Feb. 26, 1952

R. I. BERRY

LIGHTING FIXTURE AND LOUVER FOR ELONGATED TUBULAR LAMPS

2,586,908

Filed Dec. 1, 1949

2 SHEETS—SHEET 1

Fig. 1

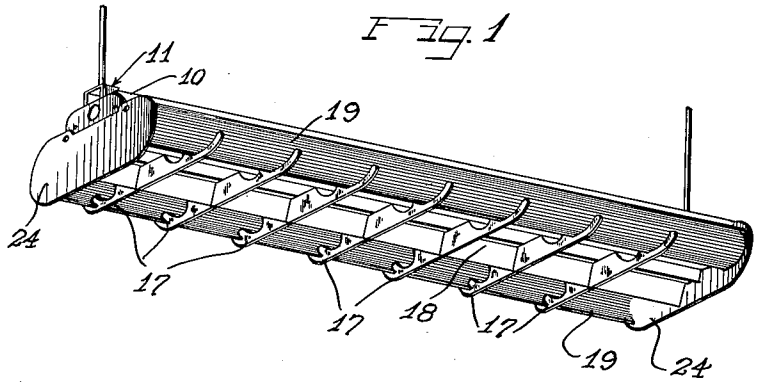


Fig. 2

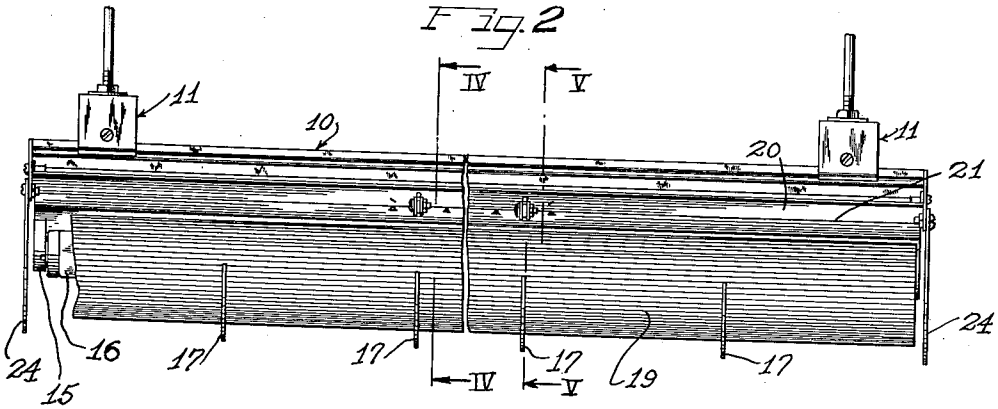
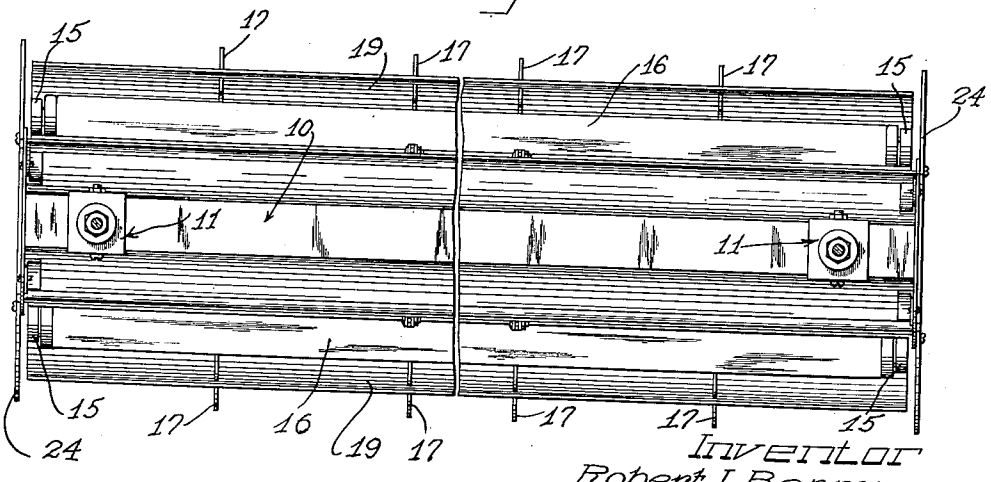


