June 14, 1932. E. WIEDEN 1,862,779

POCKET CIGAR LIGHTER

Filed May 31, 1930

Fig. 1.

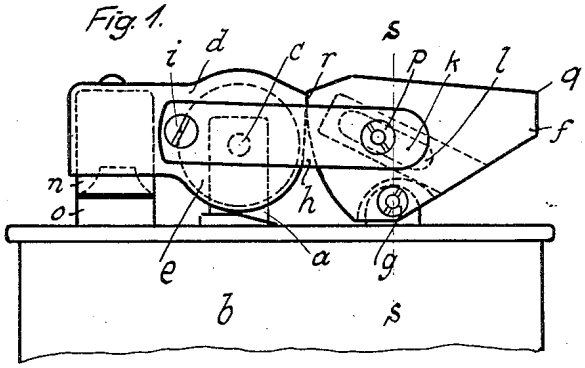
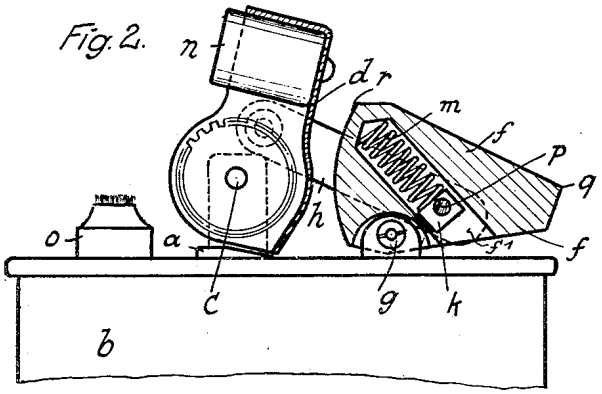


Fig. 2.



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UNITED STATES PATENT OFFICE

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POCKET CIGAR LIGHTER

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This invention relates to an igniting device for use in connection with cigar lighters; this device may be provided with a wick cap closure adapted to be employed, with the insertion of certain auxiliary members, for the actuation of the friction wheel forming one of the members of said device. The closing cap of the wick tube is connected with a depressable finger piece by means of a link or links connected with the finger piece indirectly by means of a spring arranged in a bore of the finger piece, a slide is also located in said bore, and a pin connecting said slide with the links, the arrangement being such that the spring is compressed when the cap is closed and the finger piece is in its position of rest, said links being then practically in their dead-point position, and that the said spring is released so as to be able to fling open the cap when the finger piece is depressed and the links are thereby moved out of their dead-point position.

The wick tube cap is under a certain pressure as long as the finger piece is in its position of rest. That pressure is transmitted from the compressed spring to the cap by the intermediary of the finger piece or, more precisely by the upper front edge of the same which contacts with an upper rear edge of the suitably shaped cap, the first-mentioned edge forming an abutment for the other edge, and the contacting edges remaining in this position until the finger piece is depressed in order to actuate the lighter, all as more fully described hereinafter.

The invention is illustrated diagrammatically and by way of example on the accompanying drawing, on which Figure 1 is a side-view of a wick cap closure designed according to this invention, the cap being closed; Figure 2 is a similar representation showing the cap opened, and partly in vertical section. The details are as follows:

b denotes the casing of the cigar lighter, and *a* is a bracket secured to the top of the casing and serving as support or bearing for an axle *c* supporting in turn the turnable closing cap *d* and the friction wheel *e*. *o* is the upper end of the wick tube, and *n* is a separate cap inserted into the front portion of the main cap *d* and fitting upon said wick tube. The movement of the cap is transmitted to the friction wheel by any suitable means in such a manner that this wheel is turned when the cap is opened so that the known igniting sparks arise at the circumference of said wheel, but this latter is not turned when the cap is moved in the opposite direction, i. e. closed.

The cap *d* is moved by means of a somewhat segmental shaped finger piece *f* and being movably supported at *g* on the top of the casing *b*; the finger piece *f* and the cap *d* are connected with one another by two links *h*, of which one is located on the one side of said parts *d* and *f*, and the other on the other side of the same. The connection between the cap and said links (at *i*) is a direct one, whereas the connection between the said links and the finger piece is an indirect one. There is in the finger piece *f* a bore *f'* in which a slide *k* can move along, and a pin *p* extending transversely through this slide extends also through lateral slots *l* formed in the finger piece. The shaded lines in Figs. 3 and 4 represent one of the walls of the slots *l*. The slide *k* is subjected to the pressure of a helical compression spring *m* located in the key bore *f'*. The arrangement of these parts relatively to one another is such that the spring is compressed when the cap is in closed position, as in Fig. 1.

