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.

Sound Film Developing and Processing. *Kinemat. Weekly*, **152**, Nov. 7, 1929, p. 52. Two models of the "Rovo" developing machine are briefly described. It is a glass tube machine and the film is driven through the various solutions by rollers instead of sprockets. The tubes are enclosed in a light-tight cabinet and the capacity of the larger machine is between 130 and 260 meters per hour.

C. M. T.

Incandescent Spotlight for Panchromatic Film Illumination. *Kinotechnik*, **11**, June 20, 1929, p. 333. An incandescent light bulb is supported between a reflector and a ground glass plate, on an adjustable base. The ground glass plate diffuses the light from the filament through the lens so that no bright spots occur in the illumination. The spotlights are made in two sizes. The diameter of the effective illumination three meters distant for the small spotlight, using a 500-watt bulb, can be varied from 20 to 120 cm., and for the larger spotlight using a 1000- to 3000-watt bulb, the diameter can be varied from 40 to 150 cm.—*Kodak Abstr. Bull.*

Testing the Dallmeyer $f/0.99$ Cine Lens. *Amat. Films*, **2**, December, 1929, p. 89. The Dallmeyer $f/0.99$ cine lens stopped to $f/11$, and used in photographing steel work against the sky, showed very little flare. It showed a distinct advance over the $f/1.9$ lenses in photographing a street scene lighted by shop windows. The definition was very good according to the author, but its depth of focus was rather small.—*Kodak Abstr. Bull.*

Frequency Ranges of the Phonograph Record. *Filmtechnik*, 5, Oct. 12, 1929, pp. 447–8. Dr. W. Hagemann, in the A. E. G. "Mitteilungen," gives the following data on phonograph record reproduction. The recording space of 100 mm. contains approximately 360 grooves (assuming $4^1/_2$ minutes per record), and 80 revolutions per minute. The pitch of the grooves is 0.28 mm., 0.15 mm. of which represents the groove width proper, and 0.13 mm. the width of the interval between the grooves. Toward the end of the record, the velocity of the record with respect to the needle is approximately 40 cm. per second. Under these conditions a sound of vibrating frequency of 4000 per second will consist of oscillations each occupying 0.1 mm. Phonographic reproduction is satisfactory for frequencies from 50 to 10,000 per second. Photomicrographs are given of phonographic records having recorded frequencies of 4000, 6000, and 10,000 per second.—*Kodak Abstr. Bull.*

Question of Large Picture Films. L. KUTZLEB. *Kinotechnik*, 11, Oct. 5, 1929, p. 507. It is the author's opinion that the installation of equipment for projection of wide films is likely to be a very gradual process in Europe. He believes that the Fear method of rotating the image through 90 degrees from the usual position on the film would be much more economical and equally satisfactory for obtaining a larger picture with a longer and wider sound track.—*Kodak Abstr. Bull.*

Expanding Core for Film Rewinding. M. ENGELMANN. *Lichtbildbühne*, 22, July 6, 1929, p. 15. A core for film rolls is constructed with a wedge center so that it is easily removable or replaceable without damaging the film. A rewinder using the new core is illustrated. C. M. T.

Relations between Mirror, Film Gate Illumination, and Light Output in Motion Picture Projection. H. NAUMANN. *Kinotechnik*, 11, June 20, 1929, p. 311. In place of the screen there were set up a number of lenses in various areas of the picture so that a series of images of the condensing system, one for each portion of the picture area, were thrown on a screen farther back. By this means the light distribution over the face of a condensing mirror could be studied in relation to each part of the picture area. Diagrams and plates are reproduced.—*Kodak Abstr. Bull.*

Analyzing the Acoustics of Sound Motion Picture Theaters. W. KEITH FRIEND. *Projection Eng.*, 2, No. 2, February, 1930, p. 19. This article is an elaboration on a former discussion (*Projection Eng.*, December, 1929) dealing with the effect of theater seats on acoustics. Relations given by F. R. Watson and by W. C. Sabin are used. E. E. R.

The Super Simplex. *Projection Eng.*, 2, No. 2, February,1930, p. 29. A description of the new features which include a fan in the rotating shutter for reducing heat at the aperture plate and a semi-automatic framing and picture centering device. E. E. R.

