

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in or relating to Cigar Lighters.

I, JAMES MADISON JACKSON, a citizen of the United States of America, of Rope and Cordage Company, Parkersburg, County of Wood, and State of West Virginia, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in cigar lighters, and has for its object to provide an improved electrical cigar lighter of the extension cord type in which an electrical heating circuit is closed as soon as the lighter is pulled forwardly toward the smoker preparatory to lighting a cigar and also having such provision as will again open the circuit when the device is released and permitted to fly back into its normal position.

Another object of the invention is to provide a device of the character described, which is capable of being used as an extension electric lamp, it being a mere matter of exchanging the preferred electrical heating unit for a standard base lamp to serve the latter purpose.

A lighter made in accordance with the invention comprises a device arranged to be taken into the hand and freely moved about, characterized by the provision of a thimble in which there is a receptacle by which an element to be heated is adapted to be carried, there being a conical end extending from the thimble in which an insulating bushing is situated, a spring contact mounted in the bushing being movable into an opening in said conical end to engage the wall of the opening and make electrical connection with one terminal of said element, an electrical cable extending into the conical end representing a circuit, one side of which has connection with said contact, the other side of

which has connection with another terminal of said element, a relatively fixed insulating bushing having a tapering bore, into which said conical end is insertible to cause depression of the contact and breaking of the circuit, being carried by a box having a shell in which said last bushing is situated, and means in the box upon which the electrical cable is capable of winding, substantially as described.

Other objects and advantages appear in the following specification, reference being had to the accompanying drawings, in which

Figure 1 is a part sectional view of the spool box and shell, portions of the device being shown in elevation,

Figure 2 is a part central longitudinal section of the lighting thimble which cooperates with said shell,

Figure 3 is a view partly in elevation and partly in section illustrating the thimble placed in the resting position in the shell,

Figure 4 is a view partly in section on the line 4—4 of Figure 1,

Figure 5 is a detail section on the line 5—5 of Figure 4, and showing a detail of the cable spool.

In carrying out the invention provision is made of a box 1 in which a spool 2 is rotatably mounted. The box has a cover 3 (Fig. 4) which, when placed upon the otherwise open side of the box, assists in holding the shaft 4 of the spool in position. The spool includes a drum 5 (Figs. 4 and 5) in which a spring 6 is so arranged as to continuously tend to turn the spool in the counter-clockwise direction and thereby keep the electric cable 7 wound up within the box 1.

Extending from the box 1 is a sleeve or shell 8. This shell is externally threaded part of the way to receive one or more nuts 9 by means of which con-

nection is intended to be made with a support. Only one nut is indicated in the drawing, but in practice several are obviously used. The shell 8 has an internal insulating bushing 10 with a tapering bore 11. The electric cable 7 extends out through the bore when the cigar lighter is in use as shown in Figures 1 and 2. A thimble 12 carries a metal receptacle 13 into which is insertible the base 14 of either a small electric lamp, or preferably (to carry out the purpose of the invention) the base of a suitable heating element 15. This element is of the electrical resistance variety, being of such character that when the electrical current passes there-through it becomes sufficiently hot to light the end of a cigar introduced in the open end of the thimble 12.

The end of the base 14 is engageable with the center contact 16 which is carried by an insulating plug 17 in the conical end 18 of the thimble. The center contact is pressed by a spring 19 in one direction and is prevented from being moved out of the bore of the plug by a head 20 and a closure 21.

A side contact 22 is operable at an opening in the conical end 18. A spring 23 tends to press the contact 22 outwardly and thus make contact with the wall of the opening. The spring engages a strip 24 with which one wire of the cable 7 connects as shown. The other wire of the cable has suitable connection with the spring 19. It is readily seen that when the thimble 12 is extended as shown in Figure 2, the side contact 22 will be in engagement with the conical end 18 (which is made of metal) establishing a circuit through the base 14 and element 15 so that sufficient heat may be had for the lighting of the cigar.

Electrical current is conducted to the cable in any suitable manner. In practice the arrangement must be such that current will be conducted regardless of the fact that the spool 2 is adapted for turning. Conventional sliding contacts may be used for the purpose, and current is supplied at terminals 25 and 26. However, the spool 2, its mounting in the box 1 and the manner of supplying the electrical current may be conventional, the particular feature to be borne in mind being the construction of the thimble 12 and the shell 8 with which it cooperates.

The operation is readily understood. As already stated, the tendency of the spring 6 (Fig. 5) is to turn the spool 2 in the counter-clockwise direction so as to wind up the cable 7 and hold the thimble 12 in the space within the shell 8. The

position then assumed is illustrated in Figure 3. The conical end 18 will be held in engagement with the tapering wall or bore 11 of the insulating bushing 10. The side contact 22 being engaged with the tapering bore, is depressed against the tension of the spring 23, causing disconnection of the contact from the wall of the opening in the conical end 18. This breaks the electrical circuit which may otherwise be traced through the lamp base 14. Upon desiring to use the cigar lighter the thimble 12 is taken hold of and pulled outward. The cable 7 will unreel from the spool. The spring 23 will press the otherwise unobstructed side contact 22 into engagement with the wall of the opening in the conical end 18, establishing the electrical circuit spoken of before and causing a desired heating of the element 15. This element, as already stated, may be of any conventional resistance type. After the cigar has been lighted, the user may simply let go of the spindle 12 whereupon the spring 6 (which was previously put under tension) will turn the spool 10 until the conical end 18 finds its way into the shell 8. The side contact 22 is again depressed, and the electrical circuit is open.

While the construction and arrangement of the improved cigar lighter is that of a generally preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A cigar lighter comprising a device arranged to be taken into the hand and freely moved about, characterized by the provision of a thimble in which there is a receptacle by which an element to be heated is adapted to be carried, there being a conical end extending from the thimble in which an insulating bushing is situated, a spring contact mounted in the bushing being movable into an opening in said conical end to engage the wall of the opening and make electrical connection with one terminal of said element, an electrical cable extending into the conical end representing a circuit, one side of which has connection with said contact, the other side of which has connection with another terminal of said element, a relatively fixed insulating bushing having a tapering bore, into which said conical end is insertible to cause depression of the contact and breaking of the circuit, being carried by a box having

a shell in which said last bushing is situated, and means in the box upon which the electrical cable is capable of winding, substantially as described.

5 2. Apparatus comprising the parts set out in Claim 1, the receptacle being adapted to carry an electric lamp.

10 3. Apparatus as claimed in Claim 1 or Claim 2 being further characterized in that the thimble is metallic and has one terminal of said element in electrical connection therewith, the extension upon the thimble also being metallic, said cable including two wires of which one
15 is connected to the remaining terminal of said element and the other with said

spring contact which is guided in said insulating bushing, said spring contact when entering said opening completing the electrical circuit through said element and the wall of the opening, said box containing spring tension means by which the cable is wound substantially as described. 20

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[This Drawing is a reproduction of the Original on a reduced scale.]

