

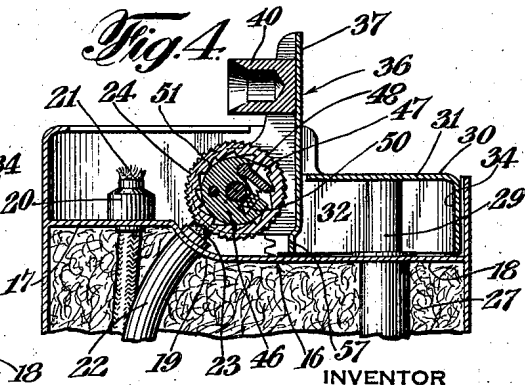
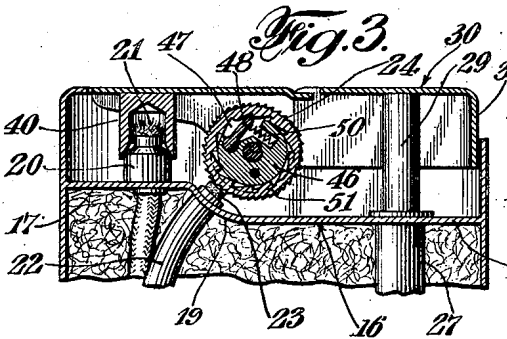
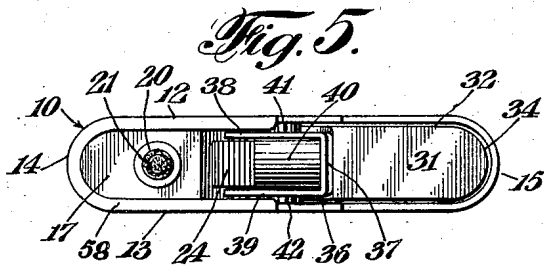
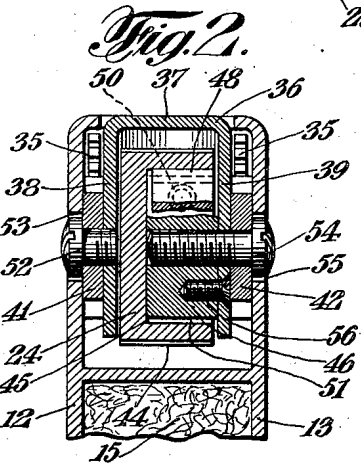
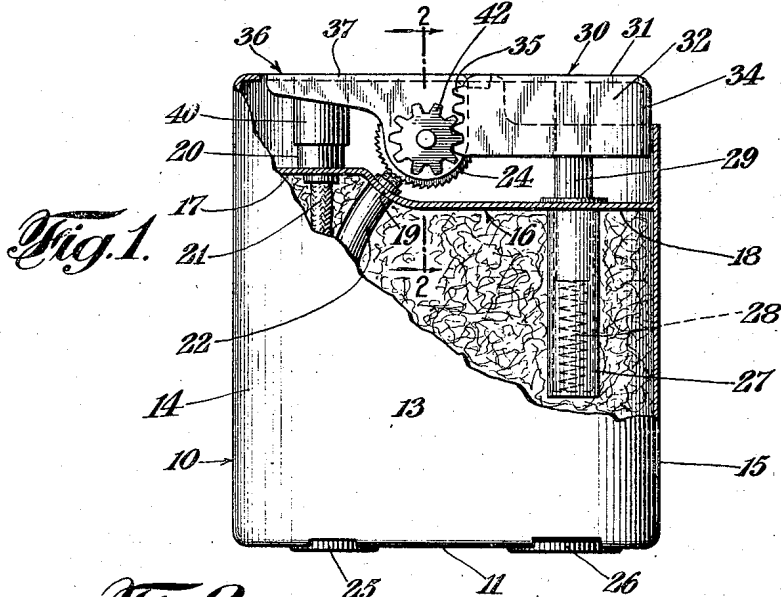
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POCKET LIGHTER AND THE LIKE

Filed Dec. 13, 1928



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POCKET LIGHTER AND THE LIKE

Application filed December 13, 1928. Serial No. 325,678.

The invention relates in general to lighters and the like devices, and more particularly to the casing structure of such devices of a type adapted to be carried, for example, in the user's pocket.

