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1,768,042

ELECTRIC SIGN

Original Filed Feb. 25, 1927

FIG. 1.

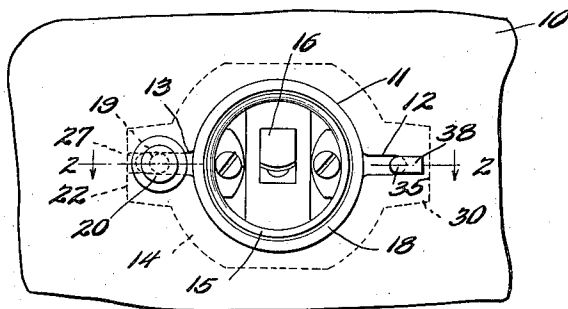


FIG. 2.

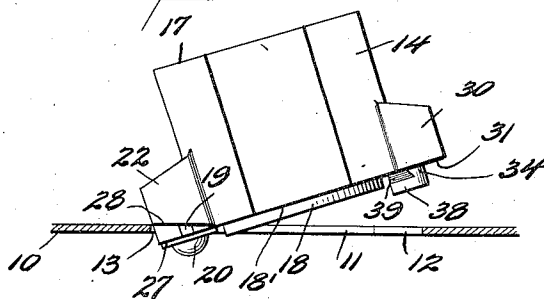
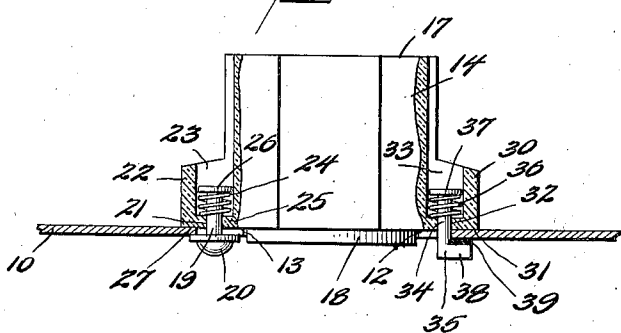


FIG. 3.



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ELECTRIC SIGN

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This invention relates to electric lamp receptacles and more particularly to that type of lamp receptacle used in electrical signs and fixtures.

It is a general object of the present invention to provide a novel and improved receptacle of the type desired.

More particularly it is an object of this invention to provide a novel receptacle which may be attached to a thin plate without the use of screws or without the need of tools.

One of the features of the present receptacle consists in having at one end thereof a means for attaching that end to the plate from the rear of the plate and for holding the receptacle tightly against the plate and having at the other end means which passes thru the plate when the receptacle is first mounted and which, from the front, may be caused to lock the receptacle firmly against the plate.

Other and further objects of the invention will be more apparent upon a consideration of the accompanying drawing and following specification where is disclosed a single exemplary embodiment of the invention with the understanding however that various changes may be made therein, such as fall within the scope of the appended claims, without departing from the spirit of the invention. In said drawing:

Figure 1 is a face view of a receptacle according to the present invention mounted in position on a thin plate;

Figure 2 is a section through the thin plate on line 2—2 of Figure 1 showing the receptacle in plan at the beginning of the mounting operation; and

Figure 3 is a section on line 2—2 of Figure 1 showing the receptacle fully mounted on the plate, portions of the receptacle also being in section.

Receptacles for electric lamps for use in electric signs and fixtures are usually mounted behind a metal plate which is perforated for the passage of the lamp base and for parts of the receptacle. There are two popular methods of mounting such receptacles; one by passing screws through holes or slots in a metal plate and receiving them in threaded

ferrules in the body of the receptacle; and second, allowing a portion of the screw shell of the receptacle to project through the hole in the metal plate and screwing an insulating ring over the projecting portion of this shell. Each of these methods requires that the receptacle be held from the rear of the plate and one or more operations performed on it from the front. In the case of large signs this requires two men.

The present invention contemplates a means whereby the receptacle may be firmly attached by a single operator from the rear of the thin plate and may later, without the use of tools, be more firmly attached by a single operation performed at the front of the thin plate. Referring now to the drawing, the reference character 10 indicates a sign plate which is preferably of thin metal. It is provided with a large circular perforation 11 and diametrically positioned radial slots 12 and 13 joining the main perforation. The receptacle comprises a body 14 of suitable insulating material, preferably porcelain or the like of any suitable configuration to receive the screw shell 15 for the lamp base and the center contact 16. Suitable terminals, not shown, may be recessed on the rear face 17 of the body. Surrounding the outer edge of the screw shell is a flange 18 projecting from the surface 18' and integral with the insulating body 14. It performs two functions; it insulates the screw shell from the sign plate and positions the receptacle accurately on the plate and prevents any movement thereof by virtue of passing through and closely fitting the hole 11 in the plate.

In the copending application of Russel and Brooks, Serial Number 151,803, filed November 30, 1926, is shown a device for temporarily attaching a receptacle to a sign plate without the need of access to the front of the plate. Such a device is shown on the left hand side of the receptacle of this invention. It comprises a stud 19 having an enlarged outer head 20. The stud passes through a bore 21 in the protruding end 22 of the receptacle body. An enlargement 23 of the bore 21 allows a coil spring 24 to surround the shank of the stud with one end

against the bottom 25 of the counter bore 23 and the other end against the inner head 26 of the stud. The outer head 20 of the stud is thus held tightly against the surface 27 which is coextensive with the surface 18' and rests against the sign plate 10 when the receptacle is in mounted position. This surface 27 beneath the head 20 is slightly less in width than the slot 13 and on each side of it the portion 22 is chamfered as shown at 28 so that the rib, of which the surface 27 is the top, may be inserted in the slot 13 as shown in Figure 2, which thus positions the head 20 above the walls of the slot 13. Upon a pull on the receptacle body the spring 24 will be compressed and the stud may be slid into the slot to assume the position shown in Figure 3 where it will securely hold the receptacle against the face of the sign plate. The receptacle may then be wired so that the operation of mounting and wiring the same can all be done while the workman is at the rear of the sign plate.

