

May 14, 1940.

J. GLASSBERG

2,200,954

ELECTRIC DEVICE

Filed Jan. 10, 1939

5 Sheets-Sheet 1

Fig. 1

Fig. 2

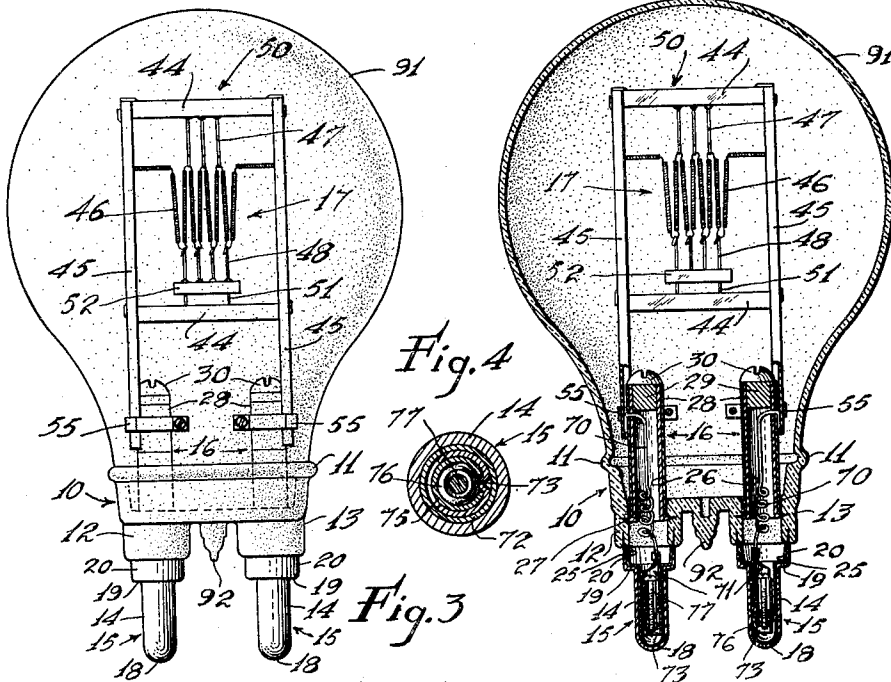


Fig. 4

Fig. 3

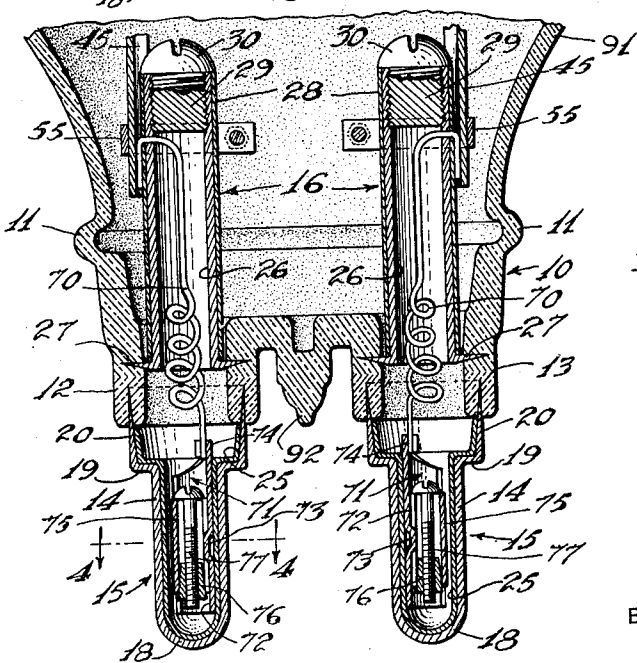
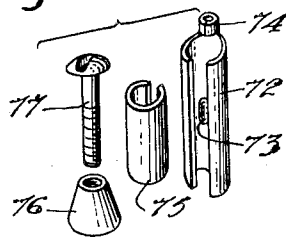


Fig. 4a



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Fig. 5

Fig. 6

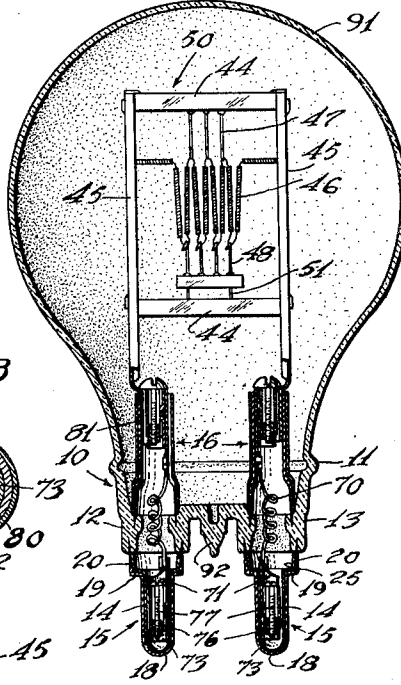
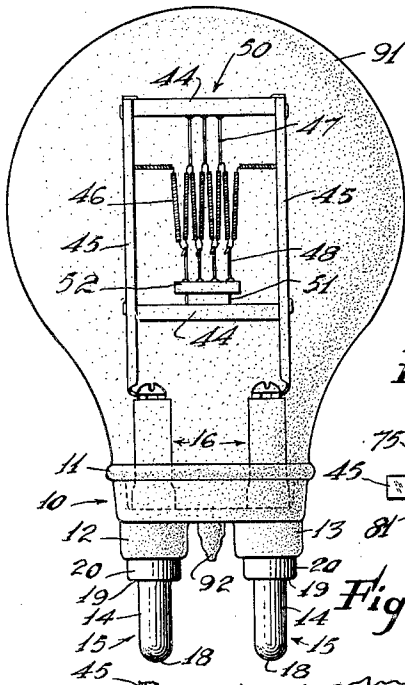


