March 24, 1942. C. KRAUSS 2,277,648

LAMP FIXTURE AND SOCKET THEREFOR

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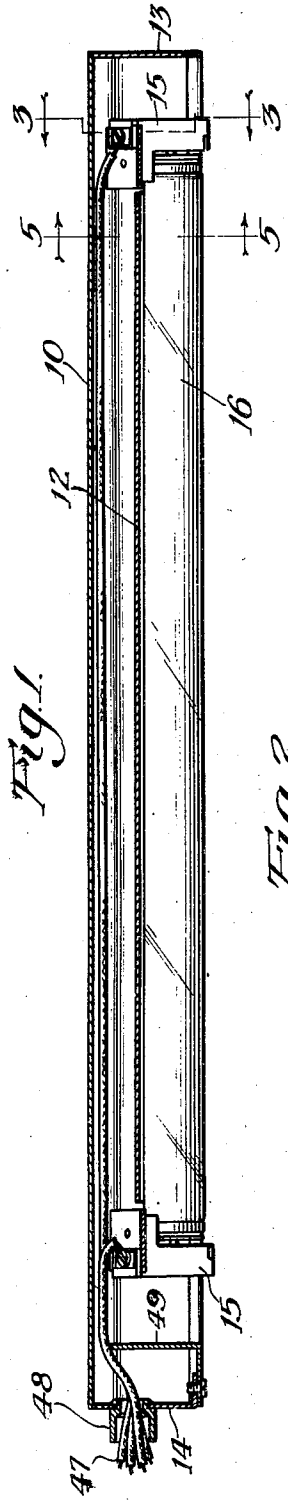


Fig. 1.

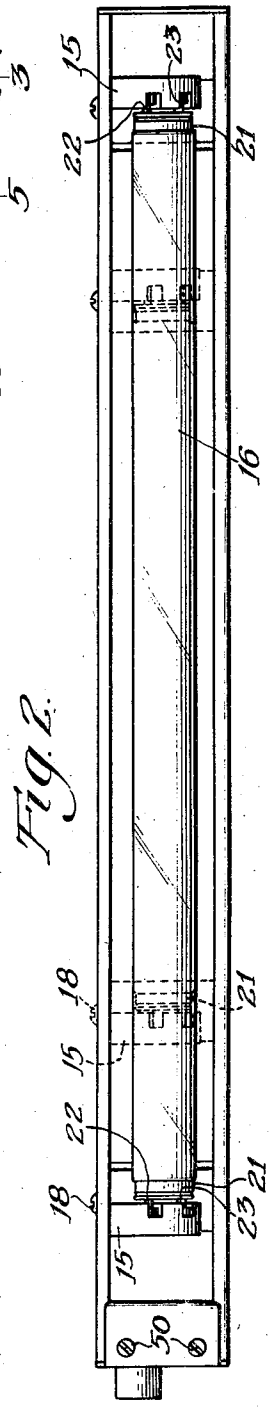


Fig. 2.

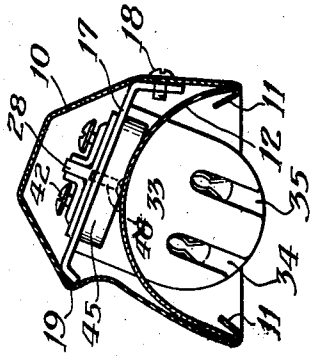


Fig. 5.

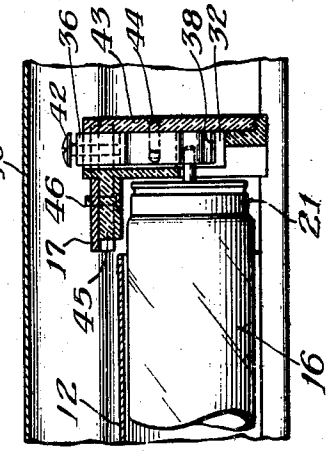


Fig. 4.

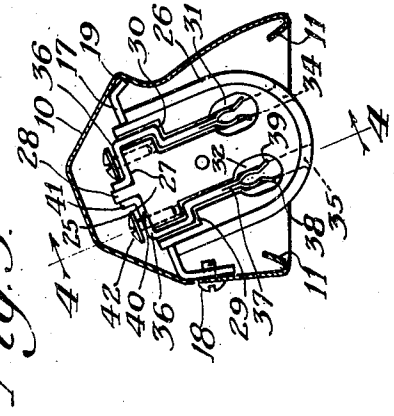


Fig. 3.

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LAMP FIXTURE AND SOCKET THEREFOR

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1 Claim. (Cl. 173—328)

This invention relates to a lamp fixture and particularly one adapted to accommodate a double-ended elongated type of lamp and also to novel sockets for such lamp fixtures. These sockets are designed to receive and have removed therefrom the contact pins or prongs at both ends of the lamp in a plane substantially at right angles to a line drawn through the axes of the contact pins. In this way the lamps may be inserted or removed therefrom by a simple transverse movement.

A lamp fixture in accordance with the present invention comprises an elongated light-reflecting housing and a pair of opposed sockets which are adapted to receive an elongated tubular incandescent lamp, preferably of the fluorescent type, as described above. These lamp fixtures are especially adapted for use in glass show-cases for merchandise display purposes.

A socket in accordance with the present invention is small and of compact form and has a pair of spring, clamp-type contacts positioned therein and adapted to readily receive the contact pins of the lamp. Each clamp-type contact is, in effect, a continuous, one-piece conductor having a spring jaw adapted to receive the contact pins and a unitary extension therefrom leading to the terminal or binding post. It is positioned substantially within the insulating socket body, except for the terminal end thereof, and hence is protected against casual contact.