Fig. 3



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2 SHEETS--SHEET 2

Fig. 4

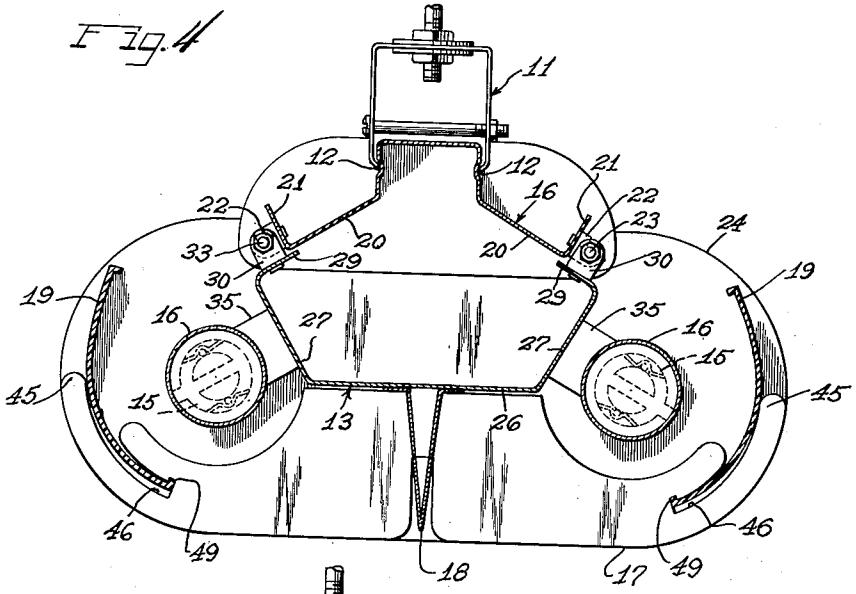


Fig. 5

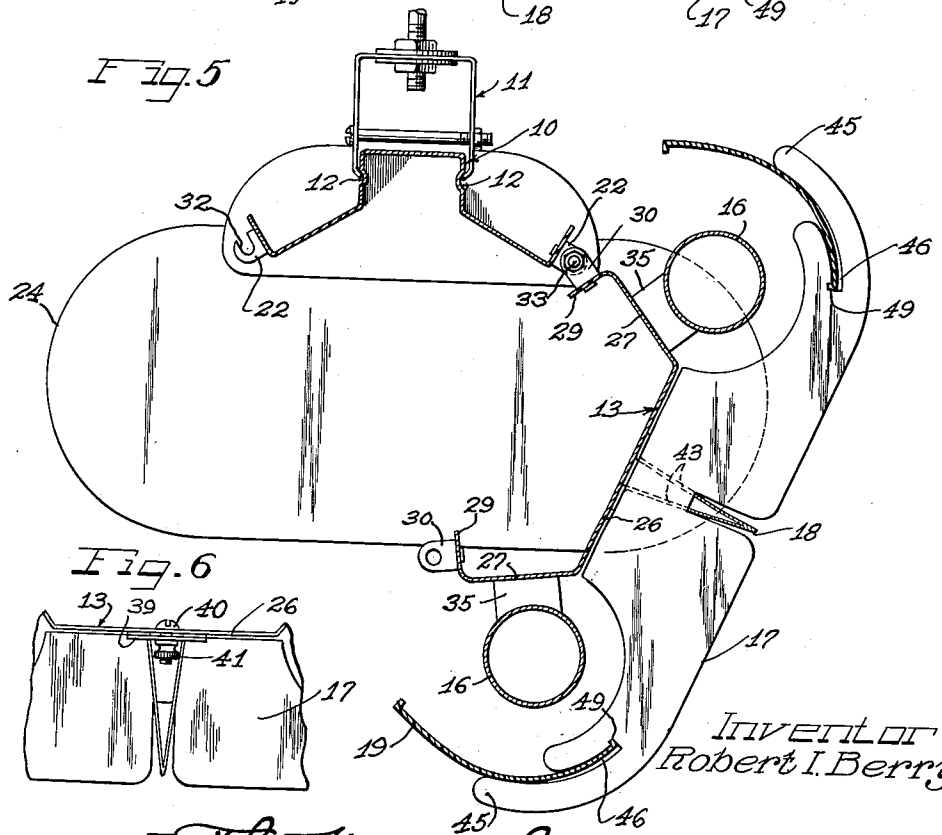


Fig. 6

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LIGHTING FIXTURE AND LOUVER FOR ELONGATED TUBULAR LAMPS

Robert I. Berry, Chicago, Ill.

