May 15, 1928. 1,669,849

C. BAIA

CIGAR LIGHTER

Original Filed Aug. 4, 1925

FIGURE 1

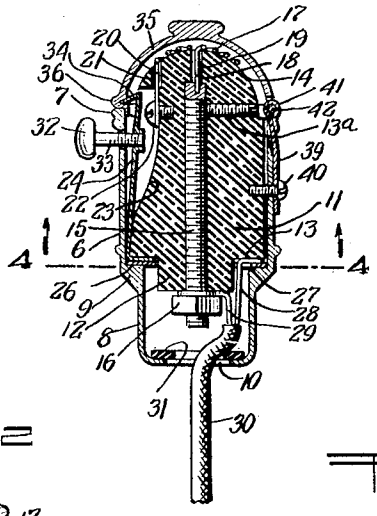


FIGURE 2

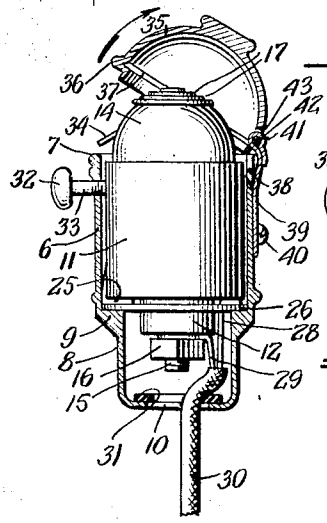


FIGURE 3

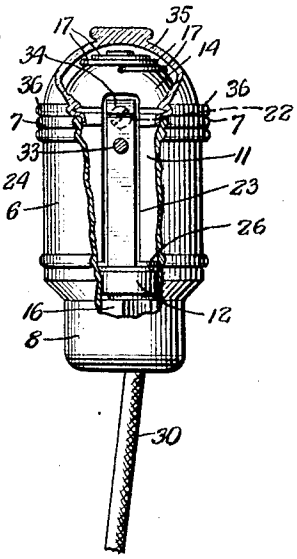


FIGURE 4

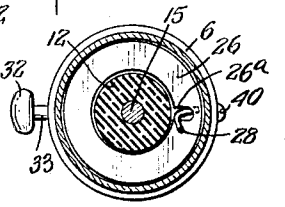
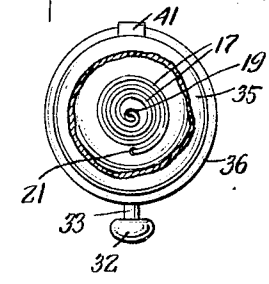


FIGURE 5



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Patented May 15, 1928. 1,669,849

UNITED STATES PATENT OFFICE.

CHARLES BAIA, OF WEST NEW YORK, NEW JERSEY.

CIGAR LIGHTER.

Application filed August 4, 1925, Serial No. 48,015. Renewed September 23, 1927.

My invention relates to cigar lighters used for lighting cigars, cigarettes, stogies and the like.

My invention comprehends a number of improvements in cigar lighters, among them being the following:

1. To render the lighting mechanism practically waterproof, by enclosing the same in a suitable casing adapted for this purpose.

2. To employ electrically operated mechanism located within the casing and controllable by contact mechanism so arranged that the operator, by simply pressing his thumb upon a single button, opens the casing and energizes the lighting mechanism.

3. To give the various parts such form and arrangement that the cover opens with a snap each time the button is pressed for the purpose just stated.

4. To give various parts such form and arrangement as to improve the general efficiency of the device.

Reference is made to the accompanying drawing forming a part of the specification, and in which like reference characters indicate like parts throughout the several figures.

Figure 1 is a substantially central section through my improved cigar lighter, the casing being shown as closed and the contact mechanism in such condition that the lighting mechanism is de-energized.

Figure 2 is a side view showing the casing in section and various other parts in elevation.

Figure 3 is an elevation with parts of the device indicated as broken away.

Figure 4 is a section on the line 4—4 of Figure 1, looking in the direction indicated by the arrows.

Figure 5 is a plan view of the device, showing the cover as partly broken away.

The casing appears at 6 and has generally the form of a cup. It is provided with an annular head 7 and with a substantially cylindrical portion 8 of reduced diameter. This portion being provided with an opening 10.

Located within the casing is a core 11 made of insulating material capable of withstanding considerable heat. For this purpose lava, earthenware, porcelain, or the like may be employed.

The core 11 is provided with a portion 12 of annular form which extends down into the portion 8 of the casing. Encircling this portion 12 is a shoulder 13 of annular form. A screw 13ª, carried by the core 11, engages the screw 15 and holds it firmly in position.

The core 11 is provided with a portion 14 which is rounded and approximates a hemispherical form.

A metallic screw 15 extends into the core 11, which is provided with a threaded hole for this purpose, and a nut 16 is fitted upon one end of this screw as indicated more particularly in Figure 1.

A heating wire is fitted upon the rounded portion 14 of the core and is used for lighting the cigars or cigarettes. The heating wire 17 is provided with an end portion 18 which extends through a hole 19 and is secured to the screw 15 in any appropriate manner, preferably by soldering or by brazing. The heating wire is provided with another end portion 20 which extends through a hole 21 in the core and is secured by a screw 22. This screw serves the double purpose of a contact member and a means for holding the end portion of the heating wire.

