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PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in Pyrophoric Lighters.

I, FRANZ DRAEGER, a German Citizen, of Jägerstrasse 2, Elgersburg, Thuringia, 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 pyrophoric lighters which can be operated by one hand and of the type utilising an operating lever which is connected by a link with an extinguishing cap connected with a friction wheel mounted on the same pivot as the cap so that said friction wheel is operated during the opening of the cap.

In accordance with the present invention, a pyrophoric lighter of this kind includes a connecting link which has a turned down end pivoted near its extremity with the extinguishing cap at a point below the horizontal line through the axis of rotation of the cap while the other end is pivoted to the operating lever, the arrangement being such that the line joining the pivots at the ends of the link coincides with or is located slightly below the axis of the cap in the closed position so that the cap can be opened with a rapid or snap action by the pressure exerted on the operating lever.

The invention is illustrated by way of example on the drawing, in which:—

Fig. 1 is a part sectional side view of the lighter with the wick cap in the closed position.

Figs. 2 and 3 are part side views of the lighter with the wick cap in the open and closed positions respectively.

Fig. 4 is a plan view of the lighter seen from above,

Fig. 5 is a front view of the friction wheel with the ratchet teeth,

Fig. 6 shows the spring pawl of the friction wheel,

Fig. 7 shows the form of return spring employed.

The friction wheel *d* has lateral ratchet teeth and is coupled by a spring pawl *e* (Fig. 6) with the extinguishing cap *a* so that when the latter rotates in the direction of opening, the wheel *d* is rotated.

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In the lighter according to the invention, the connecting link *b* is bent to an angle and fixed at one end to the operating lever *c* by pivot *j* and at the other end to the cap *a*, the point of attachment *h* to the latter lying beyond the axis *i* of the friction wheel *d* and of the cap *a* and so far below the horizontal through the axis *i* that the line joining *h* to *j* coincides with or is located slightly below the axis *i* on closing the cap *a*. Consequently the lifting movement effected by the operating lever *c*, pivoted at *l*, on the link *b* through the pivot *j* at the beginning of this movement, gives an extremely rapid drive to the friction wheel against the igniting material and a certain ignition is thus secured. A return spring *f* shown enlarged in Fig. 7 is provided below the operating lever *c*.

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. A pyrophoric lighter of the type described wherein the connecting link has a turned down end pivoted near its extremity with the extinguishing cap at a point below the horizontal line through the axis of rotation of the cap, while the other end is pivoted to the operating lever, the arrangement being such that the line joining the pivots at the ends of the link coincides with or is located slightly below the axis of the cap in the closed position so that the cap can be opened with a rapid or snap action by the pressure exerted on the operating lever.

2. A pyrophoric lighter as set forth in claim 1, characterised in that the cap is provided with a spring pawl adapted to rotate the friction wheel in one direction.

3. A pyrophoric lighter as set forth in claim 1, characterised in that the operating lever is of substantially L form and is so connected to the connecting link that the automatic closing of the extinguishing cap is effected by means of a spring acting on the lever.

4. An automatic pyrophoric lighter

constructed and arranged to operate as
herein described with reference to the
accompanying drawings.

Dated this 29th day of March, 1932.

BROWNE & Co.,
Agents for the Applicant,
9, Warwick Court, Gray's Inn, London,
W.C. 1.

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

