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W. E. DUTHIE

1,852,771

PORTABLE CIGAR LIGHTER

Filed Nov. 12, 1928

Fig. 1.

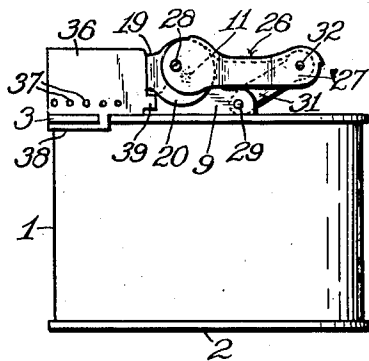


Fig. 2.

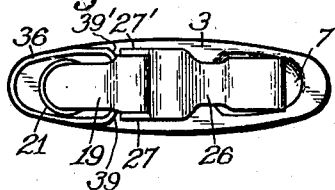


Fig. 4.

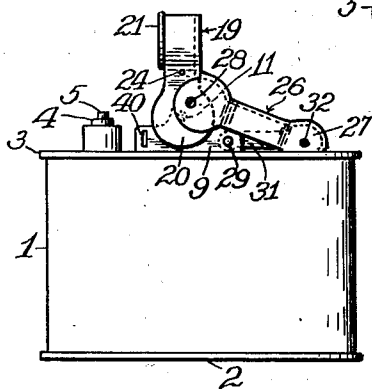


Fig. 8.

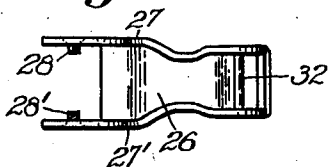


Fig. 5.

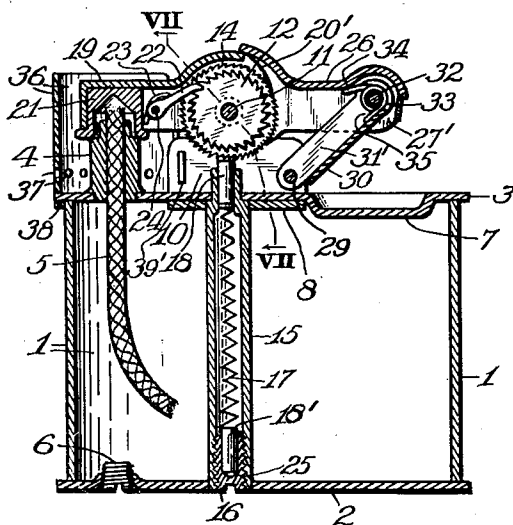


Fig. 3.

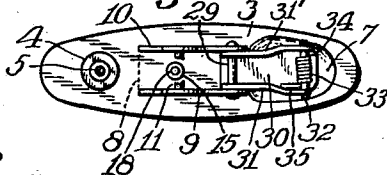


Fig. 6.

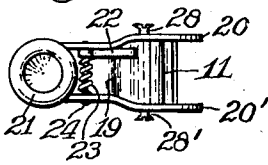


Fig. 9.

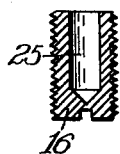
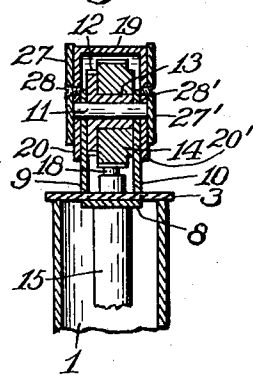


Fig. 7.



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PORTABLE CIGAR LIGHTER

Application filed November 12, 1928. Serial No. 318,835.

This invention relates to an igniter which preferably is portable and designed to be used by smokers for lighting cigars and cigarettes, and in suitable size is adapted to be carried in a vest pocket, the invention having reference more particularly to the type of lighter or igniter that carries combustion substance fed to a burner by means of a wick.

An object of the invention is to provide an improved cigar lighter which shall be of such construction as to be reliable in producing a flame, and also be certain to extinguish the flame after use to eliminate fire hazard.

Another object is to provide an improved igniter which shall be of such construction as to be adapted for conveniently carrying in a garment pocket without being cumbersome and obstructive, and which may be manufactured at moderate cost.

A further object is to provide a cigar lighter which may be so constructed as to be of light weight and convenient for carrying and handling, and not be liable to become objectionable because of leakage.

A still further object is to provide an improved and inexpensive cigar lighter which shall be so constructed as to be manufactured cheaply in large quantities and small size and yet be durable, reliable and economical in use.

With the above-mentioned and other objects in view, the invention consists in a container provided with novel operating means whereby a flame is obtained and by which the flame is automatically extinguished after use, the invention consisting also further in the improved parts and in the novel combinations and arrangements of parts as hereinafter particularly described and further defined in the appended claims.

