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PATENT SPECIFICATION



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COMPLETE SPECIFICATION

Improvements in and relating to Pyrophoric Lighters

We, ALFRED DUNHILL LIMITED a British Company of 137-143 High Street, Notting Hill Gate, London, W.11, and KARL BERNHARDT an Austrian citizen of 5 27-29 Westbahnstrasse Vienna VI, 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:—

10 This invention relates to pyrophoric pocket lighters of the kind wherein the friction wheel is operated by movement of the wick cap, the latter being operated by movement of a rack carried on a spring pressed plunger.

15 In one construction of a lighter of this kind it has been proposed to mount the fuel container in an outer case on the top of which is arranged the wick cap and the ignition device. A spring pressed plunger is arranged in and normally extending above the outer casing and is adapted, on depression indirectly to 20 operate the wick cap which in turn operates the friction wheel of the ignition device.

25 Again in another construction of lighter it has been proposed to arrange the plunger within a guide casing which extends down into the fuel container and to provide on its upper end a finger piece arranged to form part of the lighter cover. This guide casing interferes with 30 the proper packing of the fuel container with the usual absorbent material.

35 Again if the guide casing is of a short length difficulties are found in guiding the actuating member in a perfectly straight path without causing tipping or jamming, and if the casing is long it takes up too much space in the container.

40 According to the present invention the above disadvantages are obviated by attaching one end of the actuating 45 plunger to a cap shaped slide which operates the wick cap and friction wheel and forms part of the lighter cover and at the same time arranging the plunger in a guide casing which is cut off from 50 and outside the fuel container and extends over the entire height of the latter.

To enable the invention to be fully understood it will now be described by

reference to the accompanying drawing in 55 which:—

Fig. 1 is a part sectional elevation of a closed lighter constructed according to the invention and

Fig. 2 is a plan view thereof. 60

Fig. 3 is a part sectional elevation of the lighter showing it in use and

Fig. 4 is a view of a constructional detail thereof.

65 As shown the casing 2 of the lighter carries the usual wick 22 and friction wheel 4 and the casing itself is filled with absorbent material for holding the liquid fuel. The wheel 4 is rotatably mounted on the pivot pin 3 carried by lugs 1 on the casing and the wick cap 5 is also pivoted on the pin 3. The movement of the cap 5 drives the wheel 4 by means of a pawl plate 7 (Fig. 4). This plate 7 is carried 70 loosely on the pin 3 and lies with its straight edges 8 against the parts 9 of the wick cap 5 as shown so that it is forced to follow the movements of the cap. The plate 7 has a lug 10 which engages with the side of one or other of the teeth 11 80 of the friction wheel 4. The sides of the cap 5 are fitted with toothed segments 13 which engage racks 14 carried on the sides of a cap shaped slide 15 which is attached to a plunger 16 mounted in a 85 guide casing 30 formed in the casing 2 but outside the fuel container as shown. The end of the slide 15 rests against the side 17 of the casing and the free end of the plunger 16 is guided in a hole in the partition 18 so that when the slide is depressed it moves in a straight line. The cap slide 15 forms with the wick cap 5 90 the cover of the lighter. The slide 15 is held in its normal position by the coil spring 19 surrounding the plunger 16, one end of the spring abutting against the head of the plunger while the other 95 end thereof rests upon an abutment collar 20 resting on the partition 18. It will be noted that the plunger housing extends the full height of the lighter casing and is cut off from and outside the fuel portion thereof.

100 When the cap shaped slide 15 is depressed, the wick cap 5 is swung up into the position shown in Fig. 2 and the friction wheel 14 is rotated causing a spark 105

[Price 1/-]

to be made from the usual pyrophoric material 21, thus igniting the wick 22. When the pressure is removed the spring 19 returns the slide 15 and the cap 5 to the normal closed position.

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 pyrophoric lighter of the kind referred to wherein the actuating plunger is mounted on the free end of a cap shaped slide which forms part of the lighter cover and serves to operate the wick cap and the friction wheel, the plunger being mounted in a part of the lighter casing which is cut off from and outside the fuel container of the casing and extends over the full height of the lighter casing.

2. A pyrophoric lighter according to claim 1 wherein the free end of the actuating plunger passes through a hole in a partition in the casing in which it is mounted so that on depression the cap

shaped slide and plunger move in a straight line.

3. A pyrophoric lighter according to claim 1 or 2 wherein the plunger is fitted with a coiled spring one end of which bears against the underside of the plunger head whilst the other end bears against an abutment in the plunger casing.

4. A pyrophoric lighter according to any one of the preceding claims wherein the sides of the cap-shaped slide are provided with racks engaging with toothed segments fitted to the sides of the wick cap whereby the latter is operated by movement of the slide.

5. A pyrophoric lighter constructed, arranged and operating substantially as hereinbefore described with reference to the accompanying drawing.

Dated this 27th day of July, 1935.

ABEL & IMRAY,  
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London, W.C.2,  
Agents for the Applicant.

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

FIG. 1.

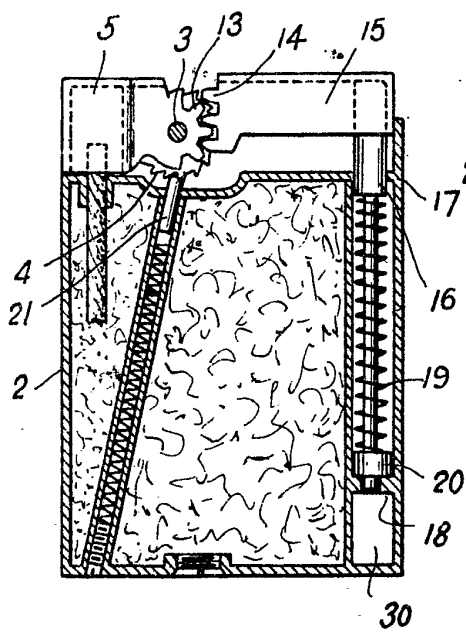


FIG. 3.

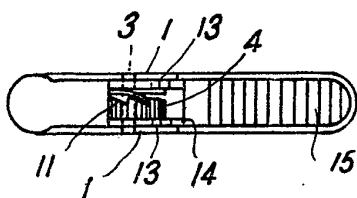
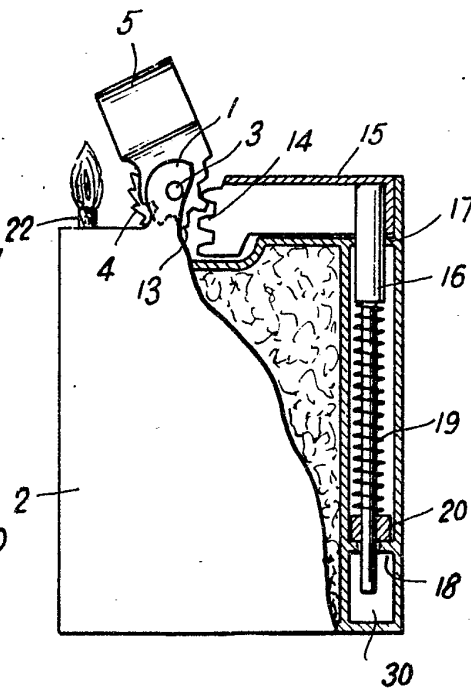


FIG. 2.

FIG. 4.

