Feb. 9, 1932. F. C. COPELAND 1,844,206

LIGHTER FOR CIGARS AND CIGARETTES

Filed April 18, 1927

Fig. 1.

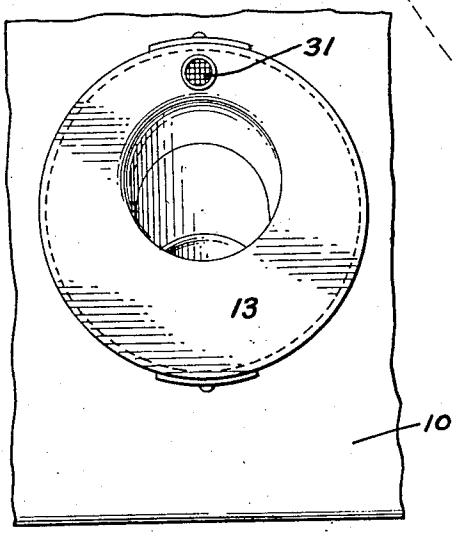


Fig. 2.

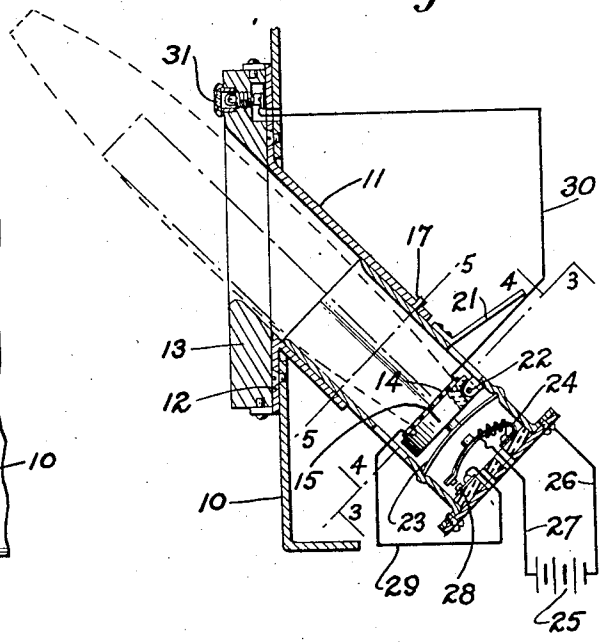


Fig. 3.

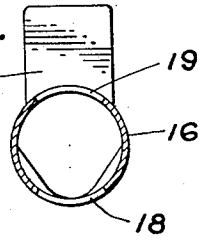


Fig. 4.

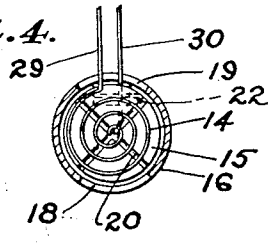


Fig. 5.

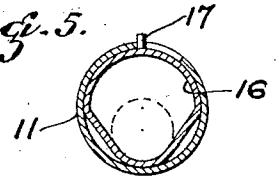
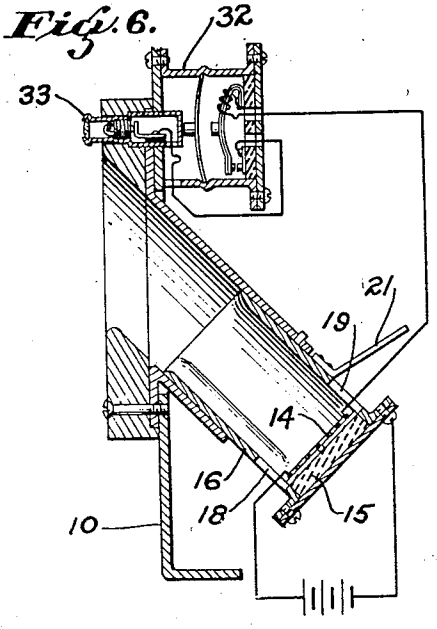


Fig. 6.



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UNITED STATES PATENT OFFICE

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LIGHTER FOR CIGARS AND CIGARETTES

Application filed April 18, 1927. Serial No. 184,571.

