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PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in Catalytic Pocket-lighters

We, DENES VON MIHALY, of Hungarian Nationality, of 3, Hildegard Strasse, Berlin - Wilmersdorf, Germany, and ALFRED MORGAN, a German Citizen, of 56, Grunewald Strasse, Berlin-Schöneberg, Germany, 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:—

This invention relates to pocket-lighters utilising liquid fuel and in which a catalytic agent, such as spongy platinum or platinum-black, is employed for ignition of a vaporizable, combustible liquid, such as alcohol.

Lighters of this kind have been proposed in which the igniting device is normally arranged in a housing which is separate from the wick chamber, provision being made for opening the chamber and bringing the ignition device into a position to ignite the vapours.

The object of the present invention is to provide an improved construction of such lighters.

Accordingly, this invention provides a pocket lighter having a housing for the igniter device, a separate wick chamber connected to a fuel reservoir and a hinged cover which seals off the wick chamber from the igniter housing and is operatively connected to the igniter device through the medium of an articulated coupling so that the cover shifts the igniter device into the wick chamber when the cover is moved to open the chamber and withdraws the igniter device into its housing when moved into position to seal the wick chamber. This construction is not only very simple to produce but enables the device to be very conveniently held and operated by one hand.

Constructional forms of the invention are hereinafter described with reference to the accompanying drawings in which:—

Fig. 1 is a longitudinal vertical cross-section of a pocket lighter according to the present invention;

Fig. 2 is a longitudinal vertical cross-section of a modified form of pocket lighter according to the invention; and

Fig. 3 is a plan view showing the device

[Price 1/-]

of Fig. 2 without the cover and with its parts in the position which they occupy when the cover is open. 55

Referring to Fig. 1, the lighter consists of two adjacent chambers 1 and 2, and of the fuel reservoir 3. The chamber 1 is above the fuel reservoir and contains a wick 4 which absorbs the fuel vapours emerging from the reservoir 3 through the felt cushion 5 of the cap screw 6. The chambers 1 and 2 are provided with a common hinged cover 7 comprising a packing 8 for hermetically sealing the chamber 1 when the cover is closed. On the cover 7 an arm 9 is rigidly mounted, and the igniter 12 comprising platinum filaments 10 and the catalytic agent 11, e.g. a small slug or ball consisting of platinum-black, is hinged to said arm. The cover 7 is retained in its closed position by a spring catch which can be released by pressure on the button 13. When released, the cover will be opened by the spring 14. 60 65 70 75

When the cover is closed the arm 9 and the igniter 12 are in the chamber 2 occupying the position indicated by dotted lines in Fig. 1. 80

In operation the lighter is preferably held in the right hand so that the button 13 is pressed by the user's thumb. Thereby the cover 7 is released and is thrown upwards so that the arm 9 comes into an almost horizontal position. By this movement of the arm the igniter is lifted from the chamber 2 and shifted over the partition separating the chambers 1 and 2 until it reaches the end position shown in full lines in Fig. 1. In this position of the igniter the catalytic agent 11 comes into contact with the vapours filling the chamber 1 and generates sufficient heat to ignite this vapour. 85 90 95

As the igniter remains in this position as long as the lighter is used, even a strong wind can not impair the function of the lighter since the vapours will be automatically and immediately re-ignited every time after the wind may have extinguished the flame. 100

After the lighter has been used it is simply necessary to close the cover 7 by pressing it down. In the downward movement of the cover the arm 9 is also swung 105

downwards and draws the igniter from the chamber 1 over the partition back into the chamber 2 while the chamber 1 is tightly sealed by the packing 8 so that the flame is extinguished at once.

The lighter shown in Figs. 2 and 3 comprises also two adjacent chambers 21 and 22 separated by a partition 28, a fuel reservoir 23 located below the chamber 21, an igniter 24, a cover 26, and an arm 27 rigidly mounted on the cover. Here, however, the partition 28 is provided with an opening the width of which exceeds the width of the igniter 24. The arm 27 is slotted and a pin projecting from the rear end of the igniter frame engages the slot in said arm. This pin and another corresponding pin on the other side of the igniter frame are slidable in horizontal guides 25 in the side walls of the chamber 22.

When the cover 26 is closed the arm 27 is in a vertical position and the igniter is in the chamber 22; the opening in the partition 28 is sealed by a vertical plate 29 fastened to the front edge of the igniter frame. In opening the cover the arm 27 is swung upwards and acts upon the pins engaging the slot in said arm so as to push the igniter through the opening in the partition 28 into the chamber 21 where it ignites the fuel vapours.

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

1. A catalytic pocket lighter having a housing for the igniter device, a separate wick chamber connected to a fuel reservoir and a hinged cover which seals off

the wick chamber from the igniter housing and is operatively connected to the igniter device through the medium of an articulated coupling so that the cover shifts the igniter device into the wick chamber when the cover is moved to open the chamber and withdraws the igniter device into its housing when moved into position to seal the wick chamber.

2. A lighter as claimed in claim 1, wherein the wick chamber is completely separated from the igniter housing by a partition and the igniter device is hinged to an arm which is rigidly fixed to the cover and retains the igniter in the igniter housing when the cover is positioned to seal the wick chamber and shifts the igniter device over the partition and into the wick chamber when the cover is moved to open the chamber.

3. A lighter as claimed in claim 1, wherein the wick chamber is separated from the igniter housing by a partition having an opening therein, and the igniter device is connected to the cover by a link means which shifts the igniter device from chamber to housing or vice versa through the opening in the partition when the cover is moved, the igniter device incorporating a member which seals the opening in the partition when the igniter device is withdrawn into its housing.

4. A catalytic lighter substantially as described with reference to the accompanying drawings.

Dated this 9th day of January, 1939.

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

