

VOID : SEALING FEE NOT PAID.

139,097

PATENT



SPECIFICATION

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Complete Accepted, Feb. 26, 1920.

COMPLETE SPECIFICATION.

Improvements in and relating to Pocket Lighters.

I, JOHN ELDRED TAYLOR, of 296—302, High Holborn, in the County of London, Merchant, 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:—

5 This invention relates to pipe and other lighters of the kind including a wick or piece of tinder adapted to be ignited by a spark produced by a flint and steel which are automatically rubbed together when the cover or lid of the lighter is opened, and my invention has for its object improvements whereby a simple, cheap and efficient lighter is provided.

10 Lighters heretofore proposed have been provided with a friction wheel which has been caused to rotate in contact with a piece of flint or like material by a rack pivoted to a lid hinged to the device and adapted to engage a pinion secured to said friction wheel so as to produce a spark when the lid was opened. In another case where the lighter was contained by two interfitting casings  
15 the friction wheel was actuated by a spring pawl when the casings were pressed together to ignite the lighter.

According to the present invention a rack which may be spring-controlled or a pawl or an equivalent part is pivotally or otherwise directly secured to the wick cap in such a manner as to engage and rotate a serrated wheel in contact  
20 with a piece of flint, carborundum or other like material when the cap is removed.

To enable the cap to be replaced without rotating the serrated wheel in the reverse direction the said cap is turned into a position in which its rack, pawl or equivalent part is out of engagement with the said wheel which it is  
25 afterwards caused to engage by turning it in the desired direction. A suitable stop may be provided to prevent further rotation when the parts are properly engaged. This stop may take the form of a pin or projection on the part engaged by the cap adapted to engage a slot, opening or depression in the cap which ensures its correct position when put on or taken off.

30 I will now proceed to more particularly describe my invention with the aid of the accompanying drawings in which:—

Fig. 1 is a vertical section through one form of the improved lighter.

Fig. 2 is a plan view thereof.

Figs. 3 and 4 are modified constructions thereof, and

[Price 6d.]

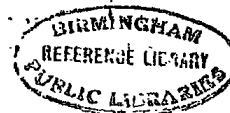


Fig. 5 is a plan view of the lighter shown in Fig. 4.

According to the construction illustrated by Figs. 1 and 2 the lighter comprises a tubular holder *a* adapted to contain a wick *b* which is surrounded by absorbent material *c* saturated with petrol or other volatile hydro-carbon.

The ignition device consists of a smaller tube *d* secured to the holder *a* by a bracket *e*. The tube *d* is cut away at its upper end so as to form a fork *f* in which the serrated wheel *g* is journaled. A flint *h* is contained in a metal carrier *i* adapted to slide in the tube *d* along which it is forced into contact with the wheel *g* by a long spiral spring *j*. This spring is retained in the tube *d* by a cap *k* which is provided with an inwardly directed projection *s* adapted to engage the bayonet slot *l*.

The upper part of the holder *a* is cut away at *m* to allow the spark from the igniter to pass to the wick *b*.

The cap *n* is provided with a rack *o* whose teeth engage those of the serrated wheel *g* so as to rotate it in contact with the flint *h* to produce a spark when the cap is removed.

When the cap *n* is replaced on the holder *a*, the rack *o* is turned slightly to the left (see dotted lines in Fig. 2) so as to avoid the serrated wheel *g* whereafter it is turned to the right to engage the teeth of the said wheel *g*.

In order that the rack *o* may be maintained in the proper position when the cap is withdrawn from or replaced on the holder *n*, said cap is provided with a wide slot *t* as shown in Fig. 3, one side of which is caused to engage the projection *u* when the cap is withdrawn while the other side is caused to engage the said projection when it is replaced.

According to the arrangement illustrated by Fig. 3, a rack *o*<sup>x</sup> is pivoted to the cap *n* and is urged in the direction to engage the teeth of the wheel *g* by a spring *p*. A slot *t* in the cap *n* co-operates with a projection *u* on the holder *a* as and for the purpose hereinbefore explained.

According to the arrangement shown in Figs. 4 and 5, a pinion *q* is mounted loosely on the pin on which the serrated wheel *g* rotates.

The rack *o* drives the pinion *q* which in turn drives the serrated wheel *g* through the pawl *r* pivoted to it.

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:—

1. An improved pocket lighter of the kind consisting of a wick-holder and cap and an ignition device comprising a serrated wheel and a flint or equivalent substance characterised by a rack, pawl or equivalent part directly mounted on said cap and adapted to rotate said wheel so as to produce a spark when the cap is removed substantially as described in the specification.

2. An improved pocket lighter according to Claim 1 characterised by a projection on the holder and a wide slot in the cap said projection being adapted to engage one side of the slot when the rack is in a position to drive the serrated wheel and adapted to engage the other side so as to move the said rack into an in-operative position when the cap is replaced on the holder substantially as described in the specification.

3. An improved pocket lighter according to the preceding claims characterised by a rack pivotted at one end to the wick holder-cap while its opposite extremity is urged by a spring into engagement with teeth so as to drive the serrated wheel substantially as described in the specification.

4. An improved pocket lighter according to Claim 1 characterised by a rack mounted on the wick-holder cap, a pinion mounted on the axis of the wheel of the ignition device and a pawl pivotted to said wheel and adapted to engage the teeth of the pinion to enable it to drive the said wheel when the pinion is rotated by the withdrawal of the holder cap, substantially as described in the specification with reference to Figs. 4 and 5 of the drawings.

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5. The combination and arrangement of parts constituting an improved pocket lighter substantially as described in the specification and shown in the various figures of the drawings.

Dated this 3rd day of July, 1919.

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