This invention relates to an electric lighter for cigars and cigarettes.

The principal object of the invention is to provide a simple form of lighter, comprising an electric igniting element adapted to be attached to a support such as the instrument board of an automobile, whereby cigars or cigarettes, when applied to the igniting element, will be lighted without the use of suction. This is brought about by causing the cigar or cigarette to occupy an inclined position, with the end to be lighted disposed downwardly, and arranging vent openings adjacent the igniting element, so that the air will get beneath the end of the cigar or cigarette and create a draft upwardly therethrough.

When applied to an automobile, the igniting element may conveniently be connected to the source of current which supplies the ignition to the engine, and the air currents produced by the cooling fan and the travel of the vehicle will be helpful in inducing a draft through the cigar or cigarette. Provision is made for closing the circuit, either by pressing a switch button by hand or by a thrust of the cigarette or cigar against the igniting element, and the said circuit may be opened automatically after the lapse of the required time to light the cigar or cigarette, through a thermostatic device.

In a device such as forms the subject-matter of the present application, it is not necessary to hold the cigar or cigarette in the mouth, nor to bring the igniting element into contact therewith. All that is required is to simply thrust the cigar or cigarette into the inclined guide and against the igniting element, whereupon the hand may be removed and the cigar or cigarette left in place until it is properly lighted, at which time the current is automatically cut off and the cigar or cigarette is in lighted position, ready to be smoked.

In the accompanying drawings,

Fig. 1 shows a front elevation of a device embodying my invention;

Fig. 2 shows a vertical central transverse section of the same;

Fig. 3 shows a section taken on the line 3—3 of Fig. 2, looking outwardly;

Fig. 4 shows a sectional view on line 4—4 of Fig. 2, looking inwardly;

Fig. 5 shows a sectional view on the line 5—5 of Fig. 2;

Fig. 6 shows a vertical central sectional view of a modified arrangement of the circuit-controlling means.

A supporting wall is shown at 10, which may be considered as the instrument board of an automobile. A tubular guide 11, arranged at a downward angle on a flange 12, extends through an opening in the board and is secured in place by screws passing through the flange and board. The flange is preferably covered by an escutcheon plate 13.

The igniting element includes a suitable resistance wire 14, arranged spirally on a refractory base 15 and supported in the end of a tubular extension 16. This tubular extension fits telescopically into the guide member 11 and is held therein by a bayonet joint 17, so that the igniting element may be conveniently inserted or removed without disturbing the other parts of the device.

Adjacent the igniting element the tubular extension has a lower vent opening 18 and an upper vent opening 19, whereby a current of air may pass in close proximity with the end of the cigar or cigarette, to facilitate lighting. Lighting is further facilitated by forming the refractory base with grooves 20, whereby the air will circulate beneath the resistance wires, and hence beneath the end of the cigar or cigarette. Due to the angle of the guide member, the cigar or cigarette will occupy an inclined position, with the end to be lighted extending downwardly so that air passing the lighted end will tend to move upwardly through the tobacco, thus facilitating combustion and making it unnecessary to apply suction to the cigar or cigarette during the time it is being lighted. The force of this draft through the cigar or cigarette is considerably increased where the device is applied to an automobile, since in that case the cooling fan will throw a current of air rearwardly, and considerable movement of air will also result from the travel of the

vehicle. I prefer to position a deflector plate 21 adjacent the top opening 19, so as to attract the current of air onto the igniting element and beneath the end of the cigar or cigarette. With the ventilating openings 18 and 19 above and below the igniting element, a flue action will be present at all times. This will induce a current of air around the end of the cigar or cigarette and between the resistance element and its base, which will be sufficient to cause lighting without suction, even though the tubular member be in a horizontal position.

