Feb. 4, 1964 M. DWORKIN 3,120,419

ADAPTERS FOR ELECTRIC LAMPS

Filed May 18, 1961

Fig. 1

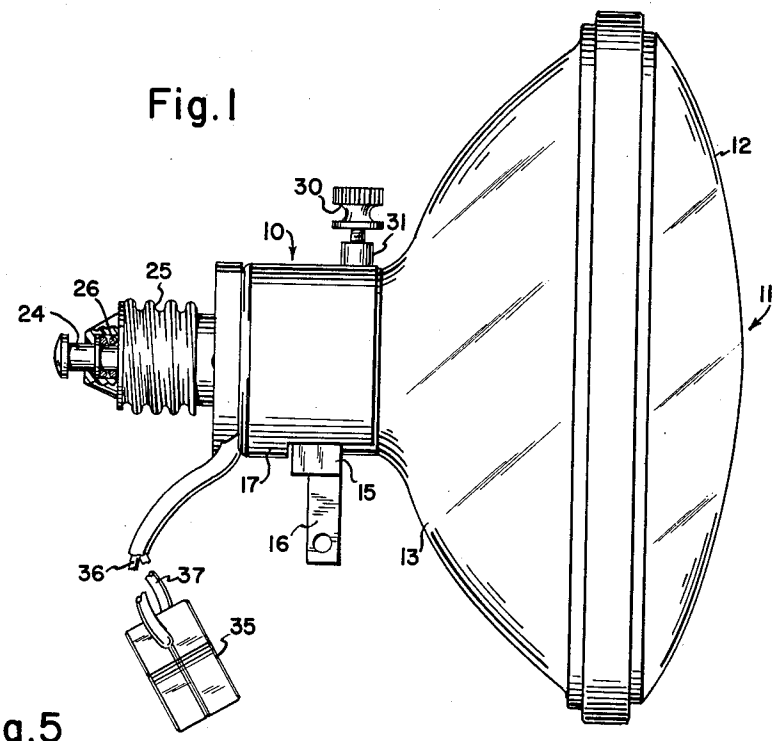


Fig. 5

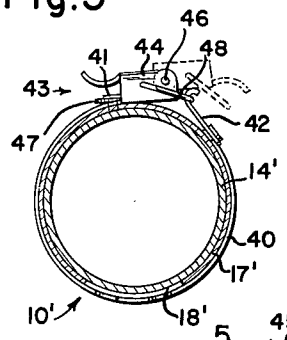
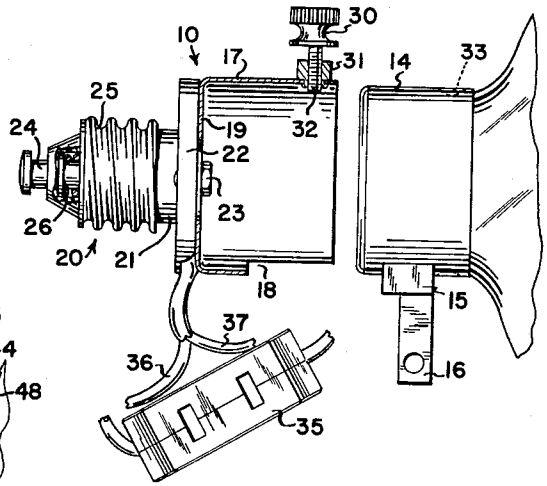


Fig. 2



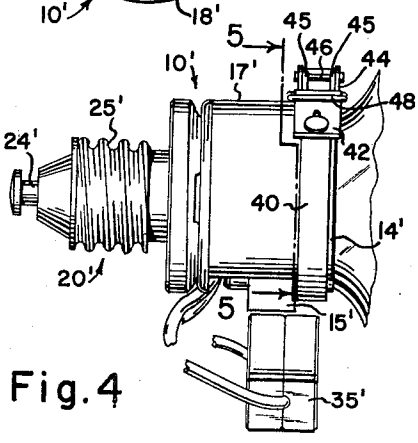


Fig. 4

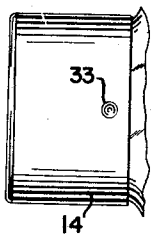


Fig. 3

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ADAPTERS FOR ELECTRIC LAMPS

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The present invention relates to electric lamps and more particularly to an adapter for use with particular lamp base constructions to adapt the lamps to be mounted in an supported by conventional electric outlet fixtures.

Most types of electric lamps have a screw plug base to adapt them to be screwed into outlet sockets on lamp stands or in ceiling or wall fixtures. However, certain types of electric lamps, such as high intensity spot-lights, are not adapted to be plugged into conventional electric fixtures. Such lamps may have non-symmetrical beams and must be turned on their axis as well as tilted relative to the axis to adjust the spot for particular conditions. To this end, these lamps are usually supported by complex adjustable yokes or non-adjustable brackets separate from the electric connections. The electric connections then are made by extension wires or cords from conventional outlet boxes. For this purpose, the lamps are provided with spaced contact prongs which project laterally from the lamp base for connection with sockets on the extension wires.