The objects of the invention include the provision of such a device, the various operating parts of which cooperate to form substantially smooth and continuous outer walls enclosing a construction which is efficient in use, rugged, and inexpensive to manufacture.

Various other and more specific features and advantages of the invention will be apparent from the following description and from an inspection of the accompanying drawings.

In the drawings—

Fig. 1 is a elevational view partly in section of one example of the invention embodied in a lighter construction.

Fig. 2 is a detail sectional view taken substantially on the line 2—2 of Fig. 1;

Fig. 3 is another vertical sectional view showing the operating parts in closed position;

Fig. 4 is a view similar to Fig. 3 but showing the operating parts in open position; and

Fig. 5 is a top plan view of the lighter.

In the following description and in the claims, parts will be identified by specific names for convenience, but such names are intended to be as generic in their application to similar parts as the art will permit.

Referring now to the drawing in further detail, the example of the lighter shown comprises a casing 10 having a flat bottom wall 11, substantially flat side walls 12 and 13 and curved end walls 14 and 15. The casing is provided with a dividing wall 16 made up of offset upper and lower portions 17 and 18 connected by an oblique or curved portion 19. The space below the dividing wall 16 constitutes a reservoir holding absorbent material for the fuel, while the space above the dividing wall is for the operating parts including the "sparking" wheel and "sparking" metal.

A wick tube 20 is provided in the upper offset portion 17, and a wick 21 extends there-through into the fuel reservoir. A curved

guide tube 22 extends from the bottom wall 11 to the oblique curved wall portion 19 and contains the sparking metal 23 and a suitable coil spring (not shown) for holding the sparking metal against a "sparking" wheel 24. A screw cap 25 closes the open end of the tube 22, and a second screw cap 26 is provided in the bottom of the fuel reservoir, removable for filling the reservoir with fuel.

Depending from the lower offset portion 18 is a sleeve seat 27 holding a coil spring 28 and a plunger 29. Secured to the upper end of the plunger 29 is a thumb piece 30 comprising a flat top wall 31, depending flat side walls 32 and a curved end wall 34, all telescoping within adjoining walls of the casing. The inner edges of the side walls 32 are provided with gear teeth 35 forming racks.

A snuffer carrying member 36 comprising a flat top wall 37 and depending side walls 38, 39 is positioned within the side walls 12, 13 of the casing and carries a snuffer member 40 adapted to seat over the wick holder 20 when the lighter is closed. Pinions 41 and 42 are positioned outside the side walls 38, 39 and between these side walls is placed sparking wheel 24 having a ribbed outer circumference 44 and a recess 45 in one face. Within the recess is an inner wheel 46 having a recess 47 in which a pawl 48 is pivoted. The inner wheel has a second recess seating a coil spring 50 to urge the pawl against ratchet teeth 51 on the inner surface of the sparking wheel 43.

A screw 52 having its head journalled in an opening 53 in the side wall 12 passes through the gear 41, and is threaded into the side wall 38. A second screw 54 having its head journalled in an opening 55 in the other side wall 13 passes through the gear 42, the side wall 39 and is threaded into the inner wheel 46. The inner wheel 46 is additionally secured to the side wall 39 by a screw 56. The top wall 37 is so shaped at 57 as to avoid interference with other operating parts.

It will be seen that the end wall 14 of the casing extends the entire height of the lighter and, at the top, the end wall and the adjoining parts of the side walls 12 and 13 extend inwardly to form a U-shape top flange 58.

The top wall 37 of the snuffer carrying member 36 is flush with the U-shape flange 58 and is also flush with the top wall 31 of the thumb piece 30, when the lighter is closed.

5 To operate the lighter, it is grasped in the hand and the thumb piece 30 pressed down, causing the sparking wheel 24 to rotate against the sparking metal 23, and the snuffer 40 to rise to the position shown in Fig. 4.
 10 The gears 41 and 42 are secured to the snuffer carrying member and movement of the rack teeth 35 causes the gears 41 and 42, the snuffer carrying member 36, the sparking wheel 24 and screws 52 and 54 to rotate, the screws 52
 15 and 54 having bearing in the holes 53 and 55. The rubbing of the sparking wheel against the sparking metal causes a shower of sparks to impinge on the wick 21 thereby igniting it, as is well understood. The thumb piece
 20 30 is held down as long as it is desired to make use of the light, and then it is released, the coil spring 28 moving it upwardly and the snuffer carrying member 36 swinging downwardly to the position shown in Fig. 3. The
 25 sparking wheel 24 partakes of no backward movement, however, because of the ratchet and pawl arrangement 48, 51.

