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PATENT SPECIFICATION



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378,356

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COMPLETE SPECIFICATION.

Improvements in Pyrophoric Lighters.

We, HERMANN THORENS SOCIÉTÉ ANONYME, of Sainte-Croix, Canton of Vaude, Switzerland, a body corporate organized under the laws of 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:—

10 The present invention relates to improvements in pyrophoric lighters, of the type comprising a rotatable wick cover which a spring tends to open and which when opening actuates the friction wheel, and a rotatable bolt member which, under the action of a spring, occupies a position in which it prevents the wick cover from opening.

20 According to the invention the bolt member carries a reciprocable slide which a spring tends to maintain at a point of its stroke where it abuts against a fixed stop, thus preventing the bolt member from turning, this slide being situated, relative to the axis of rotation of the bolt member, on that side towards which the latter inclines when it releases the wick cover, so that, when the slide is actuated against its spring, the bolt member is freed and by the same movement is brought into its disengaging position.

The accompanying drawings represent by way of example one embodiment of the invention.

35 Figure 1 shows the lighter in elevation; Figure 2 is a plan view. Figures 3 and 4 are two mainly longitudinal sections on the lines III—III, IV—IV, respectively of Figure 2, and Figure 5 is mainly a transverse section on the line V—V of Figure 1.

40 The represented pyrophoric lighter comprises a casing 1 forming the petrol reservoir at the upper part of which emerges the wick 2. Between two vertical cheeks 3, fixed to the casing 1, there is rotatably mounted, on the axis 5 of the friction wheel 6, a wick cover 4. 7 is the flint stone capable of sliding in a tube 8 lodged in the reservoir and subjected to the action of a spring 9 maintaining it in contact with the friction wheel. The wick cover 4 tends to open under the action

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of a spring 10 and when it swings into open position it actuates the friction wheel 6 by the intermediary of a U-shaped spring blade 11 of which one branch is traversed by the axis 5, while the free end of the other branch cooperates with four teeth 12 provided on the friction wheel 6. A bolt 13 mounted rotatably at 14 between the cheeks 3, carries two eccentrics 15 destined to maintain the wick cover in closed position while cooperating with a corresponding edge 16 of this latter. This bolt 13 is subjected to the action of the spring 10 which, by taking support at 19, acts with its branch 17 on the bolt, in view of holding it in its position of engagement with the edge 16 of the wick cover.

70 The bolt 13 carries a slide 20 which can rectilinearly move in a slot 21, this latter being situated at the right hand side of the axis 14, in Fig. 3, on the side towards which the bolt inclines when it disengages the cover. This slide is subjected to the action of a spring 24 which tends to maintain it in the position represented in the drawing, in which its foot 22 abuts against a fixed stop 23 carried by the reservoir, thus preventing the bolt from turning.

80 When it is desired to ignite the lighter, it suffices to actuate, with the finger, the slide 20 against its spring 24 until the foot 22 is no longer in contact with the stop 23. The bolt 13, which is then free, pivots, owing to the same action of the finger, about the axis 14 against its spring 17 and will occupy a position where the eccentrics 15 free the wick cover 4 which raises under the action of the spring 10 and actuates the friction wheel 6.

95 The lighter may be extinguished by turning the wick cover 4 down upon the wick 2; the bolt comes into engaging position under the action of its spring, engaging its eccentrics 15 beneath the edge 16 of the wick cover, and the foot 22 of the slide moves again on top of the stop 23, and is maintained in this locking position by the action of the spring 24.

100 Having now particularly described and ascertained the nature of our said invention and in what manner the same is to

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be performed, we declare that what we claim is:—

5 1. A pyrophoric lighter comprising a rotatable wick cover which a spring tends to open and which when opening actuates the friction wheel, and a rotatable bolt member which, under the action of a spring, occupies a position in which it prevents the wick cover from opening,
 10 characterised in that the bolt member carries a reciprocable slide which a spring tends to maintain at a point of its stroke where it abuts against a fixed stop, thus preventing the bolt member from turning,
 15 this slide being situated, relative to the axis of rotation of the bolt member, on that side towards which the latter inclines when it disengages the wick cover, so that, when the slide is actuated against
 20 its spring, the bolt member is freed and by the same movement is brought into its disengaging position.