One of the objects of the present invention is to provide an adapter for use with lamps of the type indicated which adapts the lamps to be mounted on and supported by conventional outlet fixtures.

Another object is to provide an adapter of the type indicated in which the lamp may be easily and quickly mounted and which, in turn, may be easily and quickly mounted in conventional screw type outlet fixtures.

Another object is to provide an adapter of the type indicated which facilitates adjustment of the lamp in store windows or the like.

Still another object is to provide an adapter of the type indicated which is of simple and compact construction, economical to manufacture and reliable in operation.

These and other objects will become more apparent from the following description and drawing in which like reference characters denote like parts throughout the several views. It is to be expressly understood, however, that the drawing is for the purpose of illustration only and is not a definition of the limits of the invention, reference being had for this purpose to the appended claims.

In the drawings:

FIGURE 1 is a side elevation view of an adapter incorporating the novel features of the present invention for mounting a lamp having laterally projecting contacts in a conventional outlet fixture;

FIGURE 2 is a part sectional view of the lamp base and adapter arranged in spaced relation to show the manner in which the lamp is mounted in the adapter socket;

FIGURE 3 is a view of the lamp base when turned 90° from the position illustrated in FIGURE 2 to show the recessed dimple therein;

FIGURE 4 is a view similar to FIGURE 1 showing an adapter of modified construction; and

FIGURE 5 is a transverse sectional view taken on line 5—5 of FIGURE 4 to show how the flexible band of the adapter of FIGURE 4 is tightened around the socket by the clamp.

Referring now to the drawing, the adapter **10** of the present invention is shown applied to a lamp **11**. While the lamp **11** may have other forms, in the particular embodiment it is of lenticular shape in outline having a lens **12** at one side and a parabolic reflector **13** at the other side. Mounted exteriorly of the reflector **13** at its axis of generation is a generally cylindrical base **14**, see FIGURE 2. Base **14** has an insulating block **15** projecting from one side with spaced contact prongs **16** extending beyond the insulating block laterally of the base. Obviously, such a lamp base cannot be mounted in or supported by conventional electric outlet fixtures as the contact prongs **16** are improperly positioned for this purpose.

In accordance with the present invention, an adapter **10** is provided in which the lamp **11** may be mounted and which, in turn, may be mounted in a conventional electric outlet fixture. While the adapter is shown as having a screw plug type fitting, it will be understood that, when desired, a plug with spaced prongs may be provided.

The adapter **10** comprises a socket **17** of a diameter just slightly larger than the diameter of the cylindrical lamp base **14** to receive the base therein. Socket **17** is slotted at one side to provide an opening **18** to accommodate the insulating block **15** and spaced prongs **16** projecting laterally from the lamp base. Mounted on the bottom wall **19** of socket **17** is a screw plug fitting **20** having a body **21** of a suitable insulating material, such as a plastic or ceramic. The fitting **20** has a circular plate portion **22** overlying the bottom wall **19** of the socket and forming a peripheral flange from which the plug portion projects. The peripheral flange of the plate **22** is connected to the bottom wall **19** of the adapter socket **17** by means of a plurality of spaced fasteners **23** illustrated in the form of bolts. It will be understood, however, that the parts may be connected to each other by rivets or any other suitable fastening means.

The screw plug type fitting **20** has a central metal contact **24** extending axially through the end of the insulating body **21** and a metallic screw threaded sleeve **25** surrounding the body and spaced from the central contact. Preferably, the contact **24** is projected outwardly by a spring **26**, see FIGURE 1, but the spring yields to permit the lamp to be turned through one complete revolution in a conventional screw threaded socket to adjust the spot produced by the asymmetrical beam from the lamp.

Referring now to FIGURE 2, the particularly attaching means disclosed comprises a set screw **30** having a screw threaded engagement with a block **31** mounted on the wall of socket **17** and extending through the wall so that its end **32** projects into the socket. The set screw **30** is positioned in the wall of the socket **17** at a radial angle to opening **18** so that its end **32** will align with a dimple **33** formed in the base **14** of the lamp **11**. Thus, the lamp **11** may be mounted in the adapter **10** by merely aligning the insulating block **15** and spaced contacts **16** with the opening **18** in the adapter socket **17** and relatively sliding the two parts axially to telescope one in the other. When the parts have been telescoped to the position illustrated in FIGURE 1, the set screw **30** aligns with the dimple **33** in the base **14**; and the parts may be permanently clamped to each other by turning the set screw to engage its end **32** with the dimpled recess **33** in the lamp base **14**.

