

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in Pyrophoric Lighters.

We, LOUIS MÜLLER and MARTIN GRÜNSTEIN, trading as MÜLLER & GRÜNSTEIN, of Elgersburger Lighter Works, Elgersburg Thuringia, Germany, German citizens, and VINCENT KASSAPIAN, of 6, Schmückestrasse Elgersburg, Germany, a Turkish citizen, 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 lighter of the kind wherein the friction wheel and a wick cap are mounted together in a fork carried by the tube containing the pyrophoric element and are operatively connected for rotating the wheel, the wick cap being engaged by an operating arm carried by spring-controlled support by the depression of which the cap is opened out and the friction wheel rotated for lighting the wick.

The object of the present invention is essentially to facilitate the disengagement of the parts when the tube is to be removed for an adjustment of the pyrophoric element and the invention consists in this respect in the provision of a slidable and spring-controlled operating arm which engages a crank pin on the wick cap by means of a fork allowing the arm to be disconnected from the cap by a mere displacement of the same in opposition to its spring, the arm being for this purpose provided at one end with a milled actuating knob.

Fig. 1 of the accompanying drawings represents a side view of the lighter showing the elements in their normal positions,

Fig. 2 is a part view of the same showing the operating arm disconnected from the wick cap,

Fig. 3 is a top view of the lighter,

Fig. 4 is a part view of the lighter showing the elements operated for lighting the wick,

Fig. 5 represents views at right angles to each other of the friction wheel, and

Fig. 6 is a view of the wheel operating element.

The fuel container 8 is fitted with a

[Price 1/-]

withdrawable tube 11 wherein the pyrophoric element is contained and wherein it is adjustable relative to a friction wheel 3, the latter being arranged, together with a wick cap 10, within a fork 1 formed at the upper, projecting end of the tube 11. Wheel and cap are mounted in the fork by means of pivot pins in the form of co-axial screws 4 which are inserted from opposite directions and which can easily be detached for disassembling the elements. One of the pivot pins also carries rotatably a plate 21 which is formed with an off-set resilient tongue 20. This tongue serves as a pawl for engagements with ratchet teeth 19 made in the adjacent flank of the friction wheel 3. A crank pin 16, carried by the cap and passing through the plate 21, is normally engaged by a fork 15 carried at one end of an arm 14. The latter is slidably guided in a sleeve 2 carried at right angles by a rod 7 which is arranged to slide in a tube 12 inside the container 8. A spring 17 within the sleeve 2 tends to hold the fork 15 in engagement with the wick cap, and a spring 13 within the tube 12 tends to maintain the rod 7 in extended position with the wick cap 10 applied to the wick tube as shown in Fig. 1. On the rod 7 being depressed in opposition to the spring 13, the fork 15 follows the movement and turns the cap 10 into open position, as shown in Fig. 4. The plate 21 and pawl 20 also participate in the movement and rotate the friction wheel so as to light the wick. On the rod being released, it returns together with the cap 10 to the normal position.

The arm 14 is provided at one end with a milled actuating knob 18 whereby it can be retracted in opposition to the spring 17 for disengaging the fork 15 from the wick cap. After such disengagement, the arm can be turned aside as shown by dotted lines in Fig. 3 and the tube 11 can be extracted as indicated in Fig. 2.

The sleeve 2 and rod 7 meet in a head which is provided with a milled top surface 22, as indicated in Fig. 3, for operative engagement with the thumb or with a finger, and the head is forked for the

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accommodation of the knob 18.

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 operating arm engages a crank pin on the wick cap by means of a fork allowing the arm to be disconnected from the cap by a slidable displacement of the arm in opposition to a spring, the arm being for this purpose provided at one end with a milled actuating knob.

2. A lighter according to claim 1 wherein the friction wheel is operated by means of a pawl engaging ratchet teeth on the wheel, the pawl having the form of an off-set resilient tongue, formed on a plate which is enclosed within the wick cap and which turns together with the latter.

Dated the 16th day of December, 1929.

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

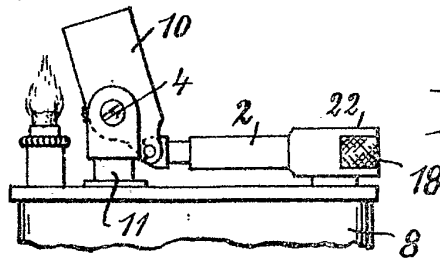
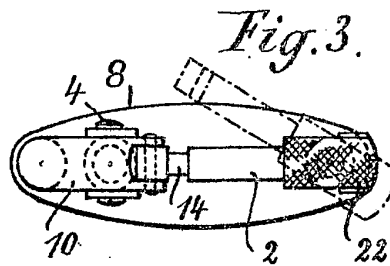
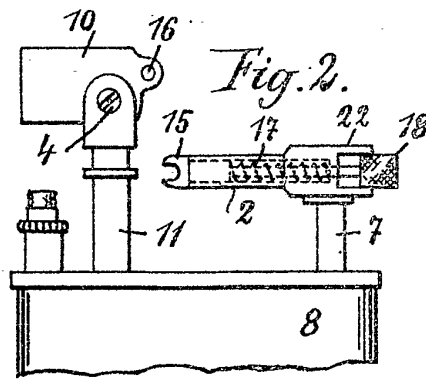
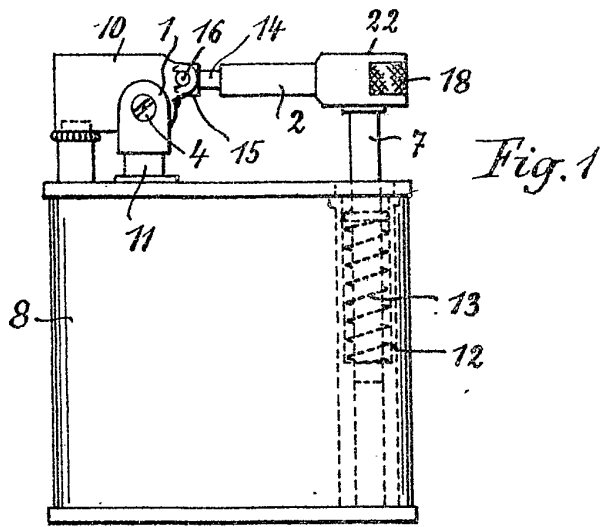


Fig. 1.

Fig. 2.

Fig. 3.

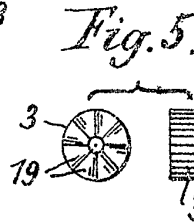


Fig. 6.

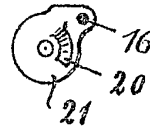


Fig. 4.