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H. BRACHTL

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CIGAR LIGHTER

Filed Nov. 30, 1931

Fig. 1

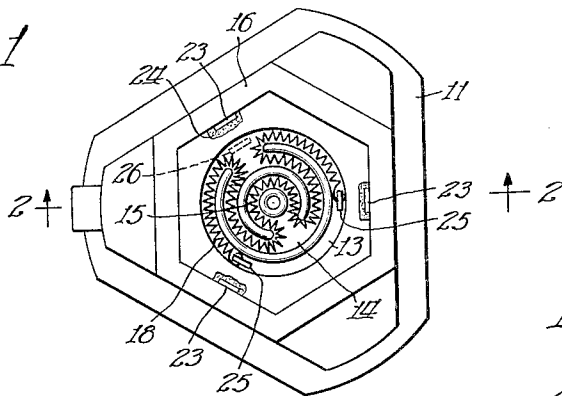


Fig. 2

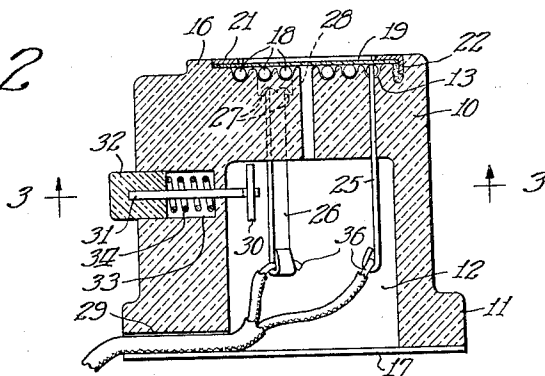


Fig. 5

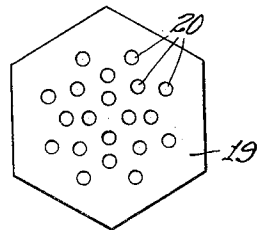


Fig. 4

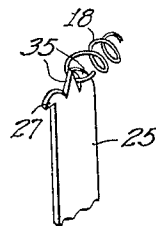
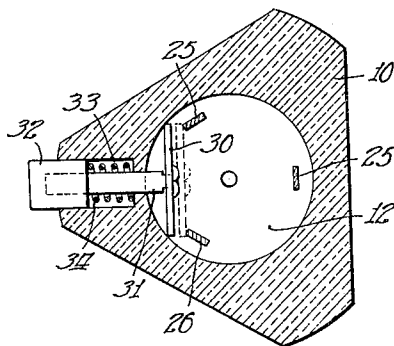


Fig. 3



Witness:  
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Att'y.

# UNITED STATES PATENT OFFICE

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## CIGAR LIGHTER

Application filed November 30, 1931. Serial No. 577,959.

My invention relates to cigar and cigarette lighting devices and more particularly it relates to a device wherein ignition occurs by holding the end of the cigar or cigarette in close contact with an energized resistance coil.

In lighters of this type as heretofore constructed the resistance coil has required a separate mounting and the terminals are of several parts including separate fastening devices for connection with the coil and with the conductors.

It is an object of the invention to provide an improved device of the kind described comprising a unitary housing or stand of refractory non-conducting material forming a mounting for a resistance coil as well as the terminals, conductors and a switch member operable to open and close a circuit by means of which the coil is energized.

Another object of the invention is the provision of an improved switch mechanism of the kind described so positioned that the circuit through the device is normally broken and is closed by exercising pressure on the switch.

A further object of the invention is the provision of terminals of novel construction suitable for economical manufacture by stamping from sheet metal and which are easily and quickly positioned in the housing and are adapted for connection with the resistance coil and conductors, respectively, by bending a portion of the terminal into clamping or binding relation with such parts.

A still further object of the invention is the provision of a device of the kind described which is simple, compact, durable, reliable, efficient, adapted to be manufactured and assembled at low cost and is satisfactory for its intended purpose.

Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claim.

In the drawing, wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a top plan view of a device embodying my invention having a cover plate removed;

Fig. 2 is a view along the line 2—2 of Fig. 1;

Fig. 3 is a section along the line 3—3 of Fig. 2;

Fig. 4 is a view to a larger scale of a detail of the device; and

Fig. 5 is a view of a sheet of insulating material forming a top cover for the device.

