

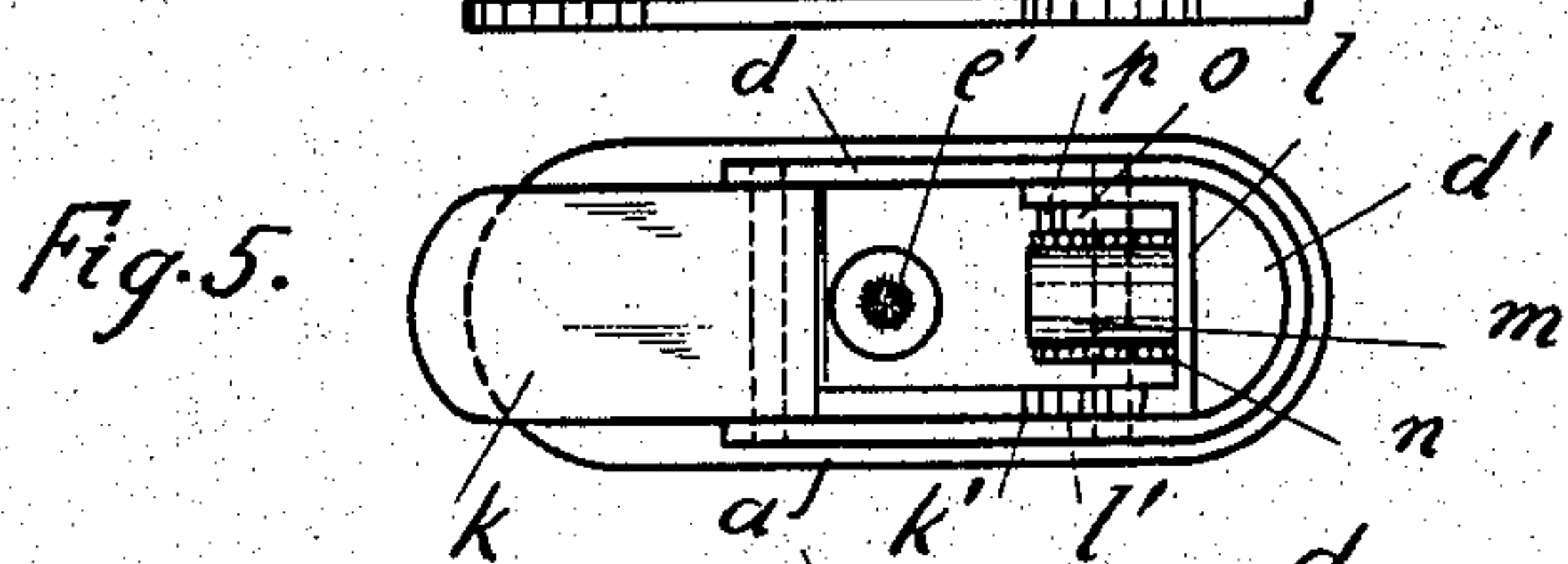
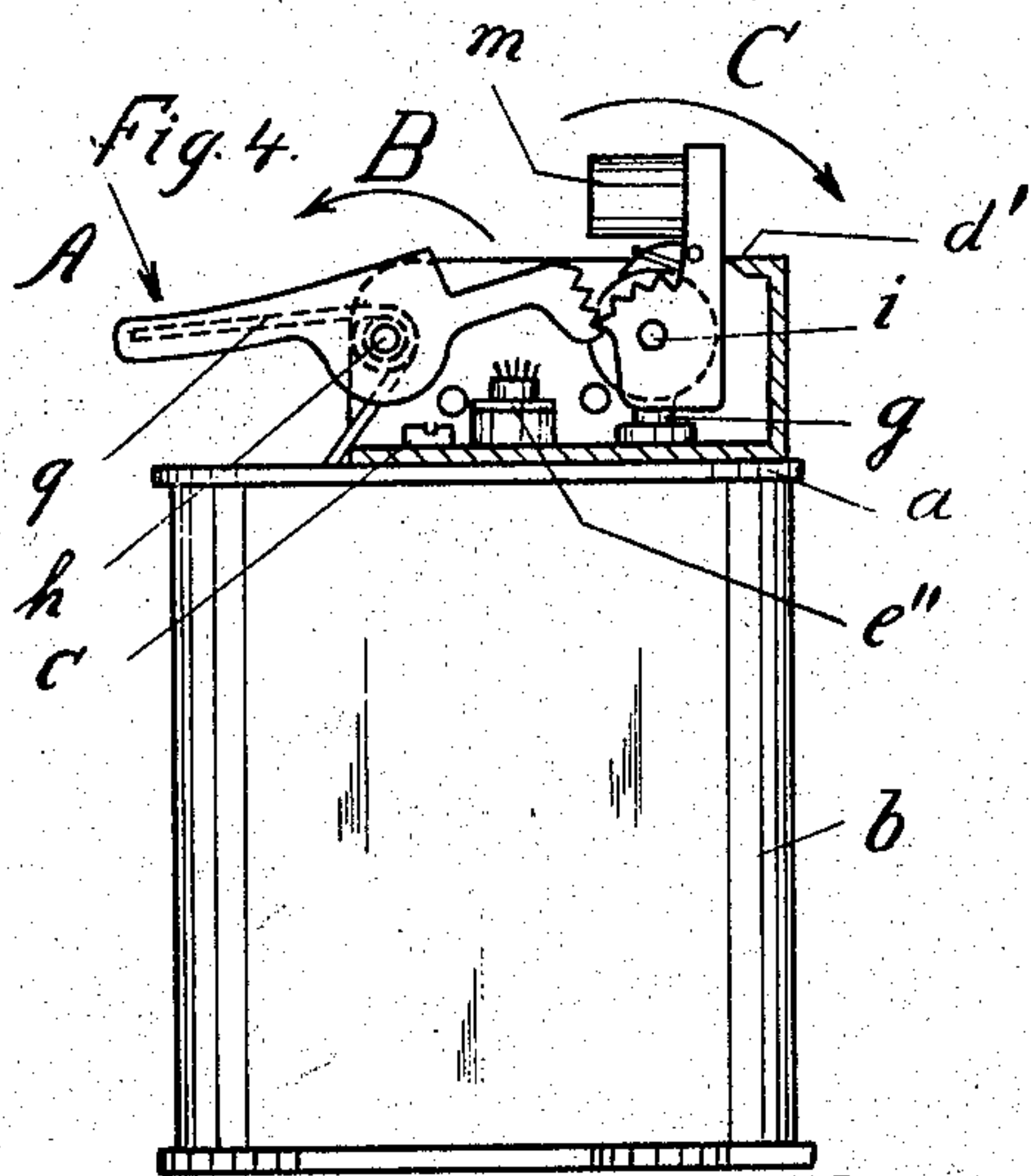
