July 12, 1949. C. L. FELLER 2,476,087

POCKET LIGHTER

Filed Dec. 21, 1945

FIG. 1.

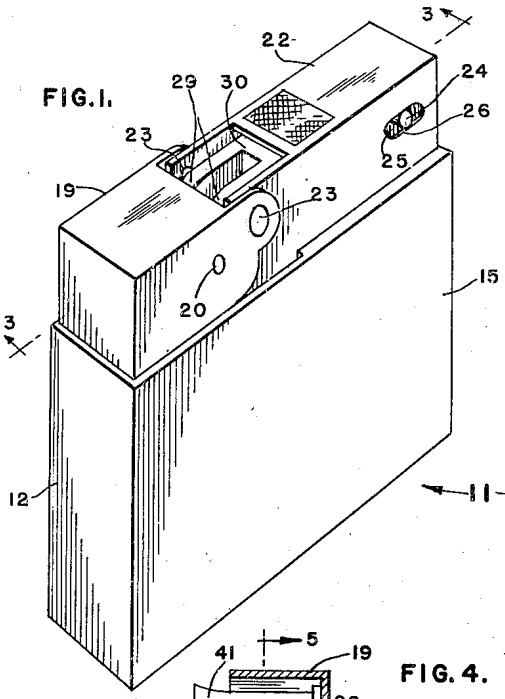


FIG. 2.

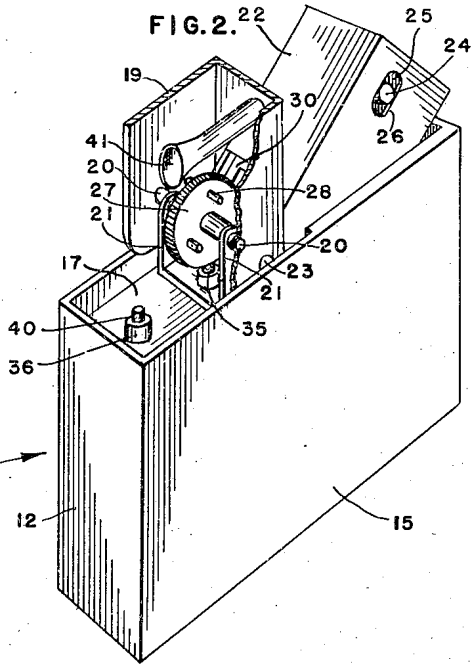


FIG. 4.

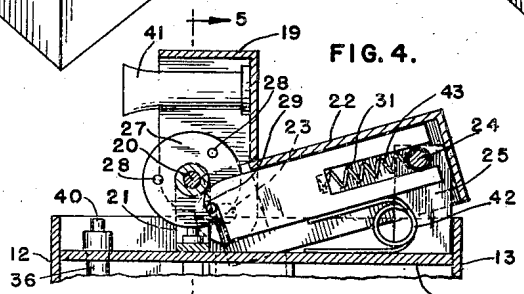
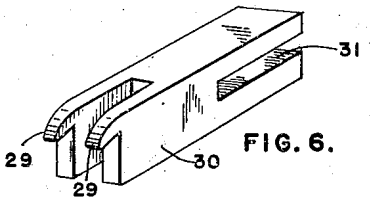


FIG. 6.



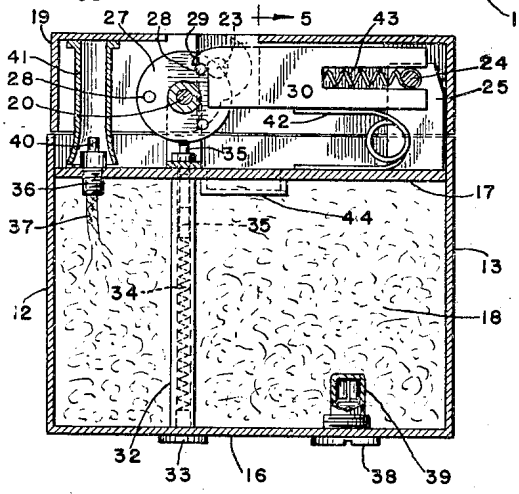


FIG. 3.

