

[54] **SUPPORT FOR THE FILAMENT BODY OF A TUBULAR LAMP**

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[58] Field of Search.....**313/271, 274, 279**

[56]

References Cited

UNITED STATES PATENTS

3,270,238	8/1966	Mosby.....	313/279
3,538,374	11/1970	Kane	313/279 X
3,168,670	2/1965	Levand.....	313/274
3,521,112	7/1970	Walsh et al.....	313/274
3,225,247	12/1965	Audesse et al.....	313/279 X

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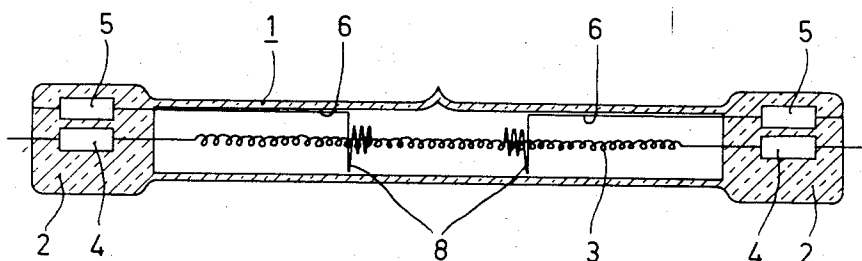
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[57]

ABSTRACT

A support for the filament body of tubular incandescent lamps, the support being formed by a length of metal wire having a coiled end surrounding the filament body and having an equally coiled portion engaging the inner wall of the lamp vessel, characterized in that the length of wire comprises a portion extending in the direction of length of the vessel and being secured in the pinch of the vessel.

2 Claims, 2 Drawing Figures



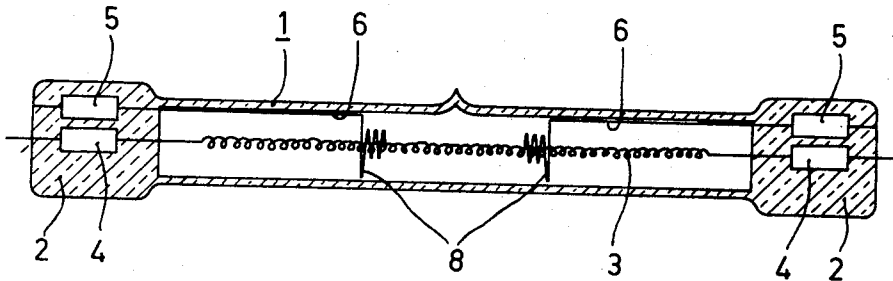


Fig. 1

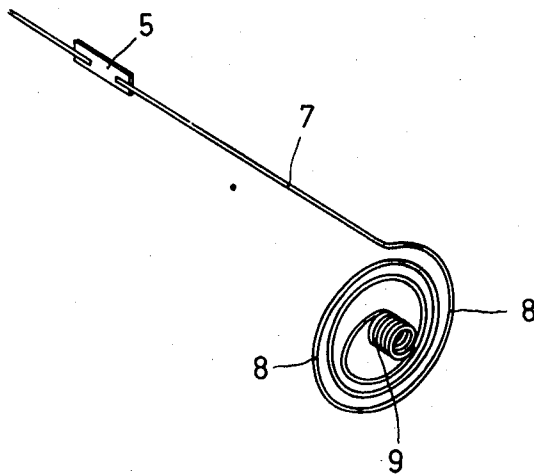


Fig. 2

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SUPPORT FOR THE FILAMENT BODY OF A TUBULAR LAMP

The invention relates to an electric incandescent lamp having a tubular bulb vessel, preferably to an incandescent halogen lamp, the ends of said vessel being closed by means of pinches, the incandescent lamp being provided with a helically wound filament body extending in the direction of length of the incandescent lamp and having its ends secured in the pinches of the lamp vessel. The incandescent body is held at least at one place between the pinches of the lamp vessel by a support formed by a length of metal wire having one wound end surrounding the filament body and having an equally wound portion extending transversely of the axis of the lamp, which portion bears on the inner wall of the tubular lamp vessel. Such an incandescent lamp is known.

