PATENT SPECIFICATION

Application Date: March 10, 1931. No. 7396/31. 365,393

Complete Accepted: Jan. 21, 1932.

COMPLETE SPECIFICATION.

Improvements relating to Pocket Lighters.

I, ALOIS KAUFMANN, an Austrian citizen, of 15, Victoriagasse, Vienna XV, Austria, 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 a pyrophoric pocket lighter of the kind in which sparking is produced by the ratchet movement of a friction wheel effected by the cap of the lighter, the said cap being opened and closed by a spring-loaded rocking lever forming the rear wall of the lighter.

According to the present invention the rocking lever is connected with the lighter cap by means of a pin disposed eccentrically with respect to the rotational axis of the cap, and with the fuel container by means of a pin or the like arranged to slide in an inclined slot in the latter. By exerting pressure on the rocking lever the cap is opened and the friction wheel thereby rotated through a so-called driver; by releasing the pressure, the cap is again closed through the action of a spring interposed between the rocking lever and the fuel container, the friction wheel remaining set ready for the next opening movement of the cap.

The construction of the lighter according to the invention is distinguished by particular simplicity. Its operation is absolutely reliable by reason of the direct operative connection between the cap and the rocking lever. The fingers of one hand are sufficient for the operation of the lighter.

A typical embodiment of the invention will now be described with reference to the accompanying drawing.

Fig. 1 shows a lighter according to the invention, in section parallel to a side wall and in the inoperative position.

Fig. 2 is an outside view of the lighter, in the position represented in fig. 1.

Fig. 3 is a similar section to fig. 1, with the lighter in operative position.

Fig. 4 is an outside view corresponding to fig. 3.

Fig. 5 shows the friction wheel with its driver.

As illustrated, there is attached to the fuel container 1, a bracket 2 in which is mounted a pin 6 carrying the rotatably mounted friction wheel 3, the friction wheel driver 4 and the lighter cap 5. The periphery of the friction wheel is provided with teeth which disrupt sparks from the flint 7, thus igniting the fuel soaked wick 8. In its face adjacent the driver 4 the friction wheel 3 is provided with recesses forming ratchet teeth with which the driver 4 engages, in rotating, by means of a flexible extension 9, thus carrying round the friction wheel 3. The said driver 4 is seated inside the lighter cap 5 and is compelled to share the rotational movements of the latter. Externally, the cap 5 is provided, on both sides, with pins 10, which engage in corresponding openings in the rocking lever 11 constituting the rear wall of the lighter, the two being thus articulated together. The side walls of the fuel container 1 are provided with extensions 12 having slots 13 in which the ends of a pin 14, passing through both side walls of the rocking lever slide during the movement of the lever. This pin 14 also carries a spring 15, the one end of which bears against the inner end wall of the fuel container, and the other end against the inner surface of the end wall of the rocking lever 11, thus constraining the two into the neutral or inoperative position shown in figs. 1 and 2. The closed upper wall 16 of the fuel container, which carries the wick tube 17, is arranged at a steep angle towards the longitudinal axis of the lighter, so that the wick tube is tilted close to the friction wheel.

The lighter functions in the following manner:—

On the rocking lever 11 being pressed inwards against the action of the spring 15, motion is communicated to the articulated cap 5, which, being mounted on the pin 6, rotates about the latter and thus actuates the friction wheel driver 4. The flexible extension 9 of the driver 4 engages in the ratchet teeth on the face of the friction wheel 3 and thus carries the latter round with the driver. This

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rapid movement of the the friction wheel strikes sparks from the flint 7 and ignites the wick 8. As the pins 10 move downward during the rotation of the cap 5, the rocking lever 11 has to share this downward movement and this is permitted by the pin and slot connection 13, 14, the pin 14, together with the spring 15, travelling in the slots 13 into the position shown in figs. 3 and 4.

On the pressure on the lever 11 being released, the operation is reversed, the lever being rocked about the pin 14 and moved upward by the action of the spring 15, thereby returning the cap 5 and the driver 4 into the neutral position (figs. 1 and 2), while the flexible extension 9, which has slipped back over the ratchet teeth of the friction wheel 3 (the latter remaining stationary) engages another ratchet tooth ready to drive the wheel forward again next time the lighter is operated.

The described lighter has the great advantage that it can be operated in a simple manner, solely by means of the fingers of one hand. It only needs to be squeezed, and always returns automatically into the closed, neutral position.

