

PATENT SPECIFICATION



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382,440

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COMPLETE SPECIFICATION.

Improvements in and relating to Pyrophoric Pocket Lighters.

We, IBELO PREIFENFABRIK AKTIEN-GESELLSCHAFT, a corporation organised under the Laws of Germany, of 131, Gutleutstrasse, Frankfurt a.M., Germany, assignees of HEINRICH MALTNER G.M.B.H., a corporation organised under the Laws of Germany, of 251a, Biebererstrasse, Frankfurt a.M., 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 friction wheel lighters of the kind in which a wick-cap carrier, which serves to actuate the friction wheel is mounted on the same spindle as the latter and is operated by a rocking member which engages therewith and is pivotally mounted on a separate spindle.

Primary objects of the invention are to provide an improved lighter of the aforesaid type and having no projecting parts which are liable to damage the pocket in which the lighter is carried.

According to the invention, the rocking member which actuates the wick-cap carrier is in the form of a casing which partly encloses the wick-cap carrier and is provided at one end with an opening through which the wick-cap carrier can pass. The wick-cap carrier itself is also in the form of a casing and encloses the friction wheel.

By this means not only are projecting parts avoided but the mechanism also is protected.

A constructional embodiment of the invention is illustrated, by way of example, in the accompanying drawing, in which:—

Figure 1 shows the lighter in the normal inoperative position in side elevation.

Figure 2 is a similar view but with the lighter in the operative position.

Figure 3 is an end view of Figure 2.

Figure 4 is a plan view of Figure 1.

Figures 5 and 6 show the lighter in side elevation, partly in section, in the closed and open positions respectively (Figure 5 being a section on the line

[Price 1/-]

a-a of Figure 7), and

Figure 7 is a section on the line b-b of Figure 5.

Referring to the drawing, on the fuel container 1 of the lighter there is pivotally mounted on the spindle or pivot 9 a carrier 2 for the wick-cap 3 which is adapted to fit over the wick 5. The carrier 2 is in the form of a casing and can pass through an aperture 7 provided in a rocker 6 which is also in the form of a casing. The latter is provided with claws 8 which engage underneath the wick-cap carrier 2 and, when the rocker is rocked, turn the carrier 2 about its pivot 9. On the spindle 9 of the wick cap carrier 2 there is mounted the friction wheel 10, enclosed by the carrier 2, against which wheel a flint 11 guided in the fuel container is pressed upwardly by an adjustable spring 12. In one side of the friction wheel 10 are formed ratchet teeth 13 which are engaged by a spring actuated pawl 14 mounted in the wick cap carrier 2, this pawl serving to rotate the friction wheel 10 when the carrier 2 is opened. Opposite the pawl 14 there is provided in the carrier 2 a further spring 15 which forms a lateral support for the friction wheel 10.

To the wick cap carrier 2 is pivoted at 18 the forked head 17 of a slide rod 16. The slide rod 16, which is under the action of a coiled spring 19 which surrounds it, is guided at its rear end in a bore in a transverse member 20 which forms an abutment for the spring 19. The member 20 is pivoted together with the rocker 6 by means of two pins 21 which are screwed into the member 20. The position of the pivots or pins 9, 18 and 21 is such that an axial line through the pivots 21 and 18 passes, when the wick-cap carrier 2 is closed i.e. in the position shown in Fig. 5, through a point above the pivot 9.

The action is as follows:—

In the closed position the spring 19 presses the wick cap 3 on to its seat by means of the head 17 since the pivot 18 is above the pivot 9. When the roughened surface 22 of the rocker 6 is pressed downwards the latter is tilted and

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- by means of the claws 8, turns the wick cap carrier 2 about its pivot 9, against the action of the spring 19, until the pivot 18 has passed the dead centre position.
- 5 The spring 19 is then able to expand and rapidly swings the wick cap carrier 2 further upwards. The ratchet pawl 14 on the latter is thus caused to rotate the friction wheel 10 and this co-acts with the
- 10 flint 11 to produce sparks which ignite the wick 5. By depressing the wick cap carrier 2 the lighter is again closed and the rocker 6 is returned into its initial position owing to the edges of the carrier
- 15 2 co-operating with the claws 8. During this operation the ratchet pawl 14 rides freely over the ratchet teeth of the friction wheel.
- The construction of the spring actuated
- 20 ratchet pawl for the friction wheel, its mounting on the wick cap carrier, as also the construction of the entire ratchet mechanism for the friction wheel may be effected in any suitable manner other
- 25 than that illustrated.
- 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
- 30 is:—
1. A pyrophoric friction wheel pocket lighter of the kind set forth in which the rocking member which actuates the wick-cap carrier is in the form of a casing
- 35 which partly encloses the wick-cap carrier and is provided at one end with an opening through which the wick-cap carrier can pass.
2. A friction wheel lighter according
- 40 to Claim 1, in which the wick-cap carrier is in the form of a casing which encloses the friction wheel.
3. A friction wheel lighter according to Claims 1 and 2, in which the rocking member is provided with claws which
- 45 engage under the wick-cap carrier and serve to raise this from the wick when the rocker is tilted.
4. A friction wheel lighter according to Claims 1 to 3, in which the wick-cap carrier is engaged by a sliding link mechanism of which the slide rod is
- 50 slidably mounted and is subject to the action of a spring which opens the wick-cap carrier.
5. A friction wheel lighter according to Claims 1 to 4, in which the wick-cap carrier engages with lateral ratchet teeth in the friction wheel by means of a spring
- 55 actuated pawl which rotates the friction wheel when the wick-cap carrier is opened.
6. A friction wheel lighter according to Claim 4 or 5 in which the slide rod engages eccentrically with the wick-cap carrier and is guided in a member which
- 60 is pivotally mounted on the pivot of the rocking member and against which the spring acting on the rod bears.
7. Pyrophoric friction wheel pocket
- 70 lighter constructed, arranged and adapted for use as a whole substantially as described with reference to the accompanying drawings.
- Dated the 19th day of November, 1931.
For the Applicants:—
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[This Drawing is a reproduction of the Original on a reduced scale.]

