

Dec. 27, 1949

G. N. MACDONALD

2,492,305

CIGARETTE LIGHTER

Filed March 16, 1946

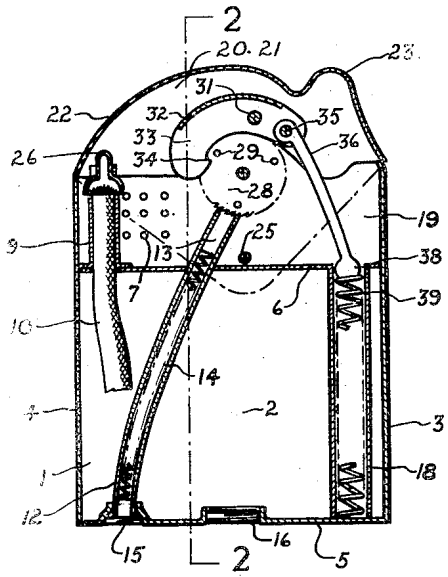


Fig. 1.

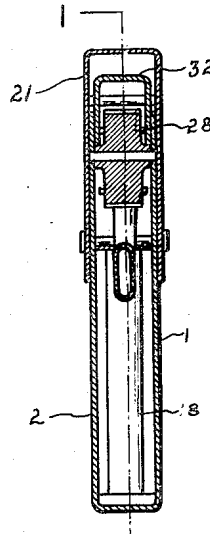
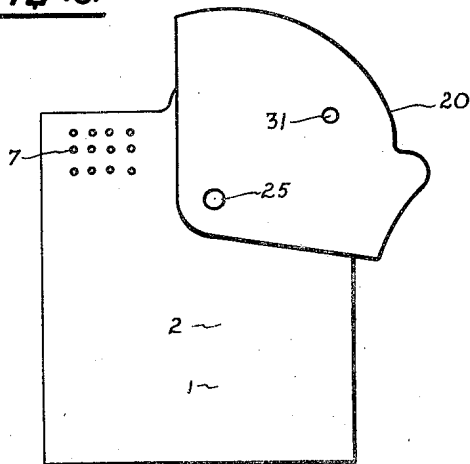


Fig. 2.

Fig. 3.



INVENTOR
GEORGE NICOLL MACDONALD

Ernest & Carter
ATTORNEY

UNITED STATES PATENT OFFICE

2,492,305

CIGARETTE LIGHTER

George Nicoll Macdonald, Vancouver, British Columbia, Canada

Application March 16, 1946, Serial No. 654,883

3 Claims. (Cl. 67-7.1)

1

2

My invention relates to improvements in cigarette lighters.

The objects of the present invention are to provide a storm proof lighter with a cover which covers, when in normal position, all the normally exposed parts completely; to provide an operating train for raising the cover and for abrading the flint which requires the use of only one spring and which will be substantially free from wear so as to prolong the effective life of the lighter, and a further object is to provide a mechanism whereby the total range of movement of the cover is less than ninety degrees.

Referring to the drawings—

Fig. 1 is a longitudinal sectional view of the invention taken on the line 1—1 of Figure 2.

Fig. 2 is a transverse sectional view of the invention taken on the line 2—2 of Figure 1.

Fig. 3 is a side elevational view showing the cover in open position.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates a container having side walls 2, end walls 3 and 4, a bottom wall 5 and a container wall 6. The side and end walls 2, 3 and 4 extend above the container wall to enclose the normal lighter parts to be hereinafter described, and a portion of the side walls is provided with apertures 7 to permit a flow of air to support combustion.

Extending upwards from the container wall 6 is a tube 9 in which the usual wick 10 is adapted to be supported. A tube 12 extends from the bottom wall 5 through the container wall 6 which encloses the usual flint 13 and flint spring 14 and is closed off at its lower end with a screw plug 15. A filler plug 16 is provided in the bottom wall 5 to afford ingress to the container for lighter fluid and a vertical tube 18 is mounted between the bottom wall and the container wall 6, which tube is open to the normally enclosed space 19.

