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LAMP BASE AND TERMINAL STRUCTURE

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LAMP BASE AND TERMINAL STRUCTURE
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This invention relates generally to electric lamps or similar devices comprising a sealed envelope of vitreous material containing electrical energy translation means such as a filament or electrodes. More particularly, the invention relates to base and terminal structures for such devices, especially for devices of the double-ended type having a base at each end for supporting the device in spaced holders or sockets and conducting current thereto.

It is among the objects of the invention to provide a base and terminal structure of low cost, high strength, ease of assembly and accurate location of the base on the envelope.

In accordance with one aspect of the invention, the envelope is formed at an end thereof, and at both ends in the case of a double-ended device, with an external pinch seal 1 in shape of cross-section through which extends a lead-in conductor, and the terminal structure comprises a base member having legs portions which snugly straddle the web portion 10 of the I-shaped seal 5 and fit snugly between the sides of the channel portions 11 at each side of the web portion 10, as seen in FIG. 4. The lead-in conductor 3 is electrically connected in any suitable manner to the base member 6. As herein illustrated, the end 8 of the base member 6 has a tab 12 stamped out at right angles thereto and the outer end of the rigid lead wire 3 extends through the resulting aperture 13 and is secured, preferably by welding, to the tab 12. The base member 6 is thereby held securely in place on the seal portion 5, and it may be fitted into a clip-type contact holder or socket such as that used for cartridge-type fuses.

In FIG. 5 there is shown an incandescent electric lamp of double-ended tubular type comprising a vitreous envelope 1 containing a tungsten filament 14 which is connected at each end to a lead-in conductor 3a having an intermediate foil section 4a which is hermetically sealed in a pinch seal portion 5a of the I-shaped cross section like that shown at 5 in FIG. 2. The terminal structure comprises a cylindrical metal base member 15 having a diametral slot 16 (FIG. 6) extending longitudinally from one end thereof and defining leg portions 17 which straddle the web portion 18 of the I-shaped pinch seal 5a and are of a width to fit snugly in the channel portions 11a at each side of said web portion. The outer end of the lead-in wire 3a extends through an axial aperture 19 in the base member 15 and into a recess or aperture 19 in the end thereof which is filled with silver solder to electrically connect the base 15 with the filament.

The leg portions 17 of the base 15 may be hollowed out by a bore 20 to provide room for a basting cement 21 when desired. Also, when desired, the end of the base 15 may be tapered as shown at 22 to provide for accurate prefocusing of the lamp for mounting in a socket of suitable design. The axis of the base 15 is accurately aligned with that of the filament 14 when attaching the base to the seal portion 5a, and the lamp is supported between opposed tapered socket terminals at least one of which is resiliently biased toward the other. It will be understood that a portion 31 may be added and the base 15 pressure fitted by relying on the web and flanges of the I-beam seal for alignment of the base.

While the invention has been illustrated by the above description of species thereof, it will be understood that the base and terminal structure may be varied and modified within the spirit and scope of the invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. An electrical device comprising a sealed envelope of vitreous material containing electric energy translation means and having an external pinch seal portion at an end thereof and a lead-in conductor extending there-through from said electric energy translation means, said seal portion having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, and a terminal structure mounted on said end of the envelope comprising a base member having leg portions snugly straddling the said web portion of the pinch seal and fitting snugly between the sides of the said channel portions.

2. An electrical device comprising a sealed envelope of vitreous material containing electric energy translation means and having an external pinch seal portion at an end thereof and a lead-in conductor extending there-through from said electric energy translation means, said seal portion having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, and a terminal structure mounted on said end of the envelope comprising a cylindrical base member having leg portions defined by a diametral slot extending longitudinally of the member from one end thereof and snugly straddling the

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said web portion of the pinch seal and fitting snugly between the sides of the said channel portions.

3. An electrical device comprising an elongated sealed envelope of vitreous material containing electric energy translation means and having an external pinch seal portion at each end thereof and a lead-in conductor extending therethrough from said electric energy translation means, said seal portion having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, and a terminal structure mounted on each said end of the envelope and comprising a base member having leg portions snugly straddling the said web portion of the pinch seal and fitting snugly between the sides of the said channel portions.

4. An electrical device comprising a sealed envelope of vitreous material containing electric energy translation means and having an external pinch seal portion at an end thereof and a lead-in conductor extending through from said electric energy translation means, said seal portion having substantially an I shape in cross section with accurately formed channels at each side of the web portion of the I-shaped section, and a terminal structure mounted on said end of the envelope and comprising a metallic base member having leg portions snugly straddling the said web portion of the pinch seal and fitting snugly between the sides of the said channel portions, said lead-in conductor being electrically connected to said base member.

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