June 10, 1947. L. SCHEPMOES 2,421,967

FLUORESCENT LIGHTING FIXTURE

Original Filed June 24, 1942

Fig. 1.

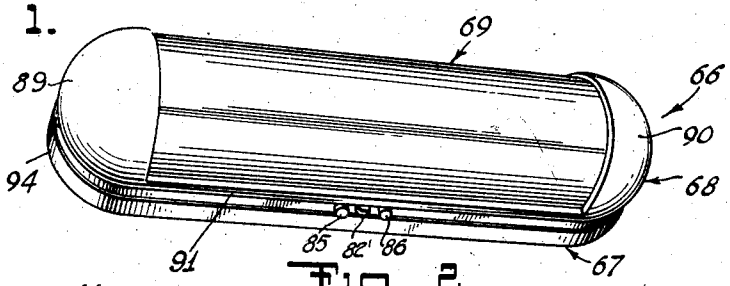


Fig. 2.

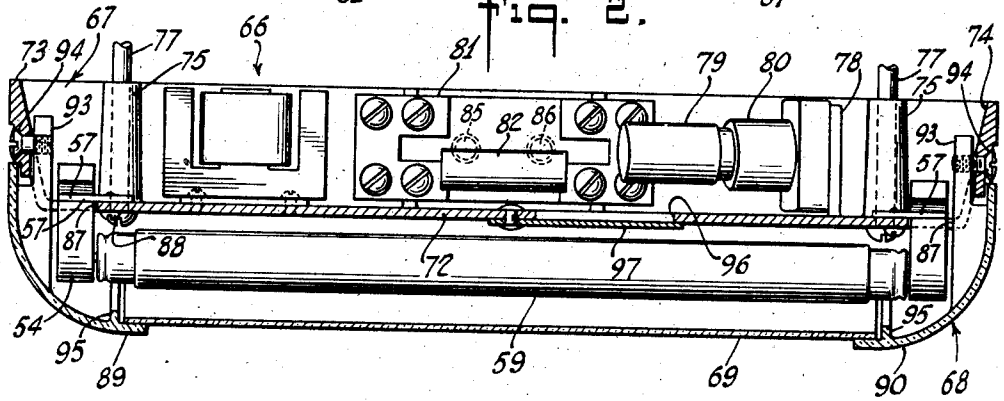


Fig. 3.

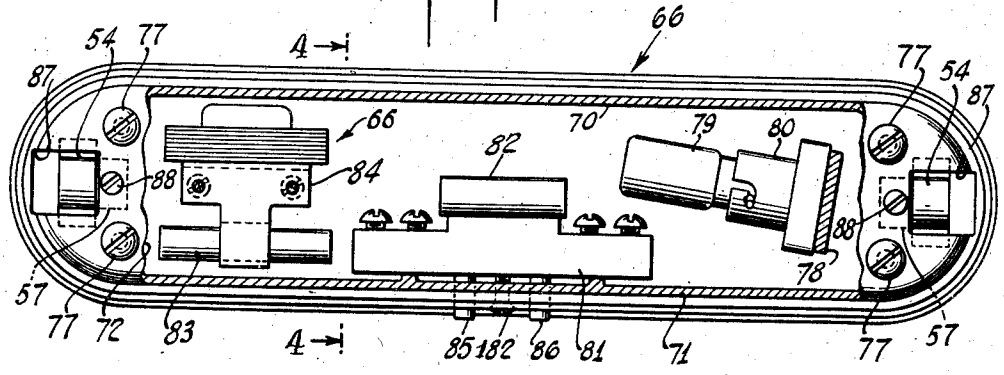
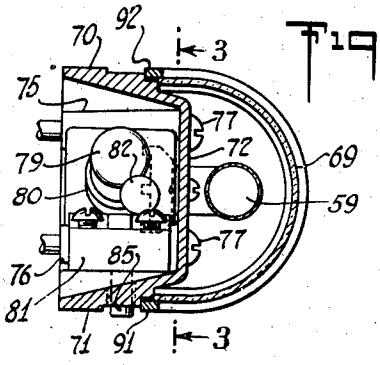


Fig. 4.



