Sept. 10, 1946. H. J. McCARTHY 2,407,567

LAMP SOCKET

Filed March 9, 1943

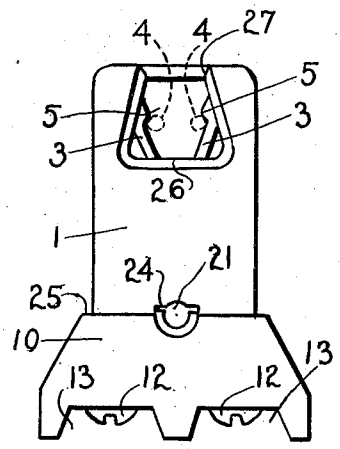


Fig. 1

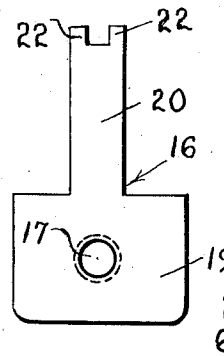


Fig. 3

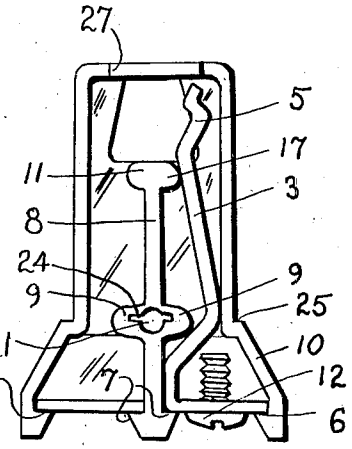


Fig. 2

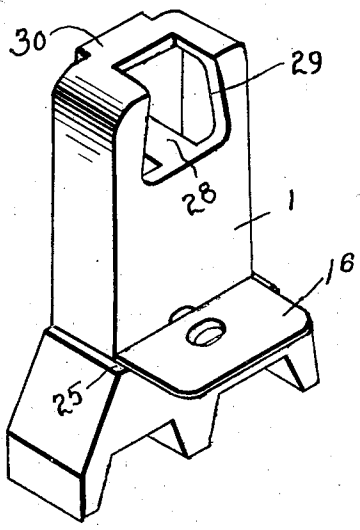


Fig. 4

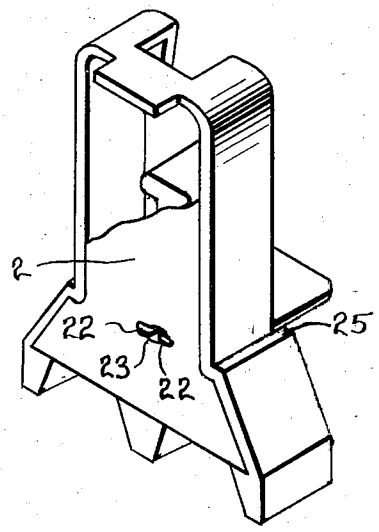


Fig. 5

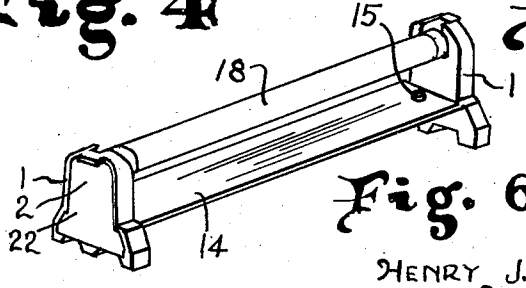


Fig. 6

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Patented Sept. 10, 1946 2,407,567

UNITED STATES PATENT OFFICE

2,407,567

LAMP SOCKET

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Application March 9, 1943, Serial No. 478,576

1 Claim. (Cl. 173—328)

1

This invention relates to supporting devices and has particular reference to sockets for mounting lamps.

An object of this invention is to provide an improved lamp socket assembly.

Another object is to provide an improved socket for elongated fluorescent lamps.

Further objects, advantages and features will be apparent from the following specification taken in conjunction with the accompanying drawing, in which:

Figure 1 is a front elevation of a socket in an illustrative embodiment of this invention;

Figure 2 is a rear elevation of the socket of Figure 1, with one of the contact fingers removed;

Figure 3 is a plan view of an assembly member to be used with the socket of Figure 1;

Figure 4 is an isometric view of the front of an assembly of the structures of Figures 1 and 3 without the contact fingers;

Figure 5 is an isometric view of the rear of an assembly like that of Figure 4 and including a portion of a backing plate; and

Figure 6 is an illustration of the use of a pair of such sockets in supporting a fluorescent lamp.

The socket and assembly shown and described in illustration of this invention is of the type used as supports and connectors for elongated tubular fluorescent lamps.

