

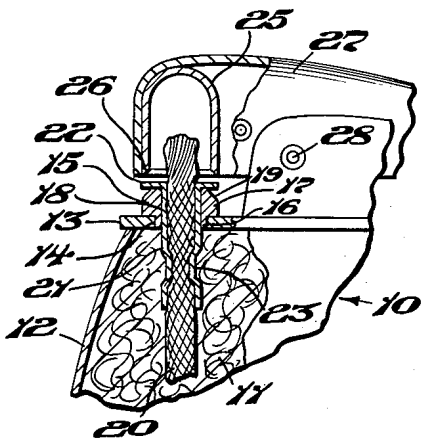
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A. F. REILLY

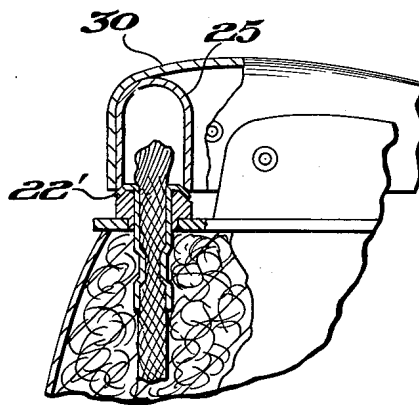
2,616,161

METHOD OF SEALING SNUFFERS

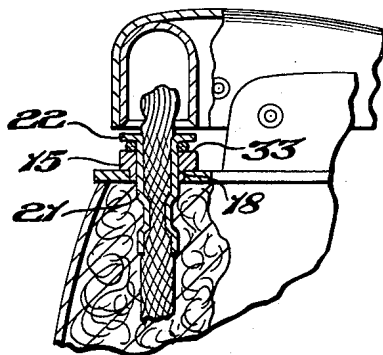
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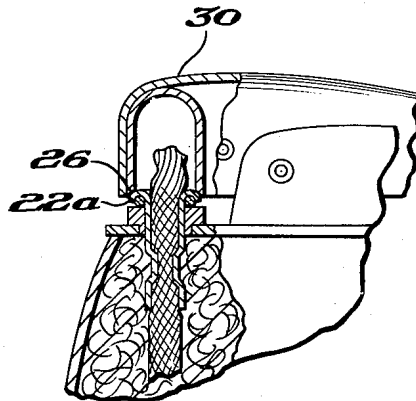
*Fig. 1.*



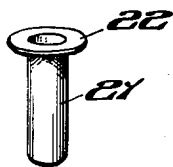
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Fig. 6.*

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# UNITED STATES PATENT OFFICE

2,616,161

## METHOD OF SEALING SNUFFERS

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3 Claims. (Cl. 29—148)

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This invention relates to a pyrophoric lighter, and particularly to the sealing of the snuffer cap at its lower edge or point of engagement with the wick-supporting structure.

This type of lighter has a fuel tank with the top wall and a wick-supporting structure mounted in an opening in the top wall, and through which support the wick extends. The wick transmits fuel through it to the point of burning and if it were not for some closure device over the wick, the fuel would escape by evaporation and would soon exhaust the fuel in the tank; consequently, it has been the practice to provide a cap over the wick end, so that the air will not get to the wick and evaporate the fuel therefrom. A seal at the lower edge of the snuffer cap, however, is not always tight, and, accordingly, some evaporation still occurs by circulation of the air into the snuffer cap.

One of the objects of this invention is to provide a method for providing a tight seal between the snuffer cap and the portion surrounding the wick against which the snuffer cap engages.

Another object of this invention is to provide a means whereby this seal may be provided with a simple operation, such for instance as by tapping the snuffer cap with a hammer.

With these and other objects in view, the invention consists of certain novel features of construction and procedural steps as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a side elevation partly in section to better show the construction in the initial assembly stage;

Figure 2 is a view similar to Figure 1, but illustrating the parts after there has been a hammer blow on the snuffer cap to cause deflection of a flange which extends from the wick-supporting tube;

Figure 3 is a view similar to Figure 1, but illustrating a modified form of the device before the hammer blow has been struck;

Figure 4 is a view similar to Figure 3 illustrating the parts of Figure 3 after there has been a hammer blow struck to deform the flange against which the snuffer cap engages;

Figure 5 is a perspective view of the tube through which the wick extends; and

Figure 6 is a perspective view of the ring which is positioned beneath the flange of the tube shown in Figure 5 in the modified form shown in Figures 3 and 4.

The body of the lighter is designated generally

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10 and comprises a fuel tank 11 having a side wall 12 and a top wall 13. An aperture 14 is provided in this top wall 13 and in this aperture a wick-supporting boss 15 which is reduced as at 16 is positioned so that its shoulder 17 will engage the upper surface of the top wall 13. This wick-supporting boss has a bore 18 extending centrally through it, and it is beveled as at 19 on its upper outer surface. The wick 20 is supported in a tube 21 of a soft malleable material which has a flange 22 extending outwardly from its upper end as shown in Figure 1. This flange is substantially at right angles to the axis of the tube. The wick fits tightly in this tube, and the tube is of such a size as to have a press fit with the bore 18 of the supporting boss 15 so that no fluid will escape along the joint. The wick is secured in the tube by deflecting the tube inwardly as at 23 which serves not only to hold the wick in the tube, but also serves to constrict by compression the wick to some extent so as to govern the flow of fluid along the wick.

The snuffer cap 25 is illustrated as in the form of an inverted cup with an edge 26 which is beveled inwardly as shown in the drawings. The cap is mounted in a lever arm 27 which is pivoted as at 28 so as to swing to and from position in response to manual manipulation. The lower edge 26 of this snuffer cap is of a size to engage the flange 22 of the tube 21 at a point slightly radially spaced from the wick 20.

In order to conform the surface of the flange to the snuffer cap so that there will be a good sealing engagement between the two parts, after the snuffer is brought into engagement with the flange 22, a hammer blow will be struck at substantially the point 30 shown in Figure 2, so as to deflect or bend the flange 22 downwardly as at 22' in Figure 2; thus giving the soft malleable flange a shape which will snugly fit the edge of the snuffer 25. Thereafter, when the lever moves the snuffer against the flange under spring pressure, it will have a good tight sealing engagement at all times.

As shown in Figures 3 and 4, I have provided a ring 31 which may be positioned beneath the flange 22 of the tube 21, and in this case, the supporting boss 15 will have a right angularly extending end 33 instead of the tapered end 19 as above described. The tube will have the same driving fit with the bore 18, and after the parts are assembled, as shown in Figure 3, a hammer blow at the location 30, as shown in Figure 4, will cause the flange 22 to be bent as shown at 22a so as to cause a good firm and tight seal between

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the lower edge 26 of the snuffer cap and this flange which is extended over the ring 31.

I claim:

1. The method of forming a tight joint between a removable lighter snuffer cap and the wick support, which comprises positioning a soft malleable tube with a radially extending metal surface at its outer end about the wick, bringing a harder engaging edge of the snuffer cap into engagement with said surface, and forcing the cap against the surface by a hammer blow sufficiently to cause a permanent deflection of the surface and a conforming of the shape of the surface to the edge of the snuffer cap to provide a good sealing engagement between the two.

2. The method as in claim 1 wherein the deflection is against a flange having a receding surface partially supporting the flange.

3. The method as in claim 1 wherein the de-

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flection is against a flange having a curved surface partially supporting the flange.

ALFRED F. REILLY.

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