May 5, 1931. J. C. STEARNS 1,803,361

CIGAR LIGHTER

Filed Aug. 31, 1927

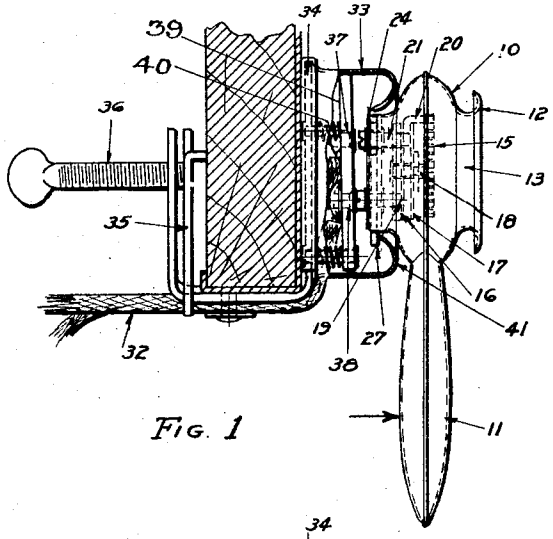


FIG. 1

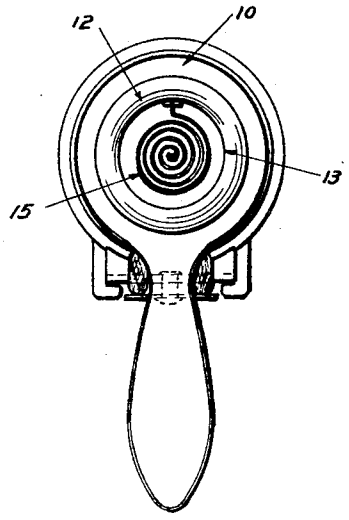


FIG. 2

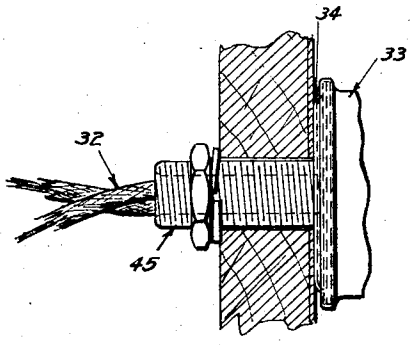


FIG. 5

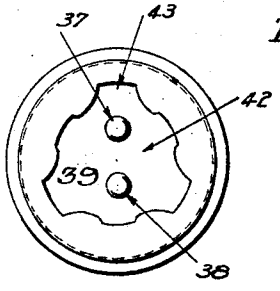


FIG. 3

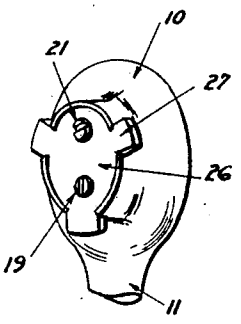
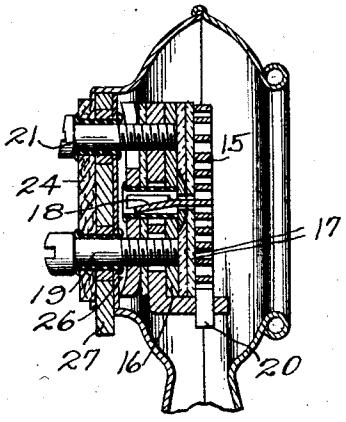


FIG. 4

FIG. 6.



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UNITED STATES PATENT OFFICE

JASON C. STEARNS, OF WORCESTER, MASSACHUSETTS

CIGAR LIGHTER

Application filed August 31, 1927. Serial No. 216,763.

This invention relates to a detachable cigar lighter for use in an automobile, parlor, car, or other convenient place.

