

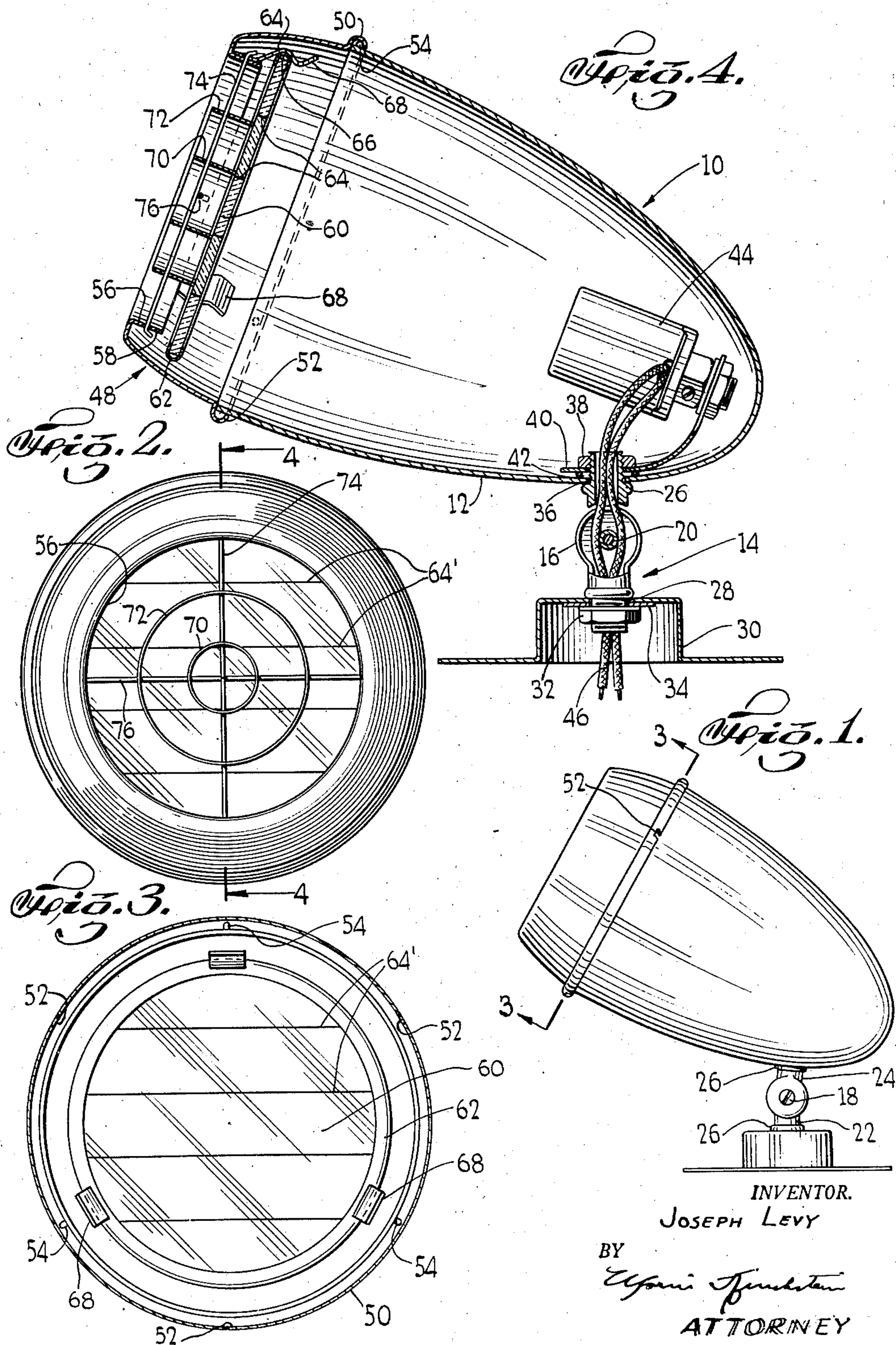
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LIGHTING FIXTURE

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## LIGHTING FIXTURE

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This invention relates to lighting fixtures. More particularly the invention pertains to lighting fixtures of the type which cast a strong, directed beam of light. Since such fixtures are widely employed in theatres and show windows, they are referred to herein as "stage-display lighting fixtures."

It is an object of the invention to provide an improved stage-display lighting fixture which comprises relatively few and simple parts, and is economical to manufacture and easy to adjust.

Another object of the invention is to provide a stage-display lighting fixture having a color screen protected by disposal within the fixture, but arranged for quick, ready removal and replacement by another screen of a different color.

An additional object of the invention is to provide a stage-display lighting fixture of improved design such that the lamp can be easily changed.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the claims.

In the accompanying drawings in which I have shown one of the various possible embodiments of my invention,

Fig. 1 is a side view of a stage-display lighting fixture embodying the invention;

Fig. 2 is a front view thereof;

Fig. 3 is an enlarged sectional view taken substantially along the line 3—3 of Fig. 1; and

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 2.

Referring now to the drawings, I have there shown a stage-display lighting fixture 10 embodying my invention and comprising a heavy gauge sheet metal lamp housing 12 deep drawn into the illustrated shape of a paraboloid closed at its small end and open at its wide end. The inside of the housing need not be a reflecting surface although, if so desired, the same may be provided.

