Oct. 10, 1950 R. E. KINGSTON ET AL 2,525,553

FLUORESCENT LIGHTING FIXTURE WITH QUICK DETACHABLE REFLECTOR

Filed Feb. 28, 1950

Fig. 2

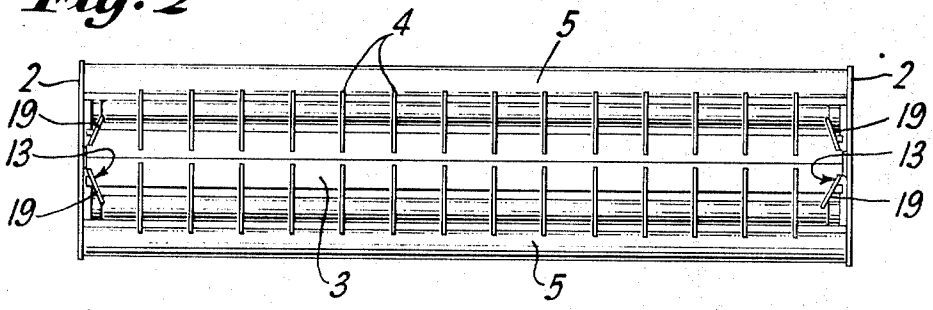



Fig. 1

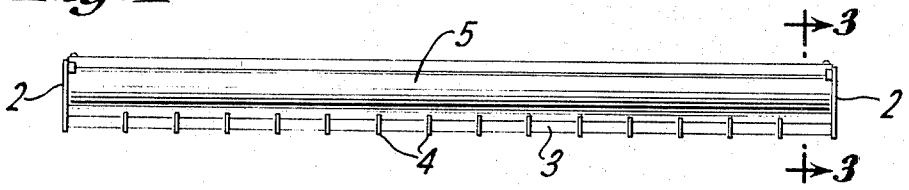



Fig. 3

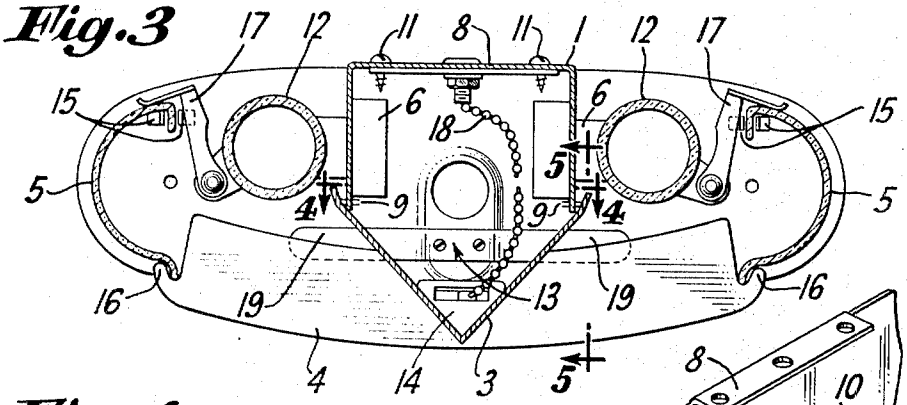



Fig. 4

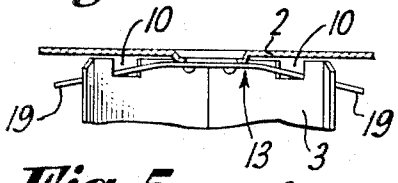



Fig. 5

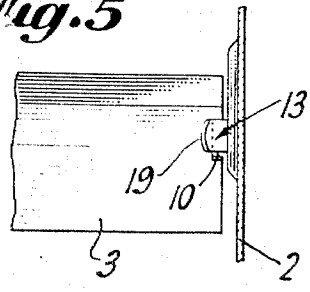
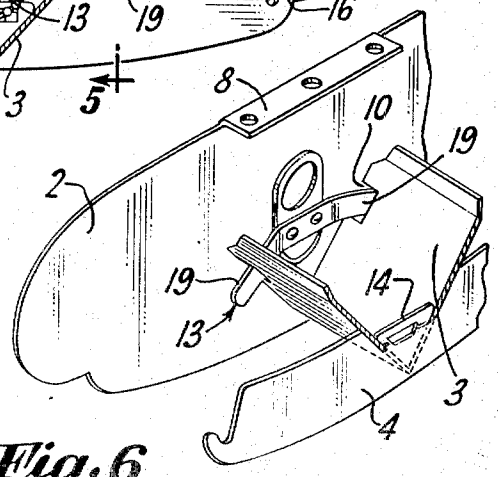



Fig. 6

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2,525,553

## FLUORESCENT LIGHTING FIXTURE WITH QUICK DETACHABLE REFLECTOR

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Application February 28, 1950, Serial No. 146,673

1 Claim. (Cl. 240—51.11)

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This invention relates to electric lighting fixtures and more particularly to those in which elongated linear light sources such as fluorescent lamps are employed.

An object of this invention is to provide an improved mechanism for supporting the reflector member of a fluorescent lamp fixture.

Another object is to provide a mechanism through which a reflector may be supported by the end plates of a fluorescent lamp fixture.

A further object is to provide a mechanism through which a reflector may be easily and quickly mounted on or disengaged from the end plates of a fluorescent lamp fixture.