Fig. 8

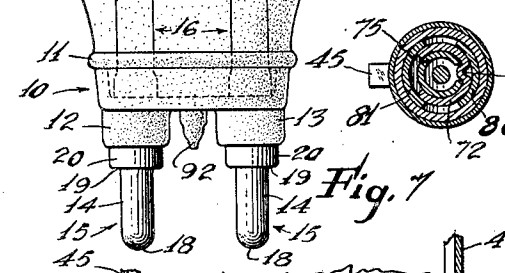


Fig. 7

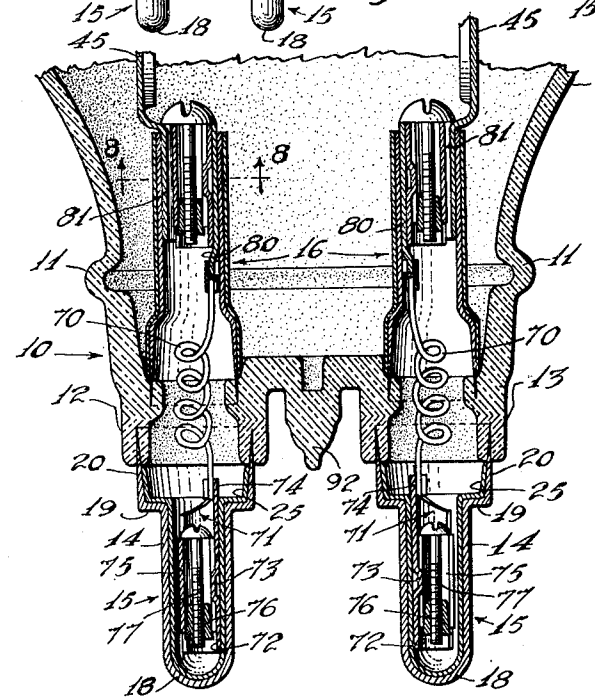
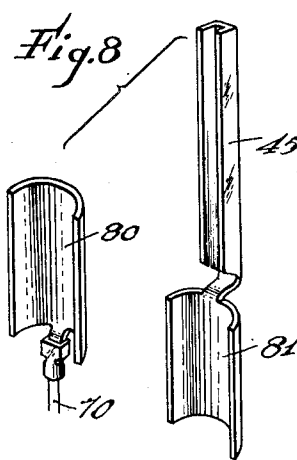


Fig. 8



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Fig. 9

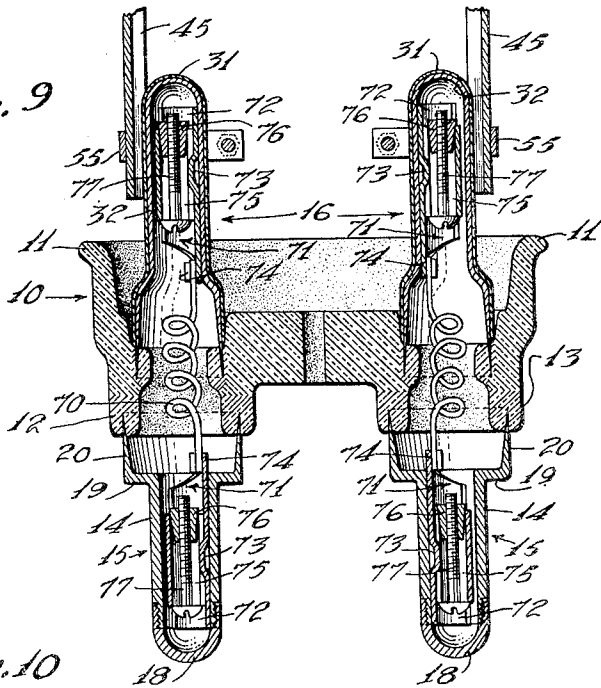


Fig. 10

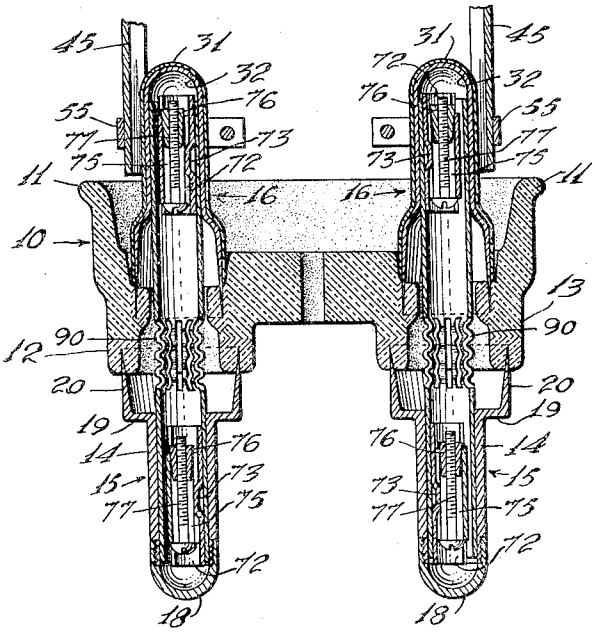
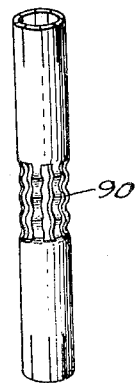


