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: Clifton Tuttle, and the Monthly Abstract Bulletin of the Kodak Research Laboratories.

Ninety Million Feet of Color Photography Set as Colorcraft Yearly Output. D. Fox. *Ex. Herald World*, **98**, 26, Jan. 4, 1930. Twelve developing and dyeing units having a capacity of 23 feet of film per minute are being installed in the Long Island laboratory of the Colorcraft Corporation. Two negatives are used in exposing the film and a double coated positive for making the prints which are subsequently dyed. The technical description given is very vague.—*Kodak Abstr. Bull.*

Harriscolor Perfects Its Process: Adds Equipment. *Ex. Herald World*, **98**, 21, Feb. 1, 1930; *Mot. Pict. News*, **41**, 72, Feb. 8, 1930. A trade note states that equipment for the three-color process known as Harriscolor has been installed to take care of 15 million feet of prints during the next six months. No technical details are given though it is stated that the prints are made on a single emulsion film.—*Kodak Abstr. Bull.*

Problem of Distortion in Sound Film Reproduction. C. O. Browne. *Experimental Wireless*, **8**, 71, February, 1930. The frequency characteristics of a sound film recording and reproducing system are discussed with a view to producing a level combined frequency response. Various recorders, and the methods by which their frequency responses can be brought into line with that of the reproducer, are described briefly. Correction can also be made for recording and reproducing slit attenuation. A recording system producing a twin wave track variable width record is described in some detail. The essential points of variable density recording are considered.—*Kodak Abstr. Bull.*

Electroacoustic Transmission Systems with Special Reference to Distant Telephony and Sound Films. F. LÜSCHEN. *Elektrotech. Z.*, **50**, 1693, Nov. 21, 1929. Electric filters are discussed, and their use in correcting the damping and phase characteristics of the recording and reproducing units is demonstrated. Frequency amplitude characteristics of different types of sounds are shown graphically.—*Kodak Abstr. Bull.*

Electroacoustic Transmission Systems with Special Reference to Distant Telephony and Sound Films. F. LÜSCHEN. *Elektrotech. Z.*, **50**, 1728, Nov. 28, 1929. Amplitude characteristics are treated and effects of nonlinear distortion shown. Various systems of recording and reproducing are described in some detail.—*Kodak Abtsr. Bull.*

Running the Talkies. XX. Symplaphone. R. H. CRICKS. *Kinemat. Weekly*, **155**, 64, Jan. 23, 1930. The synchronizer is a direct driven unit coupled to the projector. British Thomson-Houston pickups are used. The novel system of speed control and the amplifying unit are described and criticized.—*Kodak Abstr. Bull.*

Running the Talkies. XXI. British Thomson-Houston. R. H. CRICKS. *Kinemat. Weekly*, **157**, 71, March 13, 1930. A description is given of the British Thomson-Houston projection equipment for sound films.—*Kodak Abstr. Bull.*

Making Sound Films. V. Some Recording Problems and Principles. T. T. BAKER. *Kinemat. Weekly*, **156**, 60, Feb. 13, 1930. The principles involved in methods of sound recording by variable density or variable width are outlined.—*Kodak Abstr. Bull.*

Synchronizing Record Starts. A. B. REEVES. *Mot. Pict. Projectionist*, **3**, 15, December, 1929. The author has worked out a method whereby the needle of the pickup device may be replaced into the proper groove of the record when starting the projector to insure synchronizing in case some film has been destroyed. A label pasted or stamped in the center of the reel contains a scale indicating the number of frames per complete turn of the record. There is also a table indicating the number of turns of the disk and the number of frames (counted on the scale) it is necessary to correct for in order to synchronize the disk for the loss of a known number of feet of film.—*Kodak Abstr. Bull.*

Modern French Factory. G. M. COISSAC. *Cinéopse*, **12**, 47, January, 1930. An account is given of the most important products of the Établissements André Debrie. The adaptation of their camera "Parvo," model L, for the taking of sound pictures has been effected, and the former printer has been modified so that sound and pictures may be printed simultaneously. A new apparatus for making animated drawings has recently been perfected. The equipment built for microcinematography is notable in that exposures are made automatically at the desired rate, while the opaque sector of the shutter is only 60 degrees, so that a minimum of light may be used on sensitive specimens. Special effects, such as enlargements, reductions, fade-outs, and double exposures are obtained by printing with the "Truca." Finally, mention is made of a recent invention which records longitudinally on motion picture film a continuous image of a freight train as it passes the camera.—*Kodak Abstr. Bull.*

Measurements on Sound Absorbing Materials. E. MEYER AND P. JUST. *Elektrotech. Z.*, **51**, 97, Jan. 16, 1930. A small model room was set up and the reverberation time measured with an oscillator driven loud speaker as source and

a microphone-rectifier-galvanometer arrangement as the measuring device. A portion of the wall was covered with a sound absorbing material and the reverberation time again measured. The two reverberation values made possible the calculation of the absorption coefficient of the material.—*Kodak Abstr. Bull.*

