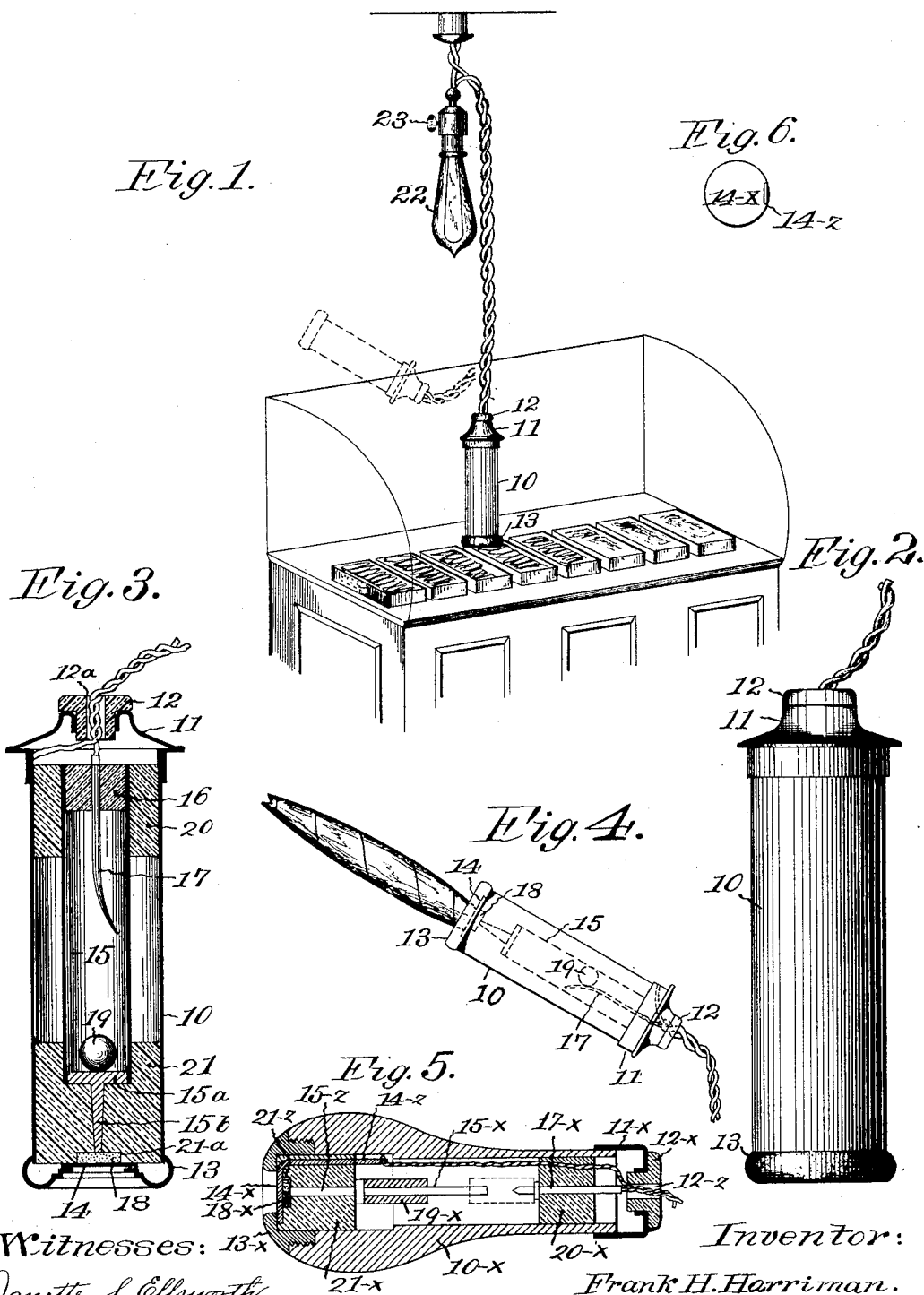


F. H. HARRIMAN.
ELECTRIC CIGAR LIGHTER.

(Application filed Mar. 29, 1898.)

(No Model.)



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ELECTRIC CIGAR-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 635,930, dated October 31, 1899.