Fig. 11



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Fig. 12

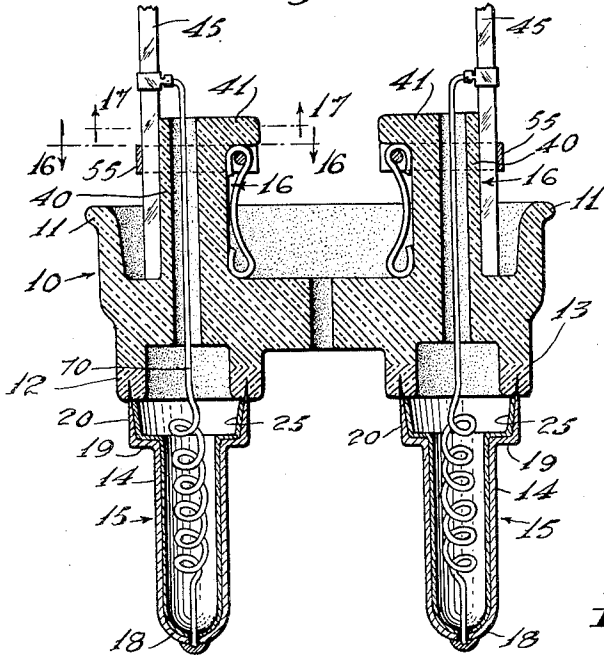


Fig. 13

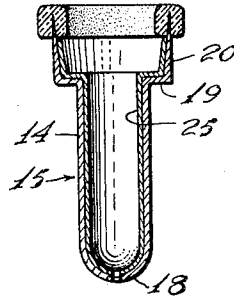


Fig. 16

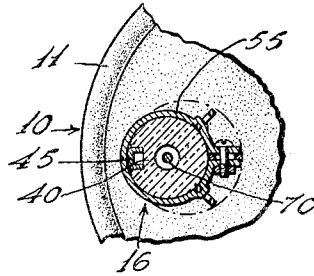


Fig. 14

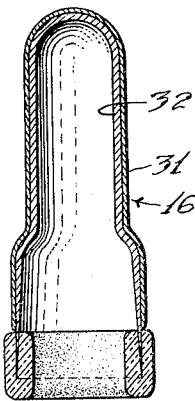


Fig. 15

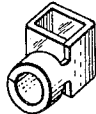
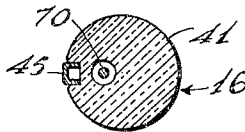


Fig. 17



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Fig. 18

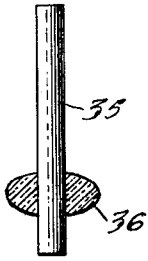


Fig. 19

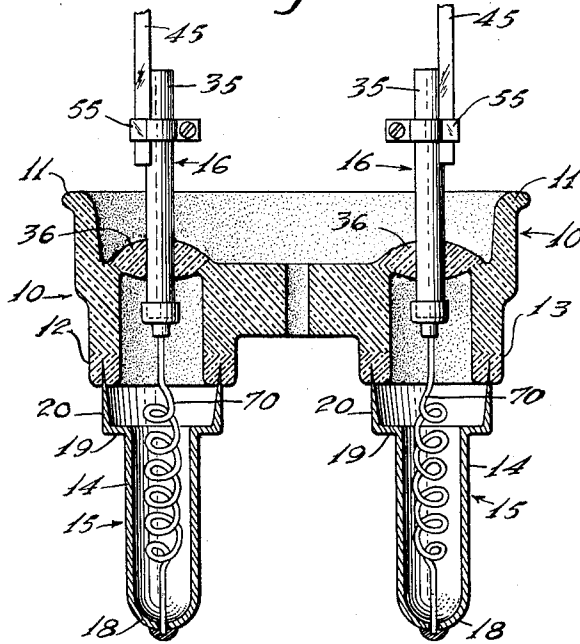


Fig. 20

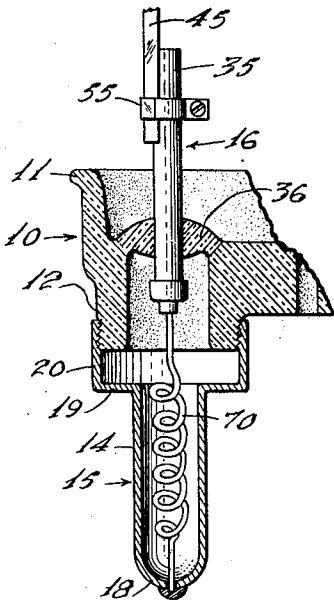
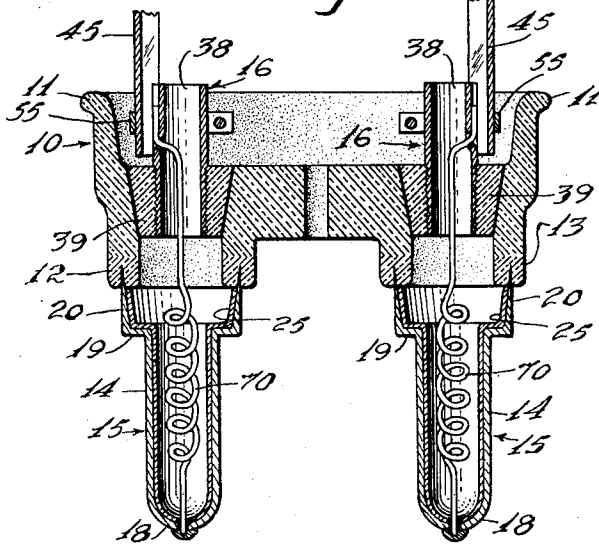


Fig. 21



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UNITED STATES PATENT OFFICE

2,200,954

ELECTRIC DEVICE

Jacob Glassberg, Hillside, N. J., assignor, by
mesne assignments, to Radiant Lamp Corpora-
tion, a corporation of New Jersey

Application January 10, 1939, Serial No. 250,154

22 Claims. (Cl. 176-38)

The present invention relates to electric de-
vices and more particularly to devices of the
character which are operated under high watt-
age conditions although it may find application
even among those devices which are operated
under low-wattage conditions. In one of its
more specific aspects the invention is directed to
multiple post lamps and especially to those in-
candescent lamps generally known as bi-post
lamps.

