

May 26, 1953

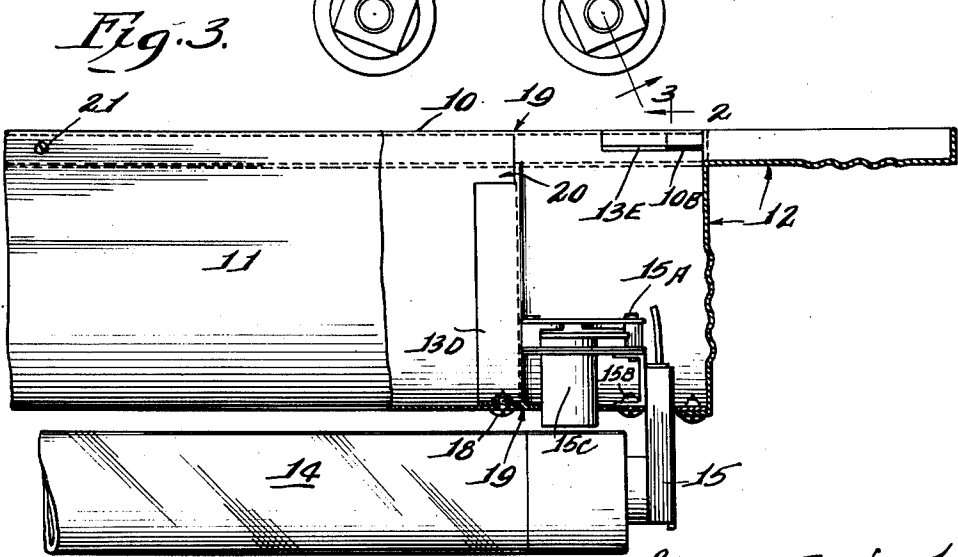
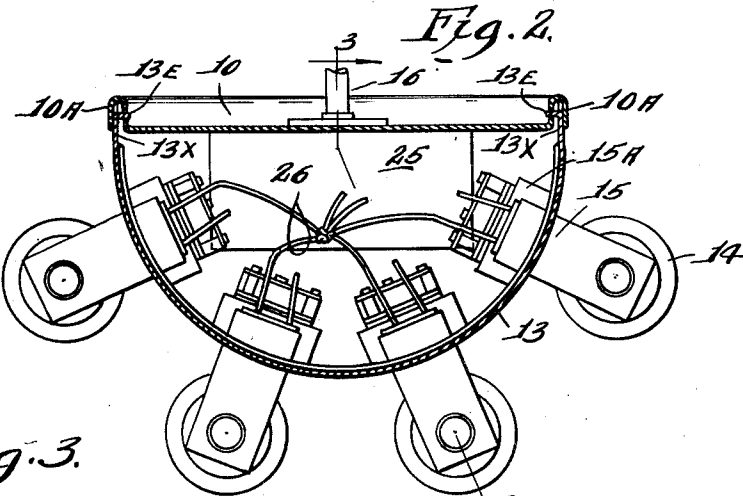
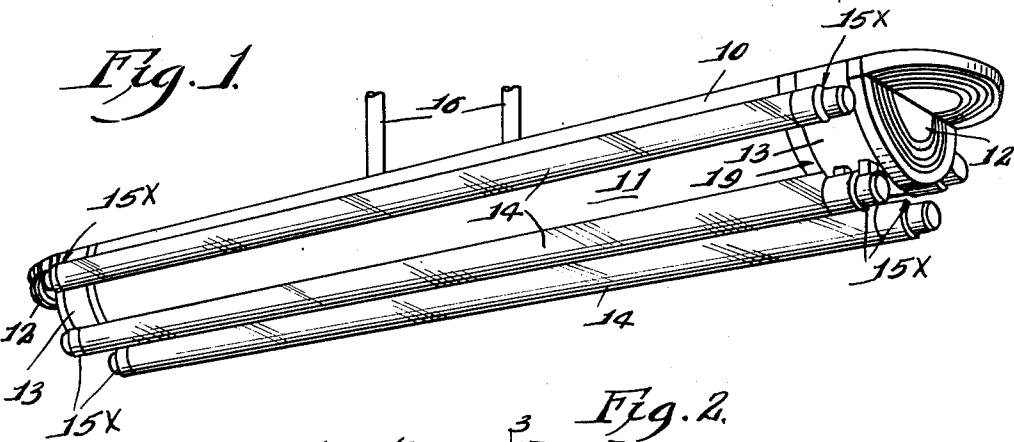
G. SMITH