A segmental cover 20 having side walls 21 and an arcuate wall 22 is provided with a protuberance 23 which defines a seat upon which to apply thumb pressure to rock the cover about its pivot pin 25. It will be noted that the pin 25 is closer to the wall 3 than the wall 4, so as to allow the right hand extremity of the arcuate wall 22, as shown in Figures 1 and 3, to pass over the upper edge of the wall 3 when opening. A snuffer 26 is carried within the cover, which is adapted to engage the wick tube 9 to quench the wick after use.

Pivotaly mounted between the upper part of

the side walls 2 is an abrading wheel 28 having three side pins 29 equally spaced around its periphery and projecting on both sides of said wheel. Rockingly mounted upon a pin 31 is a pawl 32 having side members 33, each of which terminate in a hook 34 to engage opposite ends of a pin 29, the opposite end of the pawl is connected by a pin 35 to a curved push rod 36 having at its lower extremity a ball 38 which is slidable within the tube 18. The tube 18 is fitted with a compression spring 39 which thrusts upwardly against the push rod 36 and serves to rock the cover 20 to closed position and to swing the hooks 34 in an anti-clockwise direction and into engaging position with the next following pins 29 of the abrading wheel 28. The thrust of the upper end of the rod 36 when the cover is near to closing position is above a line drawn through the axis of the ball 38 and the pivot pin 31, so that the thrust of the rod 36 will urge the hooks 34 inwardly towards the axis of the abrading wheel to ensure engagement between said hooks and the pins 29.

When thumb pressure is applied to the protuberance 23, the cover will swing towards open position as shown in Figure 3 and as soon as pulling engagement is made between the pawl 32 and the pins 29, motion will be imparted to the abrading wheel 28 and the resulting spark from the flint 13 will ignite the wick 10, which will then be uncovered by the lifting of the snuffer 26. It will be noticed that the spring 39 also serves to hold the cover in fully closed position.

What I claim as my invention is:

1. A cigarette lighter comprising a container having upwardly extending side walls defining a recess, an abrading wheel journaled between said side walls, means for supporting a flint in contact with the abrading wheel, a wick support within the recess, a cover for the recess, said cover having side walls and being mounted upon an axis remote from the abrading wheel, a pawl rockingly mounted on a pin carried by the side walls of said cover, said pawl being adapted to rotate the wheel as the cover is opened, and spring means operatively connected to the pawl for closing the cover and for disposing the pawl to operatively engage the abrading wheel.

2. A cigarette lighter comprising a container having upwardly extending side walls defining a recess, an abrading wheel journaled between said side walls, means for supporting a flint in contact with the abrading wheel, a wick support within

3

the recess, a cover for the recess, said cover having side walls and being mounted upon an axis remote from the abrading wheel, a pawl rockingly mounted on a pin carried by said cover side walls, said pawl being adapted to rotate the wheel as the cover is opened, a push rod connected at one end to the pawl to force it into operative engagement with the wheel as the cover is closed, and spring means for imparting endwise movement to the push rod.

3. A cigarette lighter comprising a container having upwardly extending side walls defining a recess, an abrading wheel journaled between said side walls, means for supporting a flint in contact with the abrading wheel, a wick support within the recess, a cover for the recess, said cover having side walls and being mounted on an axis remote from the abrading wheel, a pawl rockingly mounted on a pin carried by said cover side walls, said pawl being adapted to rotate the wheel as the cover is opened, a push rod connected at one end to the pawl, said rod having an enlargement at one end, a guide carried by

4

the container and a spring within the guide abutting the enlargement of the push rod, the point of connection of the push rod being to the outer side of a line intersecting the enlargement and the axis of the pawl whereby the thrust of the spring urges the pawl into operative engagement with the abrading wheel, and to close the cover.

GEORGE NICOLL MACDONALD.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,026,995	Mullaney	May 21, 1912
2,019,435	Blair	Oct. 29, 1935

FOREIGN PATENTS

Number	Country	Date
408,918	Great Britain	Apr. 19, 1934