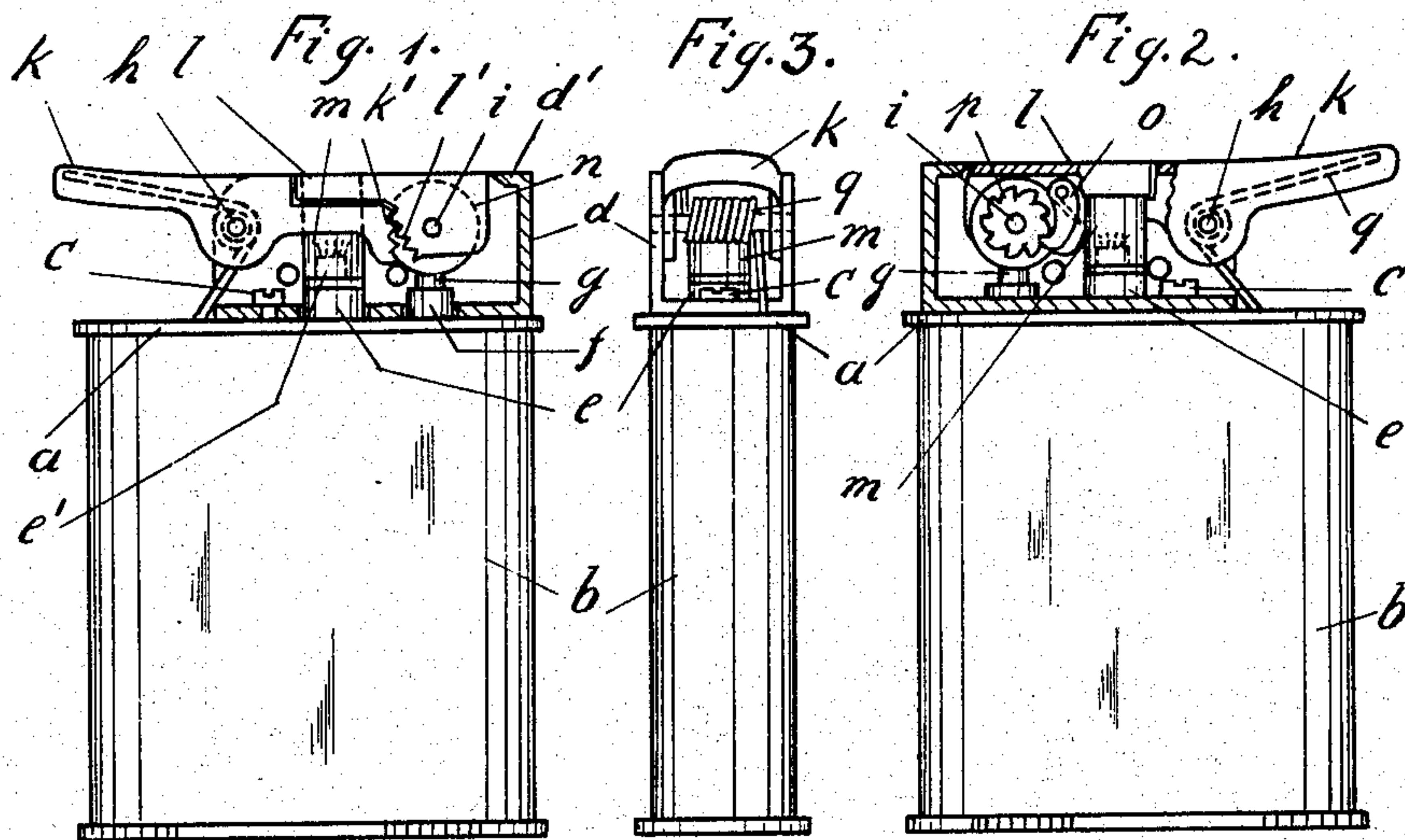
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BENZINE POCKET LIGHTER