The bi-post electric incandescent lamp now on
the market includes an envelope consisting of a
glass bulb whose neck is sealed to a glass cup
having a pair of hollow tubular projections in
the bottom thereof. Sealed to each of said pro-
jections is a hollow thimble contact terminal in
which is secured a rigid channel supporting
lead. Bridging the leads are lavite spacers be-
tween which is mounted a coiled tungsten fila-
ment. This lamp is of the type disclosed in the
Wright Patent #2,069,638, issued on February 2,
1937. The lamp is generally mounted in a
socket having a plurality of spaced sleeves for
receiving the contact terminals. Set screws for
tightening the thimbles in the sleeves are lo-
cated in the sides of said sleeves. A lamp of this
type is generally secured in said socket by the
average workman in the following manner. First,
he inserts the thimble terminals into the contact
sleeves of the socket and then firmly tightens
one set screw against one of the thimble ter-
minals to firmly anchor the thimble in its socket
sleeve to reduce the danger of sparking and to se-
cure the lamp thereto. Then he tightens the
other screw firmly against the other thimble
terminal to firmly anchor this terminal to its
socket sleeve. These socket sleeves ordinarily
are not of such precise size and so precisely
spaced from each other that there is no "play"
between these sleeves and the thimble terminals
of the lamps which are to be carried thereby.

Consequently, it happens that during the set
screw tightening operations the terminals are
bent towards or away from each other and the
stress applied thereto is transmitted to the sup-
porting channels and they move with the thim-
bles. In many cases when the thimbles move
and carry with them the channels, not only do
the channels move with respect to each other,
but the entire mount becomes distorted and the
position of the filament is changed. This oc-
currence has been common in the field and the
movement of one of said thimbles with respect
to the other often causes a permanent and def-
inite deformation of the supporting channels,

the filament and thimbles. In addition, it some-
times happens that after some use, the cup it-
self splits and fractures due to the stresses set
up therein and resulting from the stresses in
the thimble terminals which are imparted to the
rigid leads secured thereto and movement of the
terminals causes the leads to move due to con-
traction and expansion in the course of normal
usage.

An object of the invention is to obviate the
foregoing and other disadvantages.

Another object of the invention is to provide
an improved electric device.

Another object of the invention is to provide
an improved electric device which may be se-
cured in an ordinary socket therefor by the
average workman without the liability of mount
distortion in the course of securing the same
therein.

Another object of the invention is to provide a
multiple post lamp whose supporting leads are
unaffected by any movement of the lamp ter-
minals with respect to the envelope.

These and other objects will in part be evident
from the hereinafter description and appended
drawings, wherein:

Figure 1 is a front view of a complete bi-post
lamp embodying my invention.

Figure 2 is a vertical cross sectional view of
the lamp shown in Figure 1.

Figure 3 is an enlarged fragmentary view of
the lower part of the lamp shown in Figures 1
and 2.

Figure 4 is a cross sectional view taken on
line 4-4 of Figure 3.

Figure 4a is a detail view of the individual
parts of the novel device for locking the ends of
the conductor in the contact terminals as shown
in Figures 1-3.

Figure 5 is a front view of a complete bi-post
lamp embodying the invention and is a modifi-
cation of the lamp shown in Figure 1.

Figure 6 is a vertical cross sectional view of
the lamp shown in Figure 5.

Figure 7 is an enlarged fragmentary view of
the lower part of the lamp shown in Figures 5
and 6.

Figure 8 is a detail view of the semi-cylindri-
cal elements at the ends of the connecting con-
ductors and the rigid leads.

Figure 8a is a cross sectional view taken on
line 8-8 of Figure 7.

Figure 9 is a vertical cross sectional view of a
novel unitary assembly and is a modification of
the novel assembly shown in Figures 3 and 7.

Figure 10 is a vertical cross sectional view of a novel unitary assembly and is a further modification of the assembly shown in Figure 3.

Figure 11 is a perspective view of a novel means for electrically connecting a terminal and a lead support.

Figure 12 is a vertical cross-sectional view of a novel unitary assembly and is a further modification of the assembly shown in Figure 3.

Figure 13 is a longitudinal cross sectional view of a terminal having a tapered upper end terminating in a knife edge and having a glass coating welded to the edge and inside and outside surfaces of the upper end thereof.

Figure 14 is a longitudinal cross sectional view of a support having an outwardly flared lower portion whose end is tapered and terminates in a knife edge and having a glass coating welded to the edge and inside and outside surfaces of the tapered part thereof.

Figure 15 is a perspective view of the clamp connecting a lead and the conductor connecting the lead and a terminal and shown in Figure 12.

Figure 16 is a cross sectional view taken on line 16-16 of Figure 12.

Figure 17 is a cross sectional view taken on line 17-17 of Figure 12.

Figure 18 is a view showing a supporting rod having a glass bead or flange welded thereto.

Figure 19 is a cross sectional view of a novel unitary assembly and is a still further modification of the assembly shown in Figure 1.

Figure 20 is a fragmentary view similar to Figure 19 and shows a modified connection between the terminals and the downwardly extending tubes of the base.

Figure 21 is a cross sectional view of a novel unitary assembly and is a still further modification of the assembly shown in Figure 1.

