PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in or relating to Pocket Lighters

I, BEDRI HUSSEIN GOSTKOWSKI, a citizen of Turkey, residing at No. 46, boulevard du Pont d'Arve, Geneva, Switzerland, 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:—

The present invention relates to pocket lighters, and particularly to a pocket lighter in which the flint is guided in a member which is capable of being pivoted or swivelled to enable the said flint to be replaced when necessary.

The lighter according to the present invention is characterized by a spring-urged piston adapted to press the flint against a friction wheel, said piston being operable from outside the guide member and having a projection co-operating with a groove in the lighter, said guide member, piston and spring being coaxial in the normal working position and having their common axis parallel with the axis of a first portion of said groove, and said groove having a second portion with its axis disposed transversely to that of the said first groove portion whereby, when the projection of the piston enters said second groove portion the guide member is adapted to swivel around a pivot thereof and the spring is adapted to retain the projection of the piston in this second groove portion to permit access to the flint and replacement thereof.

The annexed drawing shows an embodiment of the subject of the invention, given by way of example.

Figure 1 is a lateral view of a pocket lighter flint housing according to the invention,

Figure 2 illustrates a detail, and

Figure 3 is a plan view corresponding to Figure 1.

In the drawings, the plate 1 represents the upper part of the fuel reservoir of the lighter, and on it is mounted a flint guide member in the form of a housing 2 having a bore 3 therein for receiving and guiding the flint 4 which is frictionally engaged by the wheel 5.

A piston 6, which carries at its rear side a rod 7, is slidably arranged and guided in the bore 3, and a compression spring 8 is assembled around the rod 7 and is adapted to urge the piston 6 in the direction of the friction wheel 5 so as to apply the flint 4 against this wheel.

A rod 10, which traverses the piston 6 and is integral therewith, passes through an upper longitudinal slot 9 in the housing 2 and has secured thereto at its upper end an operating knob 11, this knob permitting the piston to be moved in the direction away from the frictional wheel 5 against the action of the spring 8.

The end of the rod 10 opposite to the knob 11 projects beyond the bottom of the piston and passes through a longitudinal slot 12 in the lower part of the housing 2 to enter a cam groove 13 in the plate 1.

The shape of this groove is shown more particularly in Figure 2. It is constituted by a straight portion 13a, having its axis parallel to the common axis of piston 6, spring 8, and bore or guideway 3, and a second portion 13b having its axis transverse to this common axis.

The housing 2 can be pivoted or swivelled in a plane parallel to that of the upper surface of the reservoir 1 and around a pivot 14 disposed exteriorly of the part of the common housing 2, axis of the piston 6, and spring 8 which passes between this pivot 14 and the portion 13b of the groove 13.

Figures 1 and 2 show the various parts described in their normal working position. To take out or to replace the flint 4 the following procedure is followed:—

Rearwardly-directed pressure on the knob 11 will cause the latter to be pushed back in the direction of the spring 8 so as to compress the same.

It can readily be seen from the plan view of Figure 3 that the pressure so exerted will tend to make the housing 2 rotate in the direction of the arrow 15 around pivot 14, owing to the eccentric position of this pivot. Such movement cannot, however, take place so long as the projection formed by the lower extremity of rod 10 is guided in the portion 13a of the cam groove 13. As soon as the rod 10 enters the portion 13b of this groove, however, this swivelling movement is

[*Price* 1/-]

unobstructed and the housing pivots into the position indicated at 2^1 in dot and dash lines in Figure 3. It will remain in this position as a result of the engagement of rod 10 against the lateral wall of the portion 13b of the groove, the spring 8 no longer being able to relax and in consequence the piston 6 cannot be pushed out of the bore or guideway 3.

It is then possible to extract the flint or to insert a new flint into the guideway 3. To get it into the working position it suffices to push back the housing in the opposite direction to the arrow 15. As soon as the rod 10 enters the portion 13a of the groove 13, the piston 6 under the influence of the action of the spring will thrust back the flint against the wheel 5.

When the flint gets worn out, the piston 6 cannot be pressed against the wheel, being held back from contact with the latter by the engagement of the rod 10 against the front end of the groove 13.

The portion 13b of the slot 13 has been illustrated as having its axis practically tangential to a circle described around the pivot 14 and having the pivoting axis of the latter as its centre. It could, however, be at a right angle to the axis of the portion 13a or at any other intermediate or different angle thereto with the exception, of course, of a more obtuse angle than that shown which would preclude the rod 10 from remaining of its own accord in the groove portion 13a and consequently the housing 2 from remaining in the position 2^1.

It should be noted, finally, that the axis c—c of the housing, when the latter is in the working position, lies behind the parallel axis of the wheel 15 as regarded from the direction 16 in which the flint projects the sparks.