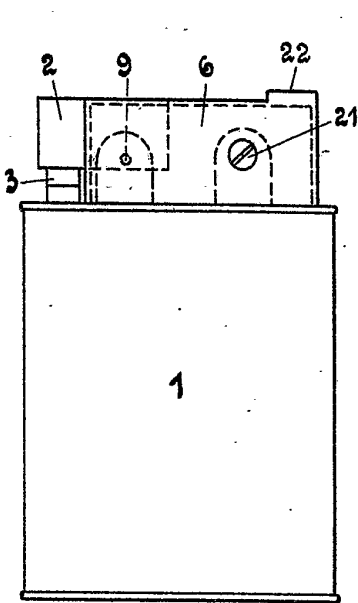


Fig: 1

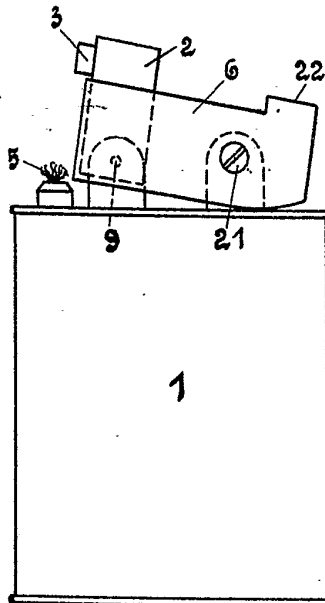


Fig: 2

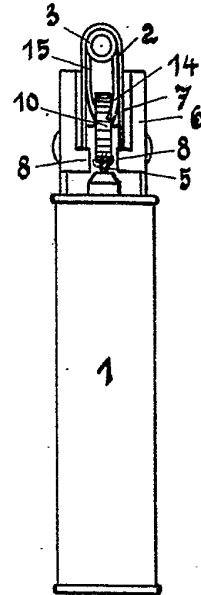


Fig: 3

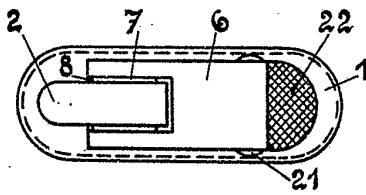


Fig: 4

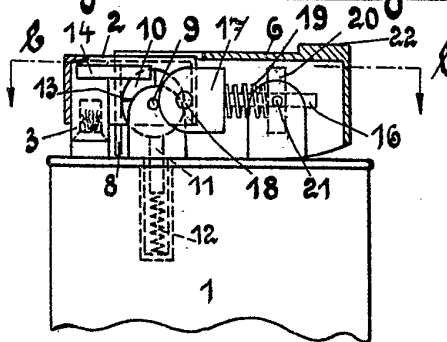


Fig: 5

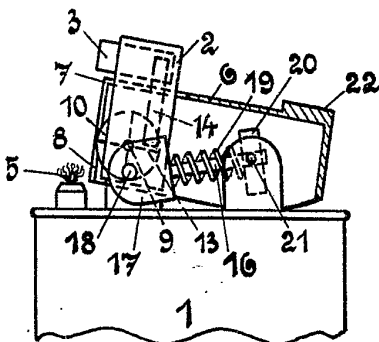


Fig: 6

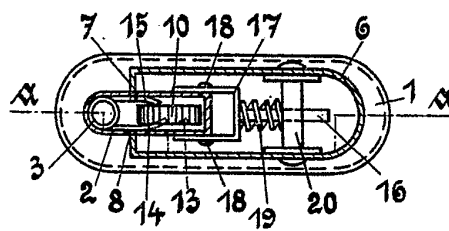


Fig: 7