Both the lamp fixture and the sockets are simple in design and construction and the latter, in particular, are inexpensive to manufacture.

The present invention has many other advantages which will be made apparent in the description of a preferred embodiment; however, my invention is not to be construted as limited to the details of the invention described and shown in the drawing except as included within the scope of the appended claim.

In the accompanying drawing, which illustrates the invention,

Figure 1 is a horizontal sectional view through a lamp fixture in accordance with my invention, showing the lamp and sockets in elevation;

Fig. 2 is a bottom plan view thereof;

Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1 showing the construction of my socket;

Fig. 4 is an enlarged fragmentary sectional view on the line 4—4 of Fig. 3, with the lamp in elevation; and

Fig. 5 is a transverse sectional view taken along the line 5—5 of Fig. 1.

In said figures, there is shown a narrow elongated lamp housing 10, preferably of metal, bent to form a generally C-shaped section, which is especially adapted for use in a glass show case. The free longitudinal edges of the housing are inturned at 11, Figs. 3 and 5, forming pockets. A metallic reflector 12 has its longitudinal edges sprung into the pockets, causing it to assume a curvilinear form within the housing. The ends of the housing are closed by walls 13 and 14.

Within the housing 10 and spaced from walls 13 and 14 are a pair of opposed sockets 15 separated a suitable distance to accommodate a lamp 16. Each socket is mounted on a bracket 17 secured at one end to the housing 10, as by the bolt 18, and having its other end supported in a reverse bend in the housing at 19.

Lamp 16 is of elongated tubular shape and is provided at each end with a base 21 into which is molded a pair of contact pins or prongs 22 and 23. The bases are so adjusted that all of the pins lie in the same plane. Lamp 16 may be of the fluorescent type sold in the trade under the trade-mark "Lumiline"; however, other types may be used.

Referring to the sockets, since both are identical in construction, only one will be described in detail. Socket 15 comprises a molded base 25 of Bakelite or other suitable insulating material having the general outline of a U. The curved part of the base is bordered on the back by a flange 26, while the upper flat part 27 is provided with a centrally disposed extension 28.

The back of base 25 is provided with a pair of tortuous or angular channels or recesses 29 and 30 symmetrically disposed with respect to the center line of the base, the precise shape of these channels being immaterial. The channels, extend from the flat part 27 on each side of extension 28 to openings 31 and 32 within the base, near the curved portion thereof. The front face 33 of the base is provided with a pair of spaced parallel recesses 34 and 35 (Fig. 5) communicating respectively with regions 31 and 32, and extending to the lower or curved edge of the base. These parallel recesses are spaced apart sufficiently to accommodate the spring of the contact pieces on the lamp.

Within each channel 29 and 30 there is disposed a contact member 36 shaped to follow the contour of the channel. The contact member may be formed of any suitable conducting material such as a phosphorous-bronze spring alloy or the like. Each contact member 36 has one end 37 shaped to provide a pair of spring

jaws 38 and 39 to receive the contact pieces on the lamp. These jaws are normally disposed in openings 31 and 32, and are so dimensioned with respect to the size of the opening as to permit of the necessary play on insertion or removal of the contact pins. The other end of each contact member is provided with a connecting lug portion 40 bent down along the flat part 27 of the base and terminating in a bent portion 41 disposed adjacent the side of extension 28. Each lug 40 is provided with an aperture through which a binding screw 42 extends into a threaded recess in the base.

A cover plate 43 of suitable insulating material is adapted to fit within flange 26 and to be flush therewith and is maintained in position by means of a screw 44 threaded into the base. Cover plate 43 serves to maintain the contact members in position within channels 29 and 30 and to cover the latter.

Each socket is provided with a shoulder or ledge 45 adjacent the flat upper portion of base 25. Shoulder 45 is secured to bracket 17 by screw 46; thus providing the means for securing the socket to the bracket.

The position of the sockets along the lamp housing may be changed to accommodate lamps of varying length. This may be accomplished by providing apertures for bolt 18 at suitable points in the housing. Alternative positions of the sockets are shown in dotted lines in Fig. 2 for accommodating a smaller lamp.

Prior to insertion in the lamp housing the sockets may be wired by means of wires 47. These wires extend through a bushing 48 in end wall 14 and are attached to the terminal screws as shown in Fig. 1. The wires to the socket remote from bushing 48 are carried along behind reflector 12 and all of the wires are retained in position by a supporting plate 49 formed as an angle bracket and secured to the housing by screws 50 near end wall 14.

It is obvious from the foregoing that simple transverse sliding motion in a plane substantially at right angles to a line drawn through the axes of pins 22, 23 will suffice for the insertion or removal of the lamp from the sockets. By virtue of this construction the excess width of the housing over that of the lamp is reduced to a minimum. This is highly desirable because it makes for a comparatively inconspicuous mounting along a wall edge of a show case.

I claim:

A socket for receiving a pair of spaced prongs comprising an insulating block terminating in flat portions at one end thereof and a curved portion on the opposite end thereof and provided with a pair of tortuous channels therein extending from said flat portions towards said curved portion and terminating in advance of said last mentioned portion in enlargements of said channels, contact members conforming to said channels and to said flat portions disposed in said channels and terminating in spring jaws at said enlargements, means for anchoring said contact members to said insulating block at said flat portions in the direction substantially along the principal axes of said contact members to counteract the thrust exerted upon the latter occasioned by the insertions of the prongs into said spring jaws, a cover plate on one side of the insulating block and passages on the other side of said insulating block extending from the curved portion thereof to said enlargements for guiding the prongs from the accessible curved portion of the socket to said spring jaws therein.

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