The heating wire may be made of any heating resisting metal suitable for the purpose; as for instance, nichrome, Monel metal, or any of the various alloys used in making other kinds of heating wire.

The core 11 is provided with a slot 23, extending in a general direction substantially parallel with the axis of the core, as may be understood from Figure 3. Located within this slot is a leaf spring 24 provided with an end portion 25 bent to substantially right-angle and engaging the shoulder 13 of the core. The bent portion 25 engages the clamping washer 26 having a general annular form, and encircling the annular portion 12 of the core, as may be understood from Figures 1 and 4.

The annular washer 26 is provided with a slot 26ª of the form shown more particularly in Figure 4. A wire 28, used for supplying electric current as hereinafter described, extends in between the clamping ring 26 and the annular shoulder 13, as shown in Figures 1 and 4, so that the annular washer 26 and the adjacent end portion of the wire 28 are clamped together between the annular shoulder 9 of the casing and the annular shoulder 13 of the core. This arrangement insures a good metallic communication between the

wire 28, the annular washer 26 and the spring 24.

Another wire 29 runs parallel with the wire 28, and the two wires are incorporated in a conducting cord 30. The end portion of the wire 29 extends in between the metallic nut 16 and the adjacent annular portion 12 of the core 11. By this arrangement good metallic communication is established between the wire 29, the metallic screw 15, and the heating wire 17.

A washer 31 of insulating material fits into the bottom of the portion 8 of the casing and serves to prevent the cord conductor 30 from being chafed by the adjacent edge portion of the casing.

The leaf spring 24 carries button 32, mounted upon a stem 33, which extends through a hole in the wall of the casing. The upper end of the leaf spring is bent to an obtuse angle thus forming a latch 34, as may be understood from Figure 1. The operator by pressing upon the button 32 with his thumb can flex the leaf spring 24.

A metallic cap 35, having substantially a hemispherical form, is carried by the casing 6 and forms a closure for the casing. This cap is provided with an annular bead 36, which is adapted to engage the annular bead 7 of the casing. These annular beads strengthen the members carrying them and tend to improve the appearance of the device. The cap 35 is further provided with an annular groove 37, so located that when the cap is pressed down upon the casing into the position indicated for it in Figure 1, the leaf spring 34 is slightly flexed and the latch 34 snaps into the groove 37 and holds the cap down firmly in position, thus effectively closing the casing and rendering the same practically watertight.

The casing 6 is provided with a slot 38 as shown more particularly in Figure 2. Located adjacent this slot and movable so as to readily close the same is a leaf spring 39, secured to the casing by a screw 40 and provided with an eye 41. The upper portion of the spring 39 is slightly curved as indicated in Figure 3, and extending through the eye 41 is a pin 42 carried by the cap 35. Thus the cap 35 is journaled upon the casing. The parts are so proportioned and arranged that when the top 35 is pressed downwardly, or in other words, when the casing is closed, the leaf spring 39 is stretched in the direction of its length and thereby flattened out and rendered comparatively straight, as may be understood by contrasting Figures 1 and 2. From this it follows that whenever the casing is closed the leaf spring 39 is under tension in the sense that it is pulling upon the adjacent portion of the cap. As a result of this arrangement, when the various parts occupy the positions indicated for them in Figure 1, by pressure upon the button 32 the latch 34 is moved inwardly and releases the cap 35, this cap abruptly swings open, as indicated by the arrows in Figure 2.

The parts are so proportioned that when the latch 34 extends into the groove 37 it holds the cap very firmly down on the casing.

As will be noted from the foregoing explanation, whenever the operator presses upon the button 32 so as to cause the leaf spring 34 to flex, two distinct objects are accomplished. First, the latch 34 is removed from the groove 37 and the cap 35 is thus released, so that it snaps from one of its normal positions into the other, or in other words, the casing flies open. Second, the leaf spring 24, considered as a contact member, makes engagement with the screw 22, also considered as a contact member. The engagement of these two contact members closes a circuit through the heating wire 17.

This circuit may be traced as follows: Wire 28, metallic washer 26, spring 24, screw 22, heating wire 17, screw 15, wire 29 through conducting cord 30 to source of supply, not shown, and thence back through wire 28.

Since the spring 24 never engages the screw 22 except when the operator presses upon the button 32, the electric circuit is also opened when the casing is closed; and even with the casing opened the circuit does not remain closed except when the operator continues pressing the button 32. Thus even with the casing open there is no undue waste of current, because the operator leaves the circuit open except when he is actually using the heating wire 17 for purposes of lighting the cigarette or the like.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is as follows:

A device of the character described, comprising a casing, a cover journaled upon said casing and movable for the purpose of opening and closing the same, a core made of insulating material and fitted into said casing, said core being provided with a slot, a spring member carried by said core and located within said slot, a heating coil mounted upon said core and so located as to be exposed whenever said casing is opened, and a stationary contact member connected with said heating coil and located partially within the path of travel of said spring member, said stationary contact member and said spring member serving as contact mechanism for controlling said heating coil.

Signed at Jersey City, in the county of Hudson and State of New Jersey, this 30th day of July.

CHAS. BAIA.