

## PATENT SPECIFICATION



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## COMPLETE SPECIFICATION

## Improvements in or relating to Pocket Lighters

I, BEDRI HUSSEIN GOSTKOWSKI, a citizen of Turkey, residing at No. 46, Boulevard du Pont d'Arve, Geneva, Switzerland, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The petrol tank of many pocket lighters is sealed by a stopper, usually screw-threaded on which depends to a great extent the fluid-tightness of the said tank.

For this reason it is necessary to have to use force to secure the stopper, and this requires the use of an accessory tool. To avoid the obligation to carry such a tool on the person, most makers of pocket lighters have provided the stopper with a head formed as a slit screw head with a milled groove broad enough to allow a coin, for example a Swiss ten centimes piece, to serve as screw driver.

Apart from the fact that it is not always certain that one would have such a coin in one's pocket, Figure 1 of the annexed drawing illustrates how inefficient, mechanically this method proves to be.

The diameter of a Swiss ten centimes piece, for example, is about 19 mm., whereas the groove made in the head of the stopper 1, which may be regarded as a typical example, is generally 40 mm. in diameter, the superficies thereof being indicated by the dotted line 2. A diameter of this order is necessitated by the fact that the maximum depth of the groove should be relatively small.

Figure 1 shows clearly how the coin penetrates into the middle part of the groove without filling the latter at its ends where the effort exerted in rotating the stopper would be greatest. Such an arrangement is equivalent to the affixing of a screw by means of a screw driver the end of which was rounded instead of being flat. The edges of the slot in the screw would rapidly become burred and this is what happens now to the stoppers of pocket lighters, the edges of the coins used gradually making irregular slashes in the material of the stopper.

With the object of finding a more satisfactory means of screwing and unscrew-

ing the stopper of a tank of a pocket lighter, the present invention provides a tool specially made to this end. But to avoid having to transport such a tool separately, and the danger of its being lost, the invention provides that the lighter shall be equipped with an element which, while part of the lighter, may be temporarily removed from it, serving then as a tool for opening the tank.

One embodiment of the subject of the present invention, is illustrated by way of example in Figures 2 to 4 of the accompanying drawings. In these drawings:—

Figure 2 is a perspective view of the bottom of the lighter,

Figure 3 represents a detail of Figure 2, and

Figure 4 the element temporarily removed from the lighter and about to be used as a tool for opening its tank.

A stopper 4 is screwed into the bottom of the casing 3 of the lighter, it is slotted at 5 in the manner of a screw, that is to say with a straight, flat-bottomed groove and not a circular groove as has been shown in Figure 1.

This stopper 4 is screwed into a counter-sunk recess in the lighter, the casing of which, in its normal position, i.e. that of Figure 2, will present on all sides a continuous aspect not spoiled by a visible portion of the stopper as is generally the case.

Adjacent the stopper 4 is a small plate 6, introduced into a dovetail shaped groove 7 in the bottom of the lighter.

This plate 6 is shown in perspective in Figure 4 and has two inclined surfaces 8 designed to co-operate with the groove 7 in the bottom of the casing. Near both its ends, each of the inclined surfaces 8 is provided with a notch 9 having a straight sided portion at its outer end, so that the plate 6 has two extremities 10 either of which may be used as a screw driver capable of co-operating with the groove 5 of stopper 4.

Two small indentations 11 in the plate 6 enable the latter to be slidden by the finger nail to extract it from the bottom of the lighter. The plate 6 is normally held in position on the bottom of the

lighter by means of a spring placed in a screw cutting 12, such spring comprising a wire 13 formed as an open loop with an extremity 14 thereof folded back along a diameter of this loop and bowed slightly convex so as to keep plate 6 in place by preventing it from sliding.

The loop 13 is held in the cutting 12 by reason of the fact that the edge of this latter is also dovetail shaped. Plate 6 might have a shallow hollow corresponding to the portion 14 of wire 13, which would be an increased help in keeping it in place.