In the practice of my invention there may be employed the well known insulating base 10 which as shown may be a preformed essentially all glass cup 11 having a plurality of spaced openings in the bottom thereof. If desired the base 10 may include a pair of short and hollow glass tubes 12 and 13 disposed parallel to each other and being integral with the bottom of said cup and communicating therewith.

According to the invention contact terminals 15 and supports 16 for a translation element 17 are so secured to the base 10 that movement of the contact terminals with respect to each other does not impart any appreciable movement to the supports. The contact terminals may be in the general form of modified thimbles composed of copper or the like. As shown each terminal 15 may consist of a thimble comprising an elongated cylinder 14 having a dome 18 closing one end thereof and an outwardly extending flange 19 at its other end and a relatively short hollow upper cylinder 20 concentric with cylinder 14 and integral with the flange 19. The terminals 15 are essentially rigid. The upper cylinder 20 is tapered to a knife like edge at its upper extremity, as shown in Figs. 1, 2, 6, 7, 9, 10, 12 to 14, 19 and 21 or it may be threaded at its upper end as shown in Figure 20. Each terminal 15 may have an opening in the dome thereof, shown in Figs. 12, 19, 20 and 21, it may be a single element having a completely closed dome, shown in Figs. 1 to 3, and 5 to 7, or it may be a two piece unitary structure whose dome 18 is removably secured to the elongated cylindrical portion thereof by virtue of the threaded connection shown in Figs. 9 and 10.

The terminals 15 having knife-like edges are first provided with a lapping glass film as shown in Figure 13 and are then hermetically sealed to the tubes 12 and 13 and are thus rigidly secured thereto. The terminals 15 having threaded upper ends are threadedly secured to the tubes 12 and 13 having threaded lower ends in the manner shown in Figure 20. Either before or after securing the terminals 15 to the tubes 12 and 13, the same is provided with a coating 25 which resists oxidation and which has a relatively high melting point, such as nickel, chromium or the like. The purpose of this coating is to prevent blackening and clouding of the envelope of the device which ordinarily takes place due to the vaporizing of the compounds of copper and the copper itself and the dropping of these vapors into the envelope, especially when the device is burned base up. It is preferable that the entire inner surface of terminals 15 except that portion coated with glass be so coated.

The supports 16 for the mount of the device are secured to the base 10 and are preferably independent of the terminals. Each support 16 may be in the form of a short hollow cylinder 26 whose outside diameter is slightly less than the diameter of the openings in the bottom of base 10 and rigidly secured to the lower edge thereof is a tapered flange 27 (Figures 1-3). The cylinder 26 and flange 27 are composed of copper or the like and cylinder 26 at its upper end is inside threaded and the entire outer surface of said cylinder 26 has a thin coating 28 of nickel or chromium thereon.

A short stud bolt 29 having a head 30 bearing against coating 27 completely covers the upper edge of the cylinder 26. The bolt 29 is preferably composed of nickel or chromium. When this structure is employed, the terminals 15 need not be coated with nickel or chromium because even if there is any vaporization of the inside surface of the terminals 15 the vapors are prevented from reaching the envelope by the closed ends of the supports 16.

To anchor cylinder 26 to the base 10, the flange 27 is provided with a glass layer folded over the entire knife edge of the flange and welded thereto in the same manner in which it is applied to the knife edge of terminal 15. Thus there is obtained a firm metal to glass seal. The cylinder 26 is inserted up through the tube 12 or 13 and the glass on the flange 27 is fused to the glass at the lower end of the tube to make a tight and hermetic seal therebetween. The glass at the end of terminal 15 is fused to the glass on the flange 27 connected to the tube to make a tight and hermetic seal therebetween as shown in Figures 1-3.

The support 16 may also be a copper cylinder 32 flaring slightly outwardly at its lower end which is tapered to a knife like edge as shown in Figure 14. Like the previously described support 16, this one also has a glass coating at the tapered part thereof which in this instance is secured to the upper part of the bottom of the base 10 by welding the glass thereof to base 10 to provide a tight and hermetic seal thereat. The entire exposed outer surface of cylinder 32 is provided with a coating 31 of nickel or chromium.

The air-tight cylinder 32 may be a single closed dome thimble as shown in Figures 9 and 10 and in this case the dome 18 of terminal 15 is removable. The openings are hermetically sealed by supports 32 and the terminal 15 need not be air-tight.

The support 16 may also be a solid cylindrical post or rod 35 composed of tungsten, or any other metallic composition which makes a tight and hermetic seal between it and a large glass bead or other glass element 36 as shown in Figure 18. The tungsten element 35 is preferably of a diameter materially less than the diameter of the openings in said cup and the inside diameter of said tubes 11 and 12.

The glass element 36 is preferably sealed to said element 35 at a portion thereof intermediate the ends of element 35. The element 35 with the glass element 36 sealed thereto is rigidly secured to the base 10 by fusing the glass 36 to the glass of the base to form a tight and hermetic seal therebetween as shown in Figures 19 and 20. In this case the outer end of terminal 15 may be a detachable dome as shown in Figures 9 and 10 or it may be a single element with an opening in the dome as shown in Figures 19-21 and the terminal 15 may be either hermetically ring sealed or merely threadedly secured to tubes 12 and 13.

Instead of securing the support 16 to the base by a metal to glass seal, it is also within the purview of the invention to secure support 16 thereto by a cement seal. In this case there is a conical opening at the upper part of the base and above each tube. The support 16 may be a nickel or chromium tube 38 making a threaded engagement with the interior threaded surface of a hollow conical glass or other ceramic plug 39 located in the conical opening in said base and firmly anchored thereto by a high temperature resistant and non-volatile adhesive.