2,640,146

LIGHTING FIXTURE FOR ELONGATED TUBULAR LAMPS

Filed June 17, 1947

2 Sheets-Sheet 1



Inventor:
G. Smith.
By: *Allen Livingston*
Attorney.

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G. SMITH

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Fig. 4.

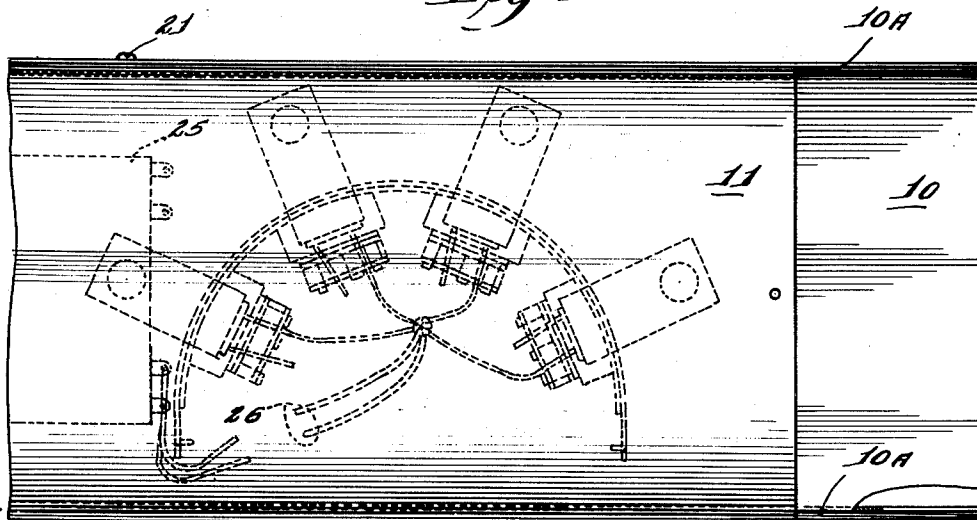


Fig. 5.

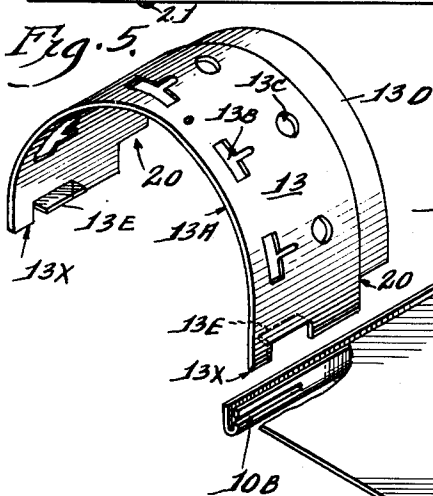


Fig. 6.

Fig. 7.