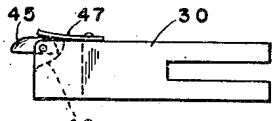


FIG. 7.

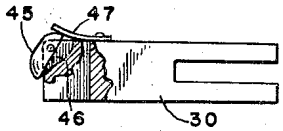


FIG. 8.

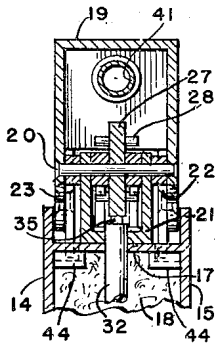


FIG. 5.

INVENTOR.

CHARLES L. FELLER,

BY Irving Seidman

ATTORNEY

Patented July 12, 1949

2,476,087

UNITED STATES PATENT OFFICE

2,476,087

POCKET LIGHTER

Charles L. Feller, New York, N. Y.

Application December 21, 1945, Serial No. 636,317

1 Claim. (Cl. 67—7.1)

1

This invention relates to automatic lighters, and more particularly to a pocket lighter.

An object of my invention is to provide a device of the said character wherein certain mechanical means are provided for igniting the wick which forms a part of same.

Another object of my invention is the employment therein of a split or two-sectioned cover or cap, adapted to be depressed by pressure upon one section of the said cover to operate the mechanism and light the wick.

Another object of this invention is the provision therein of means for automatically closing the device when the pressure is released.

A still further object of this invention is the provision of an organization in which the constituent elements are so arranged structurally and functionally as to assure improved results with materials and members which may be manufactured at reasonable cost, may be easily assembled and which will be efficient in operation with minimum wear to the parts.

The invention possesses other objects and features of advantage, some of which, with the foregoing will be set forth in the following description and in the claim wherein parts will be identified by specific names for convenience, but they are intended to be as generic in their application to similar parts as the art will permit. In the accompanying drawings there has been illustrated the best embodiment of the invention known to me, but such embodiment is to be regarded as typical only of many possible embodiments, and the invention is not to be limited thereto.

The novel features considered characteristic of my invention are set forth with particularity in the appended claim. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of a specific embodiment when read in connection with the accompanying drawings, in which:

Figure 1 is a perspective view of the lighter in closed position.

Figure 2 is a perspective view showing the position of the moving parts when the cover is depressed to operate the friction wheel and light the wick.

Figure 3 is a longitudinal section taken approximately along the line 3—3 of Figure 1 and looking in the direction indicated by arrows.

Figure 4 is a similar section of the upper part

2

of the device and shows the cap in open, operative position.

Figure 5 is a cross sectional view taken along the line 5—5 of Figure 4 and looking in the direction indicated by arrows.

Figure 6 is a perspective view of a part of the sliding block contained within the rear cover, and

Figures 7 and 8 are views of a modification which will be hereinafter described.

Referring in detail to the parts, 11 represents a lighter comprising a casing having front and rear walls 12 and 13 respectively, side walls 14 and 15, bottom 16 and a shelf or dividing partition 17, all forming a fuel chamber 18. A split cover or cap consisting of a front member 19 which is pivotly supported upon a shaft at 20 which is in turn mounted upon a forked member 21 secured upon the shelf 17. A rear cover or cap 22, is pivotly attached to the front cover portion at 23, while at the rear the said cover member 22 is pivotly and slideably attached by a pin 24 to standards 25 which are secured at the rear end of the shelf 17. The outer ends of the said pin 24 are adapted to engage within slots 26 to allow the said rear cap to move reciprocally therein.

A friction wheel 27 is centrally mounted to rotate upon the pin 20 and extending laterally from both sides of the said friction wheel are pins 28 which are adapted to be engaged by the hook members or prongs 29 formed upon a sliding block 30. The said block 30 is formed with a slot 31 which is adapted to slideably engage over the pin 24 and within the rear cap 22.

