ABSTRACTS OF RECENT U. S. PATENTS

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1,830,173. **Radio Television System.** E. L. NELSON. Assigned to Bell Telephone Laboratories, Inc. Nov. 3, 1931. Circuits for television transmission and reception having a high degree of selectivity with minimum distortion. At the transmitting station the weak photoelectric currents are greatly amplified and used to modulate a carrier current of such high frequency that the distortion of the side band frequencies in the antenna circuit becomes negligible. This frequency may, for example, be 1500 kilocycles. At the receiver initial selectivity is obtained by coupling a local circuit containing resistance to the antenna thereby securing a widened resonance characteristic. The carrier frequency is then combined with a current from a local source of frequency very much higher, so that the resulting "difference frequency" is much higher than the received carrier. This reduces the percentage width of the side band to such an extent that selectivity may be obtained in tuned circuits, without undue distortion and at the same time eliminates interference from the harmonics of the local source, which are of such high frequency as to be harmless. The frequency of the local source may be 6500 kilocycles, for example, in which case the difference frequency is 5000 kilocycles. After passage through highly selective circuits this latter current is combined with current from another local source for producing an intermediate difference frequency, which, after being selectively amplified, is detected to produce the image currents. The frequency of the second local source may be 5120 kilocycles, giving an intermediate frequency of 120 kilocycles.

1,830,231. **Mirror Disk for Television Systems.** A. KAROLUS. Assigned to Radio Corporation of America. Nov. 3, 1931. Scanning system comprising a rotary mirror supporting element, a series of wedge-shaped support members of graduated inclination rigidly secured upon the supporting element, and a reflecting scanning surface rigidly secured to each of said wedge-shaped members. Centrifugal and compressive forces set up upon rotation of the wheel do not effect displacement of the members constituting the mirror.

1,830,239. **Camera.** F. H. OWENS. Assigned to Owens Development Corp. Nov. 3, 1931. Lens turret for cameras, of either the ordinary "view" or "motion picture" type. A fixed lens and a turret carrying a plurality of lenses of different focal lengths are mounted so as to be capable of being selectively brought into operative relation with the camera. The lenses of different focal lengths can be independently brought into picture taking position.

1,830,537. **Lamp Support for Projection Machines.** L. S. FRAPPIER AND E.

BOECKING. Assigned to International Projector Corp. Nov. 3, 1931. An auxiliary light source is mounted in the projector upon a rotatable support which may be turned to bring the auxiliary light source into operative position upon failure of the other light source. The structure is particularly applicable to a mounting for the light source of a sound telescope which is used to pass continuous rays of light through the sound record of a projection film.

1,830,538. **Support for Light Sources.** L. S. FRAPPIER AND E. BOECKING. Assigned to International Projector Corp. Nov. 3, 1931. A plurality of light sources spaced peripherally of a rotatable sleeve which sleeve is adapted to be shifted angularly to bring either light source into position for directing light through the moving film and sound telescope.

1,830,546. **Synchronizing System.** J. HERRMANN. Assigned to Siemens & Halske Aktiengesellschaft. Nov. 3, 1931. A method of synchronizing which utilizes in simple manner the frequency given by the ripple of the armature current as carrier frequency for the transmission of, for instance, a control frequency to a remote station. As the control frequencies in question in this case are frequencies of the order of 50 to 150 cycles, they can no longer be transmitted over telephone lines with intermediate repeaters. The invention is directed to the method for transmitting synchronizing signals which comprises driving a picture telegraph apparatus by a driving motor and producing from the driving motor a slot frequency for use as a carrier frequency for synchronizing signals.

1,830,567. **Safety Shutter for Cinematographs.** A. SHAPIRO. Assigned to Universal Stamping & Mfg. Co. Nov. 3, 1931. The shutter is adapted to move automatically into the path of light to interrupt some of the light rays of the lamp immediately upon the stopping of the light interceptor so as to permit the showing of a "still" picture without injury to the film. A mechanism is provided operable by the light interceptor for quickly moving the safety shutter out of the path of light when the interceptor commences to rotate. The shutter is constructed for dissipating much of the heat in the path of light. A rotatable clutch element is connected to the shutter, and there is a pair of radially movable governor bodies carried directly on the gear which connects to the light interceptor and is movable into frictional engagement with the clutch element for rotating the shutter out of the light path upon the rotation of the interceptor.

1,830,586. **Transmission of Pictures.** E. F. W. ALEXANDERSON. Assigned to General Electric Co. Nov. 3, 1931. The picture receiver has a plurality of channels tuned to respond to a different wavelength with a recorder connected thereto and adapted to respond to all of the transmitted wavelengths. The recorder comprises a vibratory member having means for directing a beam of light on a light-sensitive member, a screen having an opening therein arranged in the path of the beam of light, a source of alternating current connected to the vibratory member, and means for varying the current actuating said vibratory member in accordance with the wavelength of the received signal. The different portions of pictures are transmitted over the different channels and integrated at the receiver.

1,830,596. **Adjustable Mounting for Picture Projection Apparatus.** A. DINA. Assigned to International Projector Corp. Nov. 3, 1931. The plate for supporting the projection head is pivoted to the top of the pedestal. The plate for the lamp house is mounted behind the projection head plate and secured thereto by a

pantograph arrangement to insure continuous parallel relation between the axis of the projection head and of the lamp house for both still and motion picture projection. An adjustable bracing device is provided to connect the base of the pedestal and the lamp house plate, which allows lateral shifting of the lamp house as well as adjustment of the angle of projection and also aids in imparting extreme rigidity to the entire mounting structure during operation of the machine.

1,830,601. **Sound Telescope.** L. S. FRAPPIER AND E. BOECKING. Assigned to International Projector Corp. Nov. 3, 1931. The sound telescope is rotatably mounted in a suitable framework and provided with positive means for varying the angular position of the telescope therein. The framework is mounted for movement in a horizontal direction transverse to the axis of the telescope by means of a suitable sliding bracket. The bracket itself may be moved horizontally in a direction parallel to the axis of the telescope. In order to exclude external light from the photographic record, a pair of telescoping members are included between the end of the telescope itself and the sound record and are provided with means for maintaining a positive engagement with both the telescope and the film guide. A special light source is also provided which includes a pair of lights and means for alternatingly bringing said lights into operative position. A second light is accordingly always held in reserve and may be substituted in the system without material interruption of service.

1,830,602. **Distance Releasing Device for Moving Picture Cameras Driven by a Spring Mechanism.** E. GOLDBERG. Nov. 3, 1931. A camera wherein a film driving or feeding mechanism is employed for moving the film strip in the path of the camera lens, means being inserted for controlling the operation of the mechanism as may be required by a user merely by simple adjustment of conveniently arranged control devices and, if desirable, allowing such mechanism to be manually operated both for the photographing of motion and still pictures. The camera is equipped for remote control of the film feeding mechanism whereby the same may be started or stopped by a user in a manner which will permit said user to position himself as a subject to be photographed and when so positioned, effect elective operation of the camera.

1,830,637. **Selector Filter.** P. BROSSE. Assignor, by mesne assignments, to Kislyn Corp. Nov. 3, 1931. A selecting filter for projecting goffered films in colors, having a set of differently colored selector zones occupying its central portion, and differently colored compensator zones at its opposite end portions. The colors of the compensator zones are complements of those of the selector zones which they touch so as to eliminate the noxious colors prevailing.

(Abstracts compiled by John B. Brady, Patent Attorney, Washington, D. C.)