This has the advantage of projecting these sparks in a direction more nearly to the perpendicular to the axis c—c than has usually been the case and in consequence enabling them to impinge more efficiently on the wick of the lighter. This also has the advantage of avoiding catching or jamming between the wheel and the flint.

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 pocket lighter in which the flint is adapted to be guided in a guide member which is capable of being pivoted or swivelled to enable the flint to be replaced, characterized by a spring-urged piston adapted to press the flint against a friction wheel, said piston being operable from outside the guide member and having a projection co-operating with a groove in the lighter, said guide member, piston and spring being coaxial in the normal working position and having their common axis parallel with the axis of a first portion of said groove, and said groove having a second portion with its axis disposed transversely to that of the said first groove portion whereby, when the projection of the piston enters said second groove portion the guide member is adapted to swivel around a pivot thereof and the spring is adapted to retain the projection of the piston in this second groove portion to permit access to the flint and replacement thereof.

2. A pocket lighter according to claim 1, characterized by the fact that the axes of the two groove portions are at right angle to each other.

3. A pocket lighter according to claim 1, characterized by the fact that the axis of the second groove portion is substantially tangential to a circle having the pivotal axis of the said pivot as its centre.

4. A pocket lighter according to any of claims 1 to 3, characterized by the fact that the pivotal axis of the guide member lies outside the part of the common axis of the guide member, piston, and spring which passes between the pivot and the second groove portion.

5. A pocket lighter according to any of the preceding claims, characterized by the fact that, when the parts are in the normal working position, the said common axis of the guide member, piston and spring lies behind the parallel axis of the friction wheel, regarded from the direction in which the sparks will be projected.

6. A pocket lighter substantially as hereinbefore described with reference to the accompanying drawing.

Dated the 26th day of January, 1944.

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Fig. 1.

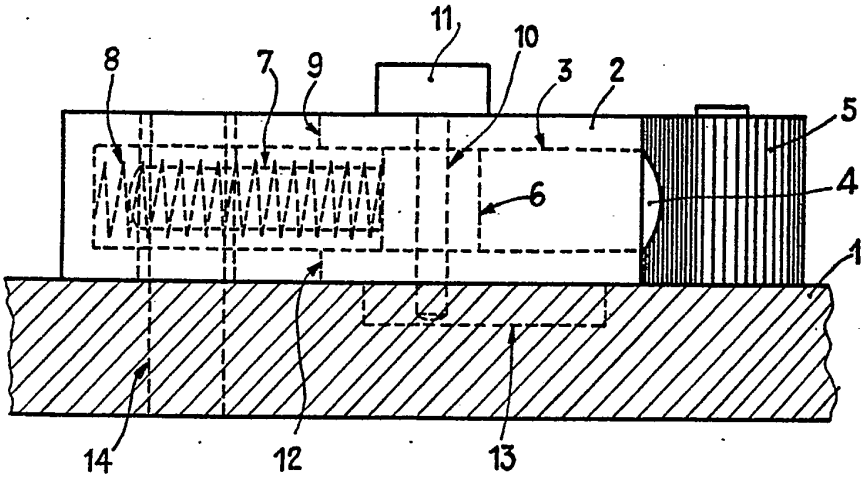
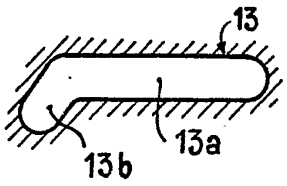


Fig. 2.



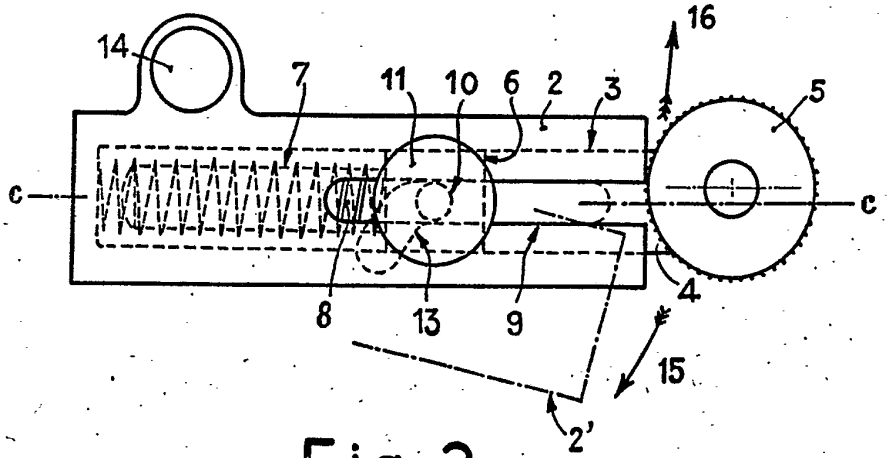


Fig. 3.

Malby & Sons, Photo-Litho.