A flexible mounting is imparted to the fixture 10 by a support 14 comprising a swivel joint 16 which includes two flanged circular plates secured to each other, with the flanges in registration and abutment, by a screw 18 passing through the axes of symmetry of said plates. The screw extends freely through an aperture in one of the plates and is threadedly received in a tapped sleeve 20 integral with the other plate. Each

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plate also is provided with an integral offset tubular projection 22, 24 extending away from the space enclosed by said flanged plates. Each tubular projection is threaded from its free end up to a bead 26. One threaded projection extends through an aperture 28 in a mounting block 30 and receives a nut 32 within said block. A washer 34 is employed to hold the nut 32 fast. Obviously, mounting blocks other than that shown might be employed.

The threaded portion of the other tubular projection 24 extends through an aperture 36 in the lamp housing 12 near the small end thereof. Within the lamp housing a nut 38 screwed on said projection presses a strap 40 against a resilient washer 42.

The strap 40 has a lamp socket 44 secured thereto in proper position to hold a lamp (not shown) within the housing. Electric power supply leads 46 for the socket 44 run through the tubular projection 26, the space between the circular plates, and the tubular projection 24.

The housing can be pointed in any direction by suitable manipulation of the flexible mounting. Thus, with the block 30 fixed, to swing said housing about a vertical axis the nut 42 is loosened, the housing oriented as desired, and the nut then tightened. The fixture is not constructed for ready performance of this adjustment since it is not one ordinarily required in the stage-display lighting field. The lamp housing is swung about a horizontal axis by loosening the screw 18, pointing the housing in the desired direction, and then tightening said screw. A lock washer (not shown) between the head of the screw and one of the circular plates prevents the screw from loosening accidentally.

In accordance with my invention, I have provided highly improved means for covering the open, wide end of the lamp housing and detachably supporting a color screen within said housing. Such means comprises a cap 48 formed from lighter gauge sheet metal than the lamp housing. At its open back end the rim of said cap has a continuous annular bead 50 whose rear wall is provided with spaced slots 52. The forward end of the lamp housing has several nibs 54 raised thereon in a plane perpendicular to the axis of symmetry of said housing. These nibs are angularly spaced in the same manner as the slots 52 and are shorter than the bead 50.

To mount the cap, it is placed on the open end of the lamp housing with the rear wall of the bead 50 resting against the nibs 54. The cap is then rotated until the slots 52 are aligned



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with the nibs. Now the cap is shifted axially of the housing to slide the nibs through the entering slots 52 into the bead 50. Finally the cap is turned to disalign the nibs and slots. The bayonet lock just described provides a quick detaching means for securing the cap to the open, wide end of the housing.

The front face of the cap has a large central aperture 56 through which light is emitted. A rearwardly extending flange 58, comprising an integral part of the cap defines said opening and affords a support for the color screen holding means and such other optical controlling means as it may be desired to provide in conjunction with the fixture 10.

The color screen consists of a circular pane 60 of colored glass or other pellucid material whose rim is held in an annular metal strip 62 of U-shaped cross-section. After said strip has been placed around the pane, said pane is cracked along a plurality of spaced zones 64' to prevent it from breaking under the intense heat developed by a lamp in the fixture 10.

The color screen holding means includes several rearwardly extending resilient sheet metal fingers 64 spot welded to the outer surface of the flange 58 at uniformly spaced intervals around its circumference. Each of these fingers is formed with an inwardly facing groove 66 and an outwardly sloping free end 68. The grooves 66 of the several fingers define a space slightly similar in diameter than the circumference of the metal strip 62. These fingers are adapted jointly to hold a colored pane 60 in position in front of the lamp.

A color screen is inserted in the cap by placing the same so that its circumscribing metal strip 62 rests against the outwardly sloping free ends 68 of the several fingers. The screen is then urged toward the light emitting opening 56 whereby to cam outwardly all the resilient fingers until the strip 62 reaches the grooves 66, whereupon said fingers will snap into position to firmly hold the screen in place. The fingers are strong enough to maintain the screen in position against accidental displacement. However, they may be forced radially outwardly with ease when it is desired to withdraw any given screen in order to replace the same with a screen of another color or type.

The flange 58 also serves as the support for a system of concentric stub circular sheet metal tubes 70, 72 which act as louvers to prevent a lateral emission of light. These tubes are carried by cross wires 74, 76 secured to the flange 58. Said stub tubes may be so arranged that a pane 60 disposed in the color screen holding means rests against the rear edge of at least one of the tubes.

It will thus be seen that I have provided a lighting fixture which achieves the several ob-

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jects of this invention and is well adapted to meet all conditions of practical use.

As various possible embodiments might be made of the foregoing invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. A stage-display lighting fixture comprising a lamp housing having an open, wide end, a cap, quick detaching means to secure said cap on the open end of said housing, said cap having a large opening defining a light emitting aperture, a rearwardly extending flange integral with the cap and extending around said aperture, louvers disposed in said aperture, means to support said louvers from said cap, a color screen disposed in back of said louvers, and a plurality of resilient fingers rigidly attached to said flange for resiliently holding said color screen against the back of said louvers.

2. A stage-display lighting fixture comprising a lamp housing having an open, wide end, a cap, quick detaching means to secure said cap on the open end of said housing, said cap having a large opening defining a light emitting aperture, louvers disposed in said opening, means to support said louvers from said cap, a color screen disposed in back of said louvers, and a plurality of resilient fingers rigidly attached to said cap for resiliently holding said color screen against the back of said louvers.

3. A stage-display lighting fixture comprising a lamp housing having an open, wide end, a cap, quick detaching means to secure said cap on the open end of said housing, said cap having a large opening defining a light emitting aperture, louvers disposed in said opening, means to support said louvers from said cap, a color screen disposed in back of said louvers, and a plurality of resilient fingers rigidly attached to said cap for holding said color screen in its aforesaid position.

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