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H. A. KIEGL ET AL

1,742,601

FLOODLIGHT

Original Filed May 24, 1928 2 Sheets-Sheet 1

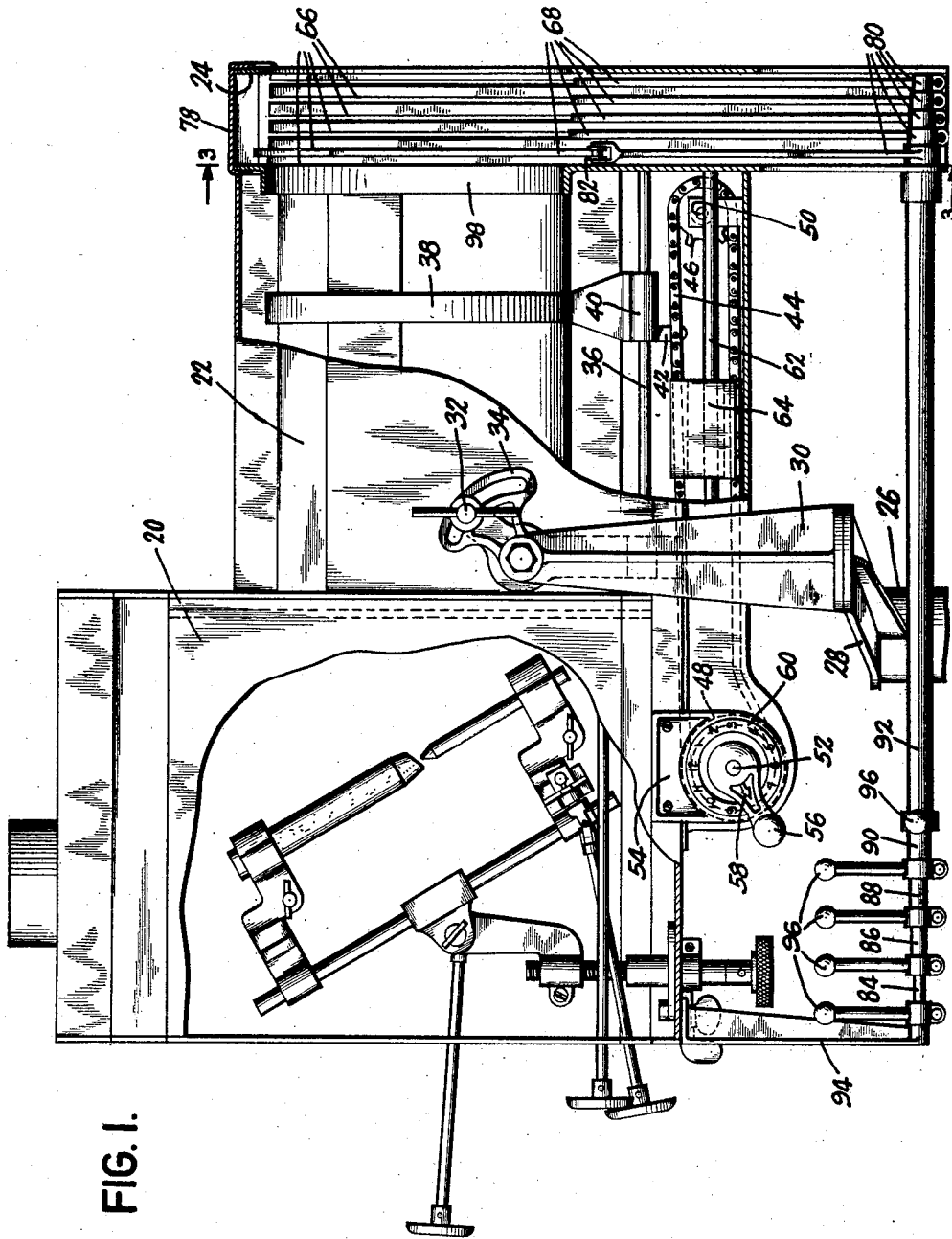


FIG. I.

