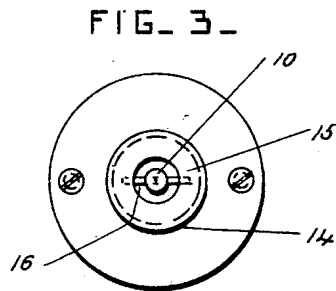
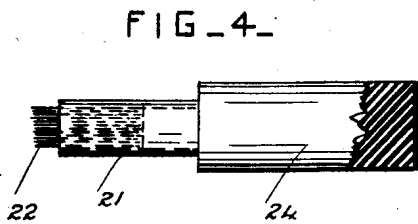
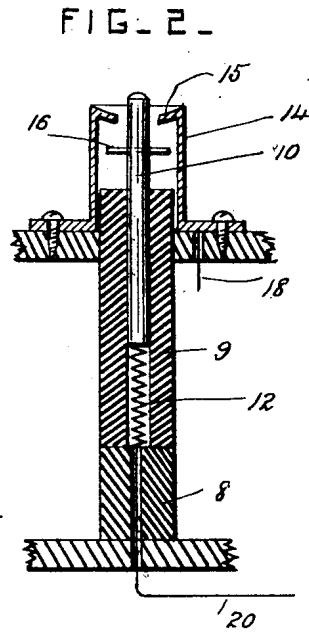
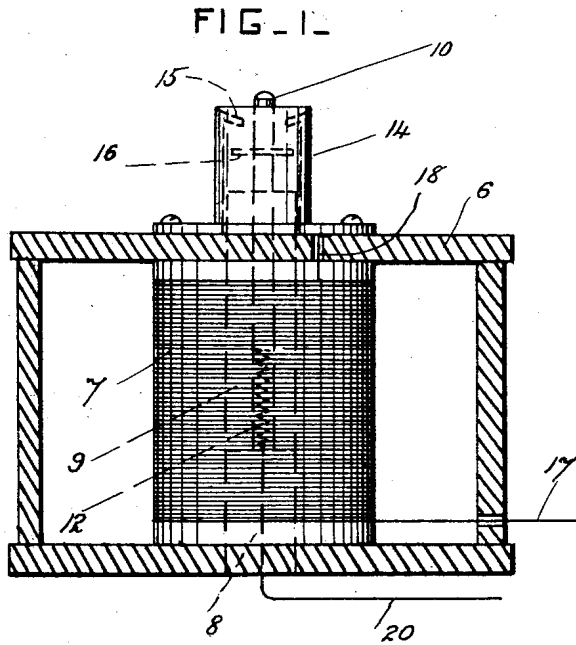


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A. C. GRUHLKE
ELECTRIC CIGAR LIGHTER

Filed June 4, 1923



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UNITED STATES PATENT OFFICE.

AUGUST C. GRUHLKE, OF WATERLOO, INDIANA.

ELECTRIC CIGAR LIGHTER.

Application filed June 4, 1923. Serial No. 643,293.

To all whom it may concern:

Be it known that I, AUGUST C. GRUHLKE, a citizen of the United States, residing at Waterloo, in the county of De Kalb and State of Indiana, have invented certain new and useful Improvements in Electric Cigar Lighters, of which the following is a specification.

This invention relates to igniters operated by electricity and adapted to ignite a wick saturated with gasoline, for use in lighting cigars; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of the igniter showing the casing in section. Fig. 2 is a vertical section through the contact devices. Fig. 3 is a plan view of the same. Fig. 4 is a side view of the torch.

A casing 6 is provided, and a solenoid having a coil 7 is inclosed therein and arranged vertically. A plug 8 of hard fiber is arranged centrally in the lower part of the coil, and a guide 9 for the solenoid coil 10 is arranged centrally on top of the plug 8, and projects from the coil and the top of the casing 6. This guide is preferably made of hard fiber.

The lower part of the guide 9 has a helical spring 12 inclosed in it. This spring supports the core 10, and the upper end portion of the core projects above the top of the guide 9. The sleeve 14 is secured to the top of the casing around the projecting end portions of the solenoid core and its guide, and forms a stationary contact piece. This sleeve 14 is formed of metal, and it has an inwardly projecting flange 15 at its top which does not touch the solenoid core. The core 10 has a pin 16 below the flange 15 which prevents the core from being wholly withdrawn from its guide, and which limits its downstroke.

The solenoid coil 7 at one end is connected to a conducting wire 17. The other end of the coil 7 is connected to the contact piece or sleeve 14 by a wire 18.

The other connecting wire 20 is passed through a hole in the plug 8, and is connected in circuit with the solenoid core 10 by means of the spring 12. The torch comprises a metal tube 21 having a lamp-wick 22 inserted in one end of it, and a hard fiber handle 24 is secured to its other end.

The device will work with a current of

any voltage from 32 to 220, on either direct or alternating current, according to the size of the coil. The pin 16 is supported out of contact with the dished flange 15 as shown, and is not used as a contact maker.

The lamp-wick is dipped in gasoline or other similar fluid and when the metal tube 21 is placed in contact with the top of the solenoid core and the metal contact piece or sleeve 14 it completes the electric circuit. The core 10 is drawn within the coil against the pressure of the helical spring, so that the circuit is broken. The dished flange 15 guides the metal tube 21 of the torch into contact with the core 10, and the circuit is broken when the core 10 is moved below the flange and out of contact with the tube 21. The spring then raises the core, and the continued vibration of the core, making and breaking the circuit rapidly by contact with the torch tube 21 which is held in contact with the dished guide flange 15, causes a stream of sparks to be formed which ignite the gasoline and the wick.

What I claim is:

1. In an igniter, a solenoid provided with a core, a stationary tubular contact piece insulated from the core and secured at one end of the solenoid and having an opening at its outer end, a spring which normally projects one end portion of the core through the said opening, and an inflammable torch adapted to complete an electric circuit through the said solenoid and contact piece.

2. An igniter as set forth in claim 1, the projecting end portion of the core being provided with a stop inside the said contact piece to limit the inward movement of the core and prevent its accidental removal.

3. In an igniter, a solenoid having a coil and a projecting core, a stationary tubular contact piece insulated from the said core and having a dished inwardly-projecting guide flange which normally encircles the projecting end portion of the core, a spring for projecting the upper end portion of the core through the opening formed by the said flange, and a torch having a metal contact piece for completing the circuit between the said core and flange, so that a continuous stream of sparks is formed while the said contact piece is held in the path of the core and in contact with the guide flange.

In testimony whereof I have affixed my signature.

AUGUST C. GRUHLKE.