Now, the cap *d* and the finger piece *f* are so designed that when both parts are in the position shown in Fig. 1, in which the cap is closed, they abut against one another at edges *r*, of which the one is at the rear of the cap and the other is at the front of the finger piece, above the links *h*. In this position of the parts the spring *m* is held compressed by the slide *k*, and as this latter is therefore subjected to the pressure of the spring and is furthermore connected with the cap by the links, the cap is kept closed by the spring as it is pressed upon its seat with a certain pressure. It cannot move spontaneously or auomatically into another position, as that is prevented by the contact or abutment at *r*. At these edges a part of the pressure exerted by the spring is transmitted

to the cap so as to keep it depressed, as already mentioned.

When the key *f* is depressed at its rear end *q* (Fig. 1) that part pressure ceases to act, and the entire pressure of the spring acts now upon the slide *k*, the pin *p*, the links *h*, and thus, upon the cap. While the key is being depressed, the pin or fulcrum *p* is moved in a circular path first rearwardly and then downwardly around the stationary pin or fulcrum *g*, and at the same time the screws or fulcra *i* are moved first upwardly and then downwardly around the stationary pin or fulcrum *c*, and this being so, and as the edges are no more in contact with one another, the spring can suddenly exert its full pressure upon the slide and the parts connected therewith, in consequence whereof the cap will be flung open, or opened with a jerk respectively. Simultaneously therewith the friction wheel *e* will be quickly turned whereby the igniting sparks are generated in the usual manner.

When, after use of the cigar-lighter, the cap is manually depressed, it draws the slide *k* by the intermediary of the links *h* and the pin *p*, into the bore *f'* of the finger piece *f* so as to compress the spring *m*, and this pressure is transmitted to the finger piece whereby the finger piece is lifted until it arrives in its end position, or position of rest, in which the edges *r* contact again with one another and lie higher than the pin or fulcra *i* and *p*.

I claim:

1. A pocket lighter comprising a casing, a wick tube thereon, a wick in said tube, a turnable closing cap on the casing, a rotary friction body located adjacent the wick, an axle common to the cap and friction body, a depressible finger piece on the casing, a link connecting the finger piece with the cap, a spring mounted in the connection between the link and finger piece, the construction being such that the spring is compressed when the cap is closed and the finger piece is in a position of rest, said link being then practically in a dead center position and the spring is released so as to be able to fling open the cap when the finger piece is depressed and the link is thereby moved out of its dead center position.

2. A pocket lighter comprising a casing, a wick tube carried thereby and having a wick therein, a turnable closing cap on the casing, a rotary friction body located adjacent the wick, an axle common to the cap and friction body, a depressible finger piece having a bore formed therein and having a lateral slot opening thereinto, a link connecting said finger piece with the cap, a helical compression spring mounted in the bore, a slide in the bore and in such position with respect to the spring that either part can act upon the other, a pin extending through said slide and slot and said link and forming a member connecting the finger piece with the link, the construction being such that the spring is compressed when the cap is closed and the finger piece is in its position of rest, said link being then practically in a dead center position and when the said spring is released so as to cause the cap to fling open when the finger piece is depressed and the link is thereby moved out of its dead center position.

3. A pocket lighter comprising a casing having a wick tube carried thereby, a wick in said tube, a turnable closing cap on the casing, a rotary friction body located adjacent the wick, and an axle common to the cap and friction body, a depressible finger piece, a link connecting the finger piece with the cap, a spring inserted in the connection between the link and finger piece, the cap and finger piece being so shaped that both contact with each other at adjacent upper edges located above said link, the construction being such that the spring is compressed when the cap is closed and the finger piece is in its position of rest, said link being then practically in a dead pointed position, said spring being released so as to be able to fling open the cap when the finger piece is depressed and the link is thereby moved out of its dead center position.

4. A pocket lighter comprising a casing, a wick carried by the casing, a closing cap pivotally connected with the casing, a rotatable friction body adjacent the wick, a finger piece pivotally mounted on the casing, a link connecting the closing cap and finger piece, a spring in the connection between the link and finger piece, the cap and finger piece having coacting abutments, said spring serving to hold the cap in a position of rest when the abutments are engaged, said abutments being disengageable from each other upon depressing the finger piece to swing said cap open under the action of said spring.

In testimony whereof I affix my signature.

ERICH WIEDEN.