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ELECTRIC CIGARETTE LIGHTER

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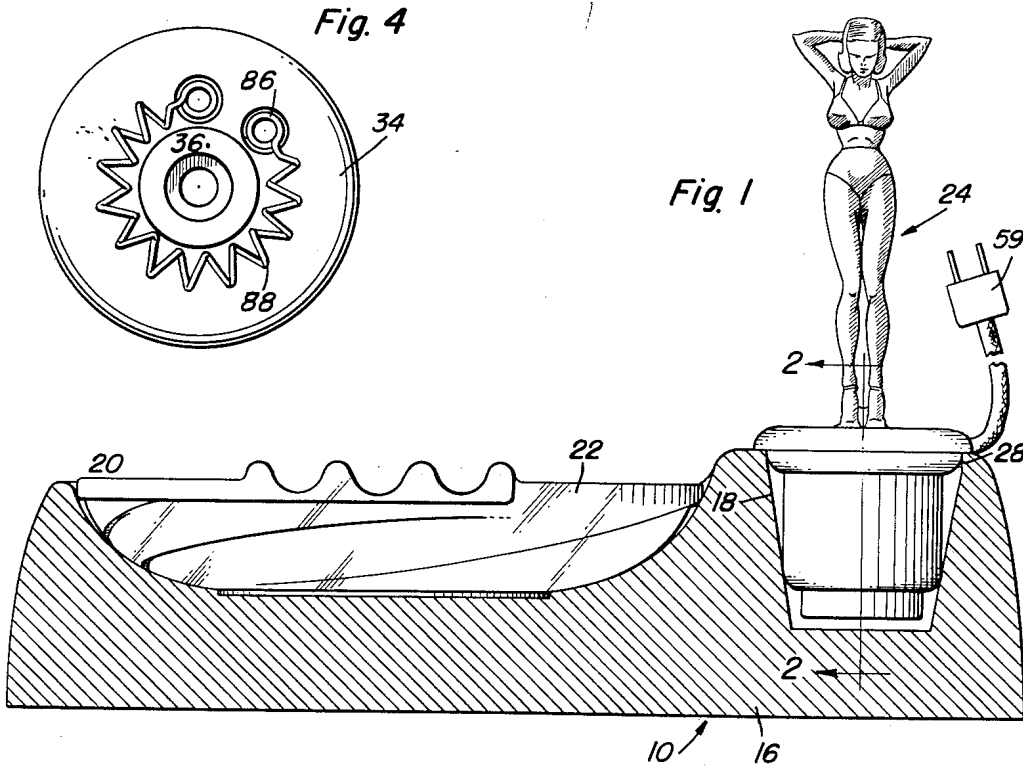


Fig. 4

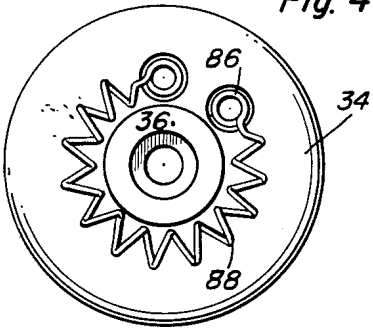


Fig. 1

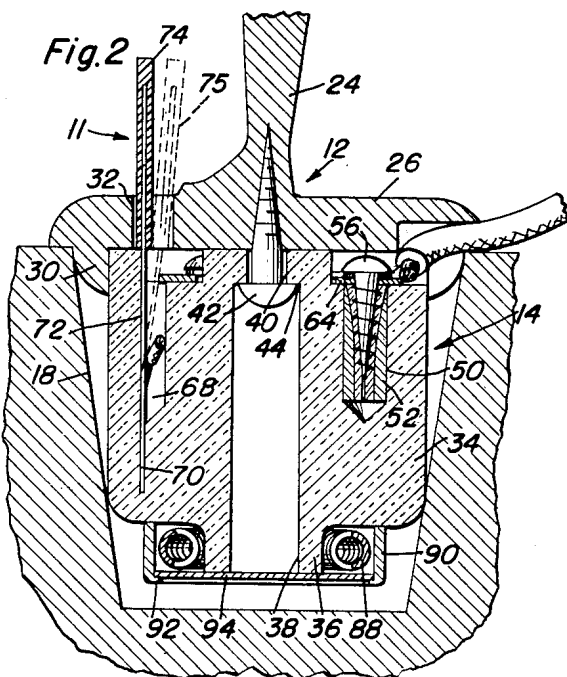
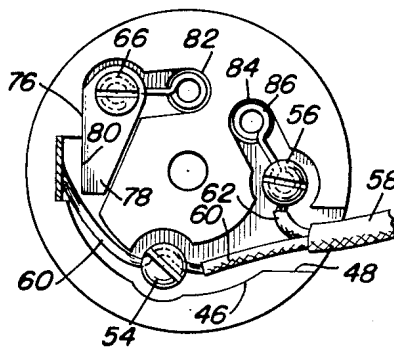


