

PATENT SPECIFICATION

305,434

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COMPLETE SPECIFICATION.

Improvements in Pyrophoric Pocket Lighters.

I, MARTIN HARTMANN, of 74, Frankfurterstrasse, Offenbach-on-the-Main, Germany, a German 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 an improved pyrophoric pocket lighter adapted to be easily operated by one hand and of the kind comprising a spirit container and a friction wheel projecting into an apertured wind shield surrounding a wick adapted to be ignited on rotation of said friction wheel. The invention is an improvement in or modification of the invention described and claimed in the Specification of our Application No. 287,806 hereinafter referred to as the "parent application."

In the specification of said parent application I have described and claimed a construction of pyrophoric pocket lighter of the aforesaid type, comprising a cap for the wick, said cap being carried at one end of an arm pivotally mounted on a pillar situated at approximately one end of the top of the casing and a shield on said wick cap, said shield projecting over said friction wheel in such a manner as to shield the operative digit from contact with said friction wheel on opening said cap and being provided with a projection or a knob adapted to enable said shield to be pushed upwards to expose the wick to the action of the spark producing device.

The provision of a wind shield renders it necessary that this should project as far as possible above the end of the wick. Consequently however the wind shield also projects above the friction wheel arranged in immediate proximity to the wick. Since the friction wheel must however be rotated by the thumb, it is obvious that the wind shield interferes with the operation of the friction wheel.

The present invention aims at overcoming this disadvantage.

In pyrophoric pocket lighters of the type in which the friction wheel is rotated by depressing a plunger, it has already been proposed to journal the axle for the friction wheel in the side walls of a

double-walled box-shaped wind shield which tapers downwardly towards the friction wheel.

In contradistinction to this proposal however, the present invention relates to pyrophoric pocket lighters of the type described and claimed in the specification of the main patent, in which the friction wheel is operated direct by the digit.

According to the invention the upper edges of the wind shield are constructed so as to taper off downwardly towards the friction wheel, being for example rounded off in the vicinity of the friction wheel so as to facilitate the application of the digit to the friction wheel.

If desired the longer sides of the wind shield may be continued to form cheeks between which the friction wheel may be mounted, thereby enabling the separate support for the friction wheel hitherto necessary, to be dispensed with.

In order more clearly to understand the invention reference is made to the accompanying drawings which illustrate by way of example two embodiments of the pyrophoric pocket lighters constructed in accordance therewith and in which:

Figs. 1 and 2 illustrate a longitudinal elevation partly in section and a top plan view respectively, of one embodiment, and

Figs. 3 and 4 illustrate a longitudinal elevation and a top plan view respectively of a second embodiment.

In all the figures like parts are denoted by like reference letters.

The pyrophoric pocket lighter illustrated consists, as usual, of a spirit container *b* provided with a wick *d* and a tube *t* containing a pyrophoric stone *g* of ferrocium which is forced into contact with the friction wheel by a spring *f*.

On the top of the container is arranged the upwardly projecting wind shield *e* which surrounds the wick on all sides and a support *i* in which is mounted the friction wheel *h* contacting with the pyrophoric stone *g*.

In the embodiment illustrated in Figs. 1 and 2, *n* denotes a wick cap with which is integral, a shield or cover *o* for the wind shield *e*. Said shield or cover *o* is continued and rounded off so as to cover

also the friction wheel *h* when in the closed position, and the rounded off portion is provided with a knob *p* adapted to facilitate the opening of the lighter.

5 The wick cap *n* is fixed on an arm *m* which is pivotally mounted on a support *k* fixed on the top of the container; and adapted to be tilted so as to cover or expose the wick, the wind shield being for this

10 purpose provided with a slot *g* adapted to receive the arm *m* on its downward closing movement.

The embodiment illustrated in Figs. 3 and 4 differs from the embodiment illustrated in Figs. 1 and 2 insofar as the arm

15 *m* carrying the cap *o* is bent upwardly to avoid projecting through the wind shield when in the closed position.