Still another type of support 16 is shown in Figure 12. In this modification, the support 16 is an upstanding glass member 40 integral with the bottom of the cup, having a longitudinal opening, at the center thereof, which is in alignment with the opening of a tube and having a flange 41. The member 40 has a longitudinal groove or slot therein parallel with the longitudinal opening in the center thereof. In this case, the entire structure including the base 10 and supports 16 may be cast or in some other manner produced as a single glass unit.

A mount 50 is secured to the hereinbefore described supports 16 in any convenient manner. The mount may be manufactured as a separate unit and generally may comprise a pair of oppositely disposed and rigid channel supporting leads 45 composed of nickel or the like. Insulators 44 are spaced from each other and their ends are located in said channels and secured thereto in any convenient manner. A translation element which may be a filament 46 has its ends electrically connected to said leads. The filament may consist of a series of coils mounted on supporting wires 47 extending downwardly from the upper insulator and wires 48 extending upwardly from a glass bar 52 located above the lower insulator and anchored thereto by wires 51. As shown in Figures 1-3, 9, 10, 19-21 the lower end of each rigid lead may have a clamp 55 secured thereto by welding, riveting or other appropriate means.

The clamps are disposed in the manner shown in said figures with each clamp being a single strap having a rectangular depression for receiving the lead and semi-circular sides terminating in tabs having openings therein to accommodate the shank of a nut and bolt assembly for locking the clamp to its support. Either the inner face of the semi-circular sides of the clamp or

the outer face of the upper part of the supports 16 or both may be knurled or roughened so that there shall be a tight and secure frictional engagement between the clamp and the support 16 to eliminate the possibilities of slippage therebetween.

Each support 16 except those shown in Figure 12 has an electrical conductor 70 connected thereto and to the terminal 15 located therebelow. The electrical characteristics of each conductor 70 may be such that in the event of an overload which sometimes happens because of filament breaking with consequent arcing or because of some other reason, then the conductor 70 will melt and break the circuit, thus acting as a fuse as well as a conductor for the current between the terminals and supports.

As shown in Figure 1-3, the lower end of each conductor 70 is electrically connected and locked to each of the terminals 15 by a locking device 71 comprising a split metallic sleeve 72 having a projection 73 extending therein and a clamp 74 at one end thereof tightly holding one end of the conductor 70. Each terminal 15 has a sleeve 72 located in the cylinder 14 thereof and in each sleeve 72 is located a split sleeve 75.

A spreader or expander 76 is located in one end of sleeve 75 and a take-up bolt 77 makes threaded engagement with spreader 76. When the bolt 77 is screwed into spreader 76, the spreader is drawn towards the bolt and expands the sleeves 75 and 72 to force the sleeve 72 firmly against terminal 15. Conductor 70 whose diameter is much less than the inside diameter of tubes 12 and 13 extends from the clamp 74 through a tube, through the opening in the bottom of the base into support 16 and its other end passes through an opening in the side of support 16 and is anchored thereto by the clamp 55 and is firmly located between the lead 45 and support 16.

As shown in Figures 5-7, the lower end of each conductor 70 is secured to each terminal 15 in the same manner in which the one end of conductor 70 is secured to terminal 15 of the device shown in Figures 1-3 and the upper end thereof is secured to the support 16 by the same device except that instead of clamping the upper end of conductor 70 to clamp 74, clamp 74 is eliminated and the upper end is clamped to a semi-circular plate 80 located between the support 16 and sleeve 72. Each lead 45 also terminates in a plate 81 which also is located between the sleeve 72 and support 16. When the bolt 77 is screwed into spreader 76, the sleeve 72 is expanded to firmly press both plates 80 and 81 firmly against support 16.

As shown in Figure 9, both ends of each conductor 70 are firmly connected to terminal 15 and support 16 by means of the expanding spreader locking means shown in Figures 1-3 and heretofore described.

As shown in Figure 10, both ends of each conductor 70 are firmly connected to terminal 15 and support 16 by means of the expanding spreader locking means shown in the upper part of Figures 5-7 and hereinbefore described.

As shown in Figures 19 and 20, one end of each conductor 70 is firmly secured to the lower end of support 16 by a butt weld or collar and its other end extends through an opening in the dome of terminal 15 and is welded thereto.

As shown in Figure 21, the lower end of conductor 70 is connected to terminal 15 in the same manner in which the lower end of conductor 70 is connected to terminal 15 in the modification

shown in Figure 20 and its upper end is connected to support 16 in the same manner in which the upper end of conductor 70 is connected to support 16 in Figures 1-3.

5 Since the support 16 of Figure 12 is glass, conductor 70 has the upper end thereof connected directly to lead 45 and its lower end is connected to terminal 15 in the same manner in which it is connected to terminal 15 as shown in Figures 19 and 20.

10 In practice, it is found that bending generally occurs at or near the meeting line between the elongated cylinder 14 and the flange 19 of each terminal 15. In accordance with this invention 15 the supports 16 are connected to the base and are independent of the elongated cylinder 14. For ease of connection, and for other reasons, the supports 16 are connected to the base 10 and are independent of the terminals 15 and are also independent of the elongated cylinders 14 thereof as shown.

20 Although the conductor 70 is in all of the different modifications electrically connected to the leads 45 and the terminals 15, the leads 45 will in no case be moved when the terminals are bent. 25 This is evident when it is realized that the physical characteristics of the conductor 70 is such that it rather than the lead or support will bend or deform when the terminal 15 is bent or deformed.

