July 14, 1959 L. H. VERBEEK 2,894,383

FLASHLAMP

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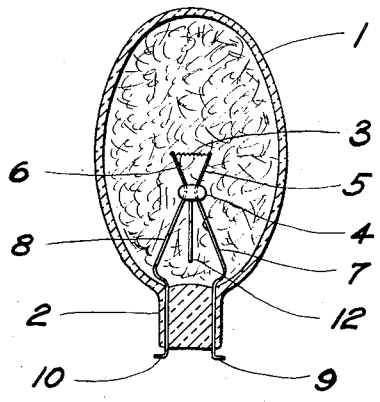


FIG. 1.

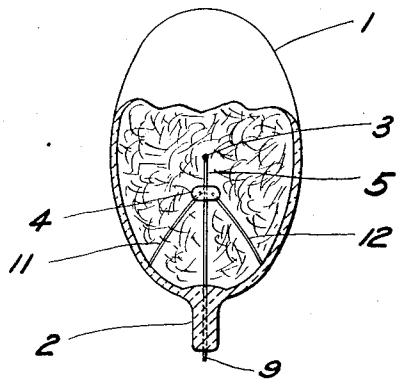


FIG. 2.

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FLASHLAMP

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2 Claims. (Cl. 67—31)

The present invention relates to a flashlamp. More particularly, the invention relates to a flashlamp which is ignited electrically. The flashlamp bulb is provided internally with an ignition mechanism constituted by a filament wire secured to ends of two stay wires conveying current and combined locally to form a maniable unit by means of non-conductive material in the shape of a bead or pearl, this ignition mechanism being introduced into the bulb to an extent such that the free ends of the stay wires, bent away from one another bear on the contracted bulb neck, which is then closed. It is common practice in this case to arrange the bulb with the neck turned upwards and to let the ignition unit pass through the neck into the bulb, it being held by the ends of the stay wires bent away from one another and supported from the bulb neck. The dimensions and the shape of the unit are such that the filament wire occupies the desired position in the bulb, generally in the center thereof; the bulb may then be sealed in a simple manner, for example by weakening the edge of the bulb neck, by urging against this edge a tube of about the same diameter as the bulb neck and by subsequently closing the opening of the tube.

The unit of filament wire, pearl and stay wires, however, is a light construction, which is held in place in this method only by the force of gravity. Thus only slight forces are sufficient for this unit to assume a position other than the desired position in the bulb. If, for example, during the sealing of the bulb neck, a slight displacement along the bulb edge with the ignition mechanism bearing thereon takes place, this may result in a turn of the ends of the stay wires about their axis, so that the filament wire is displaced in the space of the bulb. Such a displacement may particularly occur in a flashlamp, the bulb of which contains actinically burning material in the form of strips, wires or foils, since this material may hinder the ignition mechanism in occupying the desired position.

According to the invention, this disadvantage is mitigated, since stay wires starting from the pearl of the ignition mechanism bear on the bulb wall contracting in the direction of the neck, so that the ignition mechanism is clamped in the desired position in the bulb. This clamping ensures not only that a displacement of the filament wire in one lateral direction or in both is prevented, but also that the ignition mechanism penetrates sufficiently deeply into the space of the bulb and any forces are prevented from expelling the unit out of the bulb.

This is particularly of importance for the manufacture of flashlamps of the said kind, having a glass bulb which is sealed by weakening at the edge of the bulb neck, after the ignition mechanism has been introduced. When a stay wire is exposed to the heat used for weakening the bulb neck and heat is not released, due to no contact being established between the edge of the neck and the wire, the wire may be superficially oxidized, so that the seal is porous or the wire may be melted.

In order that the invention may be readily carried into effect, it will now be described with reference to the accompany drawing, wherein:

Fig. 1 is a schematic diagram of an embodiment of a flashlamp; and

Fig. 2 is a modification of the embodiment of Fig. 1.

In a preferred embodiment of the invention, the current conveying stay wires are bent away from one another locally, as is indicated in the sectional view of the bulb of Fig. 1. In Fig. 1, bulb 1 has a neck 2. In the bulb is arranged the ignition mechanism comprising the filament wire 3, the bead or pearl 4 and stay wires 5 and 6. The stay wires are bent away from one another at 7 and 8 in a manner such that the ignition mechanism is urged into the desired position. By bending the ends 9 and 10 towards one another prior to the introduction of the ignition mechanism into the bulb, the points 7 and 8 are permitted to pass readily through the narrow neck 2.

In a modification of the embodiment of Fig. 1 of the invention, wire ends from the bead bear on the bulb wall; in the bead these wire ends are secured approximately at right angles to a plane going through the current supply wires. Figure 2 is a sectional view of the last-mentioned embodiment, the plane containing the two current supply wires being turned through 90° compared with the view of Fig. 1. The same reference numerals designate the same parts in Fig. 1 and 2. Reference numerals 11 and 12 designate two wire ends starting from the bead and bearing on the bulb wall. These ends may be bent and passed through the neck of the bulb, if desired.

While the invention has been described by means of a specific example and in a specific embodiment, I do not wish to be limited thereto, for obvious modifications will occur to those skilled in the art without departing from the spirit and scope of the invention.

What is claimed is:

1. An electrically ignited flashlamp having a bulb portion and a relatively narrow neck portion, comprising a filament wire, a pair of stay wires secured to said filament wire, and a supporting member of non-conductive material affixed to both said stay wires to maintain the said stay wires in spaced relationship in said bulb portion, each of said stay wires being bent at two points separated from each other by the length of said neck portion in a manner whereby the said stay wires resiliently engage at one of said points the inner surface of said bulb portion at an area adjacent said neck portion and engage at the other of said points the base area of the said neck portion thereby securely clamping the ignition mechanism of said flashlamp in a given position in the said bulb portion.

2. An electrically ignited flashlamp having a bulb portion and a relatively narrow neck portion, comprising a filament wire, a pair of stay wires secured to said filament wire, and a supporting member of non-conductive material affixed to both of said stay wires to maintain the said stay wires in spaced relationship in said bulb portion, each of said stay wires being bent at two points separated from each other by the length of said neck portion in a manner whereby the said stay wires resiliently engage at one of said points the inner surface of said bulb portion at an area adjacent said neck portion and engage at the other of said points the base area of the said neck portion thereby securely clamping the ignition mechanism of said flashlamp in a given position in the said bulb portion, at least one wire being extended from the said supporting member to the said inner surface in a plane substantially perpendicular to the plane of said stay wires thereby to space the said supporting member from the inner surface of said bulb portion.

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