

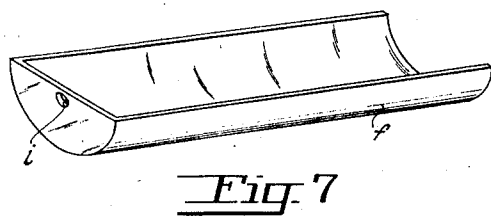
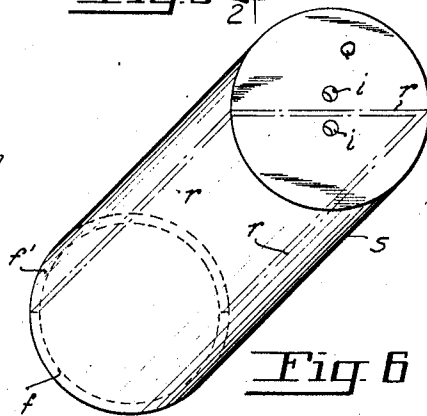
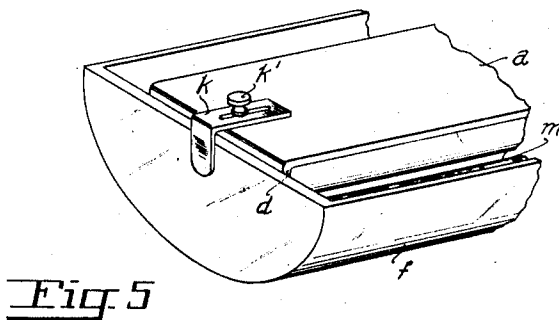
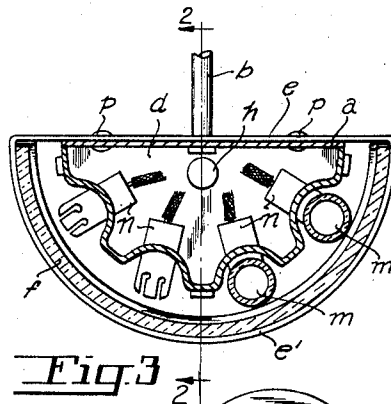
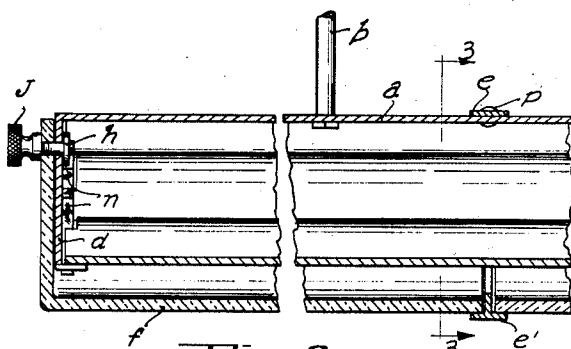
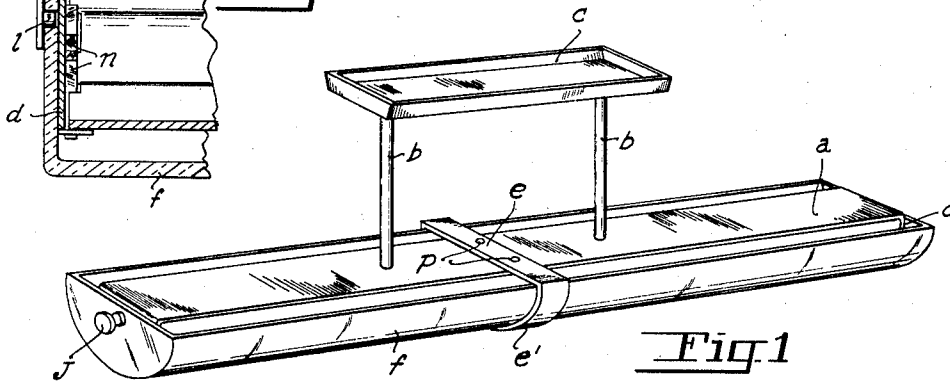
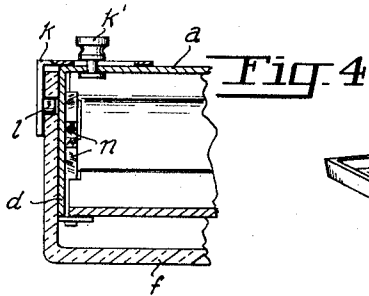
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2,323,002

FLUORESCENT LIGHT FIXTURE AND SHADE

Filed Oct. 8, 1941



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FLUORESCENT LIGHT FIXTURE AND SHADE

Frederick C. Baker, Portland, Oreg.