30 It is apparent that the conductor 70 may be of a wide variety of forms, shapes, lengths, cross sections and compositions. But two types are shown for the purpose of illustration. In one 35 form, it may be a coiled conductor which is readily flexible lengthwise and the length of the conductor may be much greater than the distance between its ends. In the other form, shown in Figures 10 and 11, it may be a hollow copper or 40 brass cylinder whose intermediate portion located between the flange 19 and the upper face of base 10 has slots therein and is corrugated at 90 to provide an easily and readily flexible connection. The cross section of this corrugated and cut out 45 portion may be of such magnitude that this conductor will melt thereat and break the circuit in the event of an overload and thus also act as a fuse. Whatever the type of conductor, it should become distorted upon distortion of the terminals without imparting any movement to the 50 leads.

In all of the modifications, there is shown a base 10, contact terminals 15 secured to the base at portions thereof adjacent the pair of openings 55 therein. The supports 16 are secured to the base at portions thereof adjacent the pair of openings therein and extend away from said terminal 15 and are concentric therewith.

60 The supports 16 may be metallic electrical conductors or they may be glass. The supports may be adhesively or fusedly secured to the base. The mount may be carried by supports 16 by securing leads 45 thereto. The conductors 70 connect the terminal 15 and supports 16 and may be of 65 any desired form and shape and may also have a portion thereof adapted to act as a fuse. This entire assembly may be produced as a single and unitary structure and requires but a bulb 91 which has its neck sealed to the upper edge of the 70 base 10 to complete the device which may be exhausted through tube 92 which is thereafter pinched.

75 When a horizontal force is applied to the part 14 of the thimbles 15, thimble 15 is rigidly anchored at its point of connection with the ends of

tube 12 or 13 and the part 14 is swung about the inner periphery of flange 19 whereby the axis of the part 14 and part 20 are now out of alignment, but the connection between the terminal 15 and the tube 12 or 13 is maintained unimpaired. This 5 particular condition may be attained because said inner periphery is the weakest point of each terminal. These terminals 15 are of such dimensions that they will support the entire weight of the devices. A device embodying my invention 10 may be electrically connected in the usual manner to a socket by inserting the terminals 15 into the metallic sleeves of the socket. Then the workman firmly tightens one of the set screws against one of the terminals and then he tightens the 15 other set screw against the other terminal 15. If one of said sleeves of said socket is oversize, one of the terminals 15 will be distorted due to the pressure of the set screw.

20 The set screw will force the part 14 to swing about the inner periphery of the flange 19 so that the vertical axis of the part 14 will be disposed at an angle to the vertical and to the vertical axis of the part 20. As the part 14 swings about the inner periphery of flange 19, the connection between part 20 and tube 12 or 13 is 25 maintained unimpaired and the connector 70 when it is a coiled flexible member is distorted and is extended and when it is a cylinder with corrugations as shown in Figures 10 and 11, it is 30 deformed and extended somewhat. In either case there is a flexible joint between the terminals 15 and the supports 16 so that upon distortion of the terminals 15 by swinging of part 14 with respect to part 20 thereof, the connector 70 35 or 90 will become distorted without causing any distortion of either supports 16 or the rigid supports 45. Because of this feature, the position of the mount or the elements of the mount with respect to each other are not varied when the terminals 15 are distorted in the course of securing 40 the lamp in a socket.

Although the invention has been described in detail the same is not to be limited to the particular construction illustrated and described because 45 the construction is subject to modifications.

Common or like subject matter of invention disclosed in this application and in my application Serial No. 200,062 filed April 5, 1938, is claimed in this application.

What is claimed:

1. A unitary assembly comprising an insulating base having a plurality of openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending 55 outwardly therefrom and supports independent of said terminals secured to said base at portions thereof adjacent said openings and extending away from said terminals.

2. A unitary assembly comprising an insulating base having a plurality of openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending outwardly therefrom, electrical conducting supports independent of said terminals secured to said base and conducting means electrically connecting said terminals and said supports, said means adapted to be deformed upon deformation of said terminals without moving 65 said supports.

3. A unitary assembly comprising a glass cup having a plurality of openings in the bottom thereof, contact terminals hermetically sealed to said cup at portions thereof adjacent said openings and extending therefrom, a plurality 75

of conducting supports sealed to said cup at portions thereof adjacent said openings, said supports being independent of said terminals and conducting means extending through said openings and electrically connecting said supports and said terminals, said conducting means adapted to be deformed without moving said supports upon deformation of said terminals.

4. A unitary assembly comprising a glass cup having a plurality of openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings, each terminal including a cylinder closed at one end and a larger diameter cylinder, means connecting one end of said larger cylinder to the other end of said first cylinder and the other end of said larger cylinder hermetically sealed to said cup and rigid leads connected to said cup and being independent of said first cylinder whereby said first cylinder may be moved with respect to said cup without moving said leads.

5. A unitary structure adapted to have a glass bulb sealed thereto and comprising an insulating base having a plurality of spaced openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending away from said base, a translation element, supporting means for said translation element, said supporting means so carried by said base and electrically connected to said contact terminals that when one of said terminals is moved with respect to the other, the position of said supporting means with respect to said base remains substantially unchanged, said base adapted to have a glass bulb sealed thereto.

6. A unitary structure comprising a glass cup having a pair of spaced openings in the bottom thereof, a pair of contact terminals secured to said cup at portions thereof adjacent said openings and extending away from said cup, a translation element, a plurality of rigid leads for supporting said element, said leads so carried by said cup and means electrically connecting said leads to said terminals that when the outer portion of one of said terminals is moved with respect to said cup, the position of the lead electrically connected thereto remains substantially unchanged.

7. A unitary structure comprising a glass base having a plurality of spaced openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending away from said base, a translation element, rigid leads for said element, means for securing said leads to said base whereby said leads are supported by said base, said means being independent of said terminals whereby said terminals may be moved with respect to each other without moving said leads, and means electrically connecting said leads and said terminals.