In order that both ends of the receptacle may be firmly united to the sign plate means are provided in the extension 30 on the opposite side of the receptacle from the extension 22 for that purpose. The front face 31 of the extension 30 is in the same plane as the face 27 of the extension 22. A small hole 32 and counter bore 33 are provided in the extension 30 to receive the shank 34 of the locking member 35. This shank is provided with a surrounding coil spring 36 bearing on the inner head 37 so that the spring tends to draw the angular head 38 down against the surface 31. This head is an elongated member integral with the shank 34 and slightly less in width than the slot 12 so that it may readily pass therethrough.

The shank 34 is so positioned entirely to one side of the head that with the head turned as shown in Figure 2, toward the center of the receptacle body, the shank and head will pass through the slot 12 when the receptacle is being positioned as previously described. The under surface of the head 38 is chamfered on both sides as at 39 so that it may readily be turned and will ride over the edges of the slot 12 and can be made to assume the position shown in Figure 3 where it bears on the outer surface of the sign plate 10 and securely holds its end of the receptacle against the sign plate. The spring 36 may be made quite strong so that there is no danger of the receptacle jarring loose. The under surface of the head 38 may be roughened to prevent accidental turning.

In use, the receptacle is applied first to the position shown in Figure 1 and then swung into the position shown in Figure 2 with the locking member however, having its head still in the position shown in Figure 2. The head 20 will hold the receptacle sufficiently tight in order that it may be wired. At the

conclusion of this operation on all of the receptacles the workman may then move to the front of the sign plate and rotate the locking members by turning the heads 38 either by hand or by the use of a tool either specially adapted for the purpose or a pair of pliers. The receptacle is thus firmly fastened into position by two spring tension devices, neither of which requires the use of an instrument or tool for fastening, and yet neither of which will come loose accidentally. A large amount of time is thus saved in the operation of mounting the receptacles, and there are no loose parts such as screws or rings which may become lost or which may be difficult to handle in cold weather.

The receptacle above described will also find use in fixtures such as ceiling bands, etc., in which a receptacle is supported in a metal plate surrounded by a canopy carrying a shade holder. Here the main advantage is the absence of any loose parts which may become lost or misplaced. The time saved in assembling the receptacle in the fixture is also of considerable importance.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In an electric sign, in combination, a sign plate having a perforation therethru, a receptacle having an insulating body abutting the rear face of said plate at said perforation, spring means secured to one end of said body, passing thru said perforation and engaging the front face of the plate, and a rotatable member mounted in said body, passing thru said perforation, and having an eccentric head adapted to be rotated to engage the front face of said plate.

2. A lamp receptacle for electric fixtures, including in combination, an insulating body, a headed stud slidably mounted and spring restrained in said body, a fastening means having a shank slidably and rotatably mounted in said body, an eccentric head on said shank outside of said body and means restraining said head against said body.

3. In an electric lamp receptacle, in combination, a body of insulating material having a face adapted to abut the back of a plate, a stud slidable in said body near one side thereof, and having a head at said face, resilient means to bias said head toward said face, and means eccentrically movable to engage over said plate at the other side of said body.

4. In an electric sign, in combination, a metal plate having an opening therethru, a receptacle having a flange adapted to pass thru said opening, said plate having two slots connecting with said opening, said receptacle having a face adapted to abut the rear of said plate when the flange passes thru said opening, means projecting thru said face and adapted to be passed thru said opening

and into one of said slots to hold said face against said plate, and means passing thru said other slot and engaging the front of said plate, said means being resiliently attached to said receptacle.

5 5. In a lamp receptacle for electric signs, in combination, an insulating body adapted to be placed against the rear face of a sign plate and means slidable and rotatable in
10 and at all times secured to said receptacle adapted to cooperate with the front face of the plate to secure the receptacle to said plate at two places.

15 6. A lamp receptacle adapted to be mounted in a thin metal plate having a large hole and communicating slots therethru, including in combination, a body containing screw shell and center contacts and having a flange adapted to pass thru said hole, means spring
20 retained in said body to pass thru said hole and engage over said plate adjacent one of said slots, means passing thru said other slot, said last mentioned means being rotatable to prevent the same from being withdrawn thru
25 said slot.

7. In an electric sign, in combination, a sign plate having a perforation therethru, a receptacle having an insulating body abutting the rear face of said plate around said
30 perforation, means secured to one end of said body, passing through said perforation and having a head engaging the front face of the plate, and a stud permanently mounted in said body, passing thru said perforation,
35 and having a head adapted to be rotated about an axis normal to said plate to engage the front face of said plate.

8. A lamp receptacle for electric fixtures, including in combination, an insulating
40 body, a headed stud mounted in said body, a fastening means having a shank slidably and rotatably mounted in said body and a laterally elongated head on said shank outside of said body and means restraining said
45 head against said body.

9. In an electric sign, in combination, a metal plate having an opening therethru, a receptacle having a flange adapted to pass thru said opening, said plate having two slots
50 connecting with said opening, said receptacle having a face adapted to abut the rear of said plate when the flange passes thru said opening, means projecting thru said face and adapted to be passed thru said opening
55 and into one of said slots to hold said face against said plate, and means passing thru said other slot and engaging the front of said plate, said second means being resiliently attached to said receptacle.

60 In testimony whereof I hereunto affix my signature.

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