It is obvious that the element of the lighter adapted to be removed from this latter to serve as a tool for opening the tank thereof, could be placed elsewhere than at the bottom. It could be an element of the sides, of the lid or, for example, a part hidden inside the latter. Moreover the element in question could have a different effect from a screw driver, for instance it could have the effect of a key co-operating with a specially shaped or formed portion of the stopper.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A pocket lighter characterized by the fact that it includes an element capable of being removed temporarily from the lighter to serve as a tool for opening the fuel tank thereof.

2. A pocket lighter according to claim 1, characterized by an element which, when it is removed from the lighter, is adapted to co-operate with a stopper of the latter, in the manner of a screw driver co-operating with a screw.

3. A pocket lighter according to claim 1, characterized by the fact that the element, when removed from the lighter,

constitutes a key adapted to co-operate with a stopper of the tank.

4. A pocket lighter according to any of claims 1 to 3, characterized by the fact that the element normally forms part of the bottom of the lighter.

5. A pocket lighter according to any of claims 1 to 3, characterized by the fact that the element normally forms part of the lid of the lighter.

6. A pocket lighter according to any of claims 1 to 3, characterized by the fact that the element normally forms part of the casing of the lighter.

7. A pocket lighter according to any of claims 1 to 3, characterized by the fact that the element is normally located inside the lid of the lighter.

8. A pocket lighter according to claims 1 and 4, characterized by the fact that the bottom of the lighter has a groove into which a plate is adapted to be introduced and held by friction, such plate, when extracted, being capable of co-operating with the stopper of the tank for screwing or unscrewing this stopper.

9. A pocket lighter according to any of the preceding claims, characterized by the fact that the stopper of the tank thereof is entirely sunk into the casing of the lighter.

10. A pocket lighter substantially as hereinbefore described with reference to Figures 2 to 4 of the accompanying drawing.

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Fig. 1.

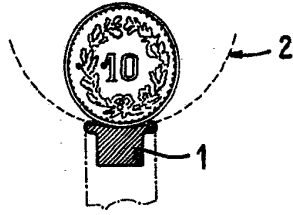


Fig. 2.

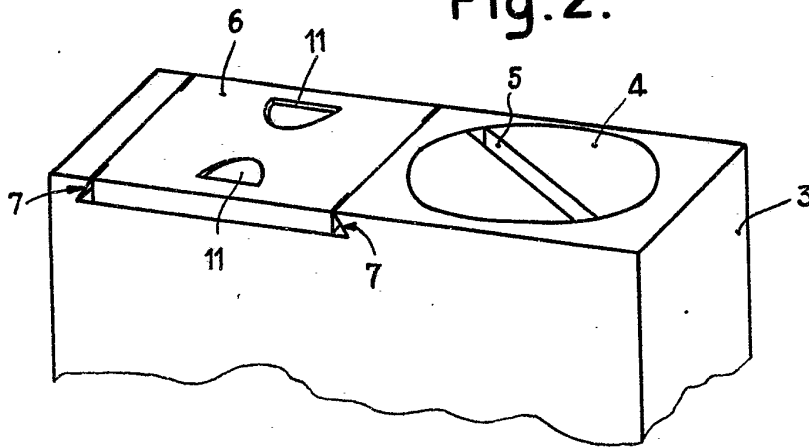


Fig. 3.

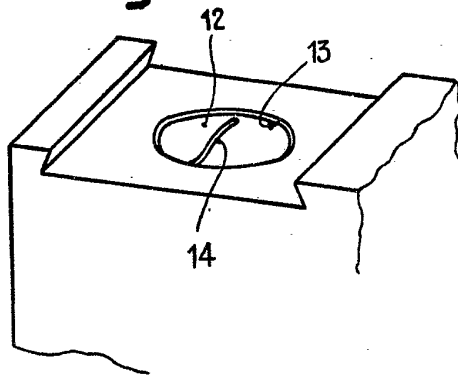
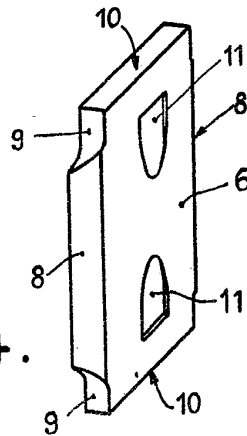


Fig. 4.



[This Drawing is a reproduction of the Original on a reduced scale.]