By using this (these) supports it is ensured that the axis of the incandescent body substantially coincides with the axis of the tubular lamp vessel.

In a known incandescent lamp of this kind the support is formed by a length of wire having a rather complicated, zigzag-shaped, annular configuration engaging the inner side of the vessel, in order to avoid tilting in the vessel. An inwardly bent, looped end surrounds the incandescent body. In order to ensure the required axial position of the support in the vessel, the bulb wall has to be locally provided with a stop for the support.

The invention has for its object to obviate these disadvantages. Therefore, the lamp of the kind set forth is characterized in that the support is provided with a portion extending in the direction of length of the lamp and fastened in the pinch of the bulb vessel. It is thus possible to use a considerably simpler configuration of the wire portion engaging the inner wall of the lamp vessel. The stop to be provided in the wall of the bulb vessel can be dispensed with.

It is known to support the filament body extending in the direction of length of an incandescent lamp having a tubular vessel by means of a length of wire secured in a bead located near the end of the lamp vessel. This bead itself is held by a few wire portions fastened in the neck of the bulb vessel. However, in lateral direction the bead is free of the bulb vessel so that this known construction is rather unstable.

In an advantageous embodiment of the lamp in accordance with the invention the two pinches of the lamp have a support secured to them. This embodiment is particularly important for those lamps whose filament body should be supported at more than one place between the pinches in view of the length of the lamp.

In a further embodiment of the lamp in accordance with the invention the end of the support is provided with a plurality of adjoining turns, the length of this configuration being at least equal to the pitch of the helically wound filament body, the inner diameter of said configuration slightly exceeding the outer diameter of the filament body. This configuration permits of sliding

the filament body, if desired, in an axial direction through the end of the support. In this embodiment of the lamp in accordance with the invention the latter possibility provides the advantage that when the incandescent lamp is mounted, the bias stress of the filament body will be uniformly distributed throughout the length of the filament body. Particularly, when the filament body is drawn out, it is not likely that one of the turns of the body should be caught by one of the supports.

The invention will be described more fully with reference to the drawing, which shows a lamp embodying the invention.

FIG. 1 is a longitudinal view of a lamp embodying the invention.

FIG. 2 shows perspectively the support provided therein.

FIG. 1 shows that the tubular bulb vessel 1 of quartz of the incandescent halogen lamp is closed by means of flat pinches 2, in which the helically wound filament body 3 is secured by means of foils 4. Each pinch 2 has furthermore a foil 5, to which the metal wire support 6 is fastened. FIG. 2 shows that this support 6 comprises a straight portion 7, extending parallel to the axis of the lamp, a curved portion 8 bearing on the inner wall of the vessel and a configuration terminating in a portion 9 and formed by a plurality of turns engaging one another. The inner diameter of this configuration surrounding the filament body slightly exceeds the outer diameter of the latter. The configuration 9 comprises a number of turns such that its length is at least equal to the pitch of the helically wound filament body.

What is claimed is:

1. An electric incandescent lamp comprising a tubular bulb vessel, preferably an incandescent halogen lamp, the ends of the vessel being closed by pinches, the incandescent lamp comprising a helically wound filament body extending in the direction of length of the tubular vessel and having its ends secured in the pinches of the lamp vessel, said filament body being held at least at one place between the pinches of the lamp vessel by a support formed by a length of metal wire having a coiled end surrounding the filament body and having an equally coiled portion extending transversely of the axis of the lamp and bearing on the inner wall of the tubular lamp vessel, wherein the support is provided with a portion extending in the direction of length of the lamp and secured in the pinch, and wherein the end of the support has a plurality of turns engaging each other, the length of this configuration being at least equal to the pitch of the helically wound filament body, the inner diameter of said configuration slightly exceeding the outer diameter of the wound filament body.

2. An electric incandescent lamp as claimed in claim 1 wherein a support is secured in each of the two pinches of the lamp.

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