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T. E. FOULKE

1,905,843

BASE AND SOCKET FOR ELECTRIC LAMPS

Filed Nov. 21, 1931

Fig. 1

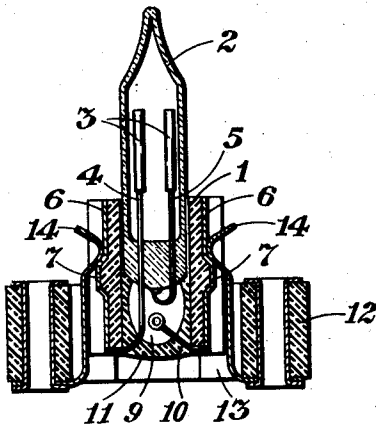


Fig. 2

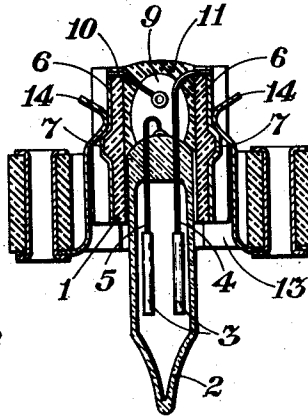


Fig. 3

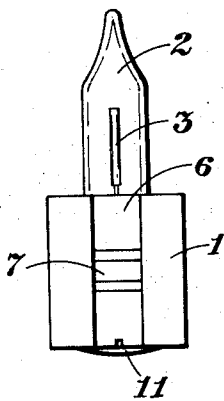


Fig. 4

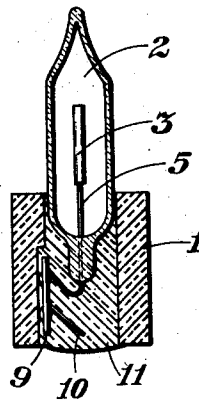
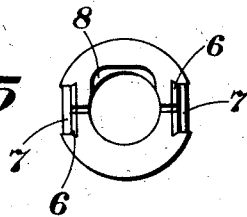


Fig. 5



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BASE AND SOCKET FOR ELECTRIC LAMPS

Application filed November 21, 1931. Serial No. 576,589.

The present invention relates to electric lamps, and particularly to mounting means therefor.

The object of the present invention is to provide a mounting for an electric lamp by which said lamp will be firmly secured in a socket. Another object of the invention is to provide a mounting which will maintain a good electrical connection to said lamp despite severe vibration of said mounting. Still another object of the invention is to provide a mounting in which an external resistance may be housed and protected from the elements. A further object of the invention is to provide a mounting by means of which a lamp may be positioned on either side of the mounting at will. Other objects and advantages of the invention will appear from the following detailed description thereof or from an inspection of the accompanying drawing.

The invention consists in a new and novel combination of elements, as hereinafter set forth and claimed.

In many instances it is necessary to mount electric lamps in locations where there is very severe vibration. Where the ordinary screw base and socket is used for this purpose it has been found that the lamps eventually worked loose in their sockets, as a result of these vibrations, opening the circuit therethrough. While this failure of the circuit is extremely annoying in cases where the lamps are used for general illumination, it is even worse where the lamps are used as indicators, as in submarines, power plants, and the like, where a faulty indication is fraught with danger to both life and property. I have now devised a mounting for electric lamps which will maintain a good electrical connection despite long continued vibration, and which at the same time permits the removal and insertion of lamps with greater facility than even the conventional screw sockets heretofore used. My novel structure likewise permits the lamp to be mounted in a suitable base in either of two positions, at will.

For the purpose of illustrating my invention I have shown a preferred form of my

novel mounting in the accompanying drawing, in which

Fig. 1 is a sectional view showing a lamp supported in said mounting,

Fig. 2 is a similar view showing the lamp reversed in said mounting,

Fig. 3 is an elevational view of the lamp and the permanently associated base member,

Fig. 4 is a sectional view of the parts shown in Fig. 3, and

Fig. 5 is a bottom view of the base member shown in Fig. 3.