New 16 mm. Film System. *Projection Eng.*, December, 1929. This system uses the standard 16 mm. motion picture film, but four frames are photographed in the space now occupied by one. The film is moved horizontally as well as vertically across the front of the camera, the two movements taking place alternately The projector can also be used to project regular 16 mm. film. A 100 ft. reel taken with this apparatus is equivalent to a 400 ft. reel of regular 16 mm. film. G. L. C.

Euclid on the Screen. *New York Sun*, Mar. 7, 1930. U. S. Consul J. B. Osborne reports the extensive use of educational pictures for school children in Sweden. A large film producing company distributes 1000 films weekly to 1500 schools. Branches of higher education, especially in medicine and surgery, are taking advantage of motion picture instruction. G. L. C.

The Projection Osisa. *Projection Eng.*, December, 1929. A new device, known as the Projection Osisa, makes it possible for vocal and instrumental artists to see the sound waves they produce dance across the screen. The sound waves caught by a microphone are conveyed electrically to a delicately suspended mirror that is oscillated in unison with the received sound waves. A beam of light directed on this mirror is reflected by it to a system of revolving mirrors which, in turn, project it upon a screen. G. L. C.

Talkies Used by Police. *Ed. Screen*, **8**, December, 1929, p. 298. A murderer's confession was recorded in Philadelphia by sound motion picture to be used later in the trial as evidence. A bureau is to be established for photographing prisoners and recording their voices, gestures, and mannerisms. All sound news cameramen, who photographed the attempted assassination in Brussels of Crown Prince Humbert of Italy, were ordered by police to turn their negatives in for inspection to be used as evidence in connection with the crime.—*Kodak Abstr. Bull.*

Motion Pictures Aid to Physicians. *Ed. Screen*, **8**, November, 1929, p. 265. A motion picture of living cells of body tissues made by Dr. Alexis Carrel of the Rockefeller Institute was shown before the Thirteenth International Physiologists' Congress. Studies requiring days of microscopic observation were shown to an audience of 500 in half an hour.—*Kodak Abstr. Bull.*

Isography and Cinematography of the Heart. P. STUMPF. *Fortschr. a. d. Gebiete d. Roent.*, **40**, November, 1929, pp. 798–804. Isograms or curves of equal density in the roentgenographic heart shadow give information on the volume distribution of the heart and have important diagnostic significance. Studies of heart movements may be made by roentgenographing the heart through a set of parallel slits in a lead screen upon a film moving slowly past the slits. Methods are described for viewing or projecting the resultant photograph for the purpose of visualizing the heart's action.—*Kodak Abstr. Bull.*

X-Ray Motion Pictures. *Photo-Era*, **63**, November, 1929, p. 277–8. A brief description of three different attempts at X-ray motion pictures. Lommond and Commandon in 1911 and 1924 made successful motion pictures of the fluorescent screen. A special screen and a lens of Uviol glass and quartz were used. Ruggles, in 1925, developed a machine to make fifteen 8 x 10 direct X-ray photographs per second. He used Eastman Super-Speed Duplitized X-ray film in strips 30 ft. long and 8 inches wide. Exposure time was about $1/_{24}$th second with intensifying screen. Pillsbury recently has developed a successful time-lapse mechanism for X-ray pictures. He has recorded the growth of a pigeon embryo, the opening of a rose, and the knitting of a bone. C. M. T.

Television with Cathode-Ray Tube for Receiver. V. ZWORYKIN. *Projection Eng.*, December, 1929, p. 18. The advantages of the cathode-ray tube are absence of moving mechanical parts, simplification of synchronization, ample amount of light, persistence of fluorescence of the screen. The transmitter and receiver are described, as well as the new type of cathode-ray tube used. For the transmission of the complete picture three sets of signals are required which it is possible to

combine into one channel. There are no moving parts, consequently no noise; the framing of the picture is automatic and it is brilliant enough to be seen in a moderately lighted room by a large number of people. The high frequency motor for synchronization is not required. The power necessary to operate the grid of the cathode-ray tube is no more than that for an ordinary vacuum tube.

G. L. C.

Glossary of Cinematic Terms. I. *Amat. Films*, **2**, December, 1929, p. 100. This is a glossary of technical and general phrases used in modern motion picture work.

C. M. T.