Fig. 3



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ELECTRIC CIGARETTE LIGHTER

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6 Claims. (Cl. 219-32)

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The present invention relates to improvements in lighters for cigars and cigarettes and more particularly to a lighter which is associated with an ash tray, the lighter being switch operated and adapted to be connected to the conventional electrical outlets in the home or office.

An object of the invention is to provide an improved cigar and cigarette lighter for an ash tray wherein the lighter is secured to the base of a statuette, the statuette providing a handle for the lighter whereby the lighting unit can be removed from the recess of the ash tray when it is desired to light a cigar or cigarette.

A further object of the present invention resides in the provision of a manually operated switch which has its insulated handle extending upwardly through the base of a statuette whereby when the statuette is gripped for removing the lighter from the recess from the ash tray, the switch can be actuated by the thumb or fingers for completing the circuit of the heating coil.

A still further object of the present invention resides in the novel construction of the lighting unit which includes an insulating member of substantially cylindrical form on which a pair of connector posts are fixedly mounted, one of the connector posts being connected to the actuating switch element, the other connector post being connected to one end of the heating coil, the other end of the heating coil being connected to a contact post which has a switch plate secured thereto, the actuating switch element being adapted to contact the switch plate for completing the circuit of the heating coil.

Still another object of the present invention resides in the novel construction of the entire cigar and cigarette lighter combined with an ash tray base which is pleasing in appearance, simple in assembly and economical of manufacture.

Various other objects will become apparent from the detailed description to follow. The best form in which I have contemplated applying my invention is clearly illustrated in the accompanying drawings, wherein:

Figure 1 is a longitudinal vertical sectional view through the ash tray base showing the cigar and cigarette lighter mounted in the recess therein;

Figure 2 is a vertical transverse sectional view taken substantially along the plane of line 2-2 of Figure 1;

Figure 3 is a top plan view of the insulating member showing the connector post and the contact post with the lead wires connected to the connector post; and

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Figure 4 is a bottom plan view of the insulating member showing the portion of the heating coil encircling the reduced portion of the insulating member.

Referring more particularly to the drawings, wherein like numerals designate like parts throughout, the numeral 10 designates generally the ash tray base, the numeral 12 designates generally the statuette handle and the numeral 14 designates generally the cigar and cigarette lighter unit which is adapted to be attached to the statuette handle 12.

Looking now at Figure 1, it will be seen that the ash tray 10 is comprised of a porcelain base 16 which has a first substantially truncated conical recess 18 and a second dish-like recess 20. The recess 20 is adapted to receive a suitable ash tray 22 of glass or the like.

The handle 12 for the lighter unit 14 is formed of a statuette 24 providing a suitable hand grip, the base 26 of the statuette 24 being of circular form having an outside diameter slightly greater than the open end 28 of the recess 18. The base 26 has a reduced diameter portion at 30 which is adapted to be engaged within the open upper end 28 of the recess 18 for supporting the statuette and closing the recess 18 thereby providing an attractive appearance. The base 26 is also formed with an opening at 32 for a purpose to be more fully understood hereinafter.

The lighter unit 14 is comprised of an insulating member 34 formed from porcelain or the like, the insulating member 34 being substantially of cylindrical form and having a reduced diameter portion at 36. The insulating member 34 has an axially extending bore 38 formed therein and coaxial with the reduced diameter bore at 40. Insulating member 34 is secured to the underside of the base 26 by means of the screw 42 which is engaged against the shoulder 44 formed between the bores 38 and 40.

