March 29, 1932. C. M. PETERSEN 1,851,402

CIGAR LIGHTER

Filed May 31, 1929 2 Sheets-Sheet 1

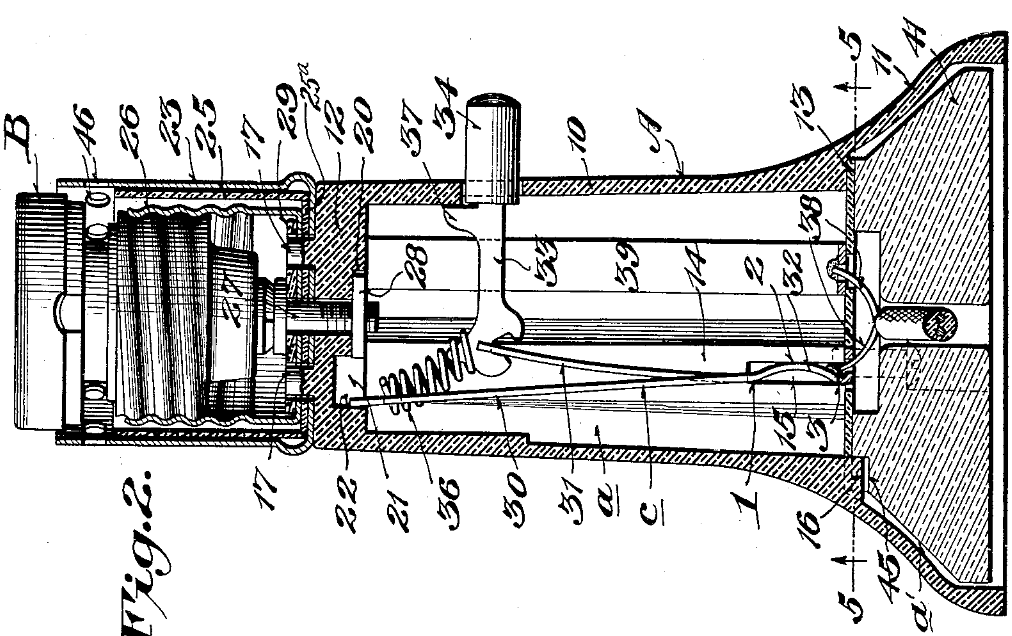

Fig. 2.

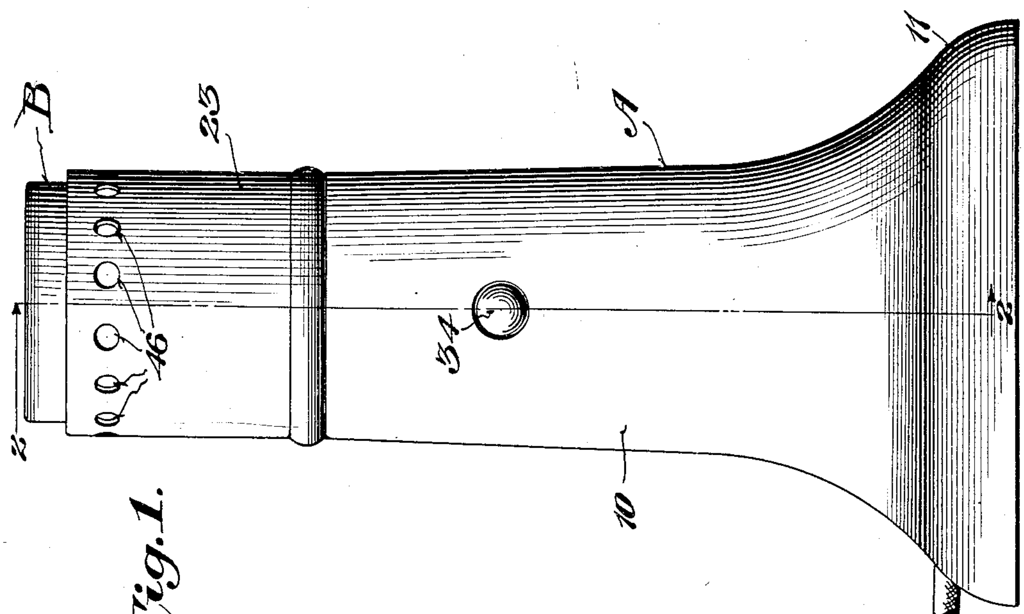

Fig. 1.

