March 15, 1960 R. J. PLOWS 2,928,437

CIGARETTE LIGHTER FILLER CAPSULE

Filed July 31, 1958

Fig. 1

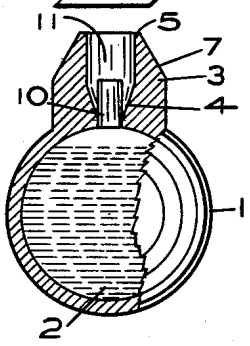


Fig. 2

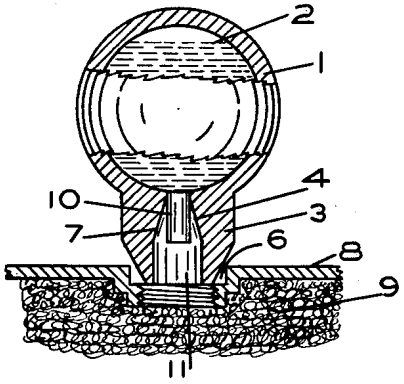
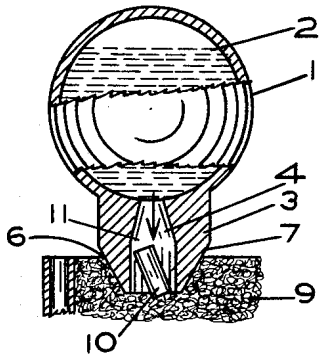


Fig. 3



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CIGARETTE LIGHTER FILLER CAPSULE

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1 Claim. (Cl. 141—114)

This invention relates to refill capsules for cigarette lighters, having particular reference to a disposable capsule in which fluid for a single filling of the lighter is carried.

The refilling of cigarette lighters is more usually done from containers capable of holding a number of fillings for the lighter. These are not convenient for carrying by the user and usually are not available when they are required.

The present invention contemplates provision of a disposable capsule of pliable plastic in which a single filling for an average size lighter is contained. This capsule has an outlet boss, the end of which is shaped to be seated in the filler opening of the lighter, permitting of ejection of fluid from the capsule into the lighter by squeezing the capsule. A closure for the capsule is provided in the form of a flint for use in the lighter and this flint is ejected with the fluid and subsequently picked off the cotton filling of the lighter, to facilitate which the outlet from the filler boss is enlarged to contain the ejected flint and allow passage of the fluid.

The object of the invention is accordingly to provide a disposable refill capsule for cigarette lighters adapted for injection of fluid contained in the capsule into the lighter and including a stopper for the capsule to be ejected therefrom with the fluid.

In the drawings, which illustrate a preferred embodiment of the invention,

Fig. 1 is an enlarged side view of a capsule filled with lighter fluid, shown partly broken away and partly in section, and including the flint stopper for the capsule.

Fig. 2 shows an enlarged view of the fluid filled capsule as it would appear inverted into filling relation to the inlet of a cigarette lighter and including the stopper, a fragment only of the lighter being shown, and the capsule and lighter being shown broken away in part and partly sectioned.

Fig. 3 shows an enlarged side view of a capsule and fragment of a lighter as in Figure 2, but with the capsule illustrated as it would appear when pressure is applied to inject the fluid and stopper into the lighter.

Having reference to the drawings a capsule is provided comprising a body 1 capable of holding a lighter fluid 2 and including a boss 3 with fluid ejection opening 4. This body is of pliable plastic material capable of being distorted in ejection of the fluid through the opening 4 by squeezing the capsule, and the boss 3 is of a thickness to provide sufficient rigidity to retain its shape during ejection of the fluid.

The boss 3 provides an annular flat end portion 5 that is adapted for seating against the inlet 6 of the lighter and an inwardly tapered shoulder 7 adapted when squeezing

pressure is applied to the capsule in ejecting the fluid into the inlet of the lighter to provide an effective seal against leakage.

The lighter, indicated generally by the numeral 8, is filled with cotton 9, or like material, and when fluid from the capsule is injected into the lighter a stopper 10 from the capsule is ejected by the fluid against the cotton. For this the boss 3 includes an outlet opening 11 forming a continuous passage from the opening 4, and when the cotton filling in the lighter does not permit ejection of the stopper this outlet opening is adapted to hold the stopper and at the same time permit passage of the fluid. The opening 11 also facilitates insertion of the stopper in the capsule opening 4 and protects the stopper from being accidentally dislodged. Such an arrangement also permits use of a comparatively short contact between the stopper and capsule to make it easier to eject the stopper when the capsule is squeezed.

The stopper is preferably in the form of a flint for use in the lighter, and after the fluid has been ejected into the lighter from the capsule the flint may be picked out of the lighter or opening 11. The flint may be coated with a preservative to prevent deterioration.

In the use of the capsule, these are designed to be marketed either singly or packed in groups of two or more, and preferably sold from vending machines. The capsules would contain only sufficient fluid for a single filling and would be disposable. Pressure by the thumb and forefinger of the user would be applied to the capsule for ejection of the stopper and fluid.

The capsule may take any preferred shape, either spherical as shown, or ovoid or pear shaped, and variations in the shape of the boss to adapt it for seating in the filler openings of lighters different from that shown is readily conceivable, and the capsule could also be used to insert fluid into a lighter of a type in which the bottom or other section of the lighter was wholly removable, in such a case sealing contact between the filler capsule and lighter would not be required.

Having thus particularly described and ascertained the nature of my said invention, what I claim and wish to secure by Letters Patent is,

A refill capsule for cigarette lighters of a character providing a filler inlet, said capsule comprising a body of pliable material containing a single filling for a lighter, said body having an opening therein for ejection of fluid from the capsule, a stopper for the opening, and a boss on the capsule to be seated in the filler inlet when in sealing relation thereto, said boss having a bore through which fluid ejected from the capsule passes, said bore having a tapered inner portion having the stopper wedged therein in closing relation to the capsule opening and an enlarged outer portion adapted to contain the stopper and at the same time permitting fluid ejected from the capsule to pass through the bore after the stopper has been dislodged from the capsule opening by applying pressure to the capsule.

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