

UNITED STATES PATENT OFFICE

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FLOODLIGHT

Application filed May 24, 1928. Serial No. 280,146.

This invention pertains to flood lights of the type used largely in theatres.

The object of the invention is to so improve the design and arrangement of the apparatus as to greatly enhance the convenience of operation and efficiency thereof.

To these and other ends the invention comprises the novel features and combinations of elements hereinafter described and shown in the drawings, which by way of illustration show what we now consider to be the preferred form of the invention.

In the drawings,

Fig. 1 is a side view of the apparatus, partly broken away to show devices in the interior thereof.

Fig. 2 is a rear view of the apparatus (from the left of Fig. 1).

Fig. 3 is a cross-section on the line 3—3 of Fig. 1.

Fig. 4 is a cross-section on the line 4—4 of Fig. 1.

Fig. 5 is a cross-section on the line 5—5 of Fig. 1.

Fig. 6 is a detail view on the line 6—6 of Fig. 1.

Fig. 7 is a detail view on the line 7—7 of Fig. 1.

Fig. 8 is a detail view on the line 8—8 of Fig. 1.

Fig. 9 is a detail view on the line 9—9 of Fig. 1.

Fig. 10 is a detail view on the line 10—10 of Fig. 8.

The supporting and enclosing structure of the invention comprises, in general, a lamp housing 20, to the front of which is attached the lens housing 22. On the front of the lens housing is mounted the screen housing 24. The whole machine is mounted on a standard 26 (Figs. 1 and 4) having a cross member 28 partially mounted upon the upper end thereof. Pedestals 30 stand on the ends of member 28. Projecting from the sides of casing 22 are trunnions passing through the upper ends of pedestals 30 to provide a pivotal support for the entire structure. Hand screws 32 cooperating with arcuate slotted arms 34 integral with standards 30, serve to hold the structure in any desired

tilted or inclined position. The trunnions are located on a horizontal line through the center of gravity of the structure in order that it may be readily movable by the operator and be easily retained in set position by the clamping screws.

In the lower portion of lens housing 22 are two parallel horizontal longitudinal rods 36 upon which lens 38 is slidably mounted for the purpose of focusing and for the additional purpose of bringing the lens to an accessible position at the front of its housing where it may easily be reached through screen housing 24 to replace a broken lens or make other adjustment. The center of the lens travels along the optical axis of the instrument. To support lens 38 on rods 36 a cross-head 40 is provided, upon which the lens structure is mounted. In order to move the lens back and forth on rods 36, we connect cross-head 40 by means of a downwardly projecting lug 42 to the upper strand of a chain 44 which passes over front and rear sprockets 46 and 48 respectively. Sprocket 46 rotates on a short shaft 50 whereas sprocket 48 is fast to a shaft 52 (Figs. 1 and 2) extending from side to side of the machine and supported for rotation in brackets 54. Each end of shaft 52 is provided with a crank handle 56 which has a pointer 58 passing over a numbered dial 60. When handle 56 is turned by the operator the lens is moved along rods 40, its exact position being always known to the operator by means of the pointer and dial.

Attached to the lower strand of chain 44 and slidable on rods 62 is a counterweight 64 which always moves in a direction opposite to that of the lens, thereby preserving the center of gravity of the machine in substantially fixed position regardless of the position of the lever.

Referring now to the screen mechanism at the front end of the machine, it will be noted that the interior of screen housing 24 is provided with guideways 66 to accommodate five color screens 68. The rearmost screen is shown elevated to operative position aligned with lens 38, while the other four screens are shown in normal inoperative position at the bottom of housing 24. Each screen is simply