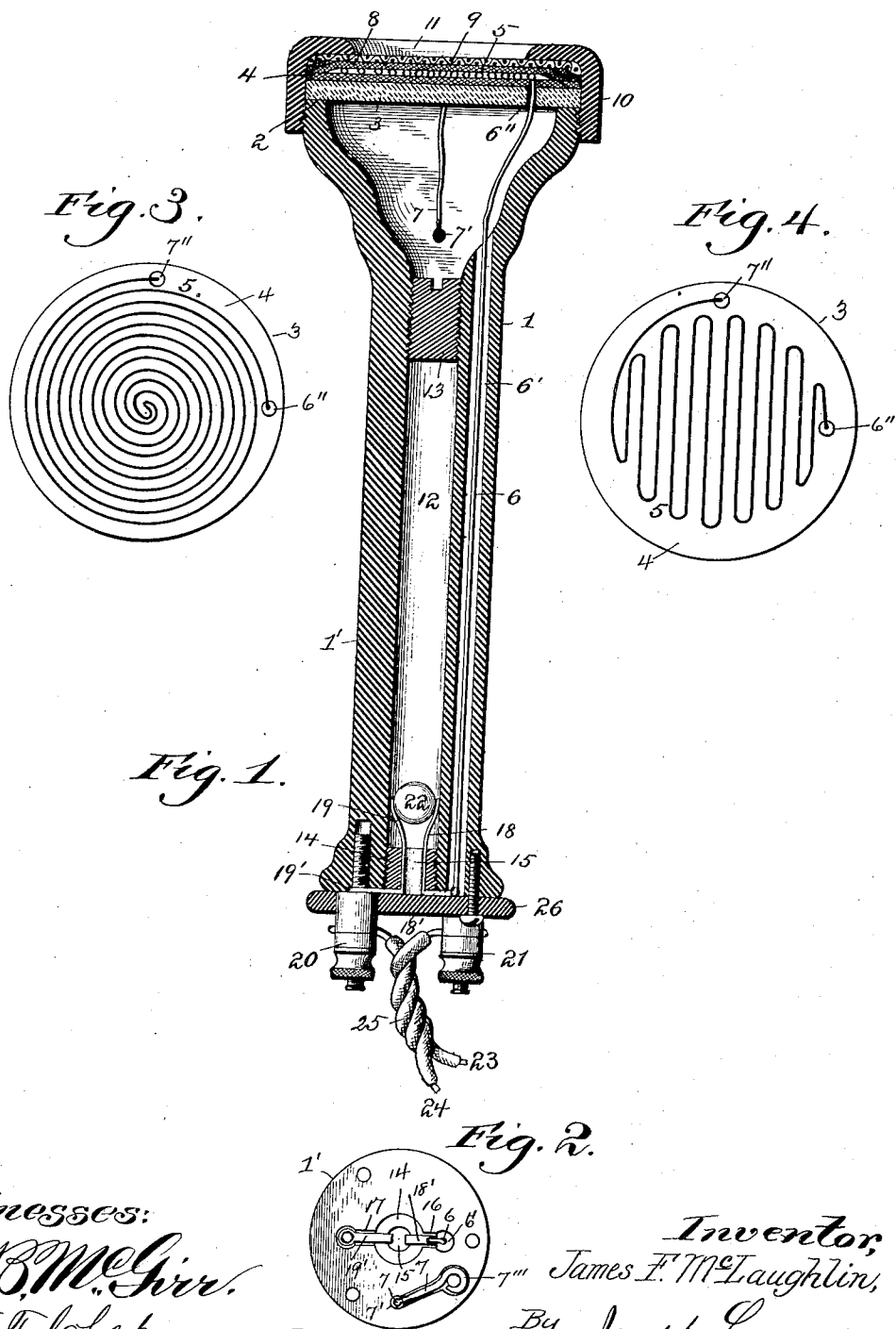


(No Model.)