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BENZINE POCKET LIGHTER

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This invention relates to benzine pocket lighters in which the ignition sparks are produced by a friction wheel rotated on a cerium iron stone.

In this invention the transmission of the oscillating movement of the arm to the wheel is effected by means of a controlling mechanism so that the friction wheel is only rotated at the lifting of the wick cap, whereas it remains stationary when the wick cap is being closed.

The main advantage of this invention consists in that it does not require the wick projecting at one of the ends of the top cover of the lighter body but permits of its being approximately in the centre thereof. The wick sleeve and therefore the flame are situated in the centre of the air space of this cap between the axle of the pressure lever and of the oscillatable arm of the wick cap. Combustion air can flow freely to the flame from all sides and it no longer flickers and smokes.

The invention consists in that the two oscillatable parts, viz. the pressure lever and the arm of the wick cap, turn in opposite directions. The turning axles are no longer close together. That of the oscillatable arm for the wick cap is near the end of the top cover of the lighter body where the mouth of the wick tube was formerly situated and this mouth approximately at the point where the axle of the pressure lever for the wick cap was formerly arranged.

The fitting of a wind screen on the lighter no longer forms an obstruction and the wind cap can advantageously form the bearings for the revolving axles, for which in all known lighters of this kind, special flaps on the top cover plate of the lighter body had to be provided.

An embodiment of the invention is shown by way of example, in the accompanying drawing, in which

Fig. 1 shows a front elevation of the lighter, the wind screen being removed, so that the gear wheels transmitting the movement of the pressure lever to the oscillatable arm of the wick cap, is visible.

Fig. 2 shows a rear elevation of Fig. 1, the wind screen being removed, so that the control mechanism transmitting the rotation of the oscillatable arm of the wick cap to the friction wheel is visible.

Fig. 3 is an end elevation of Fig. 1 from the side where the pressure lever is situated.

Fig. 4 is a similar front elevation to Fig. 1 the wick cap being however lifted.

Fig. 5 shows a plan view of Fig. 4 and

Fig. 6 a top plan view of Fig. 1.

On the top cover *a* of the body *b* of the pocket lighter the wind screen *d* is removably mounted by means of a screw *c*. Under the wind screen the wick sleeve *e* and the guide sleeve *f* of the ignition pin *g* project upwardly. The wind screen *d* forms the bearings for the turning axles *h* and *i* of the pressure lever *k* and of the oscillatable arm *l* of the wick cap *m*. The movable parts *k*, *l*, *m* can therefore be removed with the wind screen *d* from the lighter body *b* so that the wick sleeve *e* is entirely exposed for cleaning and the like. The pressure lever *k* has two arms and carries on the arm projecting into the wind screen *d* a toothed portion *k*¹. The oscillatable arm *l* is provided with a toothed portion *l*¹ in engagement with the toothed portion *k*¹ of the wick lever *k*. By depressing the pressure lever *k* in the direction A (Fig. 4) it performs a turning movement in the direction B. This causes the oscillatable arm *l* to turn in the opposite direction C whereby this latter assumes a position in the wind screen *d* so that the wick cap *m* which is thereby lifted off the wick *e*¹ will no longer be moved as formerly away from pressure lever *k*. This opening oscillation which is limited by a stop bar *d*¹ mounted on the wind screen *d*, also causes the rotation of the friction wheel *n* through a detent *o* (Fig. 2) oscillatably mounted on the oscillatable arm *l* which engages in and rotates the ratchet wheel *p* secured to the friction wheel *n* thereby producing the ignition sparks which ignite the benzine gas emitted from the wick *e*¹. On the pressure A releasing, the spring *q* comes into operation and forces the pressure lever *k* into the inoperative position shown in Figs. 1, 2, 3 and 6. By this oscillation the wick cap *m* is also again placed over the wick sleeve *e*. The closing oscillation of these two oscillatable elements *k* and *l* is thereby limited and the wick cap *m*, under the pressure transmitted from the spring *q* through the toothed portions *k*¹, *l*¹ onto the packing plate *e*², sits on the wick sleeve *e* and tightly encloses the same preventing evaporation of the fuel. Owing to this closing oscillation of the oscillatable arm *l* the detent *o* slides back over the teeth of the ratchet wheel *p* without engaging with the same. Consequently the friction wheel *n* does not rotate during the closing oscillation of the oscillatable arm *l*.

