ABSTRACTS

The following abstracts are published by courtesy of the Eastman Kodak Company, publishers of the Monthly Abstract Bulletin of the Kodak Research Laboratories.

Profits of American Studios. W. H. GORDON. *Brit. J. Phot.*, **77**, July 25,1930, p. 446. This article gives study of working expenses and profits of photographers' businesses in the United States for the year 1928 as reported by a business research bureau of an American university. Of the sixty-seven professional firms studied, thirty-three had an operating profit above the average of 10.5 per cent. The total average business done amounted to approximately $14,500. Of this average amount received, 26.3 per cent represented cost of materials, working expenses 63.2 per cent, and average profit 10.5 per cent. Detailed analysis is given of the working expense item, and conclusions are drawn from the entire report. A need is emphasized for photographers to gain more accurate knowledge of business methods, particularly of the use of budget control systems.

Soviet Hollywood. *Kinemat. Weekly*, **162**, Aug. 21, 1930, p. 24. It is stated that work on the Moscow motion picture film plant has been intensified so that it will be ready for production early in 1931 instead of 1933 as originally intended. Two systems of sound-on-film recording are to be used, the inventors being Shorin and Tager.

Expansion of Amateur Cinematography in America. K. A. BARLEBEN. *Phot. Korr.*, **66**, May, 1930, p. 128. The early systems, of which the Movette was perhaps the most important, were not commercially successful and disappeared, but they have led to the now established systems.

Cinematography in the Photographic Studio. A. JASCHKE. *Photographe*, **17**, June 5, 1930, p.233. A motion picture camera is recommended for taking pictures of infants, dancers, and like subjects. Finished pictures are made either by direct enlargement preferably on bromide paper, or indirectly by means of a master negative. The equipment necessary for this work is described.

Sound Film Patent Situation. P. HATSCHEK. *Kinotechnik*, **11**, Nov. 5, 1929, p. 570. German patents are reviewed covering the different elements in the recording and reproduction of sound in synchronism with pictures. The comments are critical as to the covering force of the individual patents.

Dividing Screen. *Kinemat. Weekly*, **163**, Sept. 25, 1930, p. 67; *Bioscope* (*Mod. Cinema Technique*), **85**, Oct. 1, 1930, p. ii. Mention is made of a Morris "Dividing" screen in use at the Scala Theater, Nottingham. The image luminosity is said to be doubled by the use of a thin muslin screen used between the acoustically transparent "Transvox" screen and the felting. (Presumably the felting referred to is placed behind the loud speakers to prevent reverberations from the rear, while the muslin is placed between the loud speakers and the screen.—Abstractor.)

Revolutionary New Set. *Bioscope* (*Mod. Cinema Technique*), **85**, Oct. 1,

1930, p. v. A new sound reproducing equipment, the Brown Magnetorge, is being marketed by Magnetic Talking Pictures, Ltd. Transmission is by means of a "magnetic torque motor," a principle said to be novel to cinema work. A special optical system is employed so that the light, after passing through the sound track, is reflected to a photo-electric cell placed centrally between the two projectors. Brown amplifiers and loud speakers are used. The complete equipment for sound-on-film and disk costs $2750.

Selenium for Talkies. R. H. CRICKS. *Kinemat. Weekly*, **163**, Sept. 11, 1930, p. 55. The Automatic Light Control Company, Ltd., has developed an improved form of selenium cell. A brief description is given of the method whereby selenium is deposited on a glass plate so as to give a very wide short current path of small internal resistance. Tests have shown that the cell is not susceptible to fatigue or temperature changes to any measurable extent, and that the time lag can be corrected by an amplifier with a suitable inductive circuit. The cell is not sensitive to color changes.

R. C. A. Aids the Hard-of-Hearing Fan. *Ex. Daily Rev.*, **28**, Sept. 20, 1930, p. 18. Persons whose hearing is defective are supplied with direct telephone connection to the amplifier. A receiver is held to the ear by means of a lorgnette handle, and a cord extends to a plug for a receptacle on the arm of the seat. The volume of sound can be controlled to suit the user.

New Continuous Printer. L. EVELEIGH. *Kinemat. Weekly*, **162**, Aug. 21, 1930. p. 65. The Vinten continuous printer for sound films is described. Contact is established by a curved gate with a flattened aperture through which the films are pulled at the correct tension by a specially designed sprocket wheel connected by a spring coupling to a flywheel on the same spindle. Uneven running of the sprocket is thus damped by the inertia of the flywheel. A universal fitting allows for the insertion of any type of printing lamp for the picture, while a 12 volt lamp is used for the sound track, provided with an ammeter and a control. The speed of printing is stated to be 120 feet per minute, and arrangement is made whereby batteries of printers can be placed in line, the negative running directly from one printer to the next, thus making any number of prints with only one final take-up. A brief description is given of the novel automatic light change incorporated. This is controlled by a number of circular disks mounted on a spindle with friction clutches. Normally, the disks are held stationary, slipping on their axle while the spindle rotates. By means of electromagnetic releases operated by a chart, any one of the disks is released and rotates with the spindle to make contact and give a predetermined exposure. When the exposure is to be altered, the release of another disk moves the contact block which has been engaging the first disk, so that it completes its rotation into its original position.

