March 23, 1948. E. WEDEMEYER 2,438,378

SNUFFER CAP ASSEMBLY

Filed Dec. 30, 1944

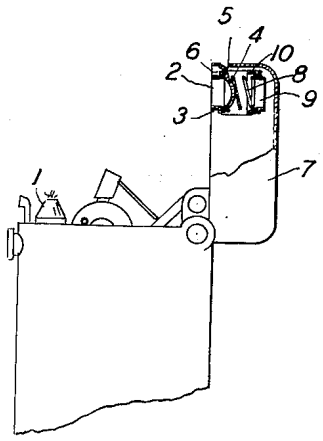

FIG. 1

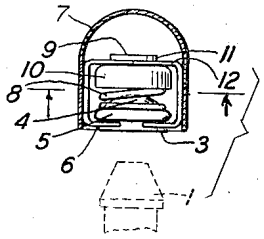

FIG. 2

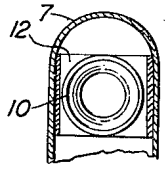

FIG. 3

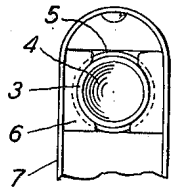

FIG. 4

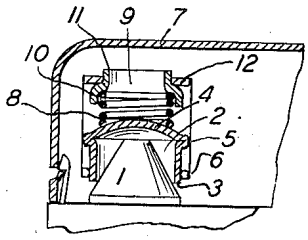

FIG. 5

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Patented Mar. 23, 1948

2,438,378

UNITED STATES PATENT OFFICE

2,438,378

SNUFFER CAP ASSEMBLY

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Application December 30, 1944, Serial No. 570,518

2 Claims. (Cl. 67—7.1)

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The present invention relates to a snuffer cap assembly for combustible liquid lighters.

Most pyrophoric lighters which have a wick are unsatisfactory in operation because the wick carbonizes and the combustible liquid evaporates easily due to insufficient means for instantaneously and completely extinguishing the flame and completely sealing the burner and preventing evaporation of the liquid from the wick when the lighter is not in use. Because of failure to produce a flame for the above set forth reason very often too much wick is pulled from its holder by the angry user and this only aggravates the described conditions.

The object of the present invention is to provide a snuffer cap assembly for pyrophoric lighters which eliminates the above set forth undesirable conditions and assures instantaneous snuffing out of the flame when the lighter is put to rest and also tightly closes the burner so that evaporation of the combustible liquid is effectively prevented, and that under all operating conditions of the lighter, also when burner and snuffer cap are badly out of alignment. With the assembly according to the invention the lighter can be operated with a minimum of wick projecting from the burner and that greatly reduces evaporation of the combustible liquid and burning of the wick itself.

Another object of the invention is the provision of a snuffer cap assembly which is composed of parts which can be manufactured and assembled at low cost. In the assembly according to the invention the parts which are subjected to wear, such as the spring and particularly the wick cap, can be replaced at any time without dismounting other parts of the device.

Further and other objects of the present invention will be hereinafter set forth in the accompanying specification and claims and shown in the drawings which, by way of illustration, show what I now consider to be a preferred embodiment of my invention.

In the drawings:

Fig. 1 shows the snuffer cap assembly according to the invention in section, in combination with a conventional lighter.

Fig. 2 is a side view of the assembly according to the invention, on larger scale.

Fig. 3 is a view from below into the upper portion of the assembly according to the invention, looking in the direction of the arrows in Fig. 2.

Fig. 4 is a view from below into the lower portion and snuffer cap proper of the assembly according to the invention.

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Fig. 5 is a large scale longitudinal sectional view of the assembly according to the invention.

Like numerals designate like parts in all figures of the drawing.

Referring more particularly to Fig. 1 of the drawing, numeral 1 designates the burner which has a conical configuration. Numeral 2 designates the snuffer cap proper which has a cylindrical portion 3 for sitting tightly on the conical surface of burner 1. Above portion 3 is a spherical portion 4. Between portions 3 and 4 an annular rim 5 projects for seating the cap on seat portion 6 when the cap is not on the burner. The seat portions 6 extend inwardly from the lower ends of the legs of a frame member of inverted U-shaped longitudinal sectional configuration and having two opposed open sides and being rigidly connected with the inside of the lighter lid 7. Cap 2 is forced to its seat 6 by a coil spring 8. This is the position shown in Fig. 2. When the lid is closed cylindrical portion 3 comes to rest on the cone of burner 1 and cap 2 or rather its rim 5 is removed from seat 6 against the pressure of spring 8 which now acts fully to press the cap to the burner. This is the condition shown in Fig. 5.

The upper end of spring 8 rests in spring retainer 9 within the cylindrical portion 10 thereof and against an internal shoulder which is formed by the junction of cylindrical portion 10 and the smaller diameter cylindrical portion 11. Portion 11 fits into an aperture in the upper transverse portion 12 of the inverted U-shaped frame member which is rigidly connected with lid 7, and the spring retainer sits on the inside of the transverse portion 12 by an outside shoulder also formed by the beforementioned junction.

The diameter of coil spring 8 is somewhat smaller than the largest diameter of the spherical portion 4 of cap 2 and the latter can make movements about the center of the sphere of which 4 is a portion. This wobbling movement is further facilitated by the lateral flexibility of coil spring 8 and permits the wick cap 2 to adjust itself on the surfaces which it has been designed to seal off, i. e. the cone of burner 1. Fig. 5 shows the snuffer cap assembly in operating position with the lid of the lighter closed and the cap 2 seated on burner 1. The spring 8 is then compressed and shoulder 5 is off its seat 6.

The inverted U-shaped configuration of the frame member 6, 12 with two opposed sides open as shown and described makes it possible to insert the wick cap, the spring, and the spring retainer laterally through said open sides after the

frame member has been connected with the inside of the cover of the lighter, and to remove these parts and, if necessary, replace them at any time without any difficult dismantling operation.

While it is believed that the above described embodiment of this invention is a preferred embodiment, it is to be understood that it is not desired to be limited to the exact details of design and construction shown and described, for obvious modifications will occur to a person skilled in the art.

I claim:

1. In a snuffer cap assembly for pyrophoric lighters, the combination of a frame member of inverted U-shaped longitudinal sectional configuration and having two opposed open sides, a spring retainer of inverted cup shape configuration removably mounted in the upper portion of said frame member, a coil spring having an end extending into the interior of said cup shaped spring retainer, and a wick cap slidably disposed in said frame member and having a cylindrical portion closed at one end by a spherical portion with the convex side on the outside, the other end of said coil spring bearing against the concave side of said spherical portion.

2. In a snuffer cap assembly for pyrophoric lighters, the combination of a frame member of inverted U-shaped longitudinal sectional configuration and having two opposed open sides and an aperture in its transverse portion and inwardly extending seat portions at the lower ends of the legs of the inverted U, a spring retainer

having a relatively small diameter cylindrical portion extending through said aperture and a relatively large diameter cylindrical portion disposed inside the U-shaped frame member and having a shoulder portion connecting said two cylindrical portions and bearing against the inside of the transverse portion of said inverted U-shaped member, a coil spring having one end extending into said large diameter cylindrical portion and resting against said shoulder portion, and a wick cap having a cylindrical portion closed at one end by a spherical portion with the convex side on the outside and projecting laterally from said cylindrical portion and forming a rim at the outside thereof, said cap being longitudinally slidably disposed between said seat portion and inside said frame member, the other end of said coil spring bearing against said spherical portion and tending to force said wick cap out of said frame member, and said rim bearing against said seat portions when the cap is forced to its outermost position by said spring.

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