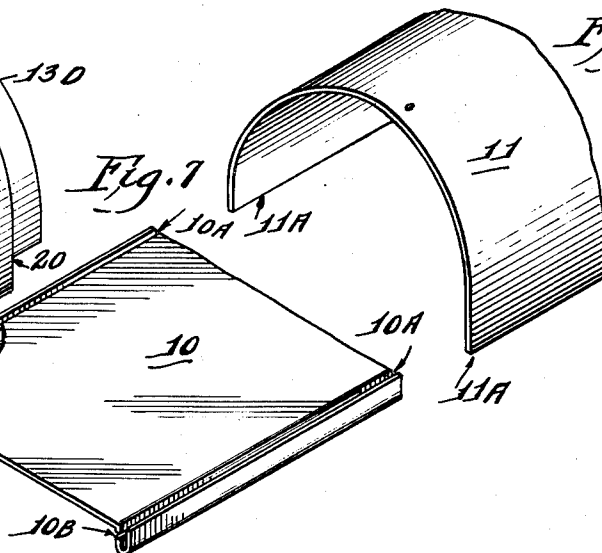
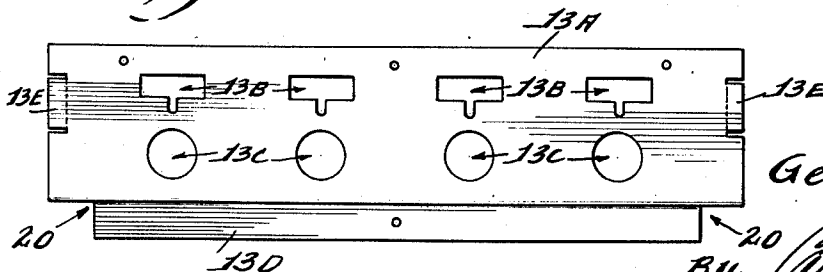


Fig. 8.



Inventor
Gear Smith
By. *Allen Kirkham*
Attorney.

UNITED STATES PATENT OFFICE

2,640,146

LIGHTING FIXTURE FOR ELONGATED
TUBULAR LAMPSGean Smith, Chicago, Ill., assignor to L. J. Segil
Company, Chicago, Ill., a corporation of Illinois

Application June 17, 1947, Serial No. 755,151

10 Claims. (Cl. 240—51.11)

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This invention pertains to lighting fixtures, particularly those adapted to use with fluorescent lamps and the like.

One of the principal objects of the invention is the provision of a lamp mount and fixture of simplified construction and improved efficiency with regard to the assembly, installation, servicing, dismantling, or shipping thereof.

Another important object is the provision of a fixture of the class described having a demountable socket base or unit.

A further important object is the provision of a lamp fixture including a reflector portion providing a cavity in which ballast or other associated apparatus can be housed, and a demountable socket unit which may be fitted into said cavity for purposes of packing and shipping without disturbing the electrical connections and wiring from the socket unit to said associated apparatus in the cavity.

Yet another object is the provision of a fixture of the class described including a base, a concavo-convex reflector or belly section of elongated form mounted on said base, and arcuate socket mounts demountably interfitting with formations on said base and so contrived as to fit into the concavity of the reflector so that the socket units, and especially the protruding socket parts thereof, are out of the way, whereby to render the fixture of smaller overall extent and shape suitable for packaging and shipping purposes, the wiring of the socket elements and associated parts remaining unaffected.

Additional objects and aspects of novelty and utility peculiar to the invention pertain to details of construction and manipulation of parts of the preferred embodiment hereinafter described in view of the annexed drawings in which:

Fig. 1 is a perspective view of a complete fixture embodying the present invention;

Fig. 2 is a cross section, to enlarged scale, taken along lines 2—2 of Fig. 3 and looking endwise into the fixture and socket mount;

Fig. 3 is a fragmentary side-elevation view of the fixture looking in the direction of lines 3—3 of Fig. 2, with parts shown in section;

Fig. 4 is a bottom plan view of an endwise portion of the base and reflector with the demounted socket mount inserted in the cavity thereof;

Fig. 5 is a perspective view of the socket mount with sockets removed;

Fig. 6 is a fragmentary perspective of an end of the belly or reflector portion cooperable with the band of Fig. 5;

Fig. 7 is a fragmentary perspective of an end

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of the base with interfitting portions cooperable with the socket band of Fig. 5 and the reflector of Fig. 6;

Fig. 8 is a plan view of the socket mount stamping before forming up.

In Fig. 1 is shown a fluorescent lighting fixture which includes a base portion 10, a belly or reflector portion 11 of elongated concavo-convex form providing a hollow interior or cavity, end plates 12, socket mounts 13, and elongated, tubular fluorescent lamps 14 seated at their ends in sockets 15. The type of fixture illustrated is intended for ceiling mounting, and accordingly is suspended by hanger tubes or conduits 16.