Thus it will be seen that, when the lighter is closed, it presents the appearance of a container having substantially unbroken and flush walls. All parts are enclosed, protecting the working parts from dirt and enhancing the attractiveness of the lighter. The offset portions of the dividing wall allow the
 35 sparking metal to be properly positioned for the formation of sparks close to the wick and at the same time aids in increasing the volume of the fuel reservoir without interference with the proper arrangement of the operating
 40 mechanism.

Certain features of the operating mechanism shown are claimed in my copending application Ser. No. 196,255, filed June 3, 1927.

45 While I have described my invention in detail and with respect to a certain embodiment thereof, I do not desire to be limited to such details or forms, since many changes and modifications may be made and the invention may be embodied in other forms without departing from the spirit and scope of the invention in its broader aspects. Hence
 50 I desire to cover all modifications and forms coming within the language or scope of any one or more of the appended claims.

55 What I claim as new and desire to secure by Letters Patent is:

1. A lighter comprising a casing having a dividing wall below its top, a wick holder on said dividing wall, a wick in said holder and
 60 extending down into said casing, a sleeve depending from said dividing wall, a coil spring in said sleeve, a plunger above said spring, a thumb-piece over said plunger, said thumb-piece having a flat top wall and depending
 65 side walls and an end wall telescoping in

close-fitting relation within corresponding side and end walls of said casing, gear teeth on the inner edges of the side walls of said thumb-piece, a carrying member having a top wall and depending side walls, a snuffer
 70 member carried by said carrying member to engage over said wick, gears secured to the side walls respectively of said carrying member and meshing with said teeth, a sparking wheel between the side walls of
 75 said carrying member, sparking metal contacting with said sparking wheel, and a pivot means passing through the side walls of said casing and operatively connecting said carrying member, said gears and said wheel, 80 said top walls being substantially flush when the lighter is closed.

2. In combination, a casing adapted to contain a liquid medium, opposite side and end walls of said casing extending above the casing top wall to form a chamber open at its top, a conduit opening into said casing through said top wall, a member adapted to cover said conduit and pivoted for movement within said chamber, and a reciproca-
 85 tory member extending vertically through said chamber, said reciprocatory member and said pivoted member, when the latter is in closed position, cooperating jointly to substantially close the upper end of said cham-
 90 ber.

3. In combination, a casing adapted to contain a liquid medium, opposite side and end walls of said casing extending above the casing top wall to form a chamber open at its
 100 top, a conduit opening into said casing through said top wall, a member pivoted for movement within said chamber, means carried by said member for closing the upper end of said conduit, said casing having a
 105 cavity depending downwardly from said top wall, a member reciprocatory in said cavity and comprising a thumb-piece on its upper end, a coiled spring in said cavity for biasing said reciprocatory member outwardly, said
 110 thumb-piece having depending sections adapted to be slidably and telescopically disposed within said chamber close to the adjacent side and end walls of said casing, and means for connecting said thumb-piece and
 115 said pivoted member together whereby said spring maintains said conduit closing means in sealed relation with respect to said conduit, said reciprocatory member and said pivoted member, when the latter is in closed
 120 position, cooperating jointly to substantially close the upper open end of said chamber and having their upper surfaces disposed in the same plane.

4. In combination, a casing adapted to contain a liquid medium, opposite side and end walls of said casing extending above the casing top wall to form a chamber open at its top, a conduit opening into said casing through said top wall, a member adapted to
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cover said conduit and pivoted for movement with respect to said chamber, and a reciprocatory member extending vertically through said chamber, interengaging means between said reciprocatory and pivoted members whereby their upper surfaces are maintained in substantially the same plane when said pivoted member is in closed position, said pivoted member and a section of said reciprocatory member cooperating jointly, at times, to substantially close the upper end of said chamber.

In testimony whereof I have signed my name to this specification.
LOUIS V. ARONSON.

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