The principal objects of the invention are to provide an electric cigar and cigarette lighter in a detachable form so that the incandescent body which serves as the lighter proper can be heated up by a very simple operation on the part of the user and then entirely detached from the connections and the supporting wall and passed around as may be desired for the purpose of lighting two or three cirgarettes or cigars; to provide the connections in such form that the handle by which the cigar lighter can be carried around can be used to control the electrical connections, simply by tilting the lighter through the operation of the handle; and to provide a construction in which the casing of the device acts as an ash receptacle and will guard against the falling of ashes on the floor in any position in which the device is apt to be used.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is an edge view of one form of my cigar lighter, showing the supporting elements therefor partly in section;

Fig. 2 is a front elevation of the detachable lighter in position on the electric heating socket;

Fig. 3 is a front elevation of the socket itself showing the shape of the opening;

Fig. 4 is a perspective rear view of the detachable lighter;

Fig. 5 is a sectional view of a different support for the socket; and

Fig. 6 is an enlarged fragmentary detail sectional view of the parts shown in Fig. 1.

The lighter itself is shown in the form of a circular casing 10 having an integral handle 11 projecting therefrom by which the casing is manipulated. The casing is of thin pressed metal and a flange 12 projects inwardly to bound and define a central opening 13 and then flares outwardly to provide a convex surface around the opening. It is obvious therefore, that this is an opening smaller than the casing through which a cigar or cigarette may be inserted for lighting against an incandescent heating coil 15. The casing 10 back of the opening spreads in all directions from the opening and furnishes a space for receiving and retaining a few ashes.

It will be seen that the incandescent element 15 is so far inside the opening 13 and the walls thereof verge inwardly at a distance from it to such an extent that when a cigar or cigareette is pressed against the igniting element, or withdrawn therefrom, any ashes discharged must fall into the casing. There is very little chance of their falling on the floor, particularly as the device is so designed as to be held in vertical position as indicated in the figures.

The incandescent element 15 consists of a coil of wire of any desired kind, of such resistance as to be rendered incandescent very readily by a current from an automobile battery or other suitable source of power. This is shown in the shape of a flat coil having an asbestos covering and terminals at the center and circumference. These terminals are mounted on a plate 16 having mica or other insulating sheets 17 between it and the coil 15. The coil is also shown as spaced from the sheet of mica 17. The central terminal 18 is secured to this plate 16 and a flange carried by it secures the mica sheet to that plate. The stud or terminal extends through the plate 16 to the back and is electrically connected with a contact 19. The other terminal 20 is directly connected with a contact 21, these two contacts being in the form of two screws. The head of the screw 19 is shown as extending considerably farther through the fiber or other insulating plate 24 which constitutes the rear surface of the casing 10 than does the head of the screw 21. Beyond this plate 24 is a metal plate 26, through insulating tubes in which these screws pass, having three arms 27 projecting through slots in the rear wall of the rear end of the casing 10.

The socket 33 is of metal and insulated from the dash by a layer 34 of insulating material and provided with arms 35 shown as extending under the front board of the dash and detachably secured on the back by a screw 36.

This is a mounting for convenience in putting the socket on the dash of an old car.

Two conductors 32, in the form shown in Fig. 1, extend into the socket 33 over the layer 34 and are connected with two contacts 37 and 38, which are located in such position as to register with the two screws 19 and 21. These contacts 37 and 38 are mounted on an insulating plate 39 which is supported in the socket by two springs 40 so that this plate is free to tilt. They are shown as in the same vertical plane. If the contacts 19 and 21 are of the same length the contact 38 will project beyond the contact 37.

The socket is provided with a rounded convex surface 41 and with an opening 42 which is provided with three radiating slots 43 for receiving the projections 27.

The detachable lighter is carried around by the handle 11 and when it is desired to put it in position it is inserted in the socket by placing the arms 27 in registration with the slots 43, pushing it against the spring resistance and then turning it so that the arms 27 are out of registration with these slots 43. The lighter is held in place by the spring pressure. At that time the handle is turned preferably so as to extend vertically downward. The contact screw 19 is in contact with the contact 38 in the socket, but the spring holds the casing 10 back so that the contact 21 is not in contact with the contact 37.

The lighter rides in this way at all times and does not get out of position because of being held there by the arms 27. When it is desired to heat the lighter up so it can be used as stated above, pressure is applied to the handle 11 outwardly in the direction of the arrow indicated. On account of one of the projections 27 coming into contact with the underside of the inner edge of the flange 41, and the two contacts 19 and 38 being in engagement, the spring holds the cigar lighter in vertical position and does not allow the two contacts 21 and 37 to come together. When the pressure is applied to the handle this resistance can be overcome easily and the contact made at 21—37.