Further objects, advantages and features will be apparent from the following description when read in conjunction with the accompanying drawing in which:

Figure 1 is a side elevational view of a fluorescent lamp fixture with which the reflector-end plate assembly of our invention may be employed.

Figure 2 is a bottom view of the fixture of Figure 1 showing the mechanism through which the reflector is supported from the end plates.

Figure 3 is a transverse sectional view taken along line 3—3 of Figure 1.

Figure 4 is a fragmentary sectional view taken along line 4—4 of Figure 3 showing the manner in which the reflector is supported from an end plate.

Figure 5 is a fragmentary sectional view taken along line 5—5 of Figure 3 showing the manner in which the reflector is supported from an end plate.

Figure 6 is a fragmentary perspective view of the reflector-end plate assembly.

This invention embodies the idea of providing a novel means for supporting the reflector of a fluorescent lamp fixture. More particularly, it embodies the idea of providing the inside face of each end plate of a fluorescent lamp fixture with a spring latch which engages slots cut in the ends of the reflector, thereby supporting the reflector. Figures 1, 2 and 3 of the drawing show one type of fluorescent lamp fixture with which the reflector-end plate assembly of this invention may be employed. Its ready adaptability to fixtures other than the one illustrated will be apparent to those skilled in the art.

The fixture as illustrated in Figures 1, 2 and 3 comprises an elongated channel-like chassis 1, a pair of end plates 2 attached to the ends thereof, a V-shaped reflector 3 supported by the end plates 2 and disposed beneath the chassis 1, a plurality of louver fins 4 connected to and extending transversely of the reflector 3, and a pair of light-controlling panels 5 supported by and extending between the end plates 2.

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The elongated channel-like chassis 1 serves as a mounting member to which a ballast and conventional wiring equipment (not shown) may be attached.

The top of the chassis 1 is provided with a plurality of knock-outs (not shown) through which suitable mechanical connections may be made to hang or mount the fixture and through which the wiring equipment may be connected to a source of electric power. A pair of lamp holders 6 may be mounted on the inside face of the chassis 1 at each end thereof and project outwardly therefrom through suitable cut-outs. Fluorescent lamps 12 are supported by these lampholders 6. Alternatively, the lampholders may be mounted on the end plates 2. The end plates 2 are attached to the chassis 1 by means of screws 11 which extend through the chassis and an inwardly turned flange 8 on the upper peripheral edge of each end plate; and by means of a pair of lances 9 in the inside face of the end plates which interlock in slots therefor in the sides of the chassis adjacent the ends thereof.

The manner in which the reflector 3 is supported from the end plates 2 is illustrated in Figures 3–6. Each end plate is provided with a spring latch 13 and the ends of the reflector are slotted at 10. Mounting of the reflector 3 on the spring latches 13 is accomplished by first placing one end of the reflector 3 against one of the end plates with the fingers 19 of the spring latch 13 extending through the slots 10 in the end of the reflector. The fingers 19 of the spring latch 13 on the other end plate are then depressed and the other end of the reflector is brought up until the slots 10 in the ends thereof are in register with the fingers 19 of the spring latch 13. The fingers 19 are then released, permitting them to snap into the slots 10 in the ends of the reflector.

The advantages of this mounting arrangement will be readily apparent to those skilled in the art. Not only does this method of supporting the reflector lend itself quite readily to the manufacturing assembly operation but it greatly simplifies the maintenance of the fixture. When it is desired to remove the reflector for cleaning purposes or to gain access to the electrical equipment in the chassis 1, all that an operator has to do is to depress the spring fingers 19 of one of the latches 13, thereby freeing one end of the reflector, and then withdraw the other end thereof

from its interlocking engagement with the fingers 19 of the other latch 13.

The reflector 3 has a plurality of slots cut transversely therein into which louver fins 4 are inserted. Each fin 4 has a tab 14 formed integral therewith which is deformed after the fin has been positioned in the reflector slot, thereby providing a mechanical locking of the fin to the reflector (Figure 3).

The inside face of each end plate is provided with two pairs of retaining tabs 15 which support the light-controlling panels 5. The lower edge of the panels 5 seat in the hook portion 16 of the louver fins 4. The panels 5 are retained securely in position by latches 17 which are pivotally mounted on the end plates 2.

A pair of reflector chain retainers 18, one end of each of which is attached to the chassis 1 and the other end of each to the tab 14 of a louver fin 4, are provided at each end of the chassis 1 (Figure 3). These retainers 18 permit the reflector-louver assembly to be suspended a few inches below the chassis after it has been disengaged from the spring latches 13 on the end plates 2. For maintenance purposes, this alternative may be preferable to complete removal of the reflector 3 as described above. The chain retainers 18 also serve as safety hangers in case of malfunction of the spring latches 13.



What we claim is:

In a lighting fixture, the combination of a chassis; end plates mounted on the ends of said chassis; a spring latch mounted on the inside face of each of said end plates and lying in a plane substantially parallel to the longitudinal axis thereof, each latch comprising a pair of resilient fingers lying in a horizontal plane and extending in opposite directions; and a reflector disposed beneath said chassis and having slots cut in and extending inwardly from the ends thereof through which the resilient fingers of the spring latches extend.

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