July 3, 1934. D. S. GUSTIN 1,965,231

LAMP BASE CONTACT

Filed May 18, 1929

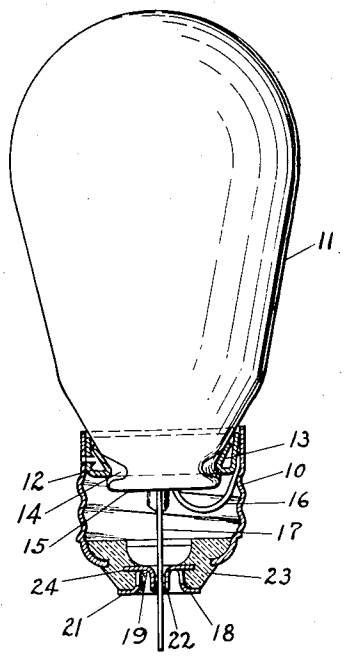


Fig. 1.

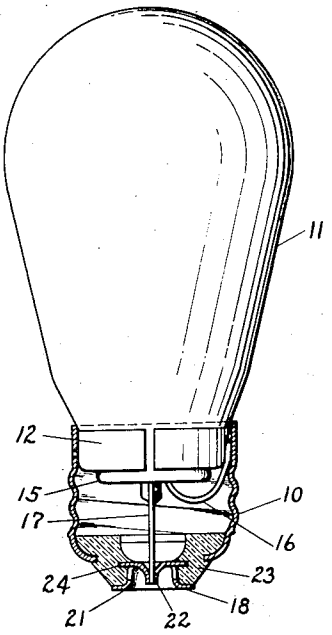


Fig. 2.

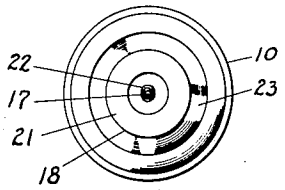


Fig. 3.

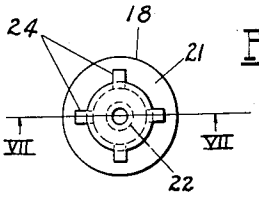


Fig. 4.

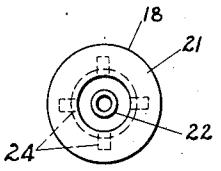


Fig. 5.

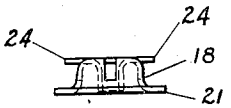


Fig. 6.

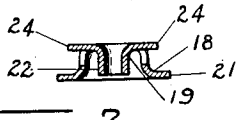


Fig. 7.

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LAMP BASE CONTACT

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Application May 18, 1929, Serial No. 364,144

7 Claims. (Cl. 176—32)

This invention relates to incandescent electric lamps and relates more particularly to improvements in the base portions of such lamps.

In the manufacture of incandescent electric lamps it has become the standard practice to employ what is termed a base which usually consists of a metallic shell in the form of a cap or thimble having a portion of its cylindrical surface threaded and provided with a bottom contact member insulated from the base proper. This base is then applied to a bulb neck and secured to the bulb by a cement or other suitable means. For the prupose of providing contact surfaces for a flow of energy through the filament of a lamp, one of the leading-in conductors of the lamp is connected by solder or otherwise to the side wall or shell of the base. The other leading-in wire of the lamp is passed through and soldered or welded to the bottom contact-member.

It has heretofore been the practice to connect the leading-in wires to the shell and to the bottom contact by means of a soldering operation. This soldering operation presented a certain amount of difficulty particularly when performed by automatic machines as is necessary in the manufacture of large quantities of incandescent electric lamps. The inconvenience and necessary care required to properly solder the lead wires to the base made this soldering operation a relatively costly procedure, from the standpoint of time and maintenance required in connection with the soldering mechanism.

It is an object of the present invention to provide an incandescent lamp base to which leading-in wires may be electrically connected in the absence of solder.

Another object of the invention is to provide a base which may be mechanically connected to leading-in wires of a lamp.

Other objects and advantages of the invention will be more fully understood by reference to the accompanying drawing in which

Fig. 1 shows a lamp having a base thereon constructed in accordance with the present invention, the base being shown in section showing a lead wire in position to be secured to a contact.

Fig. 2 is a view similar to Fig. 1 showing a lead wire secured to a contact.

Fig. 3 is a view of the bottom of a base having a lead wire secured to a contact member.

Fig. 4 is a plan view of the normal inner side of a contact-member.

Fig. 5 is a view of the normal outer side of a contact member.