Commonly, such fixtures attain several feet in length and have a proportionate girth which is reduced somewhat by removal of the lamps 14, hangers 16, etc. for stock and shipping purposes.

Moreover, the invention further provides for easy removal of the otherwise protruding sockets 15 to render the fixture still more compact, among other things.

The socket mount, which is an important feature of the invention, is easily and inexpensively formed by stamping a narrow elongated sheet of metal in the pattern shown in Fig. 8, which includes the band-proper, indicated at 13A, with punched socket openings 13B and starter-cartridge openings 13C, together with a belly or reflector mounting lip 13D, and endwise lug punchings 13E, the punched strip 13A being formed up into the arcuate shape shown in Fig. 5, and lugs 13E being struck up for purposes to be described.

As shown in Fig. 7, the base plate 10 is provided along its opposite longitudinal edges with channels or grooves 10A into which fit the longitudinal edges of the reflector and socket mount, respectively.

The innermost wall portion of each channel 10A is provided with a longitudinal slot 10B, Fig. 3 and Fig. 7, at the two ends thereof, into which slidably fit the ears or lugs 13E on the socket mounts, as in Figs. 2 and 3, to lock the mounts in the channels.

In the assembled relation of the parts shown in Fig. 3, the belly or reflector 11 overlies the lip 13D of the socket mount and is secured to the latter by screws 18, said lip being offset in stamping so that the surfaces of the reflector and socket band are substantially flush, as also are the meeting edges thereof at 19, and to this latter end, particularly, the socket band is cut away as at 20, Figs. 5 and 8, in order that there shall not be two thicknesses of metal in the channels 10A

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at the meeting line of the reflector and socket band or mount. The reflector 11 is further secured in position by means such as screws 21, Figs. 3 and 4, tapped into the base.

The sockets 15 (Figs. 2 and 3) include an upright portion which projects through the openings 13B, and a base portion 15A disposed interiorly of the band and secured to the latter as by screws 15B, and each socket also includes the usual starter cartridge 15C, the tops of which protrude through their respective openings 13C for access to removal.

Certain additional apparatus necessary to fluorescent lamp operation, such as the conventional ballast unit 25, Fig. 4, is housed within the fixture behind the reflector, and electrical connections 26 extend therefrom to each of the sockets 15 and associated starter means, such connections being by flexible wire of overlength adequate to permit some freedom of movement to the socket mounts, so that the latter may be removed from the demounted condition of Fig. 4, within the cavity of the reflector, to the mounted condition of Figs. 2 and 3, for example.

The illustrative embodiment of the fixture may be completed in assembly by attachment of ornamental and finish pieces, such as end plates 12, and socket shields 15X (Fig. 1 only) of the slip-on variety.

It is readily apparent from comparison of Figs. 2 and 4, for example, that demounting of the socket units and storage thereof within the fixture conserves space.

Upon removal from the shipping or packaging container, the socket unit may quickly and easily be assembled by sliding bands 13 into channels 10A and setting the screws 18, no attention being required to the wiring. Moreover, after the fixture is installed, should servicing of any of the sockets, wiring or associated ballast apparatus, be required, the parts are very easily accessible, it being noted that the reflector is removable without disturbing either socket mount.

The foregoing specification describes and explains in particular detail a preferred illustrative embodiment of the invention and improvements, modifications and variations of which may be effected without departing from the scope of the invention as particularly pointed out and claimed hereinafter, as follows.

I claim:

1. A lighting fixture comprising a base, a concavo-convex reflector on said base and forming a cavity therewith, and a socket mount including an arcuate band mounted on said base with an arcuate edge confronting an arcuate edge at an axial end of the reflector so as to be in curvilinear flush-surface alignment with said reflector, socket means on said band, said band removable from said base and dimensioned to fit into said cavity, electrical apparatus housed within said cavity and connected by flexible conductor means to said socket means and of extended length to permit free movement of said bands whereby said band and socket means thereon may be mounted and demounted at will and stowed in said cavity, said band having an edge offset to provide a seating ledge on which said reflector fits with the outer surfaces of both the reflector and band flush as aforesaid.