J. F. McLAUGHLIN.
ELECTRIC CIGAR LIGHTER.

No. 550,686.

Patented Dec. 3, 1895.



Witnesses:

J. B. McGirr.
F. J. Chapman.

Inventor,

James F. McLaughlin,

By Joseph Lyons.

Attorney

UNITED STATES PATENT OFFICE.

JAMES F. McLAUGHLIN, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC CIGAR-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 550,686, dated December 3, 1895.

Application filed April 24, 1893. Serial No. 471,660. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. McLAUGHLIN, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Cigar-Lighters, of which the following is a specification.

My invention has reference to electric cigar-lighters in which an electric conductor of comparatively high resistance is heated to incandescence by the passage therethrough of an electric current of suitable strength. In such devices the cigar is ordinarily applied to the heated conductor and is lighted in the same manner as if it were applied to a live coal.

The distinctive features of my improved device are the manner of mounting the heating-conductor, a guard for the heating-conductor, which being heated by the latter furnishes the light for the cigar, and an automatic gravity-switch whereby the circuit is normally broken, but is closed when the device is moved in position for use.

In the accompanying drawings, which form a part of this specification, one of the numerous forms which my invention may assume is illustrated as follows:

Figure 1 is a vertical central section of the improved cigar-lighter. Fig. 2 is an end view of the butt-end of the device with the end-facing plate removed, and Figs. 3 and 4 are plan views of two forms of heating-conductors adapted to the improved cigar-lighter.

Like numerals of reference indicate like parts throughout all the drawings.

The main body or holder 1 of the device is made of wood, hard rubber, or other like insulating material, and by preference I give to this main body the general shape of a magneto hand-telephone, as shown; but it may be smaller and should be distinguished from such instrument by a conventional color, preferably red.

Upon the annular front ledge 2 of the holder is applied a rather thick disk 3 of refractory insulating material—such as burnt clay, soapstone, or porcelain—and upon the outer face of this disk is applied a thin sheet 4 of asbestos cloth, which serves as the support or backing for the heating-conductor 5. The lat-

ter is a wire of German silver, iron, or platinum of considerable length, bent either in the shape of a flat double spiral, as shown in Fig. 3, or in parallel turns, as shown in Fig. 4, or in other suitable shapes. The two ends of the heating-conductor are connected with the rather thick copper wires 6 7, which pass through holes 6' 7' and 6'' 7'' in the porcelain disk and in the holder 1, and the ends of which are disposed and connected in a manner which will presently be described.

Upon the heater-conductor 5 is applied a sheet 8 of asbestos cloth, and upon the latter is applied a sheet of wire-cloth 9, as shown. The porcelain disk 3 and the heater-conductor, together with the sheets of asbestos and wire cloth, disposed in the order described, are clamped to the ledge 2 of the holder by a cap 10, which is screwed onto the holder and is similar in shape to the ear or mouthpiece of a hand-telephone, except that the opening 11 is wider than in such instrument.

If a current of suitable strength is passed through the heater-conductor by the wires 6 7, the former is raised to incandescence, and heating the asbestos cloth 8 and wire-gauze 9 the latter becomes the source of heat for lighting a cigar. The cigar is simply applied to the heated wire-cloth and is lighted in the usual manner. The heating-conductor being covered by the asbestos cloth and the wire-gauze, the cigar cannot come in contact with the same. This is an advantage, since these heater-conductors are necessarily thin, and when heated to incandescence are easily bent out of shape if the cigar end is directly pressed upon and rubbed against the same. If by such use these wires are bent laterally, they make contact with each other, whereby a portion of the same becomes short-circuited and the remainder is apt to be melted. By my construction such accidents cannot happen, since the rubbing of cigar ends against the wire-gauze cannot bend the heater-conductor laterally. Another advantage results from this construction, owing to the fact that asbestos cloth is somewhat elastic, and when the butt-end of the cigar is pressed against the wire-gauze the latter, together with the asbestos cloth, will yield to the pressure and will shape itself about the cigar end and come into contact with numerous points of the same,

whereby the cigar is lighted with greater ease. This construction therefore provides a glowing elastic cushion, into which the cigar end is partially immersed.

