Aug. 28, 1928. 1,682,661

J. T. BURNS

LIGHTER

Filed Aug. 23, 1927

FIG. 1.

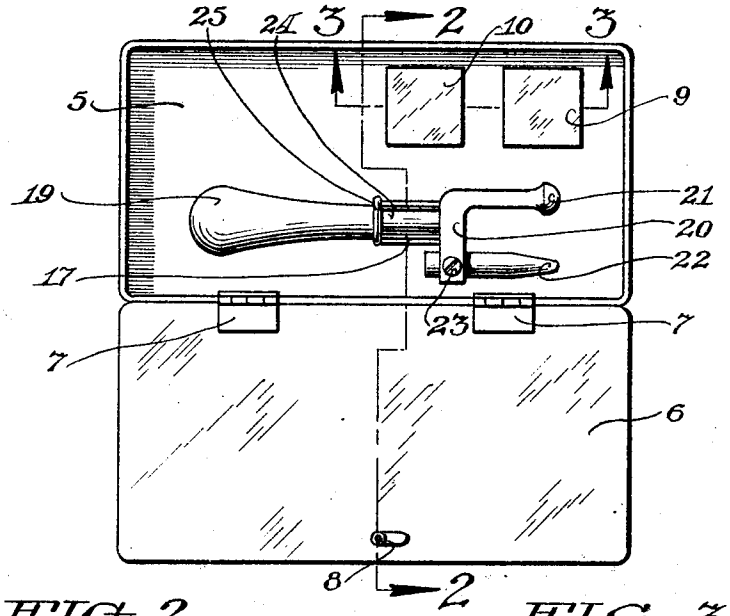


FIG. 2.

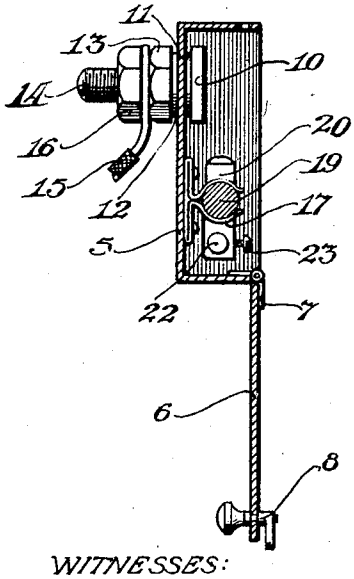
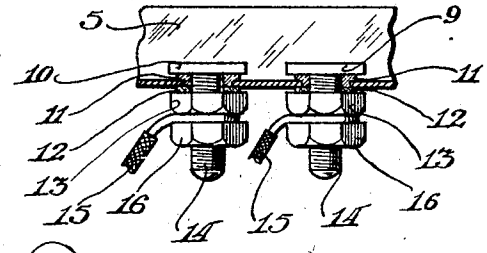


FIG. 3.



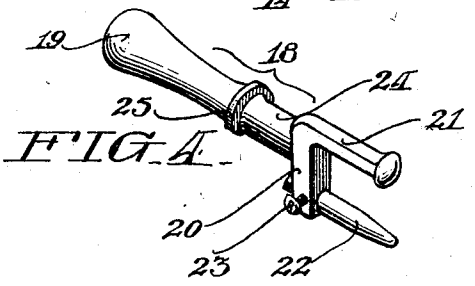


FIG. 4.

WITNESSES:
Harry C. Bright
Wesley Merriel

INVENTOR:
Joseph T Burns,
BY Joshua R. H. Potts
ATTORNEY.

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UNITED STATES PATENT OFFICE.

JOSEPH T. BURNS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CLARENCE Y. HIBBS, OF PHILADELPHIA, PENNSYLVANIA.

LIGHTER.

Application filed August 23, 1927. Serial No. 214,810.

My invention relates to lighters, such as are used for lighting cigars and cigarettes.

Lighters of this character now in use either contain a wick saturated with a combustible fluid which may be ignited by sparks, or an electrical element which becomes incandescent due to the resistance offered by it to the passage of an electric current. The first type of lighter requires considerable attention to keep same filled and cleaned, and it is difficult to light a cigar or pipe with this lighter in a strong draft of air. The resistance element in the electric lighter often burns out or becomes damaged due to its being brought into contact with the tobacco to be lighted and it is nearly impossible to light a pipe with this lighter, particularly if the top of the tobacco is slightly below the edge of the bowl.

The principal object of my invention is to provide a lighter which may be used in a high wind, which will light a pipe as readily as a cigar or cigarette, and which has no wires attached to the lighting element.

This object, and other advantageous ends which will appear hereinafter, I attain in the following manner, reference being had to the accompanying drawing in which

Figure 1 is a front view of a casing containing a pair of electrodes and a lighting element embodying my invention,

Figure 2 a section on line 2—2 on Figure 1,

Figure 3 a fragmentary sectional view on line 3—3 of Figure 1, and

Figure 4 a perspective view of the lighting element shown in Figure 1.

My invention is adapted for use under a great variety of conditions but will be described in connection with a motor vehicle, as it is evident that installations in other locations would readily be within the ability of an ordinary electrician.

Referring now more in detail to the drawing, I have shown a casing 5 which is adapted to be mounted in any suitable location on a motor vehicle, such as the dash, and provided with a cover 6 which is attached to the body of the casing by hinges 7 and adapted to be held in closed position by a catch 8. Two electrodes 9 and 10 are mounted in one corner of casing 5 and preferably insulated therefrom by insulating washers 11 and 12, as plainly shown in Figure 3. Electrodes 9 and 10 are secured to casing 5 by nuts 13 threaded onto the stem 14 of each electrode and an electric conductor 15 is connected to each electrode by being secured between nut 13 and a nut 16 also threaded onto stem 14. Electric conductors 15 are connected to a suitable source of energy, such as the lighting circuit of a building or the battery of a motor vehicle.

A spring clip 17 is secured to the back of casing 5, as shown in Figure 2, and adapted to support a lighting element 18 which consists of a handle 19 of non-conducting material, a head 20 of conducting material, a contact 21, preferably formed integral with head 20, and a carbon contact 22 secured in a suitable socket formed in head 20 by means of a screw or other fastening means 23. Head 20 and contact 21 are preferably made of copper and handle 19 is preferably provided with a straight portion 24 in order to allow clip 17 to firmly hold the element in place in casing 5. In the form shown in the drawing, straight portion 24 is but slightly longer than the width of clip 17 and is disposed between head 20 and a shoulder 25 so that the element may not move longitudinally in clip 17.

If contacts 9 and 10 are connected to a suitable source of energy and contact 21 placed against one electrode and contact 22 against the other electrode, a current will flow from one electrode