Adapter **10** also includes a plug type socket **35** connected by wires **36** and **37** extending through the body **21** of the screw plug for connection with the contacts **24** and **25** of the plug fitting. The electric wires **36** and **37** are of sufficient length to adapt the socket **35** to be extended over and pushed onto the spaced contact prongs **16** projecting laterally from the base **14** of lamp **11**. The assembly of lamp **11** and adapter **10** then provides an electrical connection projecting from the rear of the lamp **11** to adapt the whole assembly to be screwed into any conventional screw type electric outlet fitting, such as a socket in a lamp stand, wall, ceiling or floor outlet, or any electric outlet box having a screw threaded socket. The electric outlet fitting then will support the lamp and

provide a good electrical connection which is insured by the engagement of the spring pressed axial contact 24 during one complete rotation of the assembly.

FIGURES 4 and 5 illustrate an adapter 10' of modified construction having a different form of clamping means for mounting the base 14' of the lamp 11' therein. The modified adapter 10' has the same construction of socket 17' and screw threaded plug fitting 20' as in the form of the invention illustrated in FIGURES 1 to 3. In the modified construction, however, the clamping means comprises a flexible band 40 attached adjacent one end to the wall of the socket 17' by a fastener 41 which may take the form of a rivet. The flexible band 40 extends around the periphery of the sockets 17' adjacent its open end and has a hook 42 at its free end. A clamp 43 is provided at the opposite end of the band and has a member 44 of U-shape in cross section pivotally mounted on a pivot pin 46 extending between spaced lugs 45 on a base 47 for rocking movement through 180°. A loop 48 is mounted on the member 44 for engagement with the hook 42 on the opposite end of the band. Member 44 is rocked first in one direction to adapt the end of the loop 48 to be engaged with hook 42 and then in the opposite direction to pull the ends of the band 40 towards each other. Such movement of the band 40 contracts the edge portion of the socket 17' adjacent its open end to cause it to engage and firmly grip the base 14' of the lamp 11'.

The lamp 11' and adapter 10' are assembled in the same way as explained above by relatively sliding the lamp base 14' and the socket 17' at which time the flexible band 40 will have been withdrawn from in front of the opening 18'. The band is then wrapped around the socket 17' and the hooked end 42 engaged with the loop 48. It will be noted that the band is located above the insulating block 15' so that it will not engage the spaced contact prongs 16. The body member 44 is then rocked on the pivot pin 46 to clamp the socket 17' to the lamp base 14'.

It will now be observed that the present invention provides an adapter for use with an electric lamp to adapt the lamp to be mounted on and supported by conventional electric outlet fittings. It will still further be observed that the present invention provides an adapter of the type indicated in which a lamp may be easily and quickly mounted and which, in turn, may be easily and quickly mounted on a conventional electric outlet fitting. It will still further be observed that the present invention provides an adapter of the type indicated which is of simple and compact construction, economical to manufacture and one which is reliable in operation.

While two embodiments of the invention are herein illustrated and described, it will be understood that further changes may be made in the construction and arrangement of elements without departing from the spirit or scope of the invention. Therefore, without limitation in this respect, the invention is defined by the following claims.

I claim:

1. An adapter for use with an electric lamp of the type having a bulb, a base projecting from one side of the bulb and electric prong type contacts projecting laterally in a generally parallel arrangement from one side of the base, the combination with said electric lamp of said adapter comprising a socket to snugly fit the base of the lamp and having an opening at one side to accommodate the parallel electric contact prongs projecting laterally from the lamp base, a plug fitting having electric contacts projecting from the adapter socket at an angle to the contacts projecting from the lamp base, connecting means for connecting the contacts on the lamp base with the contacts on the plug fitting, and means on the adapter for clamping the lamp base thereon whereby to support the lamp on the adapter.

2. An adapter in accordance with claim 1 in which the plug fitting projecting from the adapter is a screw type fitting having an axial contact and a peripheral screw threaded sleeve.

3. An adapter in accordance with claim 2 in which the axial contact is mounted for movement relative to the adapter plug fitting.

4. An adapter in accordance with claim 1 in which the clamping means is a set screw having threaded engagement with the adapter socket and an end for engaging the base of the electric lamp.

5. An adapter in accordance with claim 1 in which the clamping means is a flexible band attached to the socket and having a loop at one end, a catch at the other free end of the band for locking engagement with the loop, and a lever handle mounted for movement on said adapter socket and manually operable to tighten the band around the adapter socket to clamp the lamp base to the socket.

6. An adapter in accordance with claim 5 in which said band is located to overlie the lamp base at one side of the laterally projecting contacts adjacent the open side of the socket, and said lever handle and loop being mounted on spaced pivots to adapt the pivoted end of the loop to be moved from one side of the lever pivot to the other to tighten the band.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 77,736	Both	Feb. 19, 1929
1,331,287	Smith	Feb. 17, 1920
2,492,475	Granger	Dec. 27, 1949
2,508,063	Gross	May 16, 1950

FOREIGN PATENTS

894,122	France	Mar. 6, 1944