Referring to the accompanying drawings,—Figure 1 is a side elevation of a cigar lighter constructed substantially in accordance with the invention; Fig. 2 is a top plan of the lighter; Fig. 3 is a top plan of the lighter minus the snuffer and parts to afford a clear view of other parts; Fig. 4 is a side elevation of the lighter minus the shield or screen thereof, in which the snuffer is withdrawn from the burner; Fig. 5 is a vertical

longitudinal section of the lighter, approximately central, on an enlarged scale; Fig. 6 is a bottom plan of the snuffer arm and parts associated therewith; Fig. 7 is a sectional view approximately on the line VII—VII on Fig. 5; Fig. 8 is a bottom plan of an improved presser-bar for controlling the snuffer arm, and Fig. 9 is a vertical section of a combined plug and spare flint carrier.

Similar reference characters in the various figures of the drawings indicate corresponding elements or features of construction detail herein specifically referred to.

Practically embodied the invention has a suitable container to carry a supply of gasoline or other suitable combustible, and devices on the top of the container to control ignition. The container or body of the complete lighter comprises a wall 1, a bottom plate 2 and a top plate 3, a burner tube 4 being rigidly secured to the top plate, adjacent to one end thereof and a wick 5 supported in the tube and extending downward into the interior of the container. The bottom plate 2 is provided with a filling plug 6 below the burner tube permitting a new wick to be inserted through the bottom of the container. Preferably the top plate has a depressed portion 7 in proximity to its opposite end to afford clearance for operative parts of the invention.

The container or body part of the lighter is provided with a frame which comprises a base part 8 arranged on the under side of the top plate 3 and secured thereto, and two upright plates 9 and 10 extending from the base plate upward through suitable slots in the top plate 3. The upright plates jointly support an axle shaft 11 which extends through the plates. A ratchet wheel 12 having a hub 13 is rotatively supported on the shaft 11, and a sparking-wheel 14 is rigidly secured to the hub and has a toothed or roughened periphery. A guide tube 15 is arranged in the container and secured at its lower end in the bottom plate 2, and it extends through the top plate 3 and is tightly secured thereto, the lower end of the tube having a stopper plug 16 screwed into it, the plug supporting a coil spring 17 that supports a flint 18 and yieldingly holds it in contact with the spark-

ing-wheel, the flint being composed of any suitable material as has hitherto been used, not necessarily a natural flint.

A snuffer arm 19 is provided which preferably is composed of sheet metal and having side members 20 and 20' that are connected to the shaft 11 in pivotal arrangement in proximity to one end of the side members, the members being arranged against the outer sides of the frame plates 9 and 10. A snuffer cap 21 is rigidly secured to the side members adjacent to the opposite ends thereof and is adapted to be seated upon the burner tube 4 and cover the upper end of the wick 5. A ratchet pawl 22 is arranged in the snuffer arm to operate on the ratchet wheel 12, being pressed thereto by means of a spring 23 on a pivot pin 24 which is connected to the side members and supports the pawl, as preferably constructed.

Preferably the plug 16 has a socket bore 25 into which a spare flint 18' is placed in order to have a flint conveniently at hand when needed, the flint preferably being pressed into the lower portion of the spring 17 so that the small flint will not be liable to become lost when its carrying plug is removed from it.

A presser-bar 26 preferably composed of sheet metal is provided which has side plates 27 and 27' that are connected adjacent to one end thereof to crank pins 28 and 28' that are screwed into or otherwise secured to the side members 20 and 20' respectively at points slightly distant from the shaft 11, the side plates being arranged against the outer sides of the members 20 and 20'. A pivot pin 29 is connected to the frame plates 9 and 10 slightly above the top plate 3, and a controlling-bar 30 which has side members 31 and 31' that are connected to the pin and adapted to project at an inclination above the depressed portion 7 of the top plate and between the side plates of the presser-bar into pivotal connection with a pin 32 connected with the two side plates 27 and 27' adjacent to their outer ends. A coil spring 33 is arranged on the pin 32 between the side members 31 and 31' and it has one arm 34 engaging the presser-bar and another arm 35 engaging the controlling-bar, the spring being under a strain tending to push the presser-bar away from the top plate 3 and over towards the burner, so as to automatically act to operate the snuffer for extinguishing a flame on the burner. The snuffer arm has a suitable contour adapting it to partially cover the ratchet wheel and sparking-wheel, and the presser-bar 26 is suitably shaped to adapt it to cover the remaining upper portions of the aforesaid wheels.

Preferably the lighter is provided with a screen or shield to prevent air currents from extinguishing the necessary flame, the screen preferably comprising a curved plate 36 having perforations 37 therein, the plate being

removably seated upon the top plate 3 and having a lug 38 engaging the under side of the plate 3 against the body wall 1, the screen extending partially about the burner tube 4 and having clasp members 39 and 39' projecting therefrom and detachably caught in a slot 40 in each of the upright frame plates, permitting ready removal of the screen.