Now when the contacts 21 and 37 are brought together the circuit is completed and the device has to be held in that condition for only a few seconds. The coil 15 heats up to incandescence and the operator can turn it in the socket to take it out. It can be passed around the car for lighting several cigars and cigarettes before it is cooled enough to be of no further use until heated up again.

A more permanent form of mounting the socket is shown in Fig. 5. Through the wall of a car or dash board, as may be desired, is a passage through which extends a screw 45 which is hollow in order to receive a pair of conductors 32 extending from the battery. This screw is passed through an opening and secured in position by a nut and lock washer or as otherwise desired. The screw extends from the rear to the socket 33 on the front of the dash or the like.

This constitutes a simple and practical construction for the purpose intended, providing a very neat device for the use of the smokers.

Although I have illustrated and described only two forms of the invention I am aware of the fact that other modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims.

Therefore, I do not wish to be limited in these respects, but what I do claim is:—

1. In a cigar lighter, the combination with a socket adapted to be attached to a dash board or wall and having a pair of electric contacts therein, of a detachable igniting element having a handle projecting therefrom, an incandescent element therein, two terminals on the back connected with the opposite ends of the incandescent element, said terminals and contacts being so located that one pair normally remains in contact and the other pair separated, and yielding means for holding them in this position, whereby the detachable element can be mounted on said socket and the circuit completed by the swinging of the detachable element.

2. In a cigar lighter, the combination with a socket adapted to be attached to a dash board or wall and having a pair of electric contacts therein, of a detachable igniting element having a handle projecting therefrom, an incandescent element therein, and two terminals on the back connected with the opposite ends of the incandescent element, said terminals being arranged in alignment with the center of the handle and the one near the handle being longer than the other, whereby the detachable element can be mounted on said socket and the circuit completed by the swinging of the detachable element about the longer contact.

3. In a cigar and cigarette lighter, the combination with a stationary socket having a pair of contacts connected with a source of power and having a surrounding wall provided with an opening therethrough, of a detachable igniting element comprising a casing having a handle projecting therefrom, an incandescent coil in the casing and two terminals on the back of the casing connected with the coil, the terminal and contact nearest the handle being longer than the other two, said casing having means for holding the detachable element in position, whereby the movement of the handle outwardly will complete the circuit.

4. In a cigar and cigarette lighter, the combination with a stationary socket having a pair of terminals connected with a source of power and having a surrounding wall pro-

vided with a perforation therethrough, of a detachable igniting element comprising a casing having a handle projecting therefrom, an incandescent coil in the casing, two terminals on the back of the casing connected with the coil, the terminal nearest the handle being longer than the other, said casing also having arms radiating therefrom for entering the opening in the socket and holding the detachable element in position, one of said arms being adapted to engage under the inner edge of said opening in the socket and constituting means for holding the detachable element with the longer of said terminals in contact with the corresponding contact and the shorter one held away from the other contact in the socket, whereby movement of the handle outwardly will complete the circuit.

5. As an article of manufacture, a detachable and movable cigar lighter element comprising a hollow metallic casing having a handle radiating therefrom and two fixed contacts on the back in a plane containing the axis of said handle, one of said contacts extending farther from the rear of said casing than the other, for the purpose described.

6. In a cigar lighter, the combination of a casing adapted to be attached to a socket on a dash board or wall and having a pair of electric contacts on one side and an opening on the other, said socket having a pair of terminals of an electric circuit, said casing being larger than the opening all around to provide a space for cigar ashes, said casing having a handle projecting therefrom, an incandescent element in the casing, and two terminals on the back connected with the opposite ends of the incandescent element, said terminals being arranged in alignment with the center of the handle and in registration with the terminals in the socket, and the one near the handle being longer than the other, whereby the casing can be mounted on said socket and the current completed by the swinging of the casing about the longer contact to bring it back into contact with one of the socket-terminals.

In testimony whereof I have hereunto affixed my signature.

JASON C. STEARNS.