Witnesses:-

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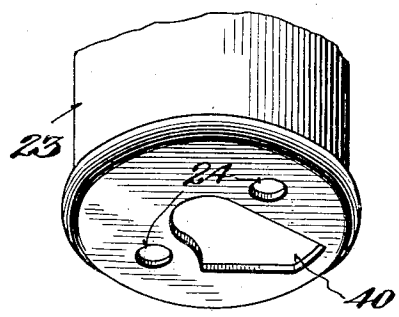
Fig. 3.



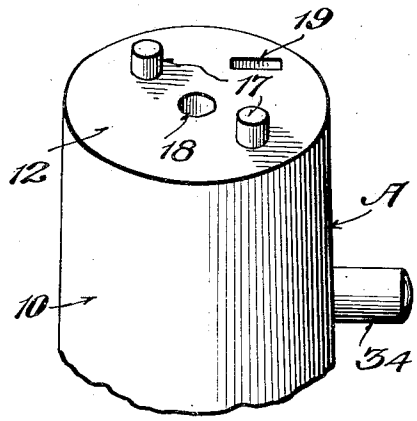


Fig. 4.

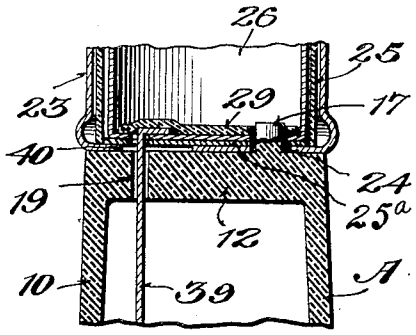


Fig. 5.

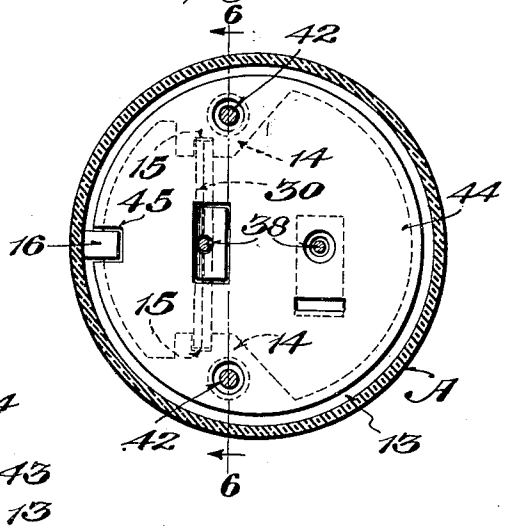
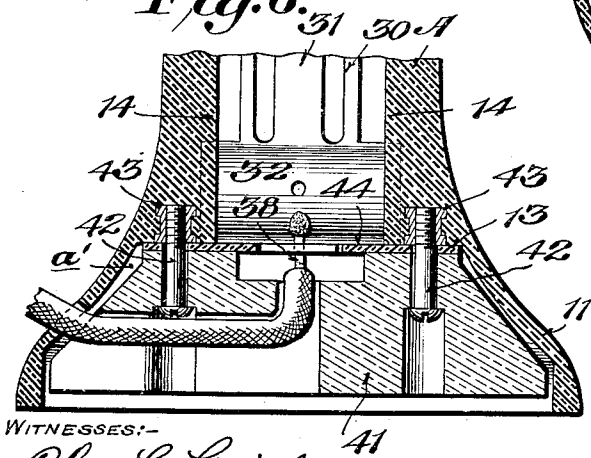


Fig. 6.



WITNESSES:-

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UNITED STATES PATENT OFFICE

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CIGAR LIGHTER

Application filed May 31, 1929. Serial No. 367,369.

This invention relates to cigar or cigarette lighters of the electrical type and has particular reference to a device of the type disclosed in my prior application No. 265,151, filed March 27, 1928, now Patent No. 1,762,075, issued June 3, 1930.

A general object of the invention is to provide a device of the class described which is light in weight, strong, durable, of attractive appearance, and which is thoroughly reliable and efficient in use, thereby enhancing the device from a practical and manufacturing standpoint.

Another object of the invention is to provide a device embodying a novel casing or standard which may be made of moldable insulating material and which possesses novel structural features and characteristics which facilitate assembly and also contribute materially to the general usefulness and appearance of the device.