Application filed March 29, 1898. Serial No. 675,536. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. HARRIMAN, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Electric Cigar-Lighters, of which the following is a full, clear, and exact specification.

This invention relates to an electric heating device and is adapted to that class of devices in which a certain part thereof is to be heated to a desired degree, and is especially adapted for and has for its main object the lighting of cigars, to be used in cigar and drug stores and where cigars, cigarettes, and the like are kept for sale, and, as herein shown, is applied in an ordinary incandescent-lighting circuit.

In order that those skilled in the art to which my invention appertains may fully understand the nature and construction of the same, I will proceed to a detailed description thereof, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents an illustration of my improved cigar-lighter, the same being suspended from the ceiling of an apartment in its normal or vertical position and being in circuit with an ordinary incandescent electric light, the light being near the ceiling, as shown, the dotted position of the cigar-lighter being that position in which it is held in the use for which it is adapted. Fig. 2 represents an outside view of the cigar-lighter in its normal position and drawn on an enlarged scale. Fig. 3 is a central vertical section through the cigar-lighter, as shown in Fig. 2. Fig. 4 represents the cigar-lighter brought out of the normal vertical position and as adapted for use, the same being drawn on a reduced scale. Fig. 5 is a central vertical section of a modified form of my improved cigar-lighter. Fig. 6 is an end view of the lighting or glowing member, as represented in that modified form.

In the accompanying drawings like numbers of reference designate like or corresponding parts throughout.

In the drawings the numeral 10 designates a shell, in this construction serving as a han-

dle whereby the cigar-lighter is manipulated and made from tubing of any suitable conducting material—such as brass, copper, silver, &c.—the top end of which has a cap 11 attached thereto, which has fastened thereto the bushing 12, provided with the central hole 12^a, through which the wires are passed, and that bushing is made of any suitable high-resistance insulation, which may be of any well-known material, and prevents the current from short-circuiting at this point. One of the ends of the circuit-wire is suitably fastened to the inner side of the shell 10. The lower part of the shell 10 carries, forced over the same, the cover 13, which presses and retains the lighting member 14 in position, both of which are made of a conducting material, the latter consisting of a circular plate, which is preferably made of platinum and forms one of the terminals or electrodes of the circuit. Inside of the shell 10 is the communicator 15, preferably of tubular form and made of any conducting material and having at its upper end, driven therein, a plug 16, of any high-resistance insulation—such as hard rubber, for instance—and which rigidly supports the conductor 17, consisting of a conducting material and preferably made of a series of thin sheet strips of copper, to which, at its upper projecting end, the other end of the circuit-wire is attached. The lower end of the communicator 15 is closed by the flange 15^a, having the reduced shank 15^b. Between the end of that shank 15^b and the platinum plate 14 is interposed a mass of pulverized or comminuted carbonaceous material 18 of high resistance.

19 indicates the connector, which in its preferred construction is a sphere or ball of any conducting material, as brass or copper.

To prevent the current from short-circuiting from the communicator 15 to the shell 10, I have arranged at the top of the cigar-lighter, inside of the shell and surrounding the communicator, a cylindrical ring 20, and at the bottom of the same, also on the inside of the shell and surrounding the communicator and its shank 15^b, the plug 21, both of which are made of any suitable insulating material—such, for instance, as asbestos or rubber.

The plug 21 has in its preferred construction a recess 21^a therein, adapted for holding the pulverized or comminuted carbonaceous material.

5 It is obvious that when the cigar-lighter is suspended from the ceiling or wall of any apartment the connector 19 will drop, according to the law of gravitation, to the bottom, resting on the flange 15^a of the communicator, 10 and thereby no current will pass through the wire. When, however, the cigar-lighter is brought out of its normal position and inclined as shown in Fig. 4 or the dotted position in Fig. 1, the connector 19 will roll back, 15 resting on the conductor 17, and wedge against the inner wall of the communicator 15 on the other side, thereby closing the circuit, so that current may pass from the conductor 17 through the communicator 15 to the flange 20 15^a and shank 15^b, which forms the other electrode or terminal, while the carbon interposed between the two members—the shank 15^b on one side and the platinum lighting member 14 on the other—forms a conductor of high resistance, which will be heated up almost to incandescence as the current passes through the same, and by the conduction of the heat from the pulverized carbon to the platinum lighting member 14 suitable means are provided whereby a cigar may be lighted. 30

As a convenient manner for adapting my improved cigar-lighter to places where electricity is already introduced a current suitable for this cigar-lighter may be used from 35 an ordinary incandescent-light circuit having the lamp arranged as at 22, in the socket of which is an ordinary switch 23.