Application December 1, 1949, Serial No. 130,428

4 Claims. (Cl. 240—51.11)

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This invention relates to improvements in lighting fixtures and more particularly relates to an improved lighting fixture for fluorescent lighting tubes.

One of the objects of my invention is to provide a lighting fixture for horizontal tube-like lighting bulbs, shielding the bulbs to avoid glare to the eyes and enabling ready replacement of the bulbs without affecting the fixture.

Another object of my invention is to provide a horizontal lighting fixture for fluorescent lighting tubes of a simple, novel and efficient structure so arranged as to permit ready removal of the tubes from the top of the fixture without removing any parts of the fixture.

A further and more specific object of my invention is to provide a fixture for fluorescent lighting tubes including a tube supporting body adapted to hang from the ceiling and having sockets horizontally supporting the tubes in laterally spaced relation with respect thereto, together with louvers extending transversely beneath the tubes and forming supports for reflecting shields extending along the outer sides of the tubes and spaced therefrom and from the body in such a manner as to permit ready removal of the tubes from the tops of the louvers and reflecting shields without removal of said louvers and shields from the body.

Still another object of my invention is to provide a ceiling fixture for the mounting of fluorescent lighting tubes having a plurality of spaced transversely extending louvers extending beneath the tubes and upwardly therealong for a portion of the height thereof, together with a novel form of means for mounting the shielding reflectors in laterally spaced relation with respect to the tubes, permitting insertion or removal thereof from the ends of the louvers.

Still another object of my invention is to provide a ceiling fixture for horizontal fluorescent lighting tubes having a longitudinally extending supporting body for the tubes with transversely extending shielding louvers extending therebeneath, together with a simple and novel form of mounting for the louvers mounting the louvers to depend from the bottom of the body in parallel spaced relation with respect to each other.

Another object of my invention is to provide a new and improved form of lighting fixture for horizontal fluorescent tubes arranged in a simple manner to screen the tubes from the eyes and permit ready removal thereof from the top of the fixture without disturbing the parts of the fixture.

These and other objects of my invention will appear from time to time as the following specification proceeds and with reference to the accompanying drawings wherein:

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Figure 1 is a modified form of isometric view of a ceiling lighting fixture constructed in accordance with my invention, looking upwardly toward the fixture;

Figure 2 is a view in side elevation of the fixture shown in Figure 1 with certain parts of the reflecting shield broken away in order to show the support sprockets for the lighting tubes;

Figure 3 is a top plan view of the fixture shown in Figure 1;

Figure 4 is a transverse sectional view taken substantially along line IV—IV of Figure 2;

Figure 5 is a view somewhat similar to Figure 4 but taken along line V—V of Figure 2 and showing the bulb supporting body pivoted in position to remove or replace the reflecting shields thereof;

Figure 6 is a fragmentary end view of the fixture with the end closure thereof removed.

Referring now in particular to the drawings, the fixture includes generally an elongated support member 10 adapted to be hung from the ceiling by hangers 11—11 clamped into engagement with recessed portions 12—12 thereof extending along opposite sides thereof. The support member 10 forms a mounting for an elongated tube supporting body 13 depending therefrom and extending therealong. The body 13 has laterally spaced sockets 15—15 extending angularly downwardly from opposite sides and ends thereof to support and conduct current to fluorescent lighting tubes 16—16, detachably mounted therein in a well known manner.

The tubes 16—16 are screened to protect the eyes by transverse louvers 17—17 depending from the bottom of the supporting body and secured thereto by a holder 18, as will hereinafter more clearly appear, and by reflecting shields 19—19 mounted on opposite ends of said louvers and extending along said tubes from positions beneath said tubes upwardly along opposite sides thereof and terminating at their upper ends above the tops thereof. The electrical conductors for supplying current to the starters and sockets 15—15 may extend through the support member and body in the space between said support member and the supporting body 13, and the starting elements for the tubes (not shown) may be removably supported in the body adjacent the respective sockets.

The elongated support member 10 is shown in Figure 4 as having a channel-like top portion opening toward the ground and diverging at its lower ends into outwardly and downwardly ex-

tending inclined wall portions 20—20 having upturned outer ends 21—21 herein shown as extending substantially perpendicular to the diverging wall portions thereof and as having longitudinally spaced ears 22—22 secured thereto and extending laterally therefrom and forming supports for the supporting body 13. Opposite ends of the fixture are shown as being closed by end closure members 24—24 suitably secured to the ends thereof and depending therefrom and extending laterally beyond opposite sides thereof and defining the outer limits of the fixture and also serving as separators between adjacent ends of the tubes where more than one fixture may be secured together in end-to-end relationship.