In this drawing a tubular base member 1 of bakelite or any other suitable insulating material has the end of a lamp positioned therein. This lamp can be of any type whatever, but as here shown consists of a cathode glow lamp 2 having the glow supporting electrodes 3, which are supported by the sealed-in leads 4 and 5, extending beyond the tubular member 1. Two contact strips 6, of brass or the like, are positioned in suitable grooves which extend from end to end of said member 1 at diametrically opposite points in the exterior surface thereof, said strips being firmly fixed in said slots in any suitable manner, as by shrinking the member 1 down onto said strips, or by forcing the strips into suitably undercut slots. Each of these strips 6 has a bulge 7 formed therein at a point which is equidistant from the ends of the base member 1. A recess 8 is formed in one side of the inner wall of the tubular member 1 at the opposite end from the lamp 2. This recess accommodates a resistance 9 which as shown consists of a piece of graphitized paper having spaced eyelets therein to which the electrical connections are made. The lead 5 is attached to one of said eyelets, while a wire 10 is connected to the other of said eyelets. The lead 4 and said wire 10 are led outwardly through suitable slots in the end of the tubular member 1 and of the contact strips 6, the ends thereof being soldered to said contact strips. The remaining space within the tubular member 1 is filled with sealing wax, resin, or any similar insulating material 11. This sealing wax or the like is poured into the tubular member 1 after the assembly is otherwise complete and serves to

cement the lamp 2, resistance 9 and other elements into said tubular member, and at the same time seals the resistance 9 from all moisture.

- 5 The socket 12 of suitable insulating material, such as bakelite, fiber, porcelain, or the like has a central opening therein in which the tubular member 1 may be placed with one end thereof against the annular shoulder 13.
- 10 Contact springs 14 which are attached to the socket 12 extend through suitable slots in said socket and engage the contact strips 6, said springs 14 being so shaped as to snap over the bulges 7 in said contact strips, and
- 15 to thereby firmly hold said tubular member 1 against said shoulder 13.

Due to the symmetry of the tubular base member 1, and to the fact that the outside diameter thereof is greater than the largest diameter of the lamp 2, said member can be inserted in the socket 12 either with the lamp 2 extending above said socket, as shown in Fig. 1, or with the lamp extending therebelow, as shown in Fig. 2. In either case the springs 14 hold the lamp firmly in place, so that it cannot vibrate loose under any circumstances, yet the lamp 2 may be easily removed from the socket 12 and a new one inserted therein when desired. This new mounting is, therefore, extremely beneficial for use in all locations where severe vibrations are encountered.

While I have described my invention by reference to a specific embodiment thereof it is to be understood that it is not limited thereto, but that various changes, omissions or substitutions, within the scope of the appended claims, may be made therein without departing from the spirit of my invention.

I claim as my invention:

1. In combination, a tubular lamp base member of insulating material, an electric lamp bulb mounted therein, and spaced contact strips extending longitudinally along the outer surface of said base member and permanently attached thereto, the leads of said lamp bulb being connected to said contact strips, said strips having an outwardly extending bulge therein.

2. In combination, a tubular lamp base member of insulating material, an electric lamp bulb mounted therein, spaced contact strips extending longitudinally along the outer surface of said base member, the leads of said lamp bulb being connected to said contact strips, said strips having an outwardly extending bulge therein, an eccentric recess in the bore of said base member, a resistance in said recess, and a cementitious material within said bore, said material serving to hold said lamp in said base member and to seal said resistance against moisture.

3. In combination, a tubular lamp base member of insulating material, an electric

lamp bulb mounted therein, the greatest diameter of said lamp bulb being less than the outer diameter of said base member, and diametrically spaced contact strips extending longitudinally along the outer surface of said base member, the leads of said lamp bulb being connected to said contact strips, each of said strips having a bulge therein at a point midway between the ends of said base member.

4. In combination, a tubular lamp base member of insulating material, an electric lamp bulb mounted therein, spaced contact strips extending longitudinally along the outer surface of said base member, the leads of said lamp bulb being connected to said contact strips, said strips having an outwardly extending bulge therein, a socket member of insulating material having a bore therein of substantially the same diameter as said lamp base member, a shoulder at one end of said bore, and contact springs mounted on said socket and engaging the bulges on said contact strips whereby said lamp base is held firmly against said shoulder.

5. In combination, a tubular lamp base member of insulating material, an electric lamp bulb mounted therein, the greatest diameter of said lamp bulb being less than the outer diameter of said base member, symmetrically spaced contact strips extending longitudinally along the outer surface of said base member, the leads of said lamp bulb being connected to said contact strips, each of said strips having a bulge therein at a point midway between the ends of said base member, a socket of insulating material having a bore therethrough, a portion of said bore being of substantially the same diameter as that of said lamp base member while another portion of said bore is of a diameter which is smaller than that of said lamp base member but larger than that of said lamp bulb, whereby said base member can be inserted with either end in said bore, and contact springs mounted on said socket member and engaging the bulges on said contact strips to hold said lamp base firmly in said socket.

Signed at Hoboken in the county of Hudson and State of New Jersey this 20th day of November A. D., 1931.

TED E. FOULKE.