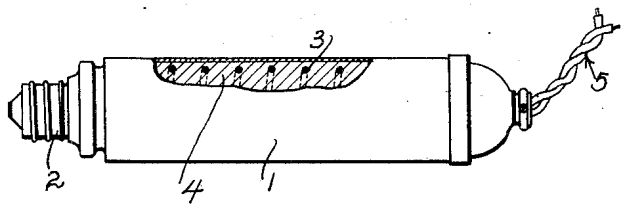
F. W. STRUBING.

CIGAR LIGHTER.

APPLICATION FILED SEPT. 27, 1920.

1,417,422. Patented May 23, 1922.



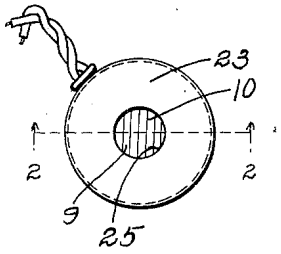


Fig. 1.

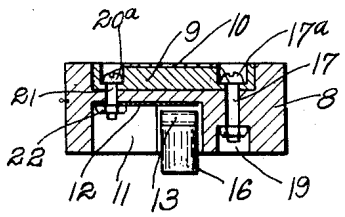


Fig. 2.

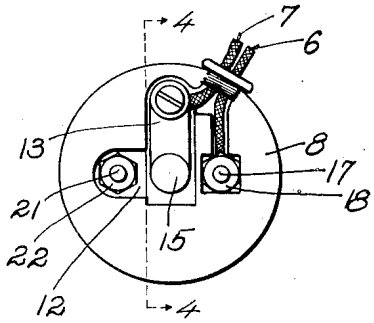


Fig. 3.

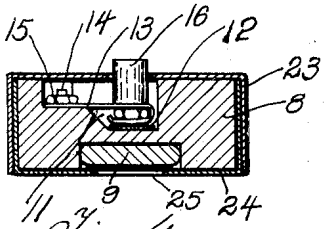


Fig. 4.

Fig. 5.

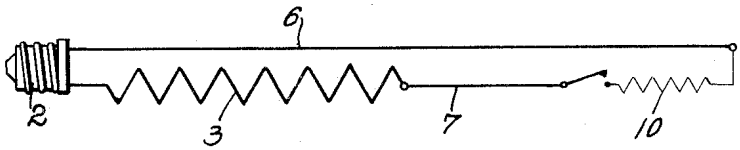


Fig. 6.

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FRANK W. STRUBING, OF HARTFORD, WISCONSIN.

CIGAR LIGHTER.

1,417,422. Specification of Letters Patent. Patented May 23, 1922.

Application filed September 27, 1920. Serial No. 412,965.

To all whom it may concern:

Be it known that I, FRANK W. STRUBING, a citizen of the United States, residing at Hartford, in the county of Washington and State of Wisconsin, have invented new and useful Improvements in Cigar Lighters, of which the following is a specification.

This invention relates to igniting means, and more particularly to a cigar lighter of the electrical type.

One of the main objects of the invention is to provide a cigar lighter of simple construction and operation which may be produced at small cost. A further object is to provide a lighter which may be readily connected to the ordinary electric lighting circuit. Another object is to provide a resistance forming an igniting element which may be readily removed and replaced at small cost. A further object is to provide a primary resistance for reducing the current flowing through the secondary or igniting resistance to such an extent as to prevent injury to the latter. Further objects will appear from the detailed description.

In the drawings:—

Figure 1 is a plan view, partly in section, of a lighter constructed in accordance with my invention.

Figure 2 is a section taken substantially on line 2—2 of Figure 1 the cover members of the base being removed.

Figure 3 is a back view of the base with the cover members removed.

Figure 4 is a section taken substantially on line 4—4 of Figure 3 with the cover members applied.

Figure 5 is a detail side view of the block.

Figure 6 is a diagrammatic view.

In constructing the lighter I provide a casing 1 having at one end a plug 2 of known type adapted to be threaded into the usual socket for connecting the device to an electric circuit. A resistance coil 3 of comparatively heavy or thick wire is mounted within casing 1 and is connected at one end to one of the terminals of plug 2. The casing is filled with a suitable insulating material 4 which serves to effectually insulate the convolutions of the coil 3 from each other and from casing 1. This material also serves to enclose the coil so as to prevent entry of air about the same thus preventing oxidizing or the burning of the coil when heated. A cord 5 containing wires 6 and 7 extends from the other end of casing 1, one of these wires (wire 7) being connected to the other end of coil 3, and the other wire 6 being connected to the other terminal of plug 2.