5 The main body or holder 1 is hollowed out, as shown, and the cylindrical portion or handle 1' has a central cylindrical bore 12, which is closed at the forward end by a solid screw-plug 13 and at the rear end by a screw-plug 14, of insulating material, provided with a central hole 15. This plug 14 is screwed into the bore 12 until its rearward end is slightly below the butt-end of the holder, in which there are formed two grooves or recesses 16 17, as shown in Fig. 2.

Two metal springs 18 19 are inserted with their free ends into the hole 15 of the plug 14, and their projecting ends 18' 19' are bent over the butt-end of the holder and are seated in the recesses 16 17. One of these downturned ends 19' is formed with an eye and is held in place by and connected with a binding-post 20, while the end 18' is soldered or otherwise connected with the end of the upper wire 6, which projects from the hole 6'. The copper wire 7 where it projects at the butt from the hole 7' is bent over and is formed into an eye 7'', through which the screw-pin of the binding-post 21 passes into the wall of the holder.

30 Before the insulating-plug 14 is inserted a metal ball 22 is placed in the bore 12. This ball is slightly smaller than the diameter of the bore 12, and the free ends of the springs 18 19 are spread apart, as shown, and slightly curved, so as to receive the ball 22 between them and make extended contact with the same. To the binding-posts 20 21 the leading-wires 23 24 are connected. These are insulated and are twisted into a cord 25, as shown.

When the device is not in use, it hangs down, suspended from the cord 25, and in that position of the device the ball 22 rests upon the plug 13 and the electric circuit is open. When it is desired to light a cigar, the device is raised and turned over, with the opening 11 in the cap 10 toward the cigar end and with the butt-end of the device toward the earth. When this is being done, the ball 22 drops down between the springs 18 19 and closes the circuit, which is then as follows: Entering by the binding-post 20, the current passes through spring 19, ball 22, spring 18, copper wire 6, heater-conductor 5, copper wire 7, and out by binding-post 21. As soon

as the cigar is lighted, the device is allowed to drop and to hang down by the cord 25, or is hung upon a hook by an eye which may be provided at the butt-end of the device, and the ball 22 again drops down upon the plug 13, breaking the circuit between the springs 18 19. The ball 22, together with the springs 18 19, thus constitutes a gravity-switch automatically closing the circuit when the cigar-lighter is moved in position for use and automatically breaking the circuit when the cigar-lighter is put away after use.

A facing-plate 26 may or may not be applied to the butt-end of the holder. By preference such plate is used as a protection for the springs 18 19 and for preventing the admission of dust to the gravity-switch.

Having now fully described my invention, I desire it to be understood that I am not limited to the identical details of construction shown, since these may be variously changed without departing from the fundamental features of my invention.

I claim as my invention and desire to secure by Letters Patent—

1. An electric cigar lighter comprising a heating conductor disposed between layers of asbestos with a superposed sheet of wire gauze, and suitable circuit connections, substantially as described.

2. In an electric cigar lighter, the combination of a rigid plate or disk of refractory insulating material, a heating conductor disposed between sheets of asbestos cloth arranged upon the rigid disk, and a wire gauze protector for the outer sheet of asbestos; with suitable circuit connections, substantially as described.

3. In an electric cigar lighter, the combination of a holder, a heating conductor disposed at one end face of the same, an elastic refractory cushion embedding the conductor, and a wire gauze protector for the cushion; with a perforated removable cap for clamping the conductor, cushion and protector to the holder, and exposing a portion of the same for use, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES F. McLAUGHLIN.

Witnesses:

R. E. DIFENDERFER,
H. F. REARDON.