It should be understood that suitable packing is used in the container to absorb the required liquid, but this being of common knowledge is not illustrated.

In practical use, assuming that the container has been properly charged with suitable flame-producing media and the wick conducting the same to the top of the burner, while a person holds the container in one hand and with his thumb presses downward upon the presser-bar, the controlling-bar 30 is forced to swing downward or towards the container top and forces the presser-bar in the direction away from the burner, while acting on the crank pins whereby the snuffer arm is swung upwardly and causes rotation of the sparking-wheel, which causes a spark or sparks to be thrown from the top of the flint 18 and to the top of the burner tube so as to cause a flame as commonly whereby to light a cigar, a cigarette or a pipe of tobacco as may be desired. When used in-doors the screen may readily be removed from place, and may be again quickly applied when the lighter is required for out-door use. Preferably when operating a lighter the pressure is exerted mainly near the outer end of the presser-bar to cause quick action of the snuffer arm and sudden rapid movement of the sparking-wheel, the pressure being shifted towards the crank pins as they are moved over the axle sufficiently to operate to hold the snuffer upwardly so as to fully clear the burner while utilizing the flame. Upon release of the presser-bar the spring 32 causes return of the controlling-bar and the presser-bar and the latter promptly pushes the snuffer over until the cap 21 extinguishes the flame, after which the lighter may be safely placed into a garment pocket.

What is claimed is:

1. A cigar lighter having a snuffer arm and a presser-bar pivotally connected together, a container provided with a rigid frame pivotally supporting the snuffer arm, a flint supported upon the container, a burner upon the container, a sparking-wheel supported by said frame, and a control bar pivotally supported upon the container and pivotally co-operating with the presser-bar adjacent to its end to control the snuffer arm for operation in connection with the burner.

2. An igniter including a pivoted snuffer arm provided closely adjacent to its pivot with a crank pin, the arm having a cap, a presser-bar connected at one end thereof to the crank pin, an inclined controlling-bar

pivotally supported at one end thereof and pivotally connected at its opposite end to the opposite end portion of the presser-bar, a sparking-wheel controlled by the snuffer arm, and a flint device to be operated on by the sparking-wheel.

3. An igniter having a frame and an arm pivoted thereto, a ratchet wheel and a sparking-wheel secured together and rotatably supported in the frame, a pawl supported in the arm and engaging the ratchet wheel, a flint device supported to be operated on by the sparking-wheel, a presser-bar having pivotal connection at one end with the arm, and a controlling-bar pivotally supported adjacent to the base of the frame and having pivotal connection with the presser-bar to control movement thereof when operated to pivotally move the arm.

4. A cigar lighter including a container and a frame upon the top thereof, a burner tube on said top adjacent to one end of the frame, an axle shaft supported on the frame, a sparking-wheel and a ratchet-wheel secured together and rotatable on said shaft, a snuffer arm pivotally supported on said shaft and provided near its pivot with a crank pin, the arm having also a cap to cover said tube, a guide tube on the top of the container and a flint in the tube in contact with the sparking-wheel, a pawl supported in the snuffer arm in engagement with the ratchet-wheel, and a presser-bar connected with said crank pin and provided with an inclined control device pivoted thereto and having pivotal support at its lower end on the opposite end of the frame.

5. In a cigar lighter, a container provided with a top plate having a depressed portion adjacent to one end thereof, a burner tube fixed to said top plate adjacent to the opposite end thereof, a frame fixed to said plate between said depressed portion and said tube, a snuffer arm pivoted to the frame, a sparking-wheel in the frame to be operated by the snuffer arm, a flint supported in the frame beneath the sparking-wheel, and a presser-bar pivotally connected with the snuffer arm and provided with a control device pivotally connected with the frame and the presser-bar to eccentrically guide the end of the latter over to be received into said depressed portion.

6. In a cigar lighter, the combination of a container comprising a bottom provided with a filling-plug and a top provided with a burner tube above the filling-plug, a flint supported upon said top, a frame fixed upon said top, a sparking-wheel and a snuffer arm supported by the frame, a presser-bar connected with the snuffer arm and provided with a pivot-pin, a controlling-bar pivoted to the frame and connected to said pin, a spring on said pin having an arm engaging the controlling-bar and an arm engaging the presser-

bar, and means to enable the snuffer arm to operate the sparking-wheel.

7. In a cigar lighter, the combination of a container provided with a top plate having a depression, a sparking-wheel and a snuffer arm supported upon the top plate, a presser-bar having controlling connection with the snuffer arm and movable to bring its outer end into said depression, and a control device having connection with the presser-bar and supported upon said top plate, the device being provided with a spring for yieldingly pushing the presser-bar away from said top.

In testimony whereof, I affix my signature on the 8th day of November, 1928.

WILLIAM E. DUTHIE.