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[54] **LAMP BASE AND LEADING-IN WIRE CONNECTION**  
**6 Claims, 3 Drawing Figs.**

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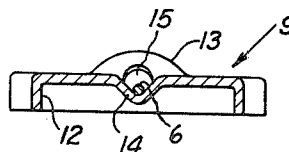
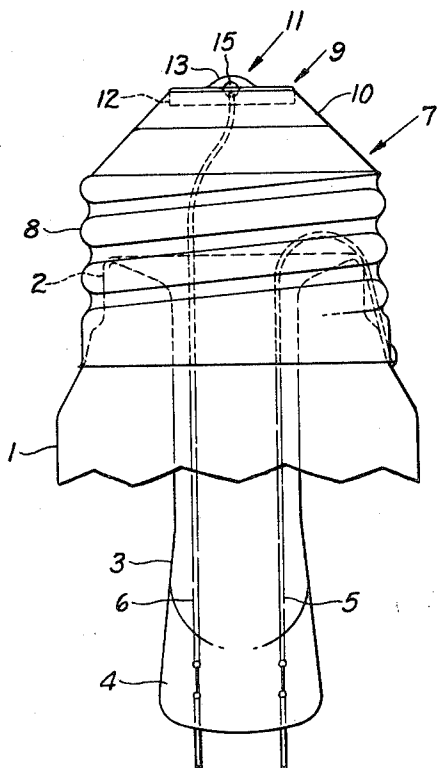
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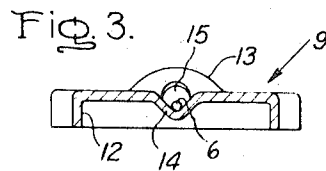
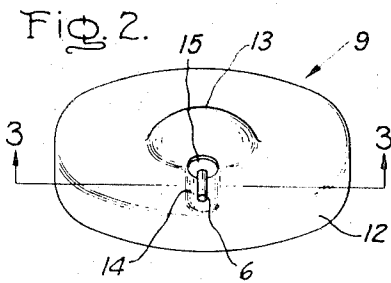
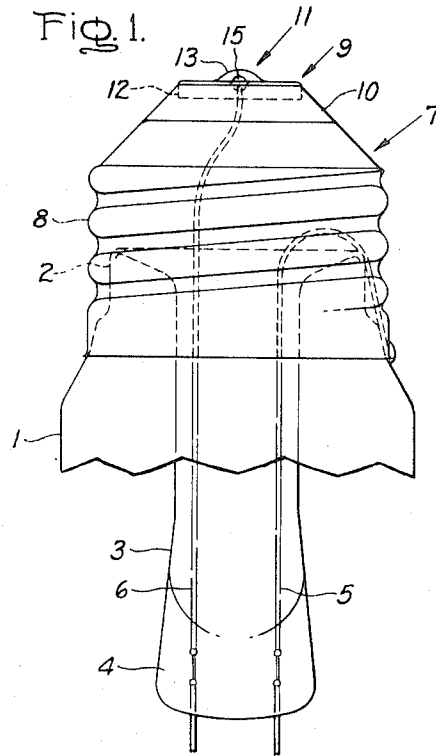
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**ABSTRACT:** The contact of a conventional screw-type electric lamp base is provided with a side apertured dome-shaped boss for engaging a socket contact and a groove extending from and communicating with the side aperture for accommodation a leading-in wire threaded through the side aperture from the interior of the base and affixed to the contact within the groove.





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## LAMP BASE AND LEADING-IN WIRE CONNECTION

The present invention relates to end contacts of electric lamp bases to which one of the leading-in wires of the lamp is connected. More particularly, the invention is related to such end contacts utilized on the bases of household-type incandescent lamps usually comprising a metallic shell contact having its cylindrical surface provided with screw threads and a metallic contact member in the form of an eyelet insulated from the shell by a molded body of glass or other suitable insulating material such as organic thermosetting material. The shell contact also has a leading-in wire connected thereto.

In the manufacture of such lamps a leading-in wire is threaded through the eyelet and the connection between the eyelet and the leading-in wire is made by means of a solder joint of generally rounded contour. The solder joint projects outwardly of the contact member, varies in shape somewhat from lamp-to-lamp and frequently does not have a neat appearance. Further, the distance the solder joint projects beyond the dome of the contact member differs from lamp-to-lamp which occasionally results in difficulty in making effective electrical engagement with a socket contact.

The principal object of the invention is to provide a novel form of lamp base contact member for connection to a leading-in wire of lamps of the above type which avoids the above disadvantages.

Another object of the invention is to provide such a contact member which retains the rounded contour typical of the solder joint of prior bases of this type so that the contact member or portion of the invention may be used in place of the present commercial contacts.

Another object of the invention is to provide an electric incandescent lamp or similar device having a leading-in wire firmly and permanently connected to a contact on the base of the lamp and presenting a neat, uniform appearance at the dome contact member.

Further objects and advantages of the invention will appear from the following detailed description of the preferred embodiment thereof and the accompanying drawing.