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FLUORESCENT LIGHTING FIXTURE

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3 Claims. (Cl. 240—78)

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This invention relates to lighting fixtures and more particularly to a fluorescent lighting fixture.

One of the objects of this invention is to provide a fixture for fluorescent lighting characterized by simplicity and sturdiness and which is compact so as to be capable of installation in restricted spaces. Another object is to provide a fixture of the above nature capable of providing maximum light distribution from a fluorescent lamp, regardless of the position of installation of the fixture. Another object is to provide a fixture of the above nature in which glare is reduced to a minimum when the fixture is observed in the normal range of vision. Another object is to combine a fluorescent lamp with its various operating electrical auxiliaries together with its light control lens within a compact housing of pleasing external appearance which may be mounted directly on a wall surface with no part of it penetrating the wall. Other objects will be in part apparent and in part pointed out hereinafter.

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

This application is a division of my copending application Serial No. 448,313, filed June 24, 1942, which issued as Patent 2,352,804 on July 4, 1944 entitled "Fluorescent lighting fixture."

In the drawing, wherein I have shown one embodiment of my fixture,

Figure 1 is a perspective view of my fixture;

Figure 2 is an enlarged horizontal section of the fixture shown in Figure 1;

Figure 3 is a section taken along the line 3—3 of Figure 4; and,

Figure 4 is a section taken along the line 4—4 of Figure 3.

Similar reference characters refer to similar parts throughout the various views of the drawings.

The ever-increasing development and use of fluorescent lighting has given rise to a number of problems and difficulties in the provision of suitable fixtures for fluorescent lamps, and suitable housings for the electrical apparatus necessary to the operation of the fluorescent lamp. Even when this necessary electrical equipment is provided in compact form, it is still difficult to house and conceal in such a manner as to prevent unsightly bulkiness. Further complications arise

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due to the length of the fluorescent lamp itself which, of course, necessitates a fixture of still greater over-all dimensions. Also, when it is desired to use fluorescent lighting in particular installations, such as in railroad cars, Pullman berths, mirrors, over beds in homes or on ships, and similar places where space is relatively confined, additional difficult problems arise in providing a fixture suitable for such installations. Space limitations are confined not only to wall surface area or mirror frame surface, but also the thickness of partitions adds further complications in that, in many cases, pentration of the partition is not allowed, thus necessitating the provision of a fixture which is completely self-contained and which must therefore be capable of direct attachment to the partition.

It is accordingly a further object of my invention to provide a fluorescent lighting fixture capable of solving the above-mentioned problems and obviating the above-noted difficulties in an efficient and practical manner.

It is often desirable, or necessary, to install a lighting fixture where general illumination is required rather than concentrated, asymmetrical light distribution, and particularly where symmetry is desired to meet prescribed decorative conditions. The fixture, generally indicated at 66 in Figure 1, is particularly well adapted to such use. Broadly speaking, fixture 66 resembles the fixture claimed in my above-noted application, in that it includes a housing, generally indicated at 67, a metal or plastic canopy, generally indicated at 68, and a translucent plastic shade, generally indicated at 69. As will be described in detail below, shade 69 is disposed within canopy 68 and is accordingly securely held in the fixture when the canopy is secured to housing 67. Housing 67 may in turn be directly attached to the desired supporting surface.

As shown in Figure 4, housing 67 is generally dish-shaped, having top, bottom and front walls 70, 71, 72, and curved end walls 73 and 74 (Figure 2). At each end of housing 67 are a pair of hollow posts 75 and 76 (Figure 4) through which screws 77 extend so that their threaded ends may be attached to the supporting surface on which the fixture is to be applied, thus to hold the housing securely in its installed position. Housing 67, (Figure 2) also has a platform 78 formed integrally therewith to support a ballast lamp 79 and its socket 80. When fixture 66 is to be energized from a source of direct current, it is provided with electrical equipment similar to that described in connection with Figure 2. Thus fix-

ture 66 may have disposed in the housing 67 thereof not only ballast lamp 79, but also starter switch 81 (Figure 3) condenser 82, resistor 83, and reactor 84. Starter 81 is secured to bottom wall 71 of the housing by a screw 182. Starter 81 is, of course, provided with on and off buttons 85 and 86 which accessibly extend through holes drilled in the housing wall. It will accordingly appear that housing 66 supports and, when installed, conceals the various electrical equipment for fluorescent lighting.