The lighting member includes a base 8 of porcelain or any other suitable electrical insulating material. This base is provided in one side with a rectangular recess which receives a porcelain block 9 the lateral faces of which are grooved to receive a relatively thin or fine wire 10 of German silver or any other suitable material which is wrapped about the block so as to form a resistance element. In the present form of my device, the main resistance coil 3 is formed of wire of 25 gauge, the secondary resistance being formed of wire of 30 gauge.

Base 8 is provided in its other side with a recess 11 within which is mounted a contact plate 12. A resilient contact arm 13 is positioned above plate 12 and is normally out of contact with the same. This arm is secured in position by screw 14 upon which is threaded a nut 15, this screw forming with the nut means for connecting wire 7 to the arm. A push button 16 is secured to the free end of arm 13 and projects beyond base 8, this button providing means whereby the arm may be readily depressed so as to contact with plate 12. This arm and the plate have contacting surfaces of relatively great area, and the arm when forced into contact with the plate produces a wiping effect thus insuring clean contact surfaces and reduce arcing to a minimum.

A screw 17 is passed through one end of block 9 and through base 8, this screw receiving a nut 18 threaded thereon and positioned with a recess 19 in the opposite side of the base. This screw and nut provide means for connecting wire 6 to one end of the resistance member 10, the adjacent end of which is passed beneath head 17^a of the screw so as to be secured thereby. The other end of resistance element 10 is passed beneath head 20^a of a screw 21 which passes through block 8 and plate 12, a suitable nut 22 being threaded upon this screw. The base is preferably enclosed by two interfitting casings or members 23 and 24 which are a push fit and are preferably, though not necessarily, made of electrical insulating material. Member 24 is provided with a central opening 25 to permit insertion of the end of a

cigar, and member 23 is provided with a central opening to accommodate the push button 16.

In using the device, a cigar to be lighted is inserted through opening 25 and pressed against resistance member 10, the circuit being closed by pressing button 16. The current flowing through resistance member 10 quickly heats the same thus lighting the cigar. The main resistance member 3 serves to reduce the current flowing through member 10 to such an extent as to prevent burning out of or injury to this member. This permits the device to be readily connected into the ordinary lighting system. When the resistance member 10 is injured or burned out, it may be readily replaced by removing block 9 and winding a length of wire of the same gauge as that originally employed upon the block, after which the block is replaced, the ends of the resistance coil thus formed being secured by screws 17 and 21 in the manner described. The grooves 19[a] in the lateral faces of block 19 serve to hold the windings of resistance member 10 in spaced relation, and also insure that the proper length of wire will be wound upon the block.

As will be understood, the sizes of the wires employed in the resistance members may be varied as circumstances may require, and I do not wish to be limited to the particular sizes of wires stated herein. Changes in details of the construction and arrangement of the different parts of the device may be resorted to without departing from the field and scope of the invention, and I intend to include all such variations, as fall within the scope of the appended claims, in this application in which the preferred form only of my invention is disclosed.

What I claim is:

1. In a cigar lighter, a base, a block of insulating material detachably secured in said base, a coil of thin wire wrapped about said block to form a resistance, and means for connecting said coil into an electric circuit in series.

2. In a cigar lighter, a base, a contact plate, a contact arm normally out of contact with said plate, a block of insulating material, a resistance element carried by said block, means for detachably securing the ends of said element and for connecting one end thereof to the plate and the other end of the resistance element to one side of an electric circuit, and means for connecting said contact arm to the other side of the circuit.

3. In a cigar lighter, a base, a contact plate mounted at one side of the base, a contact arm normally out of contact with said plate, an insulating block positioned at the other side of the base, a resistance element mounted on said block, a screw passing through the block at one end thereof and through the base and contact plate, a screw passing through the other end of the block and through the base, said screws securing the ends of the resistance, and nuts threaded on said screws.

4. In a cigar lighter, a base, a block detachably secured in said base and having its lateral faces provided with transversely extending grooves, a resistance element wound about said block in the grooves thereof, and means for securing the ends of said resistance element and for connecting the same to a source of electrical energy.

5. In a cigar lighter, a base, a block mounted in said base, a resistance member wound upon said block, and means for detachably securing the block in the base and for securing the ends of the resistance member and connecting the same to a source of electrical energy.

In testimony whereof I affix my signature.

FRANK W. STRUBING