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I. FLORMAN

1,657,352

PORTABLE LIGHTER AND METHOD OF MAKING THE SAME

Filed May 21, 1927

Fig. 1.

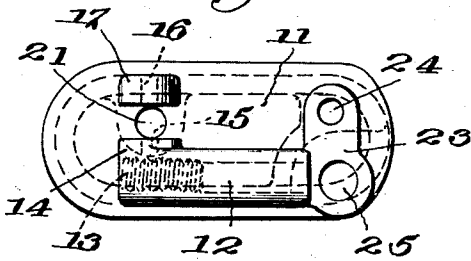


Fig. 5.

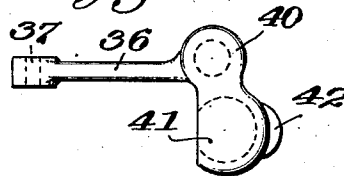


Fig. 6.

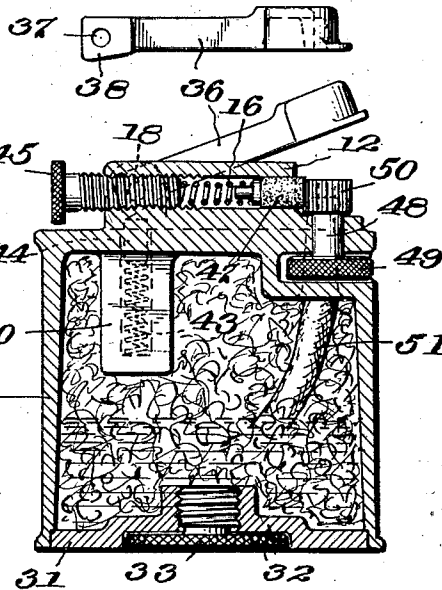


Fig. 2.

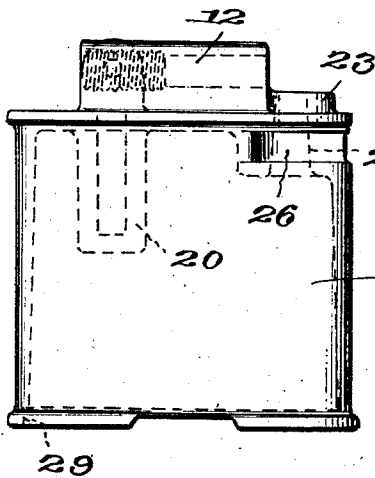


Fig. 3.

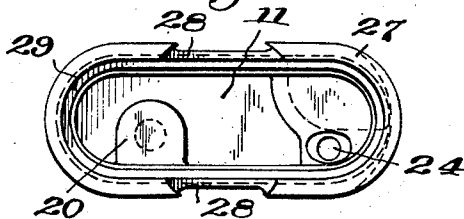
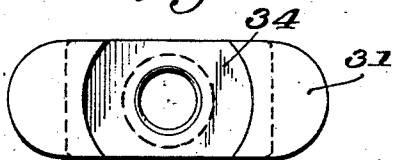


Fig. 4.



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PORTABLE LIGHTER AND METHOD OF MAKING THE SAME.

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The present invention relates to portable cigar lighters of the type wherein a frictional sparking device is employed.

The object of the invention is to simplify the construction of such lighters, and to materially reduce the cost of making them. This result is brought about by so designing the lighter as to eliminate certain of the members usually found in lighters of this type and, so far as possible, casting the parts of the lighter so as to eliminate more expensive operations.

A further object of the invention is to provide a lighter of improved design and appearance and easier to operate than those heretofore in use.

Further objects will be apparent from the description taken in connection with the accompanying drawings, in which is shown a preferred embodiment of the invention.

Fig. 1 is a top plan view of the main casting;

Fig. 2 is a side elevation of the same;

Fig. 3 is a bottom view of the same;

Fig. 4 is a bottom view of the bottom plate;

Fig. 5 is a top view of the swinging arm;

Fig. 6 is a side view of the same; and

Fig. 7 is a cross sectional view of the assembled lighter.