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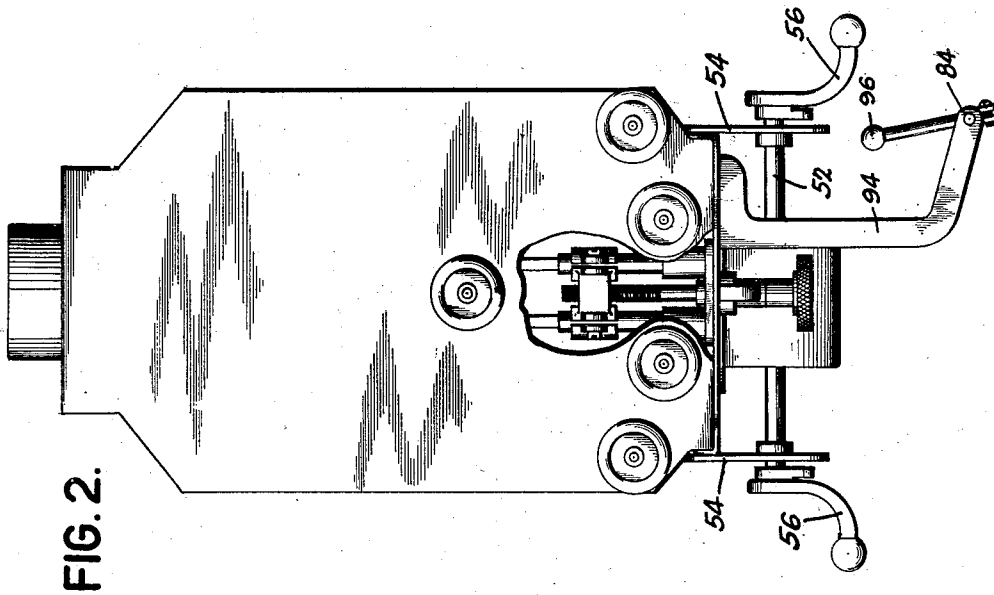
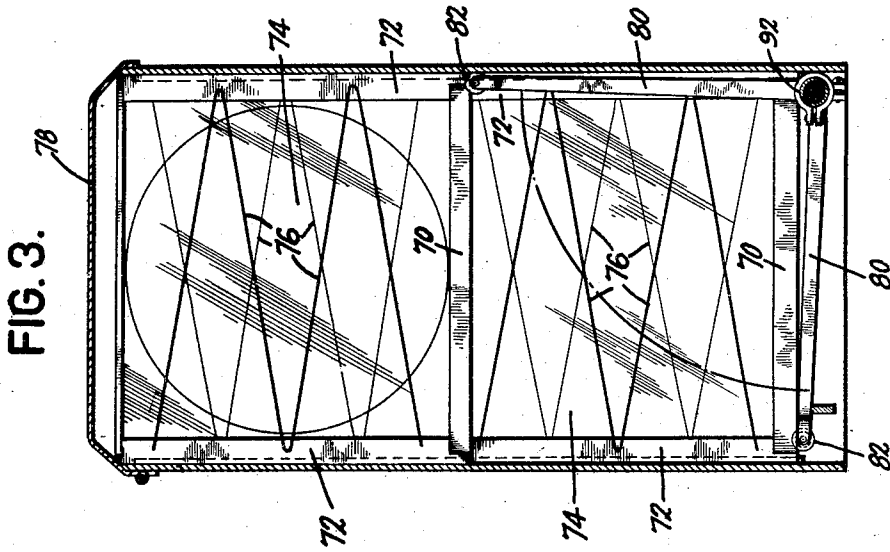


FIG. 2.

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UNITED STATES PATENT OFFICE

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FLOODLIGHT

Original application filed May 24, 1928, Serial No. 280,146. Divided and this application filed September 18, 1928. Serial No. 306,747.

This invention pertains to flood lights of the type used largely in theatres, and is a division of our application Serial No. 280,146 filed May 24, 1928.

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

10 The particular object of this divisional application is to disclose and claim the improved color screen devices of the parent invention.

15 Further and other objects and advantages will be hereinafter set forth in the accompanying specification and claim, and shown in the drawings, which by way of illustration show what is now considered to be the preferred embodiment of the invention.

20 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).

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

30 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 having a cross member 28 pivotally 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.

45 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 addi-

50 tional 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 55 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 60 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 65 is fast to a shaft 52 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. 70 When handle 56 is turned by the operator the lens is moved along rods 36, its exact position being always known to the operator by means of the pointer and dial.

75 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. 80

85 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 90 simply a rectangular metal framework comprising bottom member 70 and side members 72. Across the framework is placed a color medium 74 of gelatin or other material. Wires 76 help to hold the medium flat. To 95 insert the screens in the screen housing, hinged cover 78 is raised and the screens are dropped between guides 72 to their inoperative position at the bottom of housing 24.

100 Extending horizontally under each screen

and substantially parallel to frame member 70 thereof, is a crank arm 80 having at its free end a grooved roller 82 contacting with member 70 near one end thereof. The other end of each arm 80 is clamped to the front end of one of a set of concentric shafts 84, 86, 88, 90 and 92. These shafts extend to the rear of the machine and are there supported by a bracket 94. Each shaft is provided at its rear end with an operating handle 96 by which the shaft may be rotated to move an arm 80 from its normal horizontal position to a vertical position as shown at the right in Fig. 3, and vice versa. When an arm 80 swings from horizontal to vertical it raises its corresponding screen to operative position in front of opening 98 in the rear of housing 24, and when the arm 80 moves back to horizontal the screen follows it by gravity to inoperative position at the bottom of housing 24. There is no operative connection between any screen and its operating arm except roller 82 which travels from end to end of frame member 70. When arm 80 is in its raised position it is slightly past the vertical center line of shafts 84—92, and therefore is automatically held in position by the weight of the screen and also by the weight of the coordinated handle 96 which is then preferably horizontal. It will be understood that the position of any handle 96 will indicate to the operator the position of the screen corresponding to that handle.

The arc light and its appurtenances are not a part of the present invention, therefore they are not described.

It is to be understood that the invention is not limited to the construction herein specifically illustrated but can be embodied in other forms without departure from its spirit as defined by the appended claim.

We claim—

In apparatus of the class described, in combination, a plurality of screens at the front of the machine, a set of vertical guideways for each screen, a plurality of concentric shafts extending from front to rear of the apparatus, a crank arm fast on the front end of each of said shafts underneath one of said screens, and a handle on the rear end of each shaft whereby the operator at the rear of the machine may rotate any selected shaft to move a crank arm from horizontal to vertical position to cause the corresponding screen to travel vertically in its guideways, said screen resting by gravity on the end of the crank arm.

In testimony whereof we hereto affix our signatures.

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