Protection of Film: Methods of Preventing Surface Marking. *Bioscope* (*Mod. Cinema Technique*), **82,** March 5, 1930, p. iii. In the Henderson method of film treatment the films are not coated, but are impregnated with the preserving solution. Film treated by the Henderson method may subsequently be freed from oil or dirt by means of a dry cloth or damp leather, without the use of spirit or cleaning solutions such as are necessary for untreated films. The treatment may be applied not only to new films, but to the reconditioning of old copies.—*Kodak Abstr. Bull.*

Making Sound Film. IV. Frequency Range. T. T. BAKER. *Kinemat. Weekly,* **156,** 67, Feb. 6, 1930. The importance of the grain size of the photographic emulsion in sound recording is explained. An apparatus is described by means of which, it is stated, the maximum number of sound waves per second which a film will record when traveling at a given rate can be determined.—*Kodak Abstr. Bull.*

Making Sound Films. III. Sensitometric Tests. T. T. BAKER. *Kinemat. Weekly,* **155,** 67, Jan. 16, 1930. The significance of sensitometric curves and of gamma-time curves is explained, and image quality (graininess, fog, scratches, and uneven development) and its examination are discussed. The following formula is given for a fine grain developer in which tribasic sodium phosphate is the accelerating alkali:

Metol	4 grains
Hydroquinone	10 grains
Sodium sulfite (crystal)	400 grains
Tribasic sodium phosphate	1 grain
Potassium bromide	2 grains
Water to	2000 cc.

(In the above paper the weights are called "grains." This appears to be a misprint for "grams.")—*Kodak Abstr. Bull.*

Lighting the Studio: Use of the Incandescent Unit. *Kinemat. Weekly,* **155,** 64, Feb. 20, 1930. A summary of a paper read by W. C. Villiers before the Illuminating Engineering Society is given. For general lighting, 1500 watt lamps are becoming standard. They are arranged in banks, the largest of which take about 1800 kilowatts and are fitted with reflectors of aluminum. For spot lighting, 3000 watt lamps fitted with parabolic silvered glass mirrors give the best results, while for sun lighting special 10 kilowatt gas filled lamps have been constructed with various devices for cooling the bulb and for avoiding the obscuration of the walls by metallic deposition.—*Kodak Abstr. Bull.*

The Cinema and Children. *Intern. Rev. Educational Cinemat.,* **2,** 43, January, 1930. This is a report and comment on the results of a questionnaire on the cinema submitted to Russian children by Elkin. The children were classified, most of them being either workers' children or waifs. The cinema was the favorite amusement of most of these children. Adventure films were preferred.—*Kodak Abstr. Bull.*

Function of the Picture in Science Instruction. A. HORN. *Ed. Screen*, **9**, 75, March, 1930. The motion picture may be a substitute for classroom demonstration experiment, giving better visibility of technical skill. Science courses are becoming an organized study of environment which is facilitated by motion pictures.—*Kodak Abstr. Bull.*

University Film Foundation of Harvard University. *Science*, **71**, 381, April 11, 1930. The University Film Foundation has been established at Harvard University by the aid of John D. Rockefeller, Jr. A sound proof studio, sound-on-film and sound-on-disk recording equipment, a processing laboratory for standard and amateur standard film and editorial rooms are provided. A number of scientific films have already been produced, and its is planned to make sound pictures of eminent professors and others as historical records.—*Kodak Abstr. Bull.*

Evolution of Sound Pictures. M. CRAWFORD. *Intern. Phot. Bull.*, **3**, 20, March, 1930. A historical summary from 1878 to the present day of inventions and devices used to record sound in conjunction with motion pictures. Among others, the work of Demeny, Edison, Gaumont, Lauste, De Forest, Case, and Hoxie is mentioned. Credit is given to Lauste for the invention of the sound-on-film record and to De Forest for making it a commercial success. Recently, Madelar has developed a method of recording on the base side of film by means of a diamond stylus producing a sound record similar to the sound-on-disk record. The picture is photographed as usual on the opposite side. A somewhat similar method was worked out by White, of the Edison Company, in 1903 or 1904.—*Kodak Abstr. Bull.*

Present Position of Sound Film. E. STENGER. *Camera (Luzern)*, **8**, 113, November, 1929. A brief history of photography, cinematography, and sound pictures is presented. An outline is given of the following three systems of sound reproduction: (1) the phonograph record system; (2) the film sound record using a light-sensitive cell for reproduction; (3) the magnetized steel band method. The changes brought about in studio technic are described.—*Kodak Abstr. Bull.*

Wide Screen by New Method (Victor Talking Machine Co.). *Bioscope (Mod. Cinema Technique)*, **82**, Jan. 29, 1930, p. i. A lens system fitted to the camera condenses the lateral range of the latter about three times, standard film being used. In the projection apparatus the image is expanded to its proper dimensions. Thus a wider sound track is made possible without the risk of film buckling which is experienced with wide film. The device can be fitted to the ordinary projector for about 25 dollars.—*Kodak Abstr. Bull.*

Wide Film Problems. R. H. CRICKS. *Kinemat. Weekly*, **156**, 67, Feb. 13, 1930. It is contended that the only real advantage of wide film, namely, improvement with regard to the emulsion grain size problem, does not justify the enormous expense of new projection apparatus and new screens in every cinema. A simple and less expensive method of overcoming the grain size problem would be to photograph on double width negative material, afterwards printing on standard size slow speed, fine grain positive stock.—*Kodak Abstr. Bull.*