The tube supporting body 13 has a substantially horizontal bottom portion 26 spaced beneath the support member 10. The body 13 is herein shown as having outwardly inclined upwardly extending wall portions 27—27 extending from opposite sides of the bottom 26 and having inwardly turned upper ends 29—29 herein shown as extending substantially parallel to the diverging wall portions 20—20 of the support 10. The inwardly turned ends 29—29 are shown as having a plurality of bifurcated ears 30—30 mounted thereon and extending upwardly therefrom along opposite sides of the ears of the support member 10. The ears 22—22 are provided with upwardly opening slots 32—32 to which the ears 30—30 may be connected as by nuts and bolts 33 to support the tube supporting body 13 for downward pivotal movement about either of its sides and permit removal of the reflecting shields 19—19 for cleaning or replacement without removing the body 13 or the end closure members 24—24 from the support member 10.

The sockets 15—15 are mounted on the outer ends of support members 35—35 extending laterally from the inclined wall portions 27—27 in perpendicular relationship with respect thereto, said support members support the sockets 15—15 and tubes 16—16 to extend along the inclined wall portions 27—27 in parallel relation with respect thereto, and said inclined wall portions serve to reflect the light downwardly and laterally toward the reflecting shields 19—19.

The louvers 17—17 are supported in depending relation with respect to the base 26 of the tube supporting body 13 on the longitudinally extending louver hanger 18. The louver hanger 18 is shown in Figure 6 as being of a V-shaped formation with the upper ends of the V projecting laterally in a horizontal direction and abutting the bottom face 26 of the body 13. The laterally projecting portions of the hanger 18 extend around the forward and rear ends thereof as indicated by reference character 39 and are herein shown as being secured to the body 13 by means of thumb nuts 40—40 threaded on screws 41—41 extending through said base and the projecting forward and rear end portions 39—39 of said louver hanger. The louver hanger 18 is provided with a plurality of vertical transversely extending slotted portions 43—43 spaced longitudinally therealong and opening to the top thereof. Each of said slotted portions provides a relatively wide support to receive and support a louver 17 to extend transversely beneath the outer sides of the tubes 16—16 in laterally spaced relation with respect thereto.

The louvers 17—17 have upwardly curved end portions 45—45 conforming to the general curvature of the tubes 16—16 and are of a bifurcated

formation with the outer furcation longer than the inner one and the space between said furcations forming upwardly opening arcuate slots 46—46 for receiving and supporting the reflecting shields 19—19 to extend upwardly beyond opposite sides of said louvers. The inner end of each slot 46 is upwardly recessed to receive an inwardly turned end portion 49 of the reflecting shield 19. The reflecting shields 19—19 may thus be supported in laterally spaced relation with respect to the tubes 16—16 on the louvers 17—17 and may be held in position therein by the inwardly turned end portions 49—49. They also may readily be removed by releasing said inwardly turned end portion, and sliding said shields along and out of the slots 46—46.

The reflecting shields 19—19 may be made from a frosted or translucent glass or from any well known form of plastic material, or may be made from metal, the material used depending upon lighting conditions and the amount of reflection or diffusion desired.

In Figure 5 the supporting body 13 is shown as being hinged in a downwardly extending position. When the body 13 is in this position, the transformers and wiring within the fixture is then open and readily accessible without disassembling the fixture, and the fixture may easily be cleaned without taking it apart.

It should here be noted that the louvers 17—17 and reflecting shields 19—19 extending beneath and laterally beyond the tubes 16—16 and upwardly along opposite sides thereof are spaced with respect to the body 13 and the tubes 16—16 a distance sufficient to enable the tubes 16—16 to readily be removed from the sockets 15—15 or replaced therein from the tops of said louvers and reflectors without removing the louvers or reflectors or affecting the fixture in any manner. It should likewise be noted that the reflecting shields 19—19 are so supported and spaced as to offer a maximum amount of protection to the eyes and to be sufficiently clear of the tubes 16—16 as to permit ready removal thereof from above said reflecting shields without removal of said shields.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. In a lighting fixture for elongated horizontal fluorescent tubes, an elongated support member adapted to be suspended from the ceiling, a tube supporting body extending along said support member and secured thereto to depend therefrom and having sockets extending laterally from opposite sides and ends thereof and supporting the tubes to extend along opposite sides of said body in laterally spaced relation with respect thereto, screening means extending laterally from said body beneath said tubes and including a longitudinally extending hanger depending from said body and longitudinally spaced louvers supported thereon and extending laterally therefrom in opposite directions beyond the outer sides of said tubes and having upwardly curving outer end portions spaced from and substantially conforming to the forms of said tubes for a portion of the circumference thereof, the upwardly curving outer end portions of said louvers having upwardly opening slots extending therealong, and arcuate reflectors mounted in said slots by sliding movement from the outer ends of said louvers and supported thereby to

