May 26, 1964 L. PRAMAGGIORE 3,134,885

ELECTRICAL DEVICE FOR LIGHTING CIGARS AND CIGARETTES

Filed Dec. 29, 1961

2 Sheets-Sheet 1

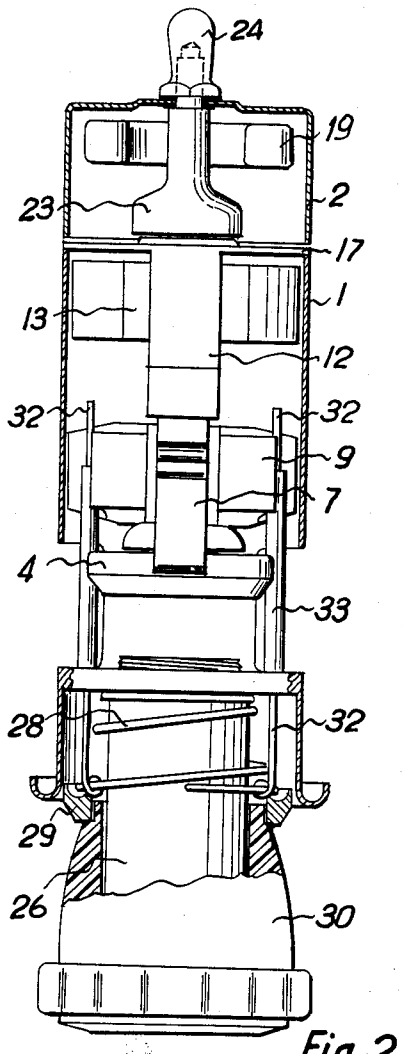


Fig. 2

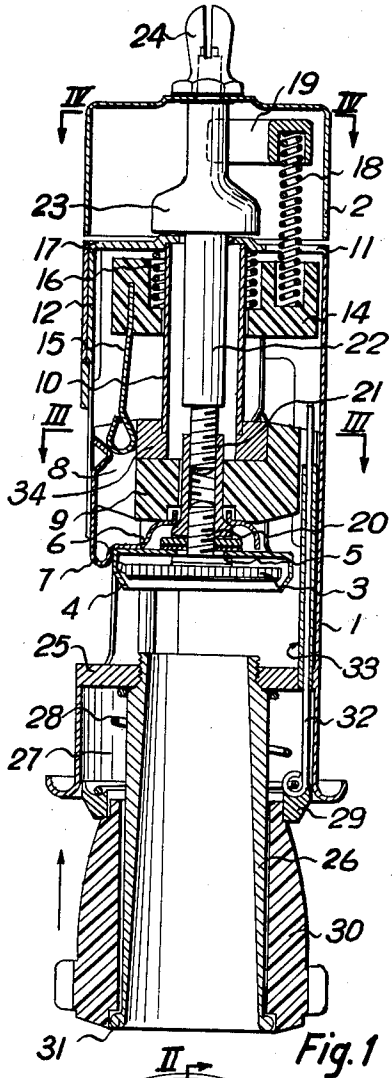


Fig. 1

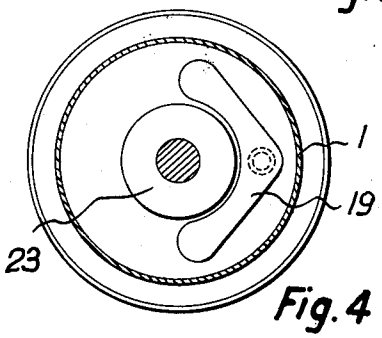


Fig. 4

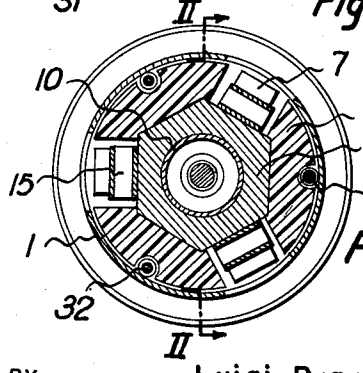


Fig. 3

INVENTOR

BY Luigi Pramaggiore

KARL W. FLOCKS

ATTORNEY

May 26, 1964 L. PRAMAGGIORE 3,134,885

ELECTRICAL DEVICE FOR LIGHTING CIGARS AND CIGARETTES

Filed Dec. 29, 1961 2 Sheets-Sheet 2

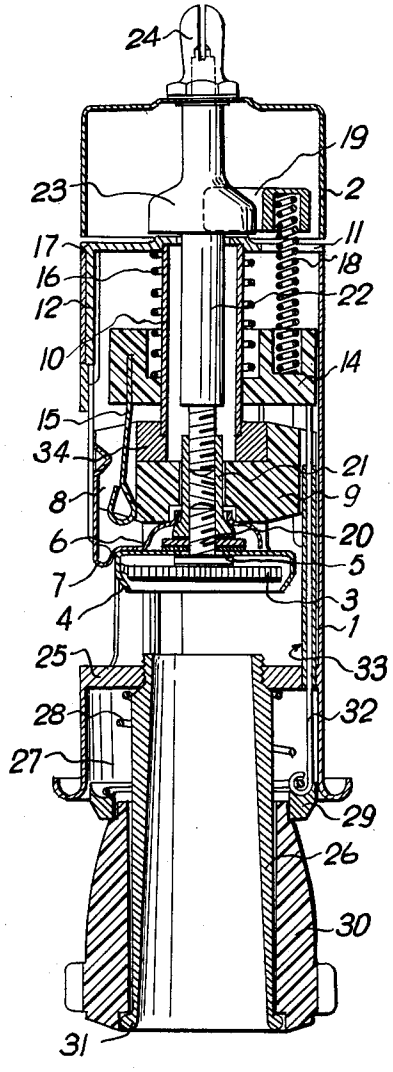


Fig. 5

INVENTOR
Luigi Pramaggiore

BY KARL W. FLOCKS

ATTORNEY

United States Patent Office 3,134,885 Patented May 26, 1964

3,134,885

ELECTRICAL DEVICE FOR LIGHTING CIGARS AND CIGARETTES

Luigi Pramaggiore, Corso Battaglione Aosta 14, Aosta, Italy

Filed Dec. 29, 1961, Ser. No. 163,191
Claims priority, application Italy Aug. 23, 1961
3 Claims. (Cl. 219—264)

This invention concerns an electrical device for lighting cigars or cigarettes.

It is among the objects of the present invention to provide an improved device of the kind before referred to. Thus according to the present invention an electrical device for lighting cigars and cigarettes, having an audible signal and being particularly adapted for use in motor vehicles, is characterized in that ignition of the cigar or cigarette is effected by pressing a knob situated on the outside of the dashboard of the motor vehicle and within easy reach of the hand, whilst the electric current to supply the resistance is conveyed by a plug situated coaxially and at the opposite end of the device, where the audible signal of bell is fitted, the striker of which is supported in cantilever fashion by a spring forced into the nucleus of insulating material in which the moving contacts are anchored.

When the knob is pressed inwards it pushes certain push-pins, fixed to its return springs, so that the ends of these, overcoming the resistance of a spring press the nucleus holding the moving contacts against the fixed contacts, thus closing the electrical circuit. When the electrical resistance has reached the temperature to light the cigar or cigarette, the fixed contacts, situated level with the moving ones round the base supporting the resistance, expand, thus releasing the moving contacts anchored to the nucleus of insulating material, so that the latter, under the influence of the spring previously compressed, returns then to their previous position.

