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W. J. GEIGER ET AL

2,047,023

BASE FOR INCANDESCENT LAMPS AND SIMILAR DEVICES

Filed Dec. 24, 1932

Fig 1

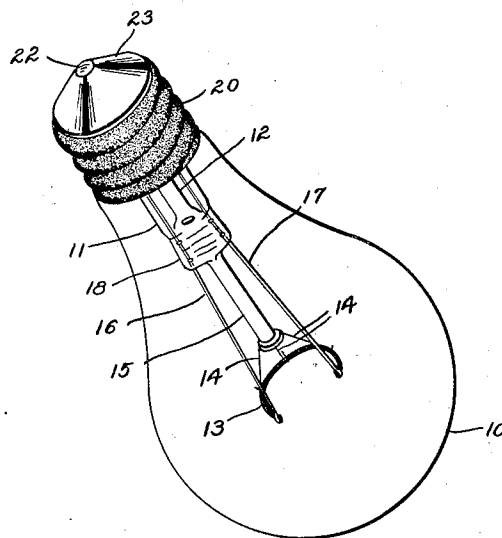


Fig 2

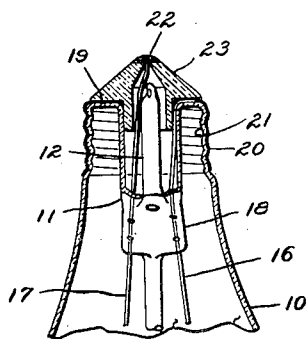
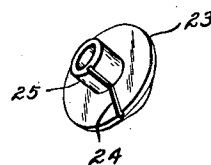


Fig 3



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BASE FOR INCANDESCENT LAMPS AND
SIMILAR DEVICES

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eral Electric Company, a corporation of New
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4 Claims. (Cl. 176—32)

Our invention relates to incandescent lamps and other similar replaceable devices which are provided with such terminal elements as to permit their ready insertion or removal from an electric circuit. More particularly our invention relates to the bases of terminal elements of said devices. The prevailing practice is to provide the lamp or other device with a base which is cemented to the bulb or other transparent container and which carries the terminal elements of the device. In many cases, trouble has arisen from the loosening of cemented bases and various constructions have been suggested to dispense with the use of cement. The construction constituting our invention is one of these.

One of the features of our invention is to secure the retention of the lamp or other device in a socket by shaping the end portion of the bulb to fit with a corresponding portion of the socket. Ordinarily this requires a screw-threaded glass bulb neck which fits in the ordinary Edison socket. This has been proposed heretofore but, according to our invention, improved means are provided for providing electrical contact between the lamp or other device and the socket, comprising a coating of conductive material, preferably metal, applied to the shaped end portion of the bulb and means are also provided for electrical connection between the said coating and one of the leading-in conductors of the device. Another feature of our invention is a cap or plug of insulating material carrying a contact connected to a leading-in conductor and also shaped to secure contact between another leading-in conductor and the aforesaid conductive coating on the bulb neck. The principal object of our invention is to provide a durable device of simple construction which can therefore be economically manufactured. Various other features and advantages of our invention will appear from the description which follows of a species thereof and from the accompanying drawing.

Referring now to the drawing, Fig. 1 is a perspective view of an electric incandescent lamp comprising our invention; Fig. 2 is a vertical section through a portion thereof; and Fig. 3 is a perspective view of the insulating cap.

The specific embodiment of our invention shown comprises the bulb 10 and stem 11, the bulb being exhausted or gas-filled as desired through tube 12 and containing the filament 13 which is mounted on support wires 14 extending from arbor 15 of the stem. The ends of the filament 13 are attached to the inner ends of leading-in wires 16 and 17 which pass through the stem

press 18. The outer end of wire 16 is bent down on flange 19 to which it is held by the metallic coating 20 which covers said flange and that portion 21 of the bulb adjacent thereto which has a screw threaded contour. One method of applying the coating consists in spraying or blowing small particles of the molten metal, for example zinc, on to the glass until the required coating thickness has been reached. Conductive coatings of other metals or paste may be used. The outer end of leading-in wire 17 is attached as by soldering to the eyelet insert 22 in insulating cap 23, preferably of hard rubber or similar material, which is mounted on flange 19 and which is prevented from turning by groove 24 therein which engages the raised portion of the coating about the end of the leading-in wire 16. If desired, the cap 23 may be cemented or glued in place. A boss 25 enters the stem and centrally locates the cap 23. When used in the usual screw thread type socket, the threads in the bulb engage corresponding threads of the socket and the coating 20 makes contact therewith. The eyelet 22 takes the place of the usual eyelet and makes contact with socket parts provided therefor.

What we claim is:

1. In an electric device, the combination of a glass bulb having an electric energy translation element sealed therein and having the outer surface of its base end shaped to engage a socket, a stem in said bulb, a conductive coating of finely divided metal particles adhering directly to the surface of said bulb end and characterized by the absence of a binding medium, a leading-in conductor connected with said coating and an insulating cap carrying a contact electrically connected to another leading-in conductor and having a groove therein to receive a portion of said first mentioned leading-in conductor.

2. In an electric device, the combination of a glass bulb having an electric energy translation element sealed therein and having the outer surface of its base end shaped to engage a socket, a stem in said bulb, a conductive coating adhering directly to the surface of said bulb end, a leading-in conductor connected with said coating and an insulating cap carrying a contact electrically connected to another leading-in conductor and having a groove therein to receive a portion of said first mentioned leading-in conductor, said cap having a centrally located boss fitting into the stem of said device.

3. In an electric device, the combination of a glass bulb having an electric energy translation element sealed therein and having the outer sur-

face of its base end formed into a screw-threaded contour, a conductive coating of finely divided metal particles adhering directly to the surface of said screw-threaded glass bulb end and characterized by the absence of a binding medium, a leading-in conductor connected with said coating, and an insulating cap carrying a contact electrically connected to another leading-in conductor.

10 4. In an electric device, the combination of a glass bulb having an electric energy translation

element sealed therein and having the outer surface of its base end shaped to engage a socket, a conductive coating on said glass bulb end comprising finely divided metal particles adhering directly thereto and characterized by the absence of a binding medium, a leading-in conductor connected with said coating, and an insulating cap carrying a contact electrically connected to another leading-in conductor.

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