extend along the outer sides of and upwardly above said tubes in laterally spaced relation with respect thereto, the inner end portions of said reflectors extending at an angle with respect to the body thereof and the curvature of said reflectors being different from the curvature of the slotted portions of said louvers and holding said end portions in interengagement with said louvers by the difference in curvature thereof and the weight of said reflectors thereon and the distance between said louvers and reflectors and said body and sockets and tubes being sufficient to permit ready removal of said tubes without removing said reflectors and louvers.

2. In a lighting fixture for elongated horizontal fluorescent tubes including an elongated support adapted to be hung from the ceiling and having shields depending from opposite ends thereof and extending laterally therefrom and defining the end and lateral limits of the fixture, a tube supporting body longitudinally pivoted to said support to one side of the center thereof, means for holding said body in a substantially horizontal position or permitting it to be pivoted with respect to said support, and tube-receiving and supporting sockets projecting laterally from opposite ends and sides of said body to support the tubes therebetween in laterally spaced relation with respect to said body, the improvements comprising a grate-like screening louver supported on and extending beneath said body between said shields and laterally beyond the outer sides of said tubes and having arcuate upwardly opening outer slotted portions, and reflecting shields supported in said slotted portions and inserted therein from the outer ends of said louvers, said reflecting shields having inwardly turned end portion in interengagement with said louvers and said slotted portions being of a greater width than the thickness of said reflectors and inwardly turned end portions and so arranged as to normally hold said inwardly turned end portions in engagement with said louvers by the weight of said reflectors on said slotted portions and to permit disengagement of said reflectors from said louvers by lateral movement of said reflectors out of said slotted portions, enabling replacement of said reflectors from the ends of said louvers without affecting the fixture.

3. In a lighting fixture for elongated horizontal fluorescent tubes including an elongated support member adapted to be mounted on a ceiling, a tube supporting body extending along and secured to the bottom of said support member and having a relatively flat bottom, and sockets supported on and extending from opposite sides and ends of said body to support the tubes in laterally spaced relation with respect thereto, the improvements comprising screening means for the tubes including a plurality of vertical longitudinally spaced transversely extending louvers extending beneath said tubes and beyond the outer sides thereof and curving upwardly in conformance with the circumference thereof for a portion of the height thereof, the upwardly curving outer end portions of said louvers being of a bifurcated formation with the outer furcation longer than the inner one and the space between the furcations thereof forming upwardly opening slots, reflecting shields substantially conforming to the form of the upwardly curved ends of said louvers and mounted thereon by movement within said slots from the ends thereof, and interengaging connections between said reflectors and louvers.

4. In a lighting fixture for elongated horizontal fluorescent tubes comprising an elongated tube supporting body having opposite inclined sides, sockets supported on and extending laterally from the inclined sides of said body to support the tubes in laterally spaced relation with respect to said body, the improvements including screening means for the tubes includnig a plurality of longitudinally spaced transversely extending louvers depending from said body and extending beneath said tubes and beyond the outer sides thereof and having upwardly curving outer end portions spaced laterally from and conforming to the form of said tubes for a portion of the height thereof, the upwardly curving outer end portions of said louvers being of a bifurcated formation with the outer furcations longer than the inner ones and the spaces between said furcations forming upwardly opening arcuate slots having recessed retaining portions at the inner ends thereof, and arcuate reflectors of a different curvature than the curvature of said slots having inwardly turned end portions engageable with said recessed retaining portions of said louvers and held in locking engagement therewith by the difference in curvature between said slots and reflectors, and the width of said slots being sufficient to permit removal of said reflectors therefrom by release of said interengaging connection and by sliding movement of said reflectors from the ends of said slots.

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