The invention will now be described further, by way of example only, with reference to the accompanying drawings illustrating one embodiment thereof and in which:

FIG. 1 represents the device on a large scale in section along its longitudinal axis, showing it in its operating position, i.e. with the electrical resistance switched on;

FIG. 2 shows the same device in partial section along its longitudinal axis as shown by the lines II—II in FIG. 3;

FIG. 3 is a cross section along the lines III—III in FIG. 1;

FIG. 4 is a cross section along the lines IV—IV in FIG. 1; and

FIG. 5 represents a similar view of the device as in FIG. 1, showing it in its non-operating position.

Referring now to the drawings, the device consists of the usual cylindrical metal casing **1**, the front end of which is supported by the dashboard of the motor vehicle (not shown) and with the rear end provided with a bell **2**. A coiled heating resistance **3** is axially mounted inside the cylinder of the casing **1** and is lodged in a housing **4** from which it is insulated as at **5**. A small metal cap **6** having a central hole, is disposed behind and coaxially with the housing **4** and is provided with three spring metal tongues **7**, the said tongues being adapted to be operated by moving contacts and being arranged at angles of 120 deg. to each other and housed in corresponding radial recesses **8** cut in the base **9** of insulating material and in contact with hexagonal metallic piece **34** in operating position of FIG. 1. The insulating material is held in its correct position against the cup **6** and the housing **4** by a distance piece or sleeve **10** which extends to the end of the casing **1** and bears against the endplate **17**, the said endplate **17** being provided with

three keys which mate with corresponding recesses at the rear end of the casing **1** and which fit over special flats **13** on the surface of the moving nucleus **14**, from which the moving contacts **15** are suspended, with the object of securing this nucleus in its correct position. The nucleus **14**, made of insulating material and provided with a central bore, is mounted on the distance piece or sleeve **10**, and a spring **16**, wound round the latter, is provided for maintaining the nucleus—and thus the moving contacts **15**—in contact with the fixed ones **7** during the ignition period.