The main body 1 and the back cover plate 2 (Figure 5) are formed of suitable electrically insulating material. The electrical connection of the lamp through the socket is made by engaging the contact pins of the lamp base with resilient contact fingers 3 mounted in the rear recess, of the socket body 1. The base pins are clamped between the fingers 3 in the socket body 1 (see dotted forms 4 in Figure 1). In order to facilitate this clamping action, steps 5 are formed in the fingers 3.

As in Figure 2, the fingers 3 extend downwardly in the socket body 1 within the recess formed in the back thereof. One of the fingers has been omitted in the illustration of Figure 2 to show the recess formation more clearly. The fingers 3 are each held in place by the combination of resilient engagement with abutments 6 and 7; the lateral confining effect of a central wall 8 in the recess of the body 1 and a side wall of the body; and the forward and rear confining effect of the front wall of body 1 and the back plate 2. The fingers are slightly sprung from their normal set to engage the abutments 6 and 7, and to be located between the central wall 8 and one of the

2

side walls of the body 1. They may be removed by removing cover plate 2 and pulling them straight back out of their recesses.

Abutments 6 and 7 prevent downward movement of the fingers 3, abutments 9 and the inward taper of the base 10 of the body 1 prevent upward movement, and abutments 11 as well as 9 and portions of the side walls of the body 1, provide fixed pressure points to aid in providing firm and uniform resilient resistance to the assembly of the base pins 4 as in Figure 1. The outer, rear surface of the wall 8 is located within the main body recess of the socket so that the back cover 2 may be set in flush with the rear edge surfaces of the side walls of the body 1.

Electrical connection from the fingers 3 to associated apparatus may be accomplished by securing connecting wires to the connecting screws 12 mounted in the lower portions of fingers 3 as in Figures 1 and 2. Arch openings 13 are formed in the socket 1 to provide an exit for such connecting wires.

The mounting of the sockets 1 may be accomplished as illustrated in Figure 6. Sockets 1 are joined by a reflector plate 14, secured to each socket through a connection 15 to a mounting plate 16 (Figure 3), utilizing opening 17 of plate 16. A lamp 18 may then be mounted between the sockets 1 as in Figure 6.

The mounting plate 16 is preferably formed of metal and extends through the socket 1 from front to back, with a mounting shelf portion 19 extending forwardly of the socket to support the reflector 14, and with a reduced portion 20 lying in opening 21 extending through socket 1. The rear extremity of the reduced portion 20 is provided with assembly fingers 22 which extend through an opening 23 (Figure 5) in the back plate 2, and then are bent laterally and oppositely to clamp the back plate 2 in position and also so as to use the back plate 2 as an anchor for the mounting plate 16. Opening 21 is formed with horizontal wing extensions 24 which contain the reduced portion 20 of the mounting plate 16. A partial support is provided for the mounting shelf 19 by the shoulder 25 formed in the socket 1.

The upper portion of the socket 1 is formed with a view to supporting a lamp by receiving and holding the base pins 4 thereof and with a view to facilitating insertion and removal of these pins.

As may be seen in Figure 1, an opening 26 in the form of a truncated isosceles triangle, is provided in the front face of socket 1, and when

the lamp 19 is mounted by the sockets, as in Figure 6, the base pins 4 extend through the opening 26. In order to facilitate assembly and disassembly of the lamp 18 and the sockets 1, a slot 27 is formed in the top of the socket 1, and this slot connects directly with the opening 26 so that the lamp 18 and the sockets 1 may be assembled or disassembled by moving the pins 5 into or out of the opening 26 by way of the slot 27.

Directly beneath the slot 27 is a platform 28, the top of the vertical wall 8, in horizontal alignment with the lower edge of the triangular opening 26, and the opening 26 is provided with side walls 29. The platform 28 and side walls 29 act as cam surfaces against which the pins 4 bear as they are moved in the opening 26.

The top of the socket is provided with a strengthening portion 30 extending rearwardly of the socket. This may be used as a locating member to position the socket in a support and/or may be used as a spacer member in mounting the socket in a support.

The entire structure of the body 1 is preferably moulded or otherwise formed as an integral structure.

What I claim is:

A lamp socket assembly for receiving lamps having contact pins in their bases comprising a body portion of insulating material and having a chamber opening rearwardly and bounded by the walls of the body, a lamp base pin receiving opening in the upper portion of the front wall of said body and communicating with said recess, a pair of spaced metallic resilient contact fingers anchored in the base of said socket and extending into position to be engaged by the lamp base pins, a back plate for closing said chamber and a metallic mounting plate having an elongated portion extending through the socket and back plate, and a forwardly extending mounting shelf and retaining means on the outer end of said elongated portion engaging and securing said back plate to the socket.

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