The novel feature of the present invention resides in the fact that the wind shield *e* has a portion *e*¹ tapering downwardly in the direction of the friction wheel, being for example rounded. This tapered or rounded portion facilitates the

20 operation and downward pressing of the friction wheel against the pyrophoric stone by means of the thumb.

In the embodiment illustrated in Fig. 1 the friction wheel *h* is separately

30 mounted at *i* whereas in the embodiment illustrated in Figs. 3 and 4, the friction wheel is mounted between cheeks *i*¹ formed by continuations of the wind shield *e* thereby dispensing with the hitherto

35 usual separate mount fixed on the top of the spirit container.

The hereinbefore described construction offers the further advantage of enabling the same to be applied to smaller pyrophoric igniters since these latter can be

40 made of less depth than hitherto, especially when the friction wheel is carried by the wind shield itself.

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:—

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1. An improvement in or modification of the pyrophoric pocket lighter claimed in the specification of the parent application

50 in which the wind shield tapers downwardly towards the friction wheel.

2. Pyrophoric pocket lighter as set forth in Claim 1, in which the upper edge of the wind shield in the vicinity of the

55 friction wheel is rounded off.

3. Pyrophoric pocket lighter as set forth in Claim 1 or 2, in which continuations of the longitudinal walls of the wind shield in the vicinity of the friction wheel,

60 serve as cheeks for the mounting of the friction wheel.

4. The pyrophoric pocket lighters, constructed, arranged and operating substantially as described with reference to the

65 accompanying drawings.

Dated this 29th day of June, 1928.

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

FIG. 1.

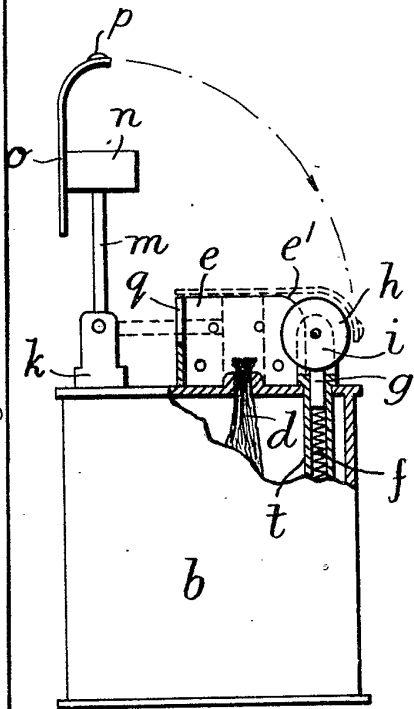


FIG. 3.

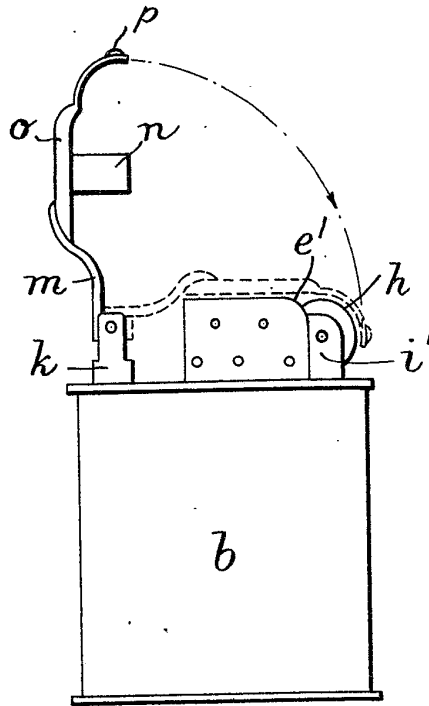


FIG. 2.

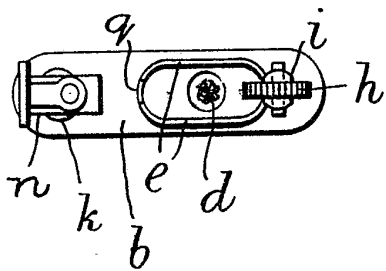


FIG. 4.