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2 Claims. (Cl. 240—78)

My invention relates to lighting fixtures in which fluorescent tubes are employed. Such fixtures are generally arranged to be suspended near the ceiling and to carry a plurality of fluorescent tubes, spaced fairly close together, extending substantially the full length of the fixture, and arranged on the outside of the bottom surface of the fixture or central-supporting body. In such fixtures the central-supporting body is generally flat on top and its bottom surface may be formed in a variety of ways to enable the fixture to accommodate the number of fluorescent tubes desired and to present a proper reflecting surface for the light tubes.

While such fixtures are often used without any glass or translucent shade, and thus with the fluorescent tubes exposed directly to view, the addition of such a shade, supported below or on the outside of the tubes, and thus concealing the tubes from view, considerably enhances the appearance of the fixture as well as giving a softening effect to the light. The addition of a glass shade to a fixture of this nature, however, not only involves considerable expense, since the shade must be long and specially formed to fit on the fixture, but the attaching and detaching of such a shade from the fixture, when any of the tubes require replacement, involves considerable trouble and inconvenience and danger of breaking the shade. This is true particularly when the fixture is located at considerable height from the floor so that the person endeavoring to remove the shade, while standing on a ladder, must hold the shade (which will ordinarily be quite heavy) supported in one hand, while he uses the other hand to attach or detach the shade at each end where it is supported on the fixture. When the fixture is very long it is necessary for two persons to attach or detach such a shade and considerable care is quite necessary to prevent the shade, while being fastened or unfastened, from slipping and dropping to the floor.

In order to lessen the inconvenience in attaching and detaching a shade to an elongated fixture of this type, and to reduce risk of breaking the shade, and also to reduce the cost of manufacturing suitable shades for fixtures of this type, I conceived the idea of making a shade in smaller, lighter, companion sections which could be readily secured in place, one at a time, on the frame or body of the lighting fixture.

The particular object of this invention accordingly is to provide a simple improved lighting fixture, of the type above indicated, which will carry out my conception, and to provide a suitable shade, formed in sections, adapted for my purpose.

A further object of this invention is to provide a glass shade for elongated fixtures which can

be less expensively manufactured than those at present on the market.

The manner in which I attain these objects, together with further particulars of my invention, will be hereinafter explained with reference to the accompanying drawing in which:

Figure 1 is a view in perspective of a lighting fixture embodying my invention and showing the shade attached to the fixture, the fixture in this figure being viewed from a point above;

Figure 2 is a vertical longitudinal section of a portion of the fixture and shade of Figure 1, the section being taken on the line 2—2 of Figure 3;

Figure 3 is a transverse section of the fixture and shade taken on the line indicated at 3—3 in Figure 2;

Figure 4 is a fragmentary end longitudinal section, corresponding in part to Figure 2, showing a slightly modified means for securing the outer end of each shade section and for holding such shade section against longitudinal movement, which longitudinal movement would result in displacement of the inner end of the shade section from the means provided for supporting such inner end;

Figure 5 is a partial perspective end view of the fixture made with the modified shade-end securing means of Figure 4;

Figure 6 illustrates, in perspective, a glass cylinder, closed at one end, and indicates how the same may be cut longitudinally in half to form the two companion shade sections for my fixture; and

Figure 7 shows one of the companion shade sections thus obtained from the glass cylinder of Figure 6.

The fluorescent lighting fixture comprises a frame including an elongated hollow central body *a*. The lower face of the body *a* may be shaped to constitute a suitable reflecting surface and may also be adapted to accommodate any desired number of fluorescent lighting tubes. The top face of the body *a* is preferably a horizontal plane surface, and the body is attached by a pair of tubular legs *b* (through which the electric wires pass) to a dished or hollow ceiling plate *c*. At the ends the elongate central body *a* is provided with the two end-portions *d* constituting flat surfaces extending downwardly perpendicular to the plane of the top face, and these end-portions carry the end supports *n* and appropriate electrical contacts for the ends of the fluorescent tubes *m*, the fluorescent tubes being mounted between end-portions *d* in the usual manner.

A transverse housing band *e* extends around the body *a* at its middle point and is secured to the top face of the body *a* by rivets *p*, or in any other suitable manner. The lower portion *e'* of the housing band is spaced from the bottom sur-

face of the body *a* and is formed to correspond in size and shape exactly to the outer surface of the shade. Thus, in the fixture illustrated, this portion *e'* of the housing band *e* is semi-circular and its inside diameter corresponds approximately to the diameter of the outer surface of the semi-cylindrical shade portions which are intended to be supported thereon.

Each end portion *d* of the body *a* of the fixture is provided with a stud pin *h* (see Figures 2 and 3), the end of which stud pin is threaded and adapted to accommodate a nut *j*.