The upper ends of the insulating member 34 is recessed at 46, as shown in Figure 3, the recess 46 being closed by the base 26 with the exception of the opening 48 at one side thereof. Extending downwardly from the recess 46 are a pair of conductor post bores 50 in which are positioned the rawl plugs 52. Conductor posts 54 and 56 are threadably engaged in the rawl plugs 52 for retention in the insulating member 34. The electrical conductor 58 has its lead wires 60 and 62 respectively connected to the connector posts 54 and 56, washers 64 being disposed beneath the lead wire and conductor post heads 55 for engagement with the surface of the porcelain insulating member 34 within the recess 46.

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The insulating member 34 is formed with a third bore having a rawl plug 52 disposed therein, the contact post 66 being threadably engaged therein in the same manner as the conductor posts 54 and 56.

The insulating member 34 is formed with another enlarged recess at 68 terminating at its lower end in a reduced size recess at 70. The switch means 11 has the flexible metallic strap 72 thereon fixedly secured in the recess at 70, the upper portion thereof being flexibly disposed within the recess 68. The upper end of the flat strap 72 has a Bakelite covering 74 formed thereon thereby providing a handle portion which is movably disposed within the opening 32 of the base 26 of the statuette 24. The flat strap 72 of the switch means 11 is electrically connected to the first conductor post 54 by means of the lead wire extension 60'.

As seen best in Figure 3, contact post 66 has a contact plate 76 fixedly secured thereto with its terminal portion 78 having a flat side 80 in juxtaposed position to the flat strap 72 for contact thereby upon flexing of the switch means 11.

Finally, the insulating member 34 is formed with a pair of longitudinal bores 82 and 84 which have their lower ends terminating exteriorly of the reduced diameter portion 36, as seen best in Figure 4. The heating coil 86 has its ends connected to the contact post 66 and the second conductor post 56, an intermediate portion of the heating coil 86 extending through the pair of bores 82 and 84 and around the reduced diameter portion of the insulating member 34, as at 88.

A cylindrical element 90 encircles the coil portion 88 and is secured to the insulating member by a suitable adhesive. The cylindrical element 90 is formed with a flange at 92 whereby the protective mica plate 94 can be retained over the heating coil portion 88.

In view of the foregoing description, taken in conjunction with the drawings, it is believed that a cigar and cigarette lighter has been provided which will accomplish all of the objects hereinabove set forth. The lighter unit 14 is adapted to be supplied with electrical power by means of the conventional plug 58 which is adapted to be connected to the power outlet in the home or office. Thus, when it is desired to light a cigar or cigarette, the statuette 24 is manually gripped for removing the lighter unit from the recess 18 of the ash tray base 16. At the same time, the switch means 11 is manually depressed to the dotted line position shown at 75 whereby contact is made with contact plate 76, thereby completing the circuit for the heating coil 86.

Heretofore, considerable difficulty has been experienced with cigar and cigarette lighters of the present type; it has been necessary to provide a transformer for reducing the voltage drop across the incandescent portion 88 of the heating coil 86. In the present arrangement, the portions of the coil 86 disposed in the bores 82 and 84 provide resistance means for accomplishing the same function.

Having described the invention, what is claimed as new is:

1. A cigarette and cigar lighter for an ash tray provided with a recess, said lighter including a statuette providing a handle, said statuette having a base removably engageable with the mouth of said recess for support, an insulating mem-

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ber of substantially cylindrical cross-section and having an axial bore formed therein, a screw rigidly securing said member to the underside of said base, a pair of conductor posts secured to the upper portion of said member and adapted to have lead wires connected thereto, a contact post secured to the upper portion of said member and having a contact plate secured thereto, switch means carried by said member for manually effecting completion of the circuit between one of said conductor posts and said contact plate, and a heating coil of preselected resistance interconnecting said contact post with the second of said conductor posts.

2. A cigarette and cigar lighter for an ash tray provided with a recess, said lighter including a statuette providing a handle, said statuette having a base removably engageable with the mouth of said recess for support, an insulating member of substantially cylindrical cross-section and having an axial bore formed therein, a screw securing said member to the underside of said base, a pair of conductor posts secured to the upper portion of said member and adapted to have lead wires connected thereto, a contact post secured to the upper portion of said member, a contact plate secured to said contact post, switch means carried by said member for manually effecting completion of the circuit between one of said conductor posts and said contact plate, and a heating coil of preselected resistance interconnecting said contact post with the second of said conductor posts, said insulating member having a reduced diameter portion and a pair of longitudinal bores formed exteriorly of said reduced diameter portion, said bores having their upper ends opening in juxtaposition to said contact post and the second of said conductor posts, said heating coil extending through said bores and substantially around said reduced diameter portion.

