size. Volume control permits adjustment in graded steps from zero to maximum volume. Accommodation is made in the amplifier for a second projector to permit smooth change-over. The speaker is an electrodynamic moving coil cone type. Film speed is standardized at 90 feet per minute and the projector operates from a power source of 110 volts, 60 cycles a. c. Recording facilities are offered by the RCA Photophone at its Grammercy Studios in New York.—*Kodak Abstr. Bull.*

Sound on a Wire. *Stille Electromagnetic System Reviewed.* *Bioscope (Mod. Cinema Technique)*, 81, Oct. 16, 1929, p. vii. A steel wire or band is run between the poles of an electro-magnet, which is connected in the ordinary way to a microphone. The variations in the current density produced in the microphone are impressed electromagnetically on the traveling ribbon or wire. By passing the magnetized wire at a correct constant speed between the poles of the solenoid again, variations are produced in the magnetic field corresponding to those which were impressed on the wire. These variations may be amplified to give sound reproduction. The record is permanent under ordinary conditions, but may be completely removed by passing the wire or tape through an electro-magnetic field of constant intensity. C. M. T.

Acoustimeter. R. F. NORRIS. *Projection Eng.*, 1, September, 1929, p. 43. The output from a four stage transformer coupled amplifier is measured with a thermo-junction meter calibrated to read sound intensity. A Baldwin type magnetophone is used as the pickup. C. M. T.

Burt Reproducer for Talking Motion Pictures. *Projection Eng.*, 1, September, 1929, p. 50. This reproducer, manufactured by the R. C. Burt Scientific Laboratories, is stated to have several advantages over other types. A synchronous motor drive without flexible drive shafts or universal joints is used. The cell has

a high output therefore less amplification is required than is usual. Two cells are mounted so that a replacement can be readily made in case one cell ceases to function.
C. M. T.

Light Sensitive Cells. JOHN P. ARNOLD. *Projection Eng.*, 1, September, 1929, p. 44. The properties of photo-conductive, photo-electric, and photo-voltaic cells are briefly described.
C. M. T.

Ufa Sound Studios. An Original Lay-Out. *Kinemat. Weekly*, 152, Oct. 24, 1929, p. 30. Four Ufa studios at Neubabelsberg were completed a few weeks ago. These studios are built about a central portion where all the recording apparatus and monitors are placed.
C. M. T.

New Findings in Sound Theater Acoustics. *Ex. Herald World*, 97, Sect. 2, Nov. 23, 1929, p. 30. A summary of observations made in about five hundred theaters is given. Conclusions reached are: that the previously accepted reverberation time value should be corrected, that square theaters are better acoustically than narrow theaters, and that seats should be made to absorb the same amount of sound whether occupied or not.
C. M. T.

New Sound Film Process. G. SEEBER. *Phot. Ind.*, 27, April 3, 1929, p. 389. In this modification of the Poulsen magnetized wire memograph, the film base itself is made magnetic by the incorporation of colloidal particles of a magnetic alloy—cobalt, nickel, and iron.
C. M. T.

Amplifiers and Hookups to Minimize Distortion. P. HATSCHER. *Film-technik*, 5, Aug. 3, 1929, pp. 353-9. The principles of vacuum tube amplification, distortion, general characteristics of resistance coupled and transformer hookups, and explanation of push-pull amplification are given.—*Kodak Abstr. Bull.*

Make-Up Tests by the American Society of Cinematographers. *Amer. Cinemat.*, 10, November, 1929, p. 13. Tests to determine the best make-up for panchromatic film and for color photography have been conducted at the Tec-Art studios under the auspices of the American Society of Cinematographers. It is reported that a new series of paints and greases have been found which photograph as they appear to the eye. The results will be embodied in a quick reference make-up chart.
C. M. T.

Lighting "Rio Rita." *Internat. Phot.*, September, 1929, p. 12. A total incandescent wattage of 976,000 was used during the eight days of filming the color sequences of "Rio Rita."
C. M. T.

The Schufftan Process of Model Photography. HANS NIETER. *Phot. J.*, January, 1930, p. 16. A method of combining actual photography and model photography to create the illusion of immense settings upon the screen. This method uses a mirror of special silvered glass set at an angle to, and near the lens of the camera. A model of the set is constructed. The necessary parts of this set are built upon the studio floor. The mirror is scratched away to allow this portion to be seen by the lens through the clear glass, the rest of the mirror reflecting to the lens the image of the model which matches perfectly with the parts of the set built on the stage.
G. L. C.

Pan Film. *Camera Craft*, 36, November, 1929, p. 526. The use of panchromatic film has made it necessary for the lens designer to correct his objectives for all colors.
C. M. T.

New Depth Process for Motion Pictures. *Mot. Pict. Projectionist*, 2, September, 1929, p. 37. The appearance of depth in a picture is obtained by photo-

graphing the object through a screen of very narrow transparent vertical lines while the camera is moved in an arc around the object, at the same time moving the plate horizontally the width of the lines. When the picture is shown a line screen is placed in front and the two views give an appearance of depth.—*Kodak Abstr. Bull.*

Measure of the Effective Luminosity of Objectives. J. HRDLICKA. *Photo-Revue*, 41, Sept. 1, 1929, p. 267. A simple method is described for finding the effective relative aperture of photographic objectives, by taking into consideration the loss of illumination through reflection and absorption in the lens. An objective rated at $f/4.5$ is found to have an effective aperture of only $f/5.54$.—*Kodak Abstr. Bull.*

Lens Viewing Angles. J. DUBRAY. *Internat. Phot.*, 1, September, 1929, p. 14. Formulas are given which enable the cinematographer to make a rapid calculation of the width of object space embraced by lenses of different focal lengths for both sound and silent apertures. C. M. T.

Distribution of Light Flux from a Mirror Arc. H. NAUMANN. *Filmtechnik*, 5, Aug. 31, 1929, p. 389. The author uses a photographic method to examine the intensity distribution from a mirror arc. The effects of changing arc current or its position with respect to the mirror and of altering the size of the projection objective are illustrated by silhouette photographs. Serious disturbance of the illumination of the film aperture may result from poor adjustment of the arc and reflector. C. M. T.

Color and Its Measurement. J. GUILD. *Phot. J.*, January, 1930, p. 22. The paper deals with the question of applying a standard system of measurement to the color of objective things. Though we can apply physical measurements to the properties of the stimulus of vision, we cannot evaluate the sensation of brightness or that of color. The author discusses Young's trichromatic theory, then studies the effects of visual conditions on color measurement, explaining why the National Physical Laboratory recommends the use in all color measuring apparatus of a field subtending an angle of 2 degrees. With an angle of this size measurement is not affected by the brightness of the field or the adaptation and fatigue of the eye. Standardization of color measurements is more easily effected in the case of additive colorimeters, several of which are described. For standardization of measurement, it is recommended that color measurements be expressed on the trichromatic system. The standardization of the illuminant and the method of illumination are then discussed, as well as the question of the "normal eye" and the problem of correcting the observer's eye by means of auxiliary filters. G. L. C.

Dental Profession Uses Motion Pictures. *Intern. Phot. Bull.*, February, 1930. No less than ten reports made at the 66th Meeting and Clinic of the Chicago Dental Society were illustrated with 16 mm. motion pictures, one of them showing the physiology of mastication made entirely by Dr. Hugh McMillan. G. L. C.