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 pyrophoric pocket lighter of the kind herein set forth, characterised in that the rocking lever which forms the rear wall of the lighter is connected with the cap by means of a pin disposed eccentrically with respect to the axis of rotation of the cap, and with the fuel container by means of a pin or the like arranged to slide in an inclined slot in the fuel container.

2. A pyrophoric pocket lighter substantially as described with reference to the accompanying drawing.

Dated this 10th day of March, 1931.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1932.

Fig.5

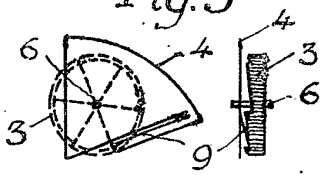


Fig.1

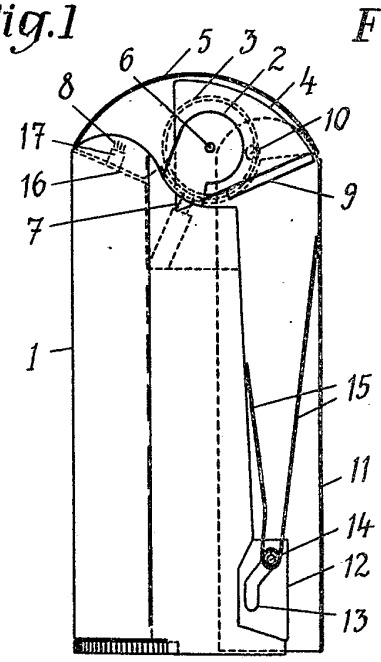


Fig.3.

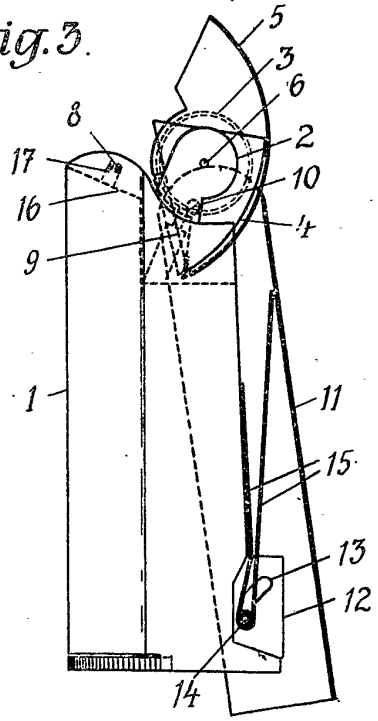


Fig.2

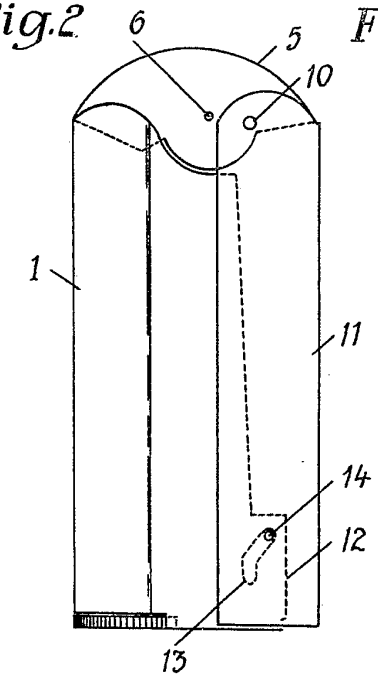
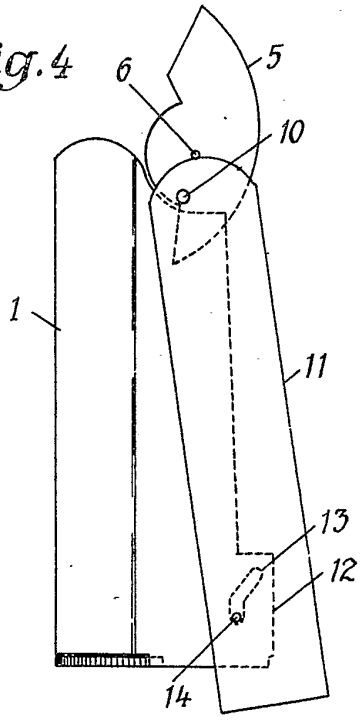


Fig.4



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