

May 6, 1941.

L. E. STANARD

2,240,678

CIGAR AND CIGARETTE LIGHTER

Filed April 26, 1940

2 Sheets-Sheet 1

Fig. 1.

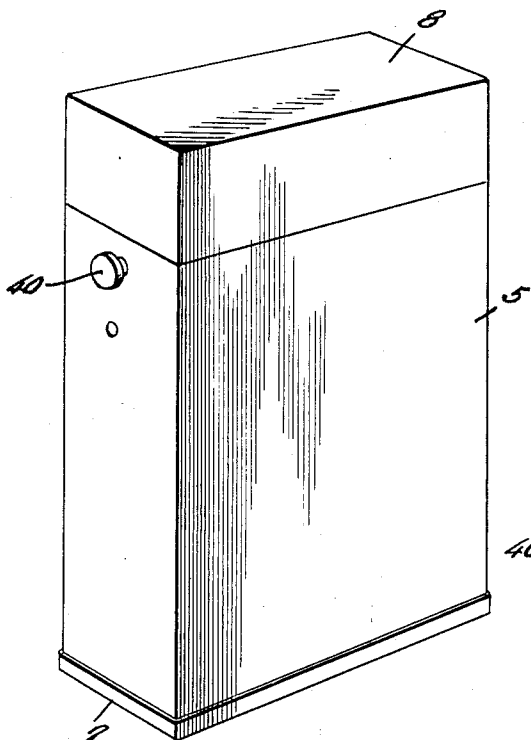


Fig. 2.

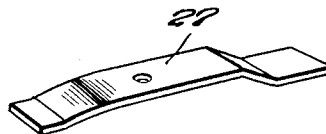
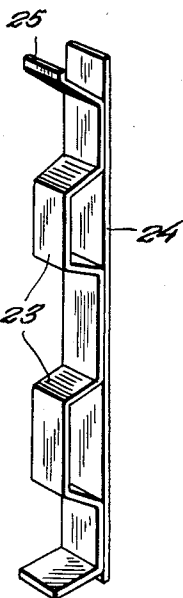
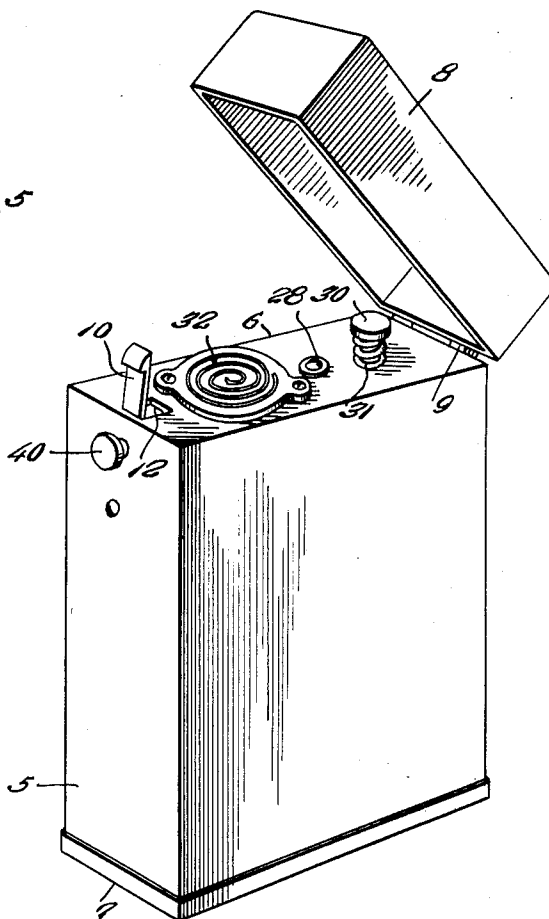


Fig. 7.