Some Experiments in Mobile Color. G. A. SHOOK. *J. Opt. Soc. Amer.*, **20**, June, 1930, p. 35. A convenient "organ" for producing lights varying in form and color is described. Unlike the Clavilux which utilizes a large number of specially constructed lamps, this new instrument has a single light source and three rotating disks on which are placed the various optical devices and colored filters for producing the mobile light forms. The instrument readily lends itself to automatic control.

Devices for Silencing Cameras. *Ex. Herald-World*, **100**, Sept. 13, 20, 1930,

p. 48. A report is given of a subcommittee of the Academy of Motion Picture Arts and Sciences on twenty-one devices used by various cameramen for silencing sound cameras for standard film. Sources of noises in cameras are outlined. If carefully serviced and covered with a good housing, the average camera operates at a sound level 6 to 10 db. less than whispering at 6 feet from the microphone. Sound is propagated through insulated structures by transmission, diaphragm action, and leakage. Details are given of the methods of measurement and of the exact type of construction used for different cameras. Some of the housings are water-tight and air-tight.

Rome's New Talkie Studios. *Kinemat. Weekly*, **163**, Sept. 18, 1930, p. 63. The Cines Pittaluga studios at Rome have been reëquipped for the production of sound pictures. Moviola and Friess outfits are provided for the examination of the sound tracks and films, copies of which can be developed in rooms attached to each studio. RCA sound recording equipment is installed, and Vinten printers are to be employed. Some details are given of the available lighting units.

New Pathé-Cinéma Studios. *Kinemat. Weekly*, **162**, Aug. 21, 1930, p. 53. The Pathé studios in Paris and at Joinville-le-Pont have been rebuilt and re-equipped. RCA Photophone sound equipment is installed both in the form of fixed outfits and in three mobile trucks. Dimensions are given of the six separate studios, some of which are fitted with baths and floor traps. Current at 120 volts is available up to 10,000 amperes, and details are given of the arc and incandescent lighting with which the studios are furnished. Workshops, laboratories, theaters, stores, garages, and a restaurant complete what are said to be the most practical and complete film studios in the world.

Parallax Panoramagrams Made with a Large Diameter Lens. H. E. IVES. *J. Opt. Soc. Amer.*, **20**, June, 1930, p. 332. A description of a method used in making pictures showing stereoscopic relief is given in which the moving lens usually employed has been replaced by a stationary lens of an aperture large enough to cover the field traversed by the moving lens. Among other advantages the exposure time required in making relief pictures is considerably shortened by the use of this new system.

Progress of Air Photography. F. E. CHASEMORE. *Brit. J. Phot.*, **77**, Aug. 22, 1930, p. 509. The cameras used in aerial surveys in 1924 and 1928 are described and compared. The modern air camera is electrically operated and uses panchromatic roll film in either of two lengths, one for 50 exposures and another for 100 exposures. At the side of each picture there are also automatically photographed data such as height and time at which photograph was taken, *etc.* When started, the camera automatically takes a series of photographs at the required time interval until switched off again. The driving power is a small electric motor working from 12 volt accumulators. A fixed slit focal plane shutter gives an exposure time of $^1/_{90}$ seconds at a full aperture of $f/4.5$, variations in exposure being obtained by adjustment of the aperture.

ABSTRACTS OF RECENT U. S. PATENTS

1,780,969. E. BRUNNER. A process and apparatus for producing artistic designs. This is a machine for producing kaleidoscopic images of one or more negatives. An optical system with lenses and reflectors is employed for producing a real image before a mirror system and then for projecting kaleidoscopic pictures from the mirror system to a screen. Mobile color effects of changing design may be thus produced.

1,788,139. R. JOHN. A positive motion picture film capable of use for enlarged projection may be made in accordance with this patent by producing images of coloring matter applied by transfer. An exposed master positive which has the character of absorbing an aqueous dye solution or retaining greasy ink corresponding to light and shadows is made photographically. This film is charged with color and the color is transferred to a support while retaining the proper relationship between film perforations and frame lines for the different picture areas of the film. The cost is said to be less than photographic copies when this process is employed.

1,775,610. A. WEISS. This patent relates to a film reel for motion pictures having an octagonal opening to engage a film supporting shaft. The shaft may extend through the reel up to one flange which is provided with a similar shaped opening of a different size. The object is to insure the proper positioning of the reel on the supporting shaft and the supporting shaft may be of various forms in cross-section such as round, square, triangular, or octagonal.