Referring now more particularly to the drawing, the numeral 10 generally designates a unitary housing member having a slightly projecting base portion 11 and a recess 12. Any suitable refractory non-conducting material may be used and in practice, porcelain has been found satisfactory for the purpose. The device is adapted to be positioned upon a table or a counter and for this purpose, a pad 17 is fastened by any suitable means to the bottom face of the housing to provide a cushion preventing marking the table or abrasion or chipping of the base of the housing.

The top of the housing 10 has an upwardly projecting hexagonal-shaped flange 16 and that portion of the top surface surrounded by the flange 16 contains a plurality of interconnected grooves having the numbers 13, 14 and 15, respectively. The grooves 13, 14 and 15 are preferably arranged concentrically and contain a unitary resistance coil 18. A sheet 19 of mica or other similar non-conducting material forms a cover for the coil 18 and contains perforations 20 overlying the coil. The sheet 19 is held in position by a hexagonal metal band 21 having a plurality of chips 22 turned downwardly into corresponding apertures 23. The apertures 23 are preferably filled with a paste or cement 24 and in assembling the device, the band 21 is then positioned on top of the sheet 19 while the paste is soft. Upon hardening or solidifying of the paste 24, the band 21 is thereby securely held in the position shown in Fig. 2.

In Fig. 1 the device is shown with the sheet 19 and the band 21 removed in order

to provide a better disclosure of the coil 18 and the arrangement of a plurality of terminals mounted in the housing. A pair of terminals 25 having their upper ends projecting into the outer groove 13 are connected with the ends of the resistance coil 18. The terminals 25 are fastened to the coil 18 by pressing together a pair of pointed stems 35 forming a portion of the terminals as best shown in Fig. 4. In casting the housing 10, vertical apertures are provided in which the terminals are positioned in assembling by inserting from below. A lateral extension 27 is formed by bending a stem to the position shown in Fig. 4 to provide a support for the terminals and prevents the terminals from falling through the housing.

A third terminal 26 has its upper end terminating in a recess 28 and is spaced apart from the coil 18. The upper end of the terminal 26 has a pair of lateral extensions 27 providing a support. The lower ends of the terminals 25 and 26 project a substantial distance into the recess 12. The lower end of one of the terminals 25 and of the terminals 26 are bent up to provide looped connections with a pair of conductors 36. A groove or hole 29 in the bottom of the housing 10 provides an outlet for the conductors 36, as shown.

The coil 18 is normally not energized by reason of the terminal 26 not being connected with the coil. A novel manually operated switch mechanism is provided to open and close the circuit and energize the coil as desired. The switch mechanism comprises a connector plate 30 suitably mounted upon one end of a stem 31. The other end of the stem 31 is fastened in a plunger 32 which is mounted in a recess 33 and projects from one wall of the device as best shown in Figs. 2 and 3. The plunger 32 is of suitable non-conducting material and is normally held in extended position by a compression spring 34, in which position the plate 30 is spaced away from one of the terminals 25 and from the terminal 26. The plate 30 is moved into contact with the designated terminals 25 and 26, from which it is normally equally spaced, by pressing on the plunger 32. The resulting contact of the plate 30 with the designated terminal 25 and the terminal 26 completes the circuit through the device and energizes the coil. By holding the end of a cigarette or cigar against the mica sheet 19, the particles of tobacco project through the apertures 20 and are brought into sufficiently close contact with the resistance coil that their ignition results. Upon release of the plunger 32, the spring 34 moves the plate 30 to its normally inoperative position wherein the circuit is broken.

The unitary construction of the housing member which eliminates the necessity of a separate mounting for the resistance coil as

has been the practice heretofore combined with the simplicity of the terminals provides a device containing a minimum number of simple parts especially adapted for economical manufacture and assembly and enables the device to be marketed at a relatively low cost.

Having thus described my invention it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to cover by Letters Patent is:

In a device of the kind described, a unitary inverted cup-shaped housing integrally formed of non-conducting material and having grooves on its upper end, a resistance coil mounted in said grooves, a perforated plate of insulating material forming a cover in close contact with the coil, a pair of terminals having their lower ends projecting into the interior of the housing and their upper ends in operative engagement with said coil, a third terminal having its lower end projecting into the housing and its upper end disconnected from said coil, a pair of conductors respectively connected with said third terminal and one of said pair of terminals, a plate connector normally spaced apart from said terminals, and means manually operable to move said plate into contact with said third terminal and the other of said pair of terminals.

In witness whereof, I hereunto subscribe my name.

HENRY BRACHTL.