The endplate **17** fixed to casing **1** by three spring flats **12** spaced at 120 degrees to each other has a radial recess **11** through which passes a helical spring **18** one end of which is forced into a cavity in the nucleus **14**, and the other into another cavity in the striker **19** of the bell **2**, so that the striker is supported by the nucleus in cantilever fashion.

The housing **4** has a central hole through which passes a threaded bolt **20**, the said bolt **20** being screwed into the threaded bore of a bush **21** inserted into the centre of the base **9**. On to the other end of the bolt **20** is screwed one end of a rod **22**, the said rod **22** serving to lock together, by means of a bulbous part **23** thereof, the whole assembly comprising the endplate **17**, the sleeve or distance piece **10**, the base **9** and the cup **6**, against the housing **4**. The bulbous part **23** is tapered beyond the bell **2** and terminates in a threaded portion on to which is screwed the coaxial plug **24** to which the electricity supply is connected.

The front part of the casing **1** is provided with a partition **25** with a threaded central hole, into which is screwed the tube **26**, coaxially wtih the resistance **3**, to hold the cigarette. The partition **25** is so positioned as to form a cylindrical cavity **27** in which is housed a helical spring **28** having coils of diminishing diameter and bearing both on the partition **25** and a ring **29** situated level with the front edge of the casing **1** on a knob **30**, the knob **30** being fitted round the aforementioned tube **26** and continually pressed forward against the bead **31** at the front end of the tube **26** by the action of the spring **28**.

Three push-pins **32** are fitted into the largest coil of the spring **28**, the said push-pins **32** being arranged at angles of 120 deg. to each other. The pins **32** pass through a similar number of tubes **33** fixed to the partition **25** and extend beyond the base **9**, passing through radial recesses cut for the purpose in the said base **9**, in intermediate positions between the recesses **8**.

When the cigarette is inserted into the tube **26** and pressed against the resistance **3**, the knob **30** being pushed at the same time in the direction of the arrow, the ring **29** will press the spring **28** and compress it, thus forcing the push-pins **32** against the nucleus **14**, to which the moving contacts **15** are secured, into the position against metallic piece **34** shown in FIG. 1, that is, the ignition position, thus closing the electrical circuit. Knob **30** returns to its original position through the action of spring **28** but contacts **15** held between V-shaped contacts **7** and metallic piece **34** maintain a closed circuit. When the electrical resistance has reached the pre-arranged ignition temperature for lighting the cigarette, the fixed contacts **7** expand and their ends get further apart, releasing the tongues **15** so that the remaining section of the moving part of the device returns to its original position as shown in FIG. 5 under the pressure of the spring **16**. Also during its movement, the nucleus **14** sets in motion the striker **19**, the vibration of which rings the bell **2**.

What I claim is:

1. An electrical device comprising a hollow body, an electrical heating element mounted within said body, an

insulating nucleus mounted for reciprocal movement in said body, a knob mounted at one end of said body for reciprocal movement in relation to said body, a first spring mounted to oppose the inward motion of said knob, a second spring mounted to oppose the movement of said insulating nucleus in the same direction, fixed contact means secured to said body in electrical connection with said heating element, movable contact means slidably carried by said insulating nucleus and movable to abut against said fixed contact means, push-pins fixed to said first spring and positioned to abut against said insulating nucleus upon the inward motion of said knob, and a resilient metallic catch member mounted in the body in heat transfer relationship with said heating element and positioned to engage with and retain said movable contact means when said means is moved into contacting means, said catch member being expandable by the heat transferred from said element so as to release said spring loaded movable contact means after a predetermined rise in temperature of said heating element.

2. An electrical device for lighting cigars or cigarettes, having an audible signal and being particularly adapted for use in motor vehicles, comprising a hollow body, an electrical heating element mounted within said body, fixed contact means secured to said body in electrical connection with said heating element, spring loaded

movable contact means movable to abut against said fixed contact means, a spring loaded knob for inward reciprocal movement in said body and movement of said movable contact means in the same direction for operation of said heating element, a plug situated coaxially and at the opposite end of said body from said knob and electrically connected to said heating element through said movable and fixed contact means, a bell positioned in said body at the same end of said body as the location of said plug, and a spring mounted and a cantilever supported striker mounted on said movable contact means for reciprocal movement in said body.

3. The electrical device in accordance with claim 2 further including push-pins operatively mounted in relation to said spring loaded knob, said push-pins pushing said movable contact means into abutting position with said fixed contact means thereby closing the electrical circuit between said plug and said heating element, said fixed contact means expanding from heat of said heating element and releasing said spring loaded movable contacts for reciprocal movement to their original nonoperating position.

References Cited in the file of this patent

UNITED STATES PATENTS

2,918,559 Pramaggiore ---------- Dec. 22, 1959