Extending through the shelf 17 and the base of the forked member 21 is a tube 32 which passes through the fuel chamber 18 and through the bottom 16, where it is closed by a cap 33. The said cap 33 is threaded into the tube 32 and engages a spring 34 which, in turn, exerts a pressure against flints 35. In the drawing Figure 3, the spring and the flints are shown in dotted lines, and three flints are shown. The upper flint contacts the periphery of the friction wheel 27.

A short tube 36 extends through, is threaded to the shelf 17 and carries a wick 37 which extends well into the fuel chamber 18 and is imbedded in cotton or other suitable material which may be saturated with any form of ignition fluid usually used in lighters of this type. The cotton contained within the said fuel chamber 18 may be saturated with ignition fluid by pouring said fluid into the chamber through an opening closed by the cap 38. A capsule 39 may be secured to the inner end of the cap 38 and is adapted to hold

a number of extra flints. The upper end of the wick **37** extends slightly above the upper edge of the tubular section **36** as indicated at **40**. Attached to the front cover **19** is a tube **41** flared at its lower outer end and which is adapted to act as a snuffer to put out the lighted wick when the cover is closed.

In engagement between the upper side of the shelf **17** and the lower side of the block **30** is a spring member **42**, which is adapted to keep the covers normally in their raised or closed position. A spring **43** is mounted within the slot **31** on the block **30**, and exerts a pressure upon the block **30** to keep it normally in its forward position. When the cover is depressed the forward lower end of the sides of the rear cover **22** moves into pockets **44**.

In the modified form shown in Figures 7 and 8, the prongs **29** on the block **30** are dispensed with and pawls **45** are pivotly mounted within grooves **46** formed upon the ends of the said block **30**, and the said pawls are normally kept in the open position shown in Figure 7 by means of a spring **47**. The action of these pawls in the operation of the device will be hereinafter explained.

The operation of the device is as follows:

Figure 1 shows the device when not in use and normally closed. Assuming that the fuel chamber has been charged with ignition fluid and the wick saturated with same and the upper flint is in position against the friction wheel, the user depresses the cover by applying a finger to the top of the rear cover thereby causing the parts to assume the position shown in Figures 2 and 4, and as the rear cover section moves downwardly the prongs on the block will engage an aligned set of pins (one on each side of the friction wheel) and force the friction wheel to rotate which rotation will create sufficient friction against the contacting flint to cause a spark to shoot outwardly and ignite the wick at **40**. When the user no longer needs the light burning at the wick **40**, he releases his finger from the cap thereby allowing the spring **42** to force the block and rear cover upwardly into its normally closed position, at the same time moving the forward section of the cover downwardly and snuffing out the light.

When the block moves upwardly, the prongs **29** will strike against the pin **28** immediately above and the upward pressure exerted by the

spring **42** coacting with the sloped upper end of the said prongs will force the block backwardly against the pressure of the spring **43** until the lower end of the prong clears the pins **28**, at which point the said spring **43** will force the prongs outwardly and over the pin as the covers close.

In lieu of the prongs **29** upon the block **30**, the spring-actuated pawls **45** will clear the pins during the upward movement of the block.

As indicated by the dotted lines in Figure 3 of the drawings, three flints are shown within the tube **32** and the object of so placing the flints is to provide an automatic means to feed a new flint to the friction wheel when the preceding flint is no longer useable.

I claim:

In a lighter of the class described, comprising a casing having a fuel chamber, a wick leading therefrom, a flint mounted outside of said fuel chamber in juxtaposition to the exposed end of the said wick, a friction wheel upon the said casing adapted to engage the said flint, pins upon the said friction wheel extending laterally therefrom, in combination with an operating member pivotally attached to said casing, pawls upon one end of said operating member adapted to engage the said pins upon the friction wheel to turn same when the said operating member is depressed and a spring upon the said operating member engaging one end of said pawls to hold same in normal operating position and permit said pawls to pass the said pins when the said operating member moves upwardly.

CHARLES L. FELLER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,762,061	Kassapian	June 3, 1930
1,956,187	Aronson	Apr. 24, 1934
2,019,433	Lagerholm	Oct. 29, 1935
2,211,500	Gabritsch	Aug. 13, 1940

FOREIGN PATENTS

Number	Country	Date
146,207	Austria	June 25, 1936