Fig. 6 is a side view of a contact member, and Fig. 7 is a view taken on line VII—VII in Fig. 4.

The present invention may be used in connection with various types of bases such as used on incandescent electric lamps or the like. The present embodiment of the invention is shown applied to a base which is mechanically secured to a bulb in accordance with the structure shown in copending application Serial No. 229,825 filed October 31, 1927 for Lamp base.

As illustrated in the drawing a base 10 of the usual screw thread type for use in the standard socket may be employed.

The base may be secured to a bulb 11 by means of a split collar 12 having internal projections 13 arranged for insertion in depressions 14 formed in the bulb neck 15. The collar 12 is applied to the bulb neck and the base forced thereover and a lead-wire or conductor 16 of the lamp is clamped between the collar 12 to provide an electrical contact with the base.

It is to be understood, however, that insofar as the present invention is concerned the base employed may be secured to the bulb by cement in the usual manner and the lead-wire 16 may be soldered to the shell or base proper.

The present invention provides means for mechanically securing a lead wire 17 to a metallic contact member 18. This contact member is preferably formed by stamping and shaping from sheet metal and may be termed a disk having a bowl portion 19 surrounded by a flange 21. Centrally disposed with respect to the bowl portion is a tubular extension 22. This contact member 18 is secured to the shell or base 10 by a mass of insulating material 23.

The material 23 may be glass which is molded around the end of the base at which time the contact member 18 is embedded in the glass mass in such position that the flange 21 is exposed to provide a contact surface for engagement with a contact of a socket. For the purpose of more securely fastening the contact member 18 in place, a plurality of lugs or ears 24 may be provided so that when the contact member is in position the lugs will lock it against removal.

When a base constructed in accordance with the present invention is applied to a bulb neck the lead-wire 17 is inserted or threaded through the tubular portion or extension 22. The wire may then be severed flush with the exposed end of the tubular portion and pressure may be applied to compress or deform the wall of the tube 22 into firm electrical contact with the lead wire.

If desirable the tube may be clamped to the lead wire and the wire subsequently severed.

It will be apparent that by reason of the present invention a lead wire may be effectively secured to a base without the aid of solder. The present form of contact not only provides a simple and effective means of mechanically securing a lead wire to a base but provides a construction wherein the clamped connection does not project to destroy the desired smooth even surface of the base. Furthermore the contact surface provided by the flange 21 gives the necessary contact area and at the same time provides a surrounding barrier as a protection for the clamped connection thus preventing it from accidental rupture during transportation or general handling.

Although a preferred embodiment of the invention is shown and described herein it is to be understood that modifications may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. An electric lamp base having a cup shaped member having a tubular projection centrally disposed within and extending from the bottom of said cup, a plurality of laterally disposed ears extending from the outer surface of said cup and projections extending from the bottom of said cup for securing the same to said lamp base.

2. A lamp base consisting of a metallic shell open at one end for attachment to a bulb neck, a glass annulus in the opposite end of said shell, a cup shaped contact member embedded in and insulated from said shell by said annulus, a tubular projection within and extending outwardly from the bottom of said cup to receive a lead wire and a flange around the perimeter of said cup to provide an effective contacting surface.

3. A metallic electric lamp base consisting of a metallic shell having an insulative bottom wall, an inverted cup-shaped contact member secured in said insulative wall, said cup being disposed with its interior surface exposed and a contact surface integral with the edge of said cup.

4. A metallic base for a vacuum device comprising a metallic shell having an insulative bottom wall, an inverted cup-shaped contact member secured in said insulative wall, said cup being disposed with its interior surface exposed, a contact surface integral with the edge of said cup and a tubular projection extending from the bottom of said cup to receive a lead wire.

5. An electric lamp base having a metallic shell having an insulative bottom wall, an inverted cup-shaped contact member secured in said insulative wall, said cup being disposed with its interior surface exposed, a contact surface integral with the edge of said cup, a tubular projection extending from the bottom of said cup to receive a lead wire and a projection extending from the bottom of said cup and embedded in said insulative wall.

6. A base for a vacuum device comprising a metallic shell and an insulative bottom wall, an inverted cup-shaped contact member secured in the insulative portion at the bottom of said base, said cup being disposed with its interior surface exposed and its outer surface embedded in said material, said cup having a peripheral flange to provide a contact surface.

7. A metallic contact for a lamp base comprising a tubular shell having one end open for attachment to a lamp bulb neck, an inverted cup shaped contact member, insulative means for securing said member in the other end of said shell, a tubular projection within and extending from the bottom of said cup.

DANIEL S. GUSTIN.