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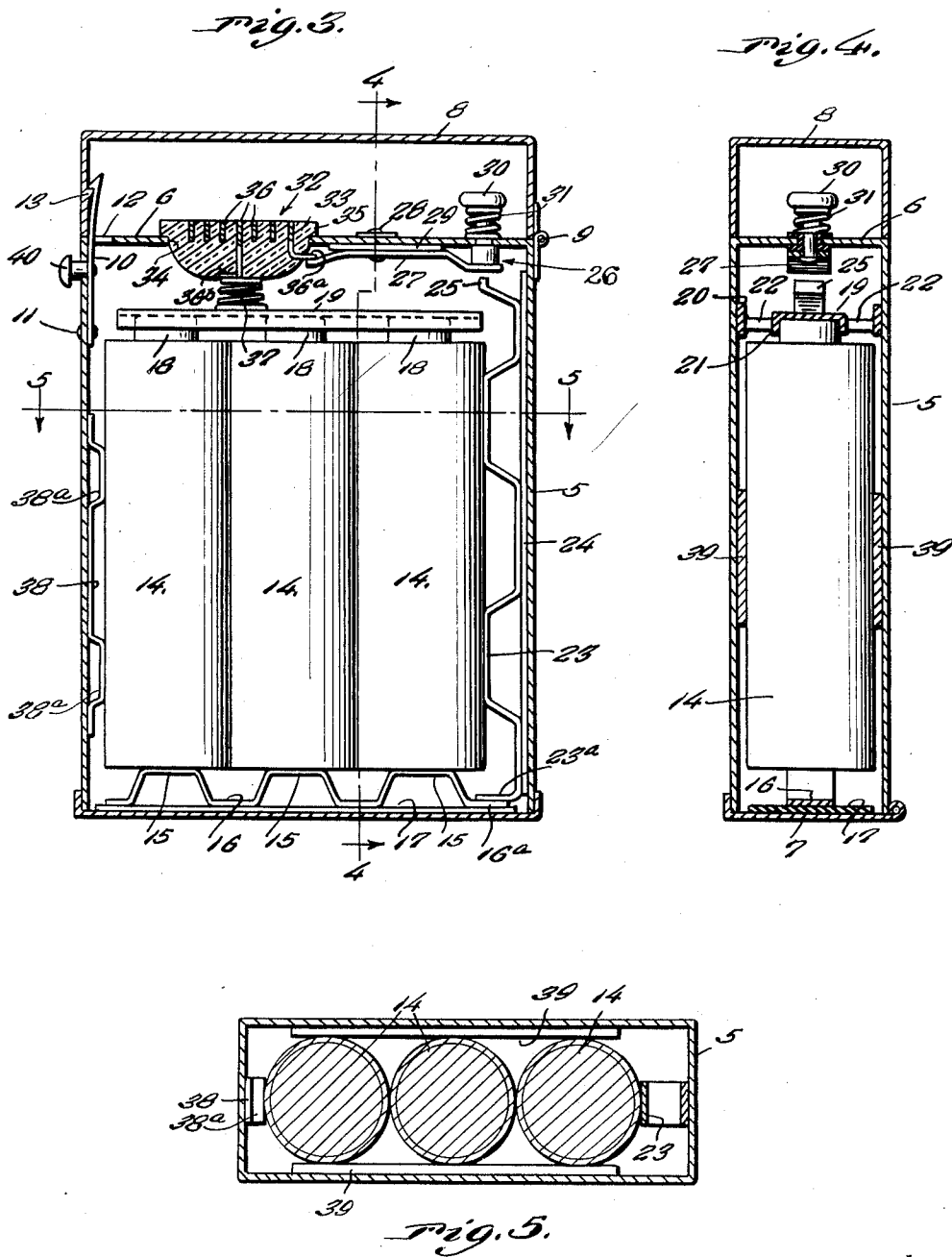
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2 Sheets-Sheet 2



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CIGAR AND CIGARETTE LIGHTER

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Application April 26, 1940, Serial No. 331,884

4 Claims. (Cl. 219—32)

This invention relates to portable cigar and cigarette lighters, and among the objects of the invention are (1) to provide a lighter of this character which is safe and efficient in operation, (2) to provide a lighter of this character through the medium of which a cigar or cigarette may be lit out of doors without inconvenience due to excessive wind, (3) to provide a cigarette lighter that is characterized by economy of structure and also of maintenance, and (4) to provide a cigarette lighter of this character which can be easily and efficiently operated to the advantage of the user thereof.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein—

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

Figure 2 is a view similar to Figure 1 but with the cover in open position.

Figure 3 is a sectional view through the lighter with certain parts shown in elevation.

Figure 4 is a vertical transverse sectional view taken substantially on the line 4—4 of Figure 3.

Figure 5 is a horizontal sectional view taken substantially on the line 5—5 of Figure 3.