As shown in Fig. 2, the base of the igniting element is hinged at 22, and rests against a buckling spring 23. Pressure of the cigar or cigarette against the igniting element will control the buckling spring past center, where it will contact with a thermostatic bar 24. This bar forms a circuit closer for a one-line circuit. The source of current is indicated at 25, and is grounded at one side by a lead 26. On the other side of the current source is a lead 27, coiled around the thermostatic bar and in contact therewith. The other end of the bar is free, and when pressed upon by the buckling spring is adapted to move into contact with a contact plate 28, to which another lead 29 is connected. This lead 29 extends to the resistance wires or igniting element, and the other side of the resistance wires is connected with a lead 30 which is mounted onto the frame of the device. A little signal lamp 31 is cut into the lead 30 and arranged on the escutcheon plate to indicate the condition of the circuit.

The thermostatic bar is so arranged that after a lapse of time sufficient to supply the required temperature to the igniting element for lighting a cigar or cigarette, the bar will expand against the buckling spring and throw the latter back to initial position, thus leaving the circuit broken, where it will remain until a subsequent time when a cigarette or cigar is inserted.

In the modification shown in Fig. 6, the igniting element is stationarily mounted in the end of the tubular extension 16 and a thermostatic circuit control is arranged in a housing 32 adjacent the signal light. The buckling spring in this case is moved to position where the thermostatic bar closes the circuit by provision of a cage 33 which carries the signal light, said cage being slidably mounted in the escutcheon plate, and capable of endwise movement when pressure is applied thereto with the thumb or finger.

Various changes in the construction and arrangement of the several parts herein shown and described may be employed without departing from the spirit of my invention as disclosed in the appended claims.

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

1. A lighter for cigars and cigarettes, comprising a guide, an electric igniting element at the lower end thereof, manual means for closing a circuit through said igniting element, and thermostatic means for opening said circuit.

2. A lighter for cigars and cigarettes, comprising a guide, an electric igniting element at the lower end thereof, means actuated by movement of the igniting element under the thrust of a cigar or cigarette to close the circuit through said igniting element, and thermostatic means for opening the said circuit.

3. A lighter for cigars and cigarettes, adapted to be attached to the instrument board of an automobile, comprising a guide for the cigar or cigarette secured to the instrument board and extending through an opening therein and downwardly at an angle, said guide being of sufficient length to independently support a cigar or cigarette, an igniting element at the lower end of the guide with which the end of the cigar or cigarette contacts and rests by gravity thereon, and ventilating means at the lower end of the guide to expose the end of the cigar or cigarette to a current of air, whereby a draft will be created around the end of the cigar or cigarette to cause lighting thereof through natural draft.

4. A lighter for cigars and cigarettes comprising a socket of sufficient length and so positioned as to independently support the cigar or cigarette, an electric igniting element at the inner end of the socket and comprising a support of insulating material, and a resistance wire arranged on said support, and means to permit air to circulate upwardly through the inner end of the socket and between the wire and the support, whereby a cigar or cigarette may be lighted through a natural draft.

5. A lighter for cigars or cigarettes, comprising a socket of sufficient length so arranged as to independently support a cigar or cigarette, an electric igniting element at the inner end of the socket, normally inactive, and means engageable by the cigar or cigarette when in the socket, to activate the igniting element.

6. A lighter, comprising in combination a vertical support, a socket on said support, of sufficient length and so positioned as to receive and support a cigar or cigarette, said socket being formed of telescoping sections detachably connected together, and an electric igniting element arranged on the innermost section.

7. A lighter for cigars and cigarettes, comprising a socket of sufficient length and so positioned as to independently support a cigar or cigarette, an electric igniting element at the inner end thereof, comprising an insulating base, resistance wires arranged thereon, and grooves formed in said base be-

neath the resistance wires, permitting circulation of air between the wires and base.

8. A lighter for cigars and cigarettes, adapted to be attached to the instrument board of an automobile, comprising a guide secured to the instrument board of sufficient length and so arranged as to independently support a cigar or cigarette, an igniting element at the inner end of the guide, ventilating means at the inner end of the guide to expose the end of the cigar or cigarette to a current of air, whereby a draft will be created around the end of the cigar or cigarette to cause lighting thereof through natural draft, means to control the circuit for activating the igniting element, and means on the instrument board to indicate when said element is activated.

FRANCIS C. COPELAND.