In accordance with the invention, a thin metal disc of a lamp base is provided with a dome-shaped side apertured boss for engaging a socket contact and a groove extending from the side aperture in the boss for accommodating the outer end portion of a leading-in wire threaded therethrough. In the manufacture of the lamp the outer end portion of the leading-in wire is threaded through the aperture, bent over into the groove and then affixed within the groove of the end contact, preferably by conventional welding techniques. The depth of the groove and the diameter of the wire are so correlated that the wire does not project beyond the top of the groove.

## IN THE DRAWING

FIG. 1 is a fragmentary elevational view of the base of an electric incandescent lamp provided with a terminal contact member embodying the invention;

FIG. 2 is a plan view on an enlarged scale of the contact and the outer end of a leading-in wire of the lamp shown in FIG. 1; and

FIG. 3 is a fragmentary sectional view, taken along the line 3-3 of FIG. 2, showing the connection between the groove in the contact member and the leading-in wire of the lamp.

As shown in FIG. 1 of the drawing, the lamp comprises a sealed glass envelope or bulb 1 having a constricted neck portion 2 provided with a reentrant glass stem 3 terminating at its inner end in a pressed portion 4 through which are sealed a pair of leading-in wires 5, 6. Interiorly of the envelope 1 the leading-in wires 5, 6 are connected to the opposite ends of a suitable filament (not shown) such as a tungsten wire of coiled, coiled-coil, or other suitable form.

Mounted on the neck 2 of the envelope 1 and suitably secured thereto, as by conventional bawing cement, is a base 7 having a contact portion according to the invention. The base 7 comprises a screw-threaded conductive metal shell 8 and a metal disc contact member 9 joined together, in insulated

relation, by an insulator 10. The insulator 10 may be made of any suitable insulating material such as glass or a thermosetting organic plastic material, for example. The shell 8 and the contact member 9 constitutes the terminal contacts of the lamp. One of the leading-in wires 5 is suitably secured to the shell contact 8 as by welding, for example; the other leading-in wire 6 is connected to the disc contact member 9 of the base in a manner according to the invention, as indicated at 11.

The contact portion 9 (FIGS. 2 and 3) is in the form of a thin disc or eyelet of a suitable sheet metal, such as brass or aluminum, and is firmly secured to the base insulator 10 in a suitable manner, as by means of a peripheral integral flange or lip 12 formed on the contact member 9 and embedded in the molded base insulation 10. The wall thickness of the contact is exaggerated in the drawing.

For the purposes of the invention, the disc contact member 9 is formed with a small outwardly protruding side apertured boss 13 in the form of a frustospherical or frustoconical dome-shaped projection pressed from the metal of the contact member and located substantially centrally thereof for engaging a socket contact. In the same pressing operation the groove 14 extending radially from the side aperture 15 of the boss 13 is formed in the contact member 9.

In the manufacture of the lamp the leading-in wire 6 is threaded through the side aperture 15 and bent over so that its outer end portion extends along the groove 14. The bent over portion of the leading-in wire is then welded to the contact member 9 within the groove 14, by resistance welding, for example, to make a mechanically strong, neat appearing electrical connection between the contact 9 of the base and the outer end portion of the leading-in wire 6 of the lamp. The depth of the groove and the diameter of that portion of the leading-in wire 6 therein are so correlated that the wire 6 does not project beyond the top of the groove. The outer end portion of the leading-in wire 6 preferably consists of copper though other known suitable metal wires may be used.

Preferably, the groove 14 has the same radius of curvature in cross section as the leading-in wire 6 (FIG. 3) to provide a substantial area of contact between these electrical conductors.

Although a preferred embodiment of the invention has been shown in the drawing and described above, it will be understood that the invention is not to be limited to the specific construction and arrangement of parts shown but that they may be modified within the spirit and scope of the invention as defined in the appended claims, for example, the contact member 9 may be of square, hexagonal or other shape instead of the disc shown in the drawing and described above and the end portion of the wire 6 may be affixed within the groove 14 by a small solder joint contained within the groove.

I claim:

1. A contact member for an electric lamp base having a dome-shaped side apertured boss for engaging a socket contact and a groove extending from and communicating with the side aperture for receiving a leading-in wire threaded through the side aperture from the interior of the base.

2. A contact member according to claim 1 wherein the boss is in a disc-shaped part of the contact member and the groove extends radially from the side aperture.

3. A contact member according to claim 2 wherein the boss is centrally located in the disc-shaped part of the contact.

4. An electric lamp comprising a sealed envelope, a leading-in wire sealed through said envelope, a base, secured to the outer surface of said envelope, and a thin metal contact member affixed to the base and connected to said leading-in wire, said metal contact member being provided with an outwardly projecting socket contact engaging dome-shaped boss having a side aperture and a groove extending from and communicating with the side aperture, said wire extending through said side aperture, along said groove and being affixed to the contact within the groove.

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5. An electric lamp according to claim 4 wherein the depth of the groove and the diameter of the wire are so correlated that the wire does not project beyond the top of the groove.

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6. An electric lamp according to claim 5 wherein the wire is affixed to the bottom of the groove and the curvature of the bottom of the groove corresponds to that of the wire.

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