3. A cigarette and cigar lighter for an ash tray provided with a recess, said lighter including a statuette providing a handle, said statuette having a base removably engageable with the mouth of said recess for support, an insulating member of substantially cylindrical cross-section and having an axial bore formed therein, a screw mounted in said bore securing said member to the underside of said base, a pair of conductor posts secured to the upper portion of said member and adapted to have lead wires connected thereto, a contact post secured to the upper portion of said member, a contact plate secured to said contact post, a switch means carried by said member for manually effecting completion of the circuit between one of said conductor posts and said contact plate, and a heating coil of preselected resistance interconnecting said contact post with the second of said conductor posts, said switch means including a flat metallic strap disposed in a recess formed in said insulated member, an insulating handle on said strap, said insulated handle extending through the base of the statuette handle whereby the strap can be flexed by manual engagement, said strap being electrically connected to said one conductor post, flexing of said strap selectively effecting contact with said plate for completing the circuit for said heating coil.

4. A cigarette and cigar lighter for an ash tray provided with a recess, said lighter including a statuette providing a handle, said statuette having a base removably engageable with the mouth of said recess for support, an insulating member

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of substantially cylindrical cross-section and having an axial bore formed therein, a screw mounted in said bore and securing said member to the underside of said base, a pair of conductor posts secured to the upper portion of said member and adapted to have lead wires connected thereto, a contact post secured to the upper portion of said member, a contact plate secured to said contact post, a switch carried by said member for manually effecting completion of the circuit between one of said conductor posts and said contact plate, and a heating coil of preselected resistance interconnecting said contact post with the second of said conductor posts, said insulating member having a reduced diameter portion and a pair of longitudinal bores formed exteriorly of said reduced diameter portion, said bores having their upper ends opening in juxtaposition to said contact post and the second of said conductor posts, said heating coil extending through said bores and substantially around said reduced diameter portion, said switch means including a flat metallic strap disposed in a recess formed in said insulated member, an insulating handle on said strap, said insulated handle extending through the base of the statuette handle whereby the strap can be flexed by manual engagement, said strap being electrically connected to said one conductor post, flexing of said strap selectively effecting contact with said plate for completing the circuit for said heating coil.

5. A cigarette and cigar lighter for an ash tray provided with a recess, said lighter including a statuette providing a handle, said statuette having a base removably engageable with the mouth of said recess for support, an insulating member of substantially cylindrical cross-section and having an axial bore formed therein, a screw received in said bore and securing said member to the underside of said base, a pair of conductor posts secured to the upper portion of said member and adapted to have lead wires connected thereto, a contact post secured to the upper portion of said member, a contact plate secured thereto, a switch carried by said member for manually effecting completion of the circuit between one of said conductor posts and said contact plate, and a heating coil of preselected resistance interconnecting said contact post with

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the second of said conductor posts, said insulating member having a reduced diameter portion and a pair of longitudinal bores formed exteriorly of said reduced diameter portion, said bores having their upper ends opening in juxtaposition to said contact post and the second of said conductor posts, said heating coil extending through said bores and substantially around said reduced diameter portion, and a protective mica plate disposed over said reduced diameter portion and said heating coil.

6. An electrical igniting device for mounting in an ash tray having a recess therein, comprising an elongated handle, a circular base on said handle, a substantially cylindrical insulating member, said insulating member having an axial bore therein, a screw mounted in said bore, said screw securing said insulating member on said base, said member having a recess in the end secured to said base, a plurality of bores extending downwardly from said recess, terminal posts secured in said bores, a reduced cylindrical end on said insulating member, a pair of parallel bores extending from said recess to the end of said member, a resistance unit mounted around the reduced end of said insulating member and extending through said parallel bores, the ends of said unit being connected to a pair of said terminal posts, an enlarged recess communicating with said first mentioned recess, said base having an aperture matching with said enlarged recess, a resilient switch element secured in said recess and extending through said aperture.

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