8. A unitary structure comprising a glass cup having a plurality of spaced openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings and extending away from said cup, a translation element, rigid supports for said element, conducting means electrically connecting said terminals and said translation element and means independent of said terminals securing said supports to said cup.

9. A unitary assembly comprising a mount including a translation element and a plurality of rigid supports therefor, a glass cup having a plurality of openings in the bottom thereof, a plurality of contact terminals secured to said

cup at portions thereof adjacent said openings and extending therefrom, means securing said supports to said cup and being independent of said terminals and conducting means electrically connecting said supports and said terminals, said conducting means adapted to be deformed while the position of said supports remain unchanged upon deformation of one of said terminals.

10. A unitary assembly comprising a mount, including a translation element and a plurality of rigid leads, a glass cup having a plurality of openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings and extending therefrom, conducting supports secured to said cup at portions thereof adjacent said openings, means electrically connecting said supports and said terminals said means adapted to be deformed upon movement of one of said terminals with respect to said cup without moving said support.

11. A unitary assembly comprising a mount, including a translation element and a pair of rigid leads, a glass cup having a plurality of openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings and extending therefrom, conducting supports for said leads, means securing said supports to said cup at portions thereof adjacent said openings, said means being independent of said terminals, means securing said leads to said supports and means electrically connecting said leads to said supports, said last means adapted to be moved upon movement of one of said terminals with respect to said cup without moving the support electrically connected thereto.

12. A unitary assembly comprising a mount, including a translation element and a pair of rigid leads, a glass cup having a plurality of openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings, means for securing said leads to said cup, said means being independent of said terminals, and means electrically connecting said leads and said terminals, said last means adapted to be moved upon movement of one of said terminals with respect to said cup without moving said leads.

13. A unitary assembly comprising a mount, including a translation element and a pair of rigid leads, a glass cup having a plurality of openings in the bottom thereof, contact terminals secured to said cup at portions thereof adjacent said openings, means for securing said leads to said cup, said means being independent of said terminals, conducting means electrically connecting said leads and said terminals, a portion of said conducting means being extensible lengthwise.

14. A unitary assembly comprising a mount, including a translation element and a pair of rigid leads, a glass cup having a plurality of openings therein, contact terminals secured to said cup at portions thereof adjacent said openings, conducting means securing said leads to said cup, said means being independent of said terminals and means electrically connecting said first means to said terminals, said second means secured to said first means and said terminals, a portion of said second means being extensible.

15. A lamp comprising a bulb, a cup sealed to said bulb and having a pair of openings in the bottom thereof, a mount including a translation element and a plurality of rigid leads, contact terminals secured to said cup and extending out-

wardly therefrom, means for securing said leads to said cup, said means being independent of said terminals, and means electrically connecting said leads and said terminals, said last means extending through said openings and adapted to be moved upon movement of said terminals with respect to said cup without moving said leads.

16. An electric device comprising an envelope having an opening, a contact element secured to said envelope at a portion thereof adjacent said opening, a support element secured to said envelope at a portion thereof adjacent said opening, only one of said elements hermetically sealing said opening, means electrically connecting said elements, said means adapted to be deformed without moving said support upon movement of a portion of said contact element with respect to said envelope.

17. An electric device comprising an insulating base, a glass bulb sealed thereto, said base having a plurality of spaced openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending away from said base, a translation element located in said bulb, supporting means for said translation element, said supporting means so carried by said base and electrically connected to said contact terminals that when one of said terminals is moved with respect to the other, the position of said supporting means with respect to said base remains substantially unchanged.

18. A unitary assembly comprising an insulating base having a plurality of openings therein, contact terminals secured to said base at portions thereof adjacent said openings and extending outwardly therefrom, supports independent of said terminals secured to said base at portions thereof adjacent said openings and extending away from said terminals and means electrically connecting said terminals and supports, said means adapted to be deformed upon deformation of said terminals without moving said supports, the surface length of said means being greater than the shortest distance between the points of connection of said supports and terminals with said means.

19. An electric device comprising a bulb, a base sealed thereto, said base composed of insulating material and having a plurality of openings therein, contact terminals secured to said base at portions thereof adjacent said openings and

extending outwardly therefrom, electrical conducting supports independent of said terminals secured to said base and conducting means electrically connecting said terminals and said supports, said means adapted to be deformed upon deformation of said terminals without moving said supports, said means located in said openings.

20. An electric device comprising a bulb, a base sealed thereto, said base being composed of vitreous material and having an opening therein, a contact terminal hermetically sealed to said base at a portion thereof adjacent said opening and extending outwardly therefrom, a conducting support sealed to said base at a portion thereof adjacent said opening, said support being independent of said terminal and conducting means extending through said opening and electrically connecting said support and said terminal, said conducting means adapted to be deformed without moving said support upon deformation of said terminal.

21. An electric device comprising a vitreous bulb, a glass cup sealed to said bulb, said cup having an opening therein, a contact terminal secured to said cup at a portion thereof adjacent said opening, a hollow vitreous support integral with said cup, a conducting support secured to said vitreous support, conducting means electrically connecting said terminal and conducting support, said conducting means extending through said opening and said vitreous support, said means adapted to be deformed upon deformation of said terminal without moving said conducting support.

22. An electric device comprising a vitreous bulb, a glass cup sealed to said bulb, said cup having a plurality of openings therein, contact terminals sealed to said cup at portions thereof adjacent said openings, said terminals closing said openings, hollow conducting supports ring sealed to portions of said cup adjacent said openings, means closing the upper ends of said conducting supports, rigid leads secured to said supports, a translation element connected to said leads and conducting means electrically connecting said terminals and said supports, said conducting means adapted to be deformed without moving said supports upon deformation of said terminals.

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