The lighter comprises a flat body 10 having a cover 11 formed integral therewith. A tube 12 is formed integral with the cover 11 and is interiorly threaded at 13 and adapted to receive a sparking element such as flint or pyrophoric alloy, as will be described below. Adjacent its threaded end 13, tube 12 is provided with a boss 14 having a recess 15 which cooperates with an aligned aperture 16 in a lug 17 to support a pivot pin 18 (see Fig. 7).

On the interior of body 10 is formed a spring housing 20 which terminates at its upper end in an opening 21 positioned between boss 14 and lug 17. At the other end of the cover 11 is a boss 23, having a tapered wick hole 24 communicating with the interior of the body, and also being provided with a journal 25 adjacent the end of the tube 12.

Below journal 25, the body 10 is provided with an indentation or recess 26, for a purpose to be described.

Referring to Fig. 3, the body 10 is provided at its lower edge with a flange 27

which is cut away at each side as indicated at 28 to receive a filler plug 33. The inner surface of the flange is enlarged or offset at 29 to receive a bottom plate 31. Plate 31 is provided with an apertured boss 32, which is threaded to receive the filler plug 33, and is counter sunk, as indicated at 34, to accommodate said filler plug.

Figs. 5 and 6 show the swinging arm 36, one end of which is drilled at 37 to receive the pivot pin 18. Flat faces 38 are provided at this end, and at the other end are provided a snuffer 40, aligned with the wick hole 24, and a protecting cap 41 aligned with journal 25. A projection 42 is provided to facilitate manipulation of the arm 36.

When the lighter is assembled, a spring 43 and plunger 44 are positioned in the housing 20, the plunger cooperating with the flat faces 38 to yieldingly hold the arm 36 either in closed or fully opened (vertical) position, in the manner of an ordinary jack knife. An adjusting screw 45 and spring 46 are positioned in the tube 12, and serve to yieldingly press a sparking element 47 forwardly of the tube. A shaft 48 is mounted in the journal 25 and carries at one end a knurled thumb wheel 49, threaded thereon, which seats in recess 26, and at its other end has a wheel 50 threaded thereon and provided with ratchet teeth adapted to cooperate with the sparking element 47 to produce sparks.

The interior of the lighter is filled with any suitable absorbent material, but I prefer to use the material known as crape wadding, a highly absorbent wood pulp product which enables the lighter to hold more fuel than where a less absorbent material is used.

The operation of the above described apparatus will be obvious without further explanation.

In making the present lighter, the body 10 and its associated elements 11, 12, 17, 20, 23 and 27 are cast as a single casting from a suitable metal, preferably a zinc-tin alloy. The casting is preferably done in dies, each die having a number of cavities, so that with one injection the body 10, bottom plate 31, and swinging arm 36 are produced. By suitably multiplying the number of cavities, any desired number of bodies, bottom plates, and swinging arms may be produced with one injection. The body 10 and bottom plate 31 are then electro-plated or galvanoplated with copper, brass, nickel, or other

metal to facilitate soldering, the bottom plate is soldered to the body, and the parts are assembled as in Fig. 7.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A portable lighter comprising a body having an integral cover plate, a tube formed integral with said cover plate and adapted to receive a sparking element, said body being provided below the cover plate with an indentation adapted to receive a thumb wheel, and a boss formed integral with said cover plate and provided with a journal for the shaft of said thumb wheel and with a wick hole.

2. A portable lighter comprising a metallic body having an integral cover plate, a tube formed integral with said cover plate and adapted to receive a sparking element, said body being provided below said cover plate with a recess adapted to receive a thumb wheel, a supporting lug, and a boss formed integral with said cover plate, said

boss being provided with a journal for the shaft of said thumb wheel.

3. In a portable lighter, a body having a recess in one of its surfaces, said body having a cover plate overlying said recess and provided with a journal, a shaft in said journal, a thumb-wheel fixed to one end of said shaft and positioned in said recess, and a sparking wheel fixed to the other end of said shaft and provided with ratchet teeth adapted to engage a sparking element.

4. In a portable lighter, a hollow body having an integral cover plate, a tube formed integral with said cover plate and adapted to receive a sparking element, said body being provided below said cover plate with a recess adapted to receive a thumb wheel, and a boss on said cover plate provided with a journal for the shaft of said thumb wheel and also provided with a wick hole communicating with the interior of the hollow body.

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