A further object of the invention is to provide a novel receptacle for receiving the heating unit, the same including a metallic guard surmounting the base or standard and having insulation and ventilation means which provide for the safety of the device in use and also protect the user against unduly heated exterior surfaces.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the drawings, wherein like characters of reference denote corresponding parts of the different views:

Figure 1 is a side elevation of a cigar lighter constructed in accordance with the present invention.

Figure 2 is a vertical section on the line 2—2 of Figure 1.

Figure 3 is a detail perspective view showing the upper part of the insulating body and the lower part of the shield element of the present device in separated relation.

Figure 4 is a detail vertical section through the upper portion of the insulating body and the lower portion of the screw shell and the shield element of the present device.

Figure 5 is a section on the line 5—5 of Figure 2; and

Figure 6 is a section on the line 6—6 of Figure 5.

Referring to the drawings in detail, A designates, generally, the hollow body or supporting housing of the present lighter, B an electric resistance unit constituting the lighter proper of the present device, and C, a switch mechanism, contained within said body or housing, for controlling a circuit in which said resistance unit is included.

The body A, in accordance with the present invention, is molded from insulating material, such as bakelite, into any suitable design, same being inclusive in this instance of an upright, approximately cylindrical portion 10, flared outwardly at its lower end into a relatively wide base as indicated at 11, and closed at its upper end by a wall 12. This body is of hollow construction to afford a switch chamber a within the portion 10 and a chamber a' within the base 11, said chamber being of greater width than said switch chamber whereby a shoulder 13 is formed between said chambers. Reinforcing ribs 14, 14, formed integrally with the body A, extend longitudinally of the portion 10 of said body and project into the chamber a at opposite sides thereof. These ribs terminate at their lower ends flush or substantially flush with the shoulder 13 and each of them has formed therein a recess 15 opening through the lower end and the inner side of the rib. In addition, a lug or key 16 is formed integrally with the body A and this lug or key projects downwardly from the shoulder 13 a short distance into the chamber a'.

Formed integrally with the body A and projecting upwardly from the top wall 12 thereof is a pair of pins 17, 17, while formed through said wall, is a central opening 18 and a slot 19 located to one side of said central opening. A recess 20 is formed in the under or bottom face of the wall 12 and this recess opens at one side into a deeper recess 21, one wall of which constitutes a stop abutment 22 for a movable contact element of the switch

mechanism C, which mechanism presently will be described in detail.

A cup-like shield element 23, formed from sheet metal or other suitable material, and provided with holes 24 in its bottom wall to receive the pins 17, rests upon the upper face of the wall 12. Disposed within this shield element is a metallic screw shell 26 which also has openings in its bottom wall to receive the pins 17. Insulation including the tubular sleeve 25 and the disk 25*a* is disposed between said shield element and said screw shell. The shell 26 together with the insulation 25—25*a* and the shield element 23 are secured to the wall 12 by a screw 27 which passes through alined holes in said parts and through the opening 18 and has threaded engagement with a nut 28 seated in the recess 20. Said screw is insulated from the shell 26 by an insulating disk or washer 29, the head of said screw thus being adapted to constitute a center contact within the shell 26, and the nut 28 being adapted to constitute the fixed contact of the switch mechanism C previously mentioned. When secured to the body A by the screw 27, the parts 23, 25, 26 and 29 obviously are held against rotation relative to said body by the pins 17.