It will be seen from the drawing that the wick sleeve *e* is situated near the longitudinal central axis of the lighter body *b* and therefore within the air space of the wind screen *d*.

I claim:—

1. A benzine pocket lighter, comprising in combination, a pressure lever, an oscillatable arm actuated by said lever to swing to open position in the opposite direction of movement of said pressure lever, a wick cap mounted on said oscillatable arm, a pivot axle for said pressure lever, a pivot axle for said oscillatable arm, a wind screen in which said axles are fixed, said wind screen pressure lever and oscillatable arm being adapted to be removed as a unit from the body of the pocket lighter, and a wick sleeve arranged between said axles and at the center of said wind screen.
2. A lighter as specified in claim 1, in which the wick sleeve is arranged in proximity to the longitudinal central axis of the lighter body and the pivot axle of the oscillatable arm carrying the wick cap is near one end of the top cover of the lighter body.
3. A benzine pocket lighter comprising a body and cover, a wind screen removably mounted on the cover, a wick extending through the cover, igniting mechanism for the wick carried by the wind screen and bodily removable with the latter and including a lever having rack teeth at one end and a pivotally mounted cover member overlying the wick and having rack teeth engageable with the lever teeth.
4. A benzine pocket lighter comprising a body and cover, a wind screen removably mounted on the cover, a wick extending through the cover, igniting mechanism for the wick carried by the wind screen and bodily removable with the latter and including a lever having rack teeth at one end and a pivotally mounted cover member overlying the wick and having rack teeth engageable with the lever teeth, the point of engagement of the rack teeth being laterally of the wick whereby upon pressure upon the lever, the arm and lever swing in opposite directions to open positions.
5. A benzine pocket lighter comprising a body and cover, a wind screen removably mounted on the cover, a wick extending through the cover, igniting mechanism for the wick carried by the wind screen and bodily removable with the latter and including a lever having rack teeth at one end and a pivotally mounted cover member overlying the wick and having rack teeth engageable with the lever teeth, the point of engagement of the rack teeth being laterally of the wick whereby upon pressure on the lever, the arm

and lever swing in opposite directions to open positions and an ignition device operated by the pivoted arm.

6. A pyrophoric lighter comprising a fuel receptacle having a finger piece, a wick, a snuffer and a sparking wheel mounted on the top wall of said receptacle and disposed substantially in line, said finger piece having a finger engaging portion disposed near one upper corner of said receptacle and said finger piece being confined substantially to the space above the receptacle whereby the side walls of the receptacle are free of operating mechanism and may be grasped in the hand of the user with his thumb in position to operate the finger piece, said wick being interposed between the finger piece, and the snuffer and sparking wheel whereby the sparking wheel and snuffer are on the side of the wick which is remote from the finger piece, and said snuffer member being pivoted over the top of the receptacle to swing upwardly to open position in a direction away from said finger piece, and means connecting said finger piece and snuffer and sparking wheel whereby when the finger piece is operated the snuffer is swung upwards away from the wick in the direction above described, and the sparking wheel is turned to ignite the wick.

7. A pyrophoric lighter comprising a fuel receptacle having a finger piece, a wick, a snuffer and a sparking wheel mounted on the top wall of said receptacle and disposed substantially in line, said finger piece having a finger engaging portion disposed near and above one upper corner of said receptacle whereby the side walls of the receptacle are free of operating mechanism and may be grasped in the hand of the user with his thumb in position to depress the finger piece, said wick being interposed between the finger piece, and the snuffer and sparking wheel whereby the sparking wheel and snuffer are on the side of the wick which is remote from the finger piece, and said snuffer member being pivoted over the top of the receptacle to swing upwardly to open position in a direction away from said finger piece, and means connecting said finger piece and snuffer and sparking wheel whereby when the finger piece is depressed the snuffer is swung upwards away from the wick in the direction above described, and the sparking wheel is turned to ignite the wick.

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