In the drawings, in Figs. 5 and 6, I have represented a cigar-lighter in a modified form, 40 and it consists of a handle 10^a of any desired conducting or nonconducting material, having fastened thereto at the top the cap 11^a, carrying the bushing 12^a, of insulating material, and provided with the central opening 45 12^a, through which the wires pass. At the lower part the handle carries securely fastened thereto the cover 13^a, which presses and retains the lighting member 14^a in position, the latter being of conducting material 50 and preferably of platinum, of circular form, having the extension 14^a integral therewith. The wires for a current suitable for this lighting device may be obtained from an ordinary incandescent-light circuit, and they are 55 passed through the opening 12^a, and one of the ends of the circuit-wire is fastened to the extension 14^a, and thereby the circular plate of the glowing member 14^a forms one of the terminals or electrodes of the circuit. Securely held in the handle at the lower and top 60 ends of the same are the plugs 21^a and 20^a, respectively, of insulating material. The lower plug 21^a has a circular recess 21^a formed therein, in which the pulverized or comminuted carbonaceous material 18^a of high re-

sistance is placed. Into the plug 21^a is driven the communicator 15^a, provided with the shank 15^b and forming the other terminal of the circuit, and loosely surrounding the communicator is the connector 19^a, both consisting of conducting material and the latter 70 having the form of a sleeve. To the top plug 20^a is securely fastened the conductor 17^a, consisting of a conducting material to which at its upper projecting end the other end of 75 the circuit-wire is attached. When the cigar-lighter is suspended from the ceiling, the connector will drop down into the position as shown in Fig. 5, and thereby the contacts are of course disengaged and no current will 80 pass through the wire. If placed, however, at an incline, as indicated in Fig. 4, the connector will slide into the dotted position, as shown in Fig. 5, and thereby form a conducting contact, and the circuit is closed and 85 the current may pass through, heating the comminuted carbonaceous material almost to incandescence, and by conducting the heat to the glowing or lighting member suitable means are provided for lighting cigars. 90

This construction provides a device which is simple, easily manipulated, convenient, and durable, and has no delicate parts to adjust or wear out, and should at any time the pulverized or comminuted carbonaceous material 95 placed between the terminals of the circuit give out the same can be renewed, thereby adapting the same for use as before.

Having thus described my invention, what I claim as new, and desire to secure by Letters 100 Patent, is—

1. In an electric cigar-lighter, the combination of the handle 10 adapted for conducting an electric circuit and for inclosing the operative parts of the lighter, the glowing 105 member forming one terminal of the electric circuit and mounted at the base of the handle, the plug 21 of insulating material having the recess 21^a filled with pulverized carbonaceous material, the communicator having the reduced shank borne by the plug and forming the other terminal of the circuit when brought out of the normal position, the connector 19 loosely mounted in the communicator, the conductor rigidly mounted in the 115 communicator, all combined and operating substantially as described.

2. In an electric cigar-lighter, the combination of the flexible electric conductors to suspend the lighter, the handle 10 adapted 120 for inclosing the operative parts of the lighter and having one of the wires of the flexible conductors attached thereto, the glowing member forming one terminal of the electric circuit and mounted at the base of the handle, the plug 21 of insulating material having the recess 21^a filled with pulverized carbonaceous material, the communicator having the reduced shank borne by that plug and forming the other terminal of that circuit, 130

the conductor 17 rigidly fastened in the com-
municator, and having fastened thereto the
other wire of the flexible electric conductors,
the connector 19 loosely mounted in the com-
5 municator, adapted and arranged to be moved
into and out of contact when placed at an
incline or in its normal position, substan-

tially as described and for the purpose set
forth.

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Witnesses:

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