

## PATENT SPECIFICATION



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### COMPLETE SPECIFICATION

#### Pocket Lighter

I, ADOLF KINZINGER trading as the firm Sarastro-Industrie Adolf Kinzinger, of No. 24 Kronprinzenstrasse, Pforzheim, Germany, of German Nationality, 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:—

10 This invention relates to a benzine pocket lighter in which by depressing a lever the friction wheel is rotated and the wick cap lifted. The oscillating movement of the wick cap can be produced in various manners, for instance in the known manner by depressing one of the arms of a two-armed pressure lever, the other arm of which is curved and extends below the axle of the friction wheel and has internal teeth meshing with a pinion or a toothed segment rigidly connected with an arm carrying or made in one piece with the wick cap, and mounted on the axle carrying the friction wheel.

25 The oscillatable arm carrying the wick cap may, however, be actuated in any other suitable manner. Pocket lighters of this type possess the inconvenience that the wick cap, which has been oscillated into the open position, descends, automatically as soon as the pressure lever is liberated by the finger. This inconvenience is avoided according to the invention. The invention may be applied also to other types of pocket lighters than hereinafter described, by way of example and shown in the accompanying drawing.

40 Fig. 1 shows in elevation a pocket lighter, one of the bearing plates and a part of the wall of the benzine tank being removed.

45 Fig. 2 shows the pocket lighter in side elevation viewed from the side at which the pressure lever is arranged.

Fig. 3 is a rear elevation of the pocket lighter, the second bearing plate and also a portion of the rear wall of the benzine container being removed.

50 Fig. 4 is a similar view to Fig. 1, the wick cap being raised.

Fig. 5 is a top plan view of Fig. 4.

55 Fig. 6 shows the pocket lighter in top plan view, the axles of the oscillatable arm of the wick cap and of the pressure

lever and the elements mounted on these axles being removed.

Two bearing plates *b* are mounted on the top plate *a* of the pocket lighter. In these plates *b* the bearings for the pressure lever *c* and for the friction wheel *d* are mounted. The friction wheel is mounted on a bearing bush *d*<sub>1</sub> of square cross section which is rigidly connected with the ratchet wheel *e*. The bearing bush *d*<sub>1</sub> is loosely mounted on a stationary axle *f* on which further an arm *h* carrying a wick cap *g* is oscillatably mounted. This oscillatable arm *h* carries at its inner end a hook-shaped pawl *i* and forms itself a toothed segment *k* with which meshes a toothed portion *m* on the inner side of the curved arm of a two-armed pressure lever *c*, said curved arm extending under the axle *f*. On the lower side of the pressure lever *c* a wedge-shaped bolt *n* is fixed, through which extends the axle *o* of the pressure lever. Opposite this bolt *n* a wedge-shaped bolt *r* controlled by a spring *q* is mounted in the benzine vessel *p* so that two of the wedge faces of the bolts *n* and *r* are bearing the one against the other in the closed or open position of the pocket lighter as shown in Figs. 3 and 4. To prevent the spring controlled bolt *r* from jumping out, it is off-set at *r*<sub>1</sub> (Fig. 6), this off-set portion being fixed by a plate *s* fixed on the top plate *a*. The pocket lighter is operated by depressing the pressure lever *c* when the spring controlled bolt *r* is depressed and after the edges of the bolts *n* and *r* have moved the one over the other, jumps up again so that the opposite wedge faces rest on one another.

The wick cap *g* if the pocket lighter is open, is maintained in open position. By the pressure exerted by the spring controlled bolt *r* it is strongly pressed on to the packing *t* of the wick if the pocket lighter is closed. The mechanism according to the invention favours the spark production as after the wedge-shaped bolts *n* and *r* have moved the one over the other the pressure lever *c* descends jerkwise as the resistance of the bolt *r* against bolt *n* has suddenly disappeared so that the rotating movement of the friction wheel *d* is considerably accelerated.

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:—

5 1. A pocket lighter with friction wheel rotated during the opening movement of the oscillatable arm of the wick cap also mounted on the axle of the friction wheel,  
 10 this opening oscillation being produced by means of a pressure lever so that sparks are produced, characterized by the arrangement of two wedge-shaped bolts  
 15 (*n* and *r*), the bolt (*n*) being fixed on the underside of the pressure lever (*e*) and the bolt (*r*) being yieldably mounted in the benzine vessel (*p*) and controlled by a  
 20 spring (*g*), said bolts bearing the one on the other with corresponding wedge faces so that during the depressing of the pres-

sure lever (*e*) the spring-controlled bolt (*r*) is lowered and, after the wedge face of the bolt (*n*) has slipped over the wedge face of the bolt (*r*), said bolt (*r*) jumps upwards and securely holds the wick cap (*g*) in the open position, but presses said wick cap strongly upon the wick packing (*t*) if the pocket lighter is closed.

25 2. Pocket lighter as claimed in claim 1, characterized in that the spring controlled bolt (*r*) has an off-set portion (*r*<sub>1</sub>) over which extends a plate (*s*) fixed on the top plate (*a*) of the benzine vessel.

Dated this 4th day of March, 1936.

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