Figure 6 is a perspective view of a conductor strip.

Figure 7 is a perspective view of a switch contact strip.

Referring more in detail to the drawings it will be seen that in the preferred embodiment thereof the cigar and cigarette lighter comprises a relatively flat substantially rectangular casing 5 having at the top thereof an integral wall 6, and for the bottom thereof a removable flanged bottom plate 7 that telescopes the casing 5 as shown.

Further, for the casing 5 there is provided a substantially channel-shaped cover or lid 8, that at one end thereof is hinged to an end wall of the casing 5 through the medium of a spring hinge 9, the same serving to yieldably and normally urge the lid or cover 8 to an open position.

For releasably retaining the cover or lid 8 in a closed position there is provided a spring latch 10 that at one end is anchored to a wall of the casing 5 as at 11. The latch member 10 extends through a slot 12 provided therefor in the wall 6 and is cooperable with a keeper lug 13 provided on an end wall of the cover or lid 8 as clearly shown in Figure 3.

Further, in accordance with the present invention there are provided a plurality of batteries,

preferably three, 14 that are accommodated within the casing 5 and seat on the humps 15 of a substantially sinuous conductor ribbon 16 the latter being welded or otherwise secured to a strip 17 of dielectric material.

When properly positioned within the casing 5 the batteries 14 are in peripheral contact and the poles 18 thereof are in electrical contact with a battery connector plate 19, the same being anchored or secured in the upper portion of the casing 5 through the medium of strips 20 of insulation material secured in any suitable manner to opposing walls of the casing 5 and connected with depending flanges 21 of the connector plate 19 through the medium of braces 22 which at one end are integral with or otherwise positively united with the strips 20, and at an opposite end integral with or otherwise positively united with the flanges 21 of the connector plate 19.

Also in electrical contact with the periphery of one of the endmost batteries 14 is a sinuous conductor ribbon 23 that is also welded to or otherwise positively secured to a strip 24 of similar material that is preferably secured in any suitable manner to an end wall of the casing 5.

At one end thereof the conductor strip 23 has a terminal part 23a that overlaps and is in electrical contact with the terminal part 16a of the conductor strip 16.

At the opposite or upper end thereof the strip 23 is formed as at 25 to present what may be termed the stationary contact of an electric switch indicated generally by the reference numeral 26.

In addition to the stationary contact 25 the aforementioned switch 26 embodies a movable contact 27 in the form of a resilient strip riveted or otherwise secured as at 28 to the wall 6 of the casing; a piece 29 of insulating material being interposed between the wall 6 and an intermediate portion of the strip 27 as clearly shown.

One end of the contact 27 is arranged to be flexed into and out of engagement with the contact 25 and that said one end is suitably engaged by the shank of a switch button 30; the shank of said button being movable thru a suitable opening provided therefor in the wall 6 of the casing. The said switch contact end of the strip 27 is normally flexed upwardly and out of engagement with the switch contact 25 and the button is normally held in raised position through the medium of a coil spring 31 interposed between the wall 6 of the casing and the head of the button 30 as shown in Figure 3.

An ignition element indicated generally by the

reference numeral 32 is provided, and in this form of the invention said element embodies a body 33 of dielectric material in the form of porcelain, glass or similar material; the same being preferably of the shape shown and seating within a suitable opening 34 provided therefor in the wall 6. As noted the body 33 of the heating element is provided with an outstanding peripheral flange 35 that seats against the top surface of the wall 6.

Embedded in the body 33 of the heating element is a thermal ribbon 36 arranged in the form of a coil and having a terminal 36a projecting laterally from the body 33 and in direct and immediate contact with one end of the switch contact strip 27.

The other end, 36b, of the ignition coil 36 is engaged by a coil spring 37 that seats on the battery connector bar 19 and serves as an electrical connection between the ignition coil 36 and the connector bar 19; the spring being expansible and contractible as may be required because of the space between the end 36b of the ignition coil 36 and the connector bar 19.

Further completing the assembly there is provided what may be termed a filler strip 38 secured to or otherwise held in contact with the inner surface of a wall of the casing 5 directly opposite to the conductor strip 23 and having humps 38a in bearing contact with an adjacent battery 14.

Also arranged onto opposite walls of the casing 5 are strips 39 of insulating material and which, together with the strips 38 and 23 serve to retain the batteries 14 in fixed position within the casing, in intermediate contact with one another and against casual displacement.

