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DISAPPEARING FOOTLIGHT

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15 Claims. (Cl. 240—3)

This invention relates to improvements in stage footlights. The chief object of the invention is to provide improved means for controlling footlights of the disappearing or concealed type.

One object of the present invention resides in the provision for controlling current supply to the lamps in such a way that current supply will be cut and the lights turned off when the footlights are in concealed position and so that supply of current is automatically resumed when the footlights are displaced to the "in use" or open position.

A further object of the present invention resides in the provision of footlights which may be displaced to concealed position or to "in use" position by suitable power devices which are adapted for control remote from the footlights.

A further object of the present invention resides in the provision of novel control and operating means for disappearing footlights and for the lamps of such footlights.

A further object of the present invention resides in the provision of novel control means for disappearing footlights which are adapted when the footlights are displaced to the "in use" position to suspend further displacement and movement of the footlights and furthermore to provide means so that when the footlights are "in use" position other control circuits are established to permit the subsequent shifting of the footlights to concealed position.

A further object of the present invention resides in the provision of novel control means for disappearing footlights which are adapted when the footlights reach concealed position to shut off current supply to the motor or motors so that no further displacement of the carriers takes place and furthermore to provide means so that when the footlights reach the concealed position, other control circuits are established to permit the subsequent shifting of the footlights to open position.

Further and other objects of the present invention will be hereinafter set forth in the accompanying specification and claims and shown in the drawings which by way of illustration show what I now consider to be preferred embodiments of the invention.

In the drawings:

Figure 1 is a fragmentary sectional view of one of the improved footlights showing a footlight displaced in concealed position;

Fig. 2 is a view similar to Fig. 1 but with the footlight in open or "in use" position;

Fig. 3 is a detail view shown partly in section, the view being taken substantially on line 3—3 of Fig. 2;

Fig. 4 shows a top plan view of the group of footlight sections, all of the sections being adapted for concurrent operation by a single operating motor;

Fig. 5 is a detailed view of a modification in which a manually operable means is provided for actuating the various footlight sections;

Fig. 6 is a detail view taken substantially on line 6—6 of Fig. 5;

Fig. 7 is a detail view of another modification in which independent motors are provided for each footlight section;

Figs. 8 and 9 are detail views of certain switching appliances used in connection with the footlights; and

Fig. 10 is a circuit diagram of the various control circuits.

The disappearing footlight sections themselves are substantially of the construction disclosed in Kliegl United States Patent No. 1,141,122 and accordingly, require no detailed description. It is sufficient to state that each section comprises a carrier generally designated 10 pivotally mounted at 19 upon a frame 17 suitably supported below the level of the stage. The lamp sockets 13 as heretofore, are mounted in a lamp box 14 and the usual lamp case 15 is provided. In contradistinction to having the ends of the covering plates or boards of the carrier spaced apart at the section ends, such parts abut each other at the ends as clearly shown in Figs. 3 and 4.

Operating mechanism

Suitably fixed to each carrier 10 there is a gear sector 30. Meshing with each gear sector 30 is a spur gear 31 which in turn is fixed to a shaft section 32 journalled suitably in frame 17. One shaft section 32 is provided for each footlight section and to provide for the relative curvature of an assemblage of footlight sections to conform with the curved front of the stage the various sections 32 are preferably coupled together by universal joints 33 (see Figs. 4 and 5). According to the embodiment of the invention shown in Fig. 4, one of the sections 32 has its spur gear 31 disposed to mesh with and be driven by a motor driven gear 35 driven by a suitable motor 36. It may be explained that the embodiment shown in Fig. 4 discloses a construction in which all sections are adapted for concurrent displacement under drive from a single motor 36. Conditions may arise, however, where separate motor drives may be desirable for the different footlight sections. In