2. A pyrophoric lighter according to claim 1, characterised in that the bolt member carries at least one eccentric
 25 which, in the engaging position of the bolt, engages beneath a corresponding part of the wick cover.

3. A pyrophoric lighter according to claim 1, characterised by a spring common to the wick cover and to the bolt member, taking support on the casing and of which one branch acts on the wick cover to open the same while the other branch acts upon the bolt for maintaining
 35 it in engaging position.

4. The improved pyrophoric lighter, substantially as described and as illustrated in the accompanying drawings.

Dated this 24th day of March, 1932.

MARKS & CLERK.

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

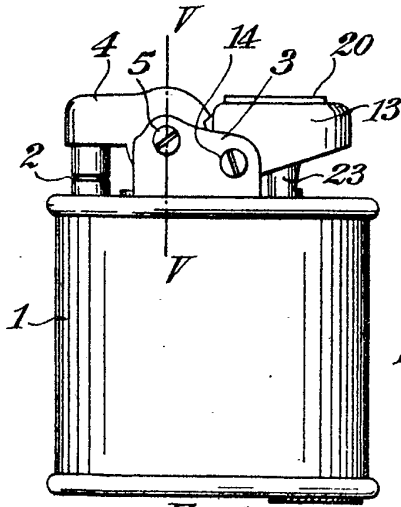


Fig. 1.

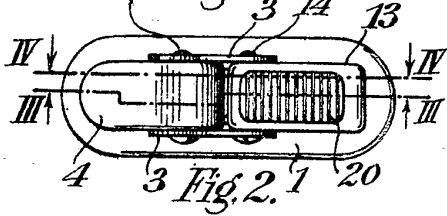


Fig. 2.

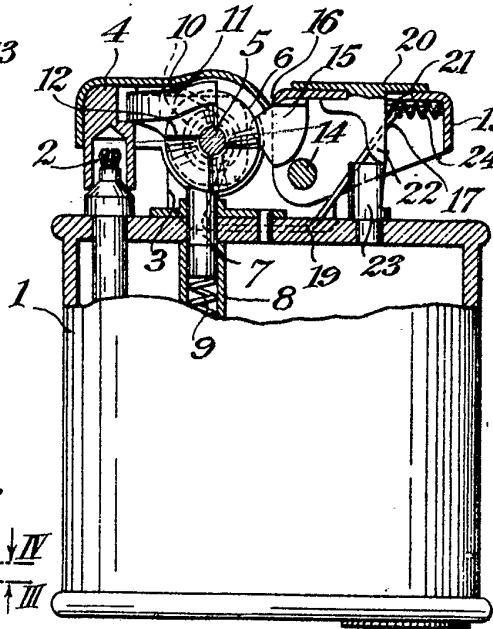


Fig. 3.

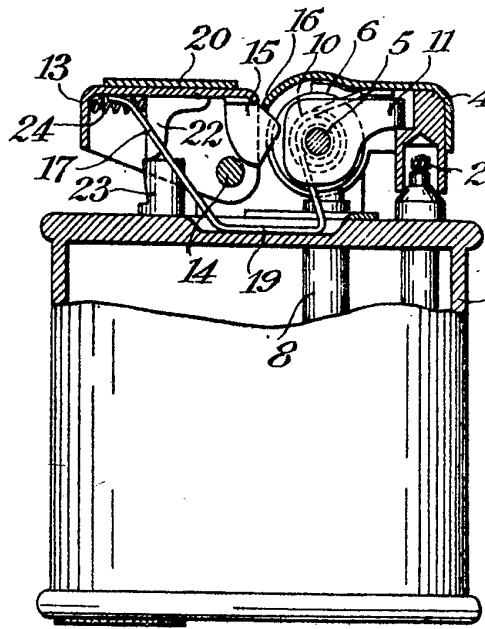


Fig. 4.

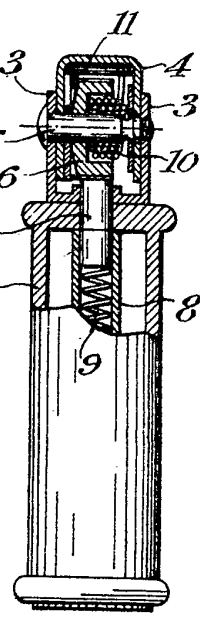


Fig. 5.