In making my shade for my fixture I first form a hollow glass cylinder, of proper diameter, the diameter being that required for the semi-cylindrical shade surface desired, and make the cylinder correspond to one-half the length of the fixture. Such a glass cylinder is shown by *s* in Figure 6. The glass cylinder is closed at one end by the wall *Q*, the other end being left open. The cylinder *s* thus formed is then cut longitudinally in half, as indicated at *r*, in order to make two complete semi-cylindrical shade sections, *f*, *f'*. A hole *i* is made in the semi-circular end wall of each semi-cylindrical section. One of these completed semi-cylindrical shade sections *f* is shown in Figure 7.

When the fixture, with the fluorescent tubes mounted thereon, has been secured to the ceiling, each semi-cylindrical section *f* or *f'* is in turn inserted in place by slipping its inner end under the housing band portion *e'* and permitting a stud pin *h* at the end of the fixture to be passed through the hole *i* in the semi-circular end of the shade section. In this position the shade section will be supported on the fixture and finally, by placing the nut *j* on the end of the stud pin *h*, the shade section will be firmly secured in position. The companion shade section is set and secured in the same manner.

When any of the fluorescent tubes require replacement and the shade sections are to be removed, the nut *j* at one end of the fixture is unscrewed and the corresponding shade section is then easily slipped off the fixture. Next the other shade section is removed in the same manner. It is not necessary to support the shade section with the hand while the nut *j* is being removed, since the section will remain in place when the nut is removed until the shade section is slid off of the stud pin *h* and off of the housing band *e*.

Instead of arranging the means for holding the outer ends of the shade sections in the manner previously described and illustrated in Figure 2, the stud pins *h* may be omitted entirely from the ends *d* of the fixture body *a*, and instead, a clamp *k* may be attached to each end of the body *a* as indicated in Figures 4 and 5. Each clamp is adjustably secured in place on the top of the fixture by a nut *k'* and a downwardly-extending leg at the end of each clamp carries a pin *l* adapted to be inserted in the hole *i* at the end of the corresponding shade section.

While I have shown my shade sections as semi-cylindrical in shape, obviously many variations may be made in this shape, and all that is necessary in my invention is to provide a pair of identical shade sections, a supporting housing band of the center of the fixture, and suitable means for supporting the closed ends of the shade sections and for securing the sections against inadvertent removal from the fixture. Thus it

would be possible, in carrying out my invention, to make the shade sections with rectangular bottom surfaces, with fluted surfaces, etc.

It would also be possible to vary the details of the supporting fixture, and it is to be understood that, in general, the foregoing specification merely describes one convenient mode of carrying my conception of invention into practice.

I claim:

1. A lighting fixture of the character described comprising an elongate frame, means for holding said frame suspended in horizontal position from a ceiling surface, a lighting tube supported horizontally on the underside of said frame, a centrally located shade support attached to said frame and extending transversely around the underside of said frame on the outside of said lighting tube, a shade bowl consisting of two identical sections, each section having a substantially semi-cylindrical main portion and a substantially semi-circular end wall portion, a hole provided in each shade end wall portion, means mounted at each end of said frame including a horizontal pin adapted to be inserted in said hole, said shade bowl sections being of sufficient length to extend from the end of said frame onto said central shade support and of sufficient size to extend about the underside of said frame and said tube with the top edges of said shade sections extending approximately to the top of said frame, whereby, when each of said shade bowl sections is mounted in place on said frame, the inner end of the section will rest on said support and the outer end will be supported on said pin, said fixture so arranged that the removal of a shade bowl section from said frame will require only a minimum longitudinal movement of the section with respect to the frame sufficient to enable said shade section to become disengaged from said central support and from said pin.

2. A fluorescent lighting fixture comprising an elongate frame, means for holding said frame suspended in horizontal position from a ceiling surface, a plurality of lighting tubes supported in spaced horizontal arrangement on the underside of said frame, a centrally located shade support attached to said frame and extending transversely around the underside of said frame on the outside of said lighting tubes, a shade bowl consisting of two identical sections, each section having a substantially semi-cylindrical main portion and a substantially semi-circular end wall portion, a hole provided in each shade end wall portion, a stud extending horizontally from each end of said frame, adapted to be inserted in said hole, a removable nut on the end of said stud, said shade bowl sections being of sufficient length to extend from the end of said frame onto said central shade support and of sufficient size to extend about the underside of said frame and said tubes with the top edges of said shade sections extending approximately to the top of said frame but not extending above said frame, whereby, when each of said shade bowl sections is mounted in place on said frame, the inner end of the section will rest on said support and the outer end will be supported on said stud, said fixture so arranged that the removal of a shade bowl section from said frame will require only a minimum longitudinal movement of the section with respect to the frame sufficient to enable said shade section to become disengaged from said central support and from said stud.

FREDERICK C. BAKER.