1,778,635. C. L. ADISLER. A simple type of support for projecting machines in which one pair of legs is movably mounted with respect to another pair of legs. The second mentioned legs carry a supporting casting having a bearing on which a top is pivotally carried. This top may be adjusted angularly about this pivot by means of a worm and worm wheel and the top is counter-balanced by a spring to insure ease and smoothness of movement.

1,783,045. KELLOGG. Contact film printer. This machine is designed for moving a plurality of films through a curved path past a printing light. The path may be curved more or less so that suitable adjustment may be made to care for any deviation in the length of a film from a standard, such deviations occurring from shrinkage, expansion, and sometimes from the age of a film. The adjustment for altering the curved film path may be automatically or manually controlled.

1,776,637. J. OSTERMEIER. A flashlight designed particularly for photographic purposes which will eliminate most of the noise and smoke usually accompanying a flash of the usual type. The lamp is similar in shape to an electric light bulb, but contains thin metallic foil, preferably aluminum, in oxygen and an igniting wire. By making the circuit a flash is produced without smoke or dust and with only a very little noise. The combustion of the foil does not alter the pressure in the bulb sufficiently to break the glass. Only a low voltage is necessary to ignite the foil. A flashlight battery may be used for this purpose if desired.

1,780,945. A. SAGIER. This relates to a film frame for a motion picture projector in which a film guideway of two relatively movable plates is provided. The plates facing the objective may be moved by a handle near the objective

for framing and this plate is resiliently mounted on a second supporting plate carrying the objective.

1,777,419. O. A. ROSS. Focus and finding apparatus for motion picture cameras. This camera is equipped with an optical system reflecting and focusing an image from the objective upon a viewing screen intermittently, and in timed relation to taking pictures. Thus an operator can view action through the finder and focus it at the same time.

1,799,653. E. N. BALL. A sound insulated camera is made by building up sound proof walls around parts of the camera and film reels. The sound proof walls are provided with suitable doors to give access to necessary camera parts, and with a window to see through the walls. The housing is built up from a tripod head and particularly guards a sound recording chamber from the noise of the camera mechanism.

1,776,049. E. I. SPONABLE. This patent relates to the splicing of sound records. To overcome the unpleasant sudden change of sound records where films are spliced together a small diamond or arcuate shaped aperture may be cut from the film through the spliced sound record. This leaves all but a narrow portion of the splice intact so that it does not materially weaken the splice.

1,781,053. R. E. DEBAULE. Illuminating system. This system includes a lamp and reflector assembly. An incandescent lamp is illustrated as having the filaments to one side of the center of the bulb, which may be mounted between two adjustable, spaced reflectors, one in front of the lamp and the other behind the lamp. Condensing lenses are supported in brackets extending through a central aperture in the front reflector and are in axial alignment with the filaments of the lamp. The lamp and reflector supports permit accurate focusing.

1,777,682. E. I. SPONABLE. Combined sound and motion picture camera. To dampen mechanical impulses in a camera for taking sound and picture records a yielding guiding connection is provided between the film sprocket and the shutter shaft. This guide may include a plurality of springs, each having one end connected to a flywheel, and each having the other end connected to one of a series of radial posts carried by a rotating member so that the drive is through the plurality of springs.

1,777,828. LEE DEFOREST. For sound and picture photography this patent proposes the use of two cameras, one for the sound record and the other for the picture record. Each of these cameras may be driven by a synchronous motor so that the sound and picture records may be made simultaneously with the cameras which may be spaced at different distances from the scene. These records may then be printed on a single film, using the desired portion of each film for a completed sound and picture record.

1,780,585. A. FRIED. A camera support permitting a camera to be mounted thereon and arranged to facilitate turning the camera on a horizontal and on a vertical axis. To insure smoothness and freedom from "chatter," a gear train is arranged to govern the movement about each axis. Each gear train terminates in a relatively heavy flywheel which limits the speed of the turning or panoraming movement. A handle projects to one side of the device for controlling the desired camera movement.

1,781,501. E. O. ORD. An optical system for use with camera objectives for producing humorous effects. Pairs of prisms are spaced angularly with respect

to each other and may be rotated about the axis of the optical system. Parallelizing lenses—a negative and a positive lens—are mounted to pass light through the prisms. This system permits accurate focusing and is said to give critically sharp pictures.

1,781,923. F. HIRSCH. A shutter for motion picture apparatus mounted on the front of an objective formed of a pair of relatively adjustable fan shaped blades. These blades are operable by a cam and linkage back and forth across the objective to make successive exposures.

1,799,468. E. GOLDBERG AND O. FISHER. Cinematographic camera. This shows a spring driven motion picture camera equipped with two counters to indicate units of exposed film and a stop mechanism which is actuated after a desired length of film has been exposed. The spring energy is never totally expended as the stop will always function before the spring is unwound. This exposes all the frames equally before the spring grows weak.