2. A lighting fixture comprising a pair of arcuate bands, socket means carried by each band and projecting therethrough in a sense radial of the center of curvature thereof, an arcuate ledge on an edge of each band and offset radially inwardly

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to form a reflector seat, a reflector curved conformably to the curvature of said bands and ledges, and base means removably mounting said bands and reflector in assembled relation with the reflector and seated at each of its axial ends on one of said ledges between said bands and the entire curvilinear surfaces of the same in substantially flush alignment.

3. A fixture as defined in claim 2 and further characterized in that said bands are slidably mounted on, and severally removable from, the base means and dimensioned to fit into a cavity formed between said reflector and said base means.

4. A fixture as defined in claim 2 and further characterized in that said reflector forms with said base means a housing cavity, and said bands are slidably interfitted with, and severally removable from, said base means and dimensioned to fit within said housing cavity.

5. A fixture as defined in claim 4 and further characterized in that flexible electrical connections are extended from the socket means of each said band to a fixed point of connection within said housing cavity and dimensioned and disposed to permit freedom of movement of said bands from within to without said cavity for purposes of mounting or removal from said base means.

6. A fluorescent lighting fixture comprising an elongated base, channels on the longitudinal edges of said base, an elongated, trough-shaped reflector having longitudinal edges fitting into said channels in assembled relation with said base, a pair of trough-shaped socket bands shaped conformably with said reflector and having edge portions also fitting into said channels in assembled relation with said base and said bands dimensioned to register in surface alignment to appear as flush-surface continuations of said reflector in assembled relation therewith on said base, and socket means carried by said bands for operatively supporting fluorescent light tubes therebetween, said channels having longitudinal slots opening into the end regions of said base, and seating lugs on said bands fitting into said slots to secure the bands in said channels.

7. In a known type of fluorescent lighting fixture which includes an elongated base, an elongated and curved belly of approximately semi-circular cross section on said base and forming therewith a housing in which lighting apparatus is disposed, the improvements which comprise the following, namely: a pair of socket mounting bands of similar semi-circular cross section removably carried on said base, one at each axial end of said belly and dimensioned to have approximately the same radius of curvature as the belly so as to conform in curvilinear shape thereto, a plurality of lamp sockets mounted on each band for cooperation in mounting elongated lamp elements along the length of said belly, and flexible electrical connections between said sockets and said lighting apparatus in said housing of character permitting freedom of movement of said bands relative to the base and belly, said bands and the sockets thereon being limited to a predetermined radial dimension relative to the radial depth of said belly, to fit into said housing with the sockets mounted thereon for stowage and shipping purposes, said base having open channels on each of its longitudinal edges into which longitudinal edge portions of said belly fit in mounted condition, and said bands have corresponding edge portions likewise received in said channels in mounted condition, said bands hav-

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ing cut-away portions adjoining said channel-fitting edge portions thereof nearest the corresponding adjoining edge portions of said belly in said channels, whereby only the thickness of the material of the belly occupies said channels at the juncture of the bands with the belly in said channels.

8. A lighting fixture in accordance with claim 7 and further characterized in that said channels have longitudinally extensive slots opening into the extremities thereof, and said bands have offset lugs each fitting into one of said slots to secure the bands respectively in mounted condition on said base.

9. A lighting fixture in accordance with claim 8 and further characterized in that said bands each have a curvilinear lip offset in a sense radial of the axis of curvature thereof and into which fit adjoining edge portions of said belly in assembled condition with said bands on said base, whereby the curvilinear surface portions of said bands and belly present a substantially flush and even outer surface.

10. In a lighting fixture, in combination, a base, a pair of semi-circular socket mounts carried on said base in spaced relation, each said

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mount having an edge portion offset to be of lesser radius of curvature than the remaining body portions of the mount and defining a reflector-seating ledge, and a reflector of similar semi-circular form and substantially the same radius of curvature on its outer surface as the outer surface of said mounts, and of substantially the same radius of curvature on its inner surface as is the outer surface of each said ledge so as to seat on the latter between said pair of mounts with said outer surfaces flush, and means on said mounts for mounting sockets.

GEAN SMITH.

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