The switch mechanism C is inclusive of a blade 30 cut or slotted to provide a spring arm 31 and bent or dished at its lower end as indicated at 32. The side edge portions of this bent or dished lower end portion 32 are adapted to be engaged in the recesses 15 as shown in Figs. 2 and 6 of the drawings, dishing of said portion providing three points of contact, designated 1, 2 and 3, between the side walls of the recesses 15 and the blade 30, whereby the latter is held firmly at its lower end against movement. Said blade extends upwardly and is of such length that its upper end is disposed within the recess 21 for movement, by flexure of the blade, either into engagement with the stop 22 or into engagement with the contact constituted by the nut 28. An actuator 33 is supported at its inner end upon the free upper end of the spring arm 31 and at its outer end is provided with a push button form of handle 34 which is slidably mounted within an opening formed in the side of the body A. Between said actuator and the free end portion of the blade 30 is arranged a coil spring 36 which functions, when the free end portion of the spring arm 31 is moved to the left of the plane of the blade 30, as viewed in Fig. 2 of the drawings, to snap the upper or free end portion of the blade 30 against the contact 28, and to snap said blade away from said contact and against the stop 22 when said spring arm is moved to the right of the plane of said blade, as viewed in said figure. The spring arm 31 is bent so that normally its upper end is disposed to the right of the plane of the blade 30 as viewed in Fig. 2, whereby the free or upper end of said blade is disposed normally disengaged from the contact 28 and against the stop 22, a projection 37 being formed on the actuator 33 for engagement with the side wall of the body A to limit outward movement of said actuator under the influence of the resiliency of the spring arm 31 and the spring 36. Thus, by pushing inward on the handle 34 the blade 30 will be snapped into engagement with the contact 28, and upon release of pressure against said handle the parts will automatically be restored by a snap action to the status shown in Fig. 2.

Connected with the lower end of the blade 30 is one of a pair of line wires 38, 38, the other of which is connected with the lower end of a conductor in the form of a metal strip 39 which extends from the lower end of the chamber *a* upwardly through the slot 19, through an opening 40 formed in the shield 23, and through the insulating member 25 into engagement with the screw shell 26. Thus, the resistance unit B, which is threaded into the shell 26 and which is inclusive of a center contact engaging the screw 27, is placed in circuit with the line wires 38 when the handle 34 is pushed inwardly and this circuit is broken when said handle is released.

By reference to Figs. 2 and 6 of the drawings, it will be observed that the bottom of the body A is open whereby the switch mechanism C is insertable into and removable from said body through the open bottom thereof. To close the bottom of said body when the switch mechanism C has been assembled therein, a backing 41 is provided. This backing, which conforms in general to the shape of the chamber *a'*, preferably is formed from porcelain or other insulating material of a heavy nature, whereby it serves to weight the base of the lighter to assist in maintaining same in an upright position. Said backing is formed with suitable openings for the reception of the line wires 38 and fastening screws 42, which latter are engageable with threaded inserts 43, molded into the body A at the bottoms of the ribs 14. Thus, when said backing is secured in the chamber *a'* it serves to hold the switch mechanism C within the chamber *a*. A disk of insulation 44 preferably is interposed between the backing 41 and the body A, and both this disk and said backing are notched or recessed as indicated at 45 to receive the lug or key 16, whereby relative rotation between the body and the backing is prevented.

When the circuit to the resistance unit B is closed considerable heat is generated by said unit, and in order to avoid resultant excessive heating of the shield 23, the latter is provided with a series of apertures 46 through which air is adapted to circulate to maintain said shield cool, it being noted in this connection that the insulating member 25 terminates at its upper end below the upper end of

the shield and that the holes in the latter are disposed above said insulating member.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claims.

I claim:

1. In an electrical cigar lighter, a support, a shield mounted on the upper end of said support and having openings near its open end, a screw shell also mounted on the support within said shield, and an electrical igniting unit having a portion fitting in said screw shell and having a rim portion lying in the plane of the igniting unit substantially closing the open end of the shield and located above the openings therein.

2. In an electrical cigar lighter, a support, a screw shell mounted on said support, a shield surrounding said screw shell and having ventilating openings, an electrical igniting unit fitted in said screw shell and having the resistance element thereof arranged above the ventilating openings in the shield, and an insulating member between said screw shell and said shield.

3. In an electrical cigar lighter, a support, a cup-like shield element mounted on said support, a screw shell disposed within said shield element, insulation between said shield element and said screw shell, and a member constituting a center contact for said screw shell serving to secure said screw shell, said insulation and said shield element to said support.

4. In an electrical cigar lighter, a body of molded insulating material outwardly flared at its lower end to provide a supporting base, means for mounting a resistance unit on the top of said body, a switch mechanism within said body for controlling said resistance unit, inserts molded into said body, a backing within said base, and screw means passing through said backing into said inserts detachably securing said backing to said body.

5. In an electrical cigar lighter, a hollow supporting body, means for mounting a resistance unit on the top of said body, a switch mechanism within said body for controlling said resistance unit, a backing holding said switch mechanism within said body, means for securing said backing to said body, and interengaging formations between said body and said backing holding said body and backing against relative rotation.

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