With the device assembled as shown and described, the same may be used as follows: The latch member 10 is flexed out of engagement with the keeper lug 13 by pressure of the thumb or finger on the stud or knob 40 provided as shown in Figure 3 for the latch 10, whereupon, in response to the action of spring hinge 9 the cover or lid 8 will spring upwardly to open position, or substantially to the position suggested in Figure 2. The operator then with the thumb to finger of the other or same hand presses downwardly on the switch button 31 so that switch contact 27 will engage switch contact 25 thus establishing the battery circuit through the coil 36 causing the coil 36 to glow. In this connection it will be appreciated that the circuit will be closed as long as the finger is held on the switch button 30, but as soon as it is released the spring 31 will be effective and force the button upwardly so as to permit the contact to be broken.

It will also be apparent that the batteries 14 may be removed from the casing 5 or repositioned therein through the bottom of the casing, the bottom plate 7 of the casing being easily removed and just as easily repositioned on the bottom of the casing 5.

It is thought that a clear understanding of the construction, assembly, operation, and manner of using a lighter of this character will be had by those skilled in the art without a more detailed description thereof.

It is also to be understood that while I have herein shown and described the preferred embodiment of the invention it is in nowise intended to limit the invention beyond the requirements of the prior art and the scope of the claims hereunto attached.

Having thus described the invention, what is claimed as new is:

1. In a portable electric lighter of the character described, a casing, a plurality of batteries and an igniter in said casing, a battery connector plate engaged with the poles of the batteries, a conductor strip engaging the batteries at the ends thereof remote from said poles, said conductor strip having a free end constituting a switch contact, a resilient switch contact strip mounted in the casing and having one end electrically connected with the igniter and a free end arranged to be flexed into and out of engagement with said switch contact, and a spring biased switch button mounted in the casing in engagement with said end of the switch contact strip for flexing said end of the strip into engagement with the first-named switch contact for controlling the circuit to the igniter, and an electrical connection between the battery connector plate and said igniter.

2. In a portable electric lighter of the character described, a casing, a plurality of batteries and an igniter in said casing, a battery connector plate engaged with the poles of the batteries, a conductor strip engaging the batteries at the ends thereof remote from said poles, said conductor strip having a free end constituting a switch contact, a resilient switch contact strip mounted in the casing and having one end electrically connected with the igniter and a free end arranged to be flexed into and out of engagement with said switch contact, a spring biased switch button mounted in the casing in engagement with said end of the switch contact strip for flexing said end of the strip into engagement with the first-named switch contact for controlling the circuit to the igniter, and a coil spring electrically connecting the igniter and battery connector plate.

3. In a portable electric lighter of the character described, a casing, a plurality of batteries and an igniter in said casing, a battery connector plate engaged with the poles of the batteries, a conductor strip engaging the batteries at the ends thereof remote from said poles, said conductor strip having a free end constituting a switch contact, a resilient switch contact strip mounted in the casing and having one end electrically connected with the igniter and a free end arranged to be flexed into and out of engagement with said switch contact, a spring biased switch button mounted in the casing in engagement with said end of the switch contact strip for flexing said end of the strip into engagement with the first-named switch contact for controlling the circuit to the igniter; a coil spring electrically connecting the igniter and battery connector plate; a hinge cover for said casing substantially housing said switch button and igniter when the cover is in closed position, and a resilient latch mechanism for releasably securing said cover in closed position.

4. In a portable electric lighter, a casing, batteries therein, a stationary plate extending across the top of the casing and having an opening therein, an electrical igniter unit including a body of non-conducting material and a coil embedded in the top of the body and having terminals extending through lower parts of the body, said body being supported in the hole in the stationary plate, a battery connector plate mounted in the casing below the first-mentioned plate and engaged by the upper ends of the batteries, a coil spring located between the bottom

of the igniter unit and said connector plate and engaging one of the terminals of the coil, a conductor member engaging the lower ends of the batteries and having a part extending up through a side part of the casing, a spring strip connected with the underside of the stationary plate and having one end connected with the second

5 terminal of the coil and its other end normally spaced from the upper end of the conductor strip and a manually operated member carried by the stationary plate for pressing the last-mentioned end of the spring strip against the upper end of the conductor strip to close the circuit to the coil.

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