As shown in Figure 3, an opening 87 is formed in each end of housing 66 through which the base of socket 54 may be placed, the socket being secured to the housing by a screw 88 which extends through front wall 72 of the housing and is threaded into strap 57. Thus, when the sockets are installed at the opposite ends of the housing, they are in position to detachably support the fluorescent lamp 59.

Canopy 68 may be molded from a plastic material, or die cast from a suitable metal. In either event, however, it is preferable that all portions of the canopy be integral both for decorative purposes and to strengthen the fixture. Thus, canopy 68 comprises hollow hemispherical ends 89 and 90 (Figure 1) the distance between which is less than the axial length of shade 69 so that when the shade is installed within the canopy and connected to housing 67, the shade is securely held within the fixture. Canopy ends 89 and 90 are connected by narrow rails 91 and 92 (see also Figure 4) and integrally formed with each of the ends 89 and 90 is an attaching post 93 (Figure 2). When canopy 68 is installed on housing 67 these posts 93 project through the openings 87 in the housing in a position to receive screws 94 which extend through holes drilled in housing end walls 73 and 74, the screws thus securely attaching the canopy to the housing. Preferably each of canopy ends 89 and 90 is provided with an angular ridge 95 (Figure 2) which limits endwise movement of shade 69 and accordingly prevents either end of the shade from becoming exposed.

Preferably housing wall 72 has an opening 96 which may be closed by a pivoted door 97. This opening is provided to permit ready access to ballast lamp 79 when the occasion arises. Preferably front wall 72 of housing 67 is suitably polished or coated with a reflecting material so that this part of the housing comprises a reflector for the fluorescent lamp.

It may thus be seen that in fixture 66 full advantage has been taken of the benefits of fluorescent lighting, and that a neat, compact and decorative fixture has been provided to fulfill the several objects hereinbefore mentioned.

As many possible embodiments may be made of the above invention, and as many changes might be made in the embodiments above set forth, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. A fluorescent lighting fixture, in combination, a trough-shaped housing having a front wall adapted to support the fluorescent lighting auxiliaries, a pair of sockets secured to said housing wall and extending therefrom, a fluorescent lamp mounted in said sockets, a canopy secured to said housing and extending outwardly therefrom over said sockets and the ends of said lamp, said canopy including attaching posts at each end thereof adapted when the canopy is installed on the housing to extend through holes formed in the housing, means for securing said posts to said housing to maintain said canopy in operative position thereon, and a light controlling member associated with said canopy and forming therewith an enclosure for said socket and said lamp and the front wall of said housing.

2. A lighting fixture as defined in claim 1 wherein the opposite ends of said housing are opaque and respectively overlie said sockets and the ends of said lamp, the over-all length of said light controlling member being less than the length of said lamp, and the distance between said attaching posts being greater than the over-all length of said lamp and said sockets, whereby said attaching posts, said sockets and said lamp ends are concealed by said opaque canopy ends.

3. A fluorescent lighting fixture, in combination, a trough-shaped housing having a front wall, said housing being elongated and having holes formed therein at opposite ends, a pair of sockets secured to said housing wall and extending therefrom through said holes, a fluorescent lamp mounted in said sockets, a canopy secured to said housing and extending outwardly therefrom over said sockets and the ends of said lamp, said canopy including attaching posts at each end thereof adapted when the canopy is installed on the housing to extend through said holes in the housing, means for detachably securing said posts respectively to the ends of said housing, and a light controlling member mounted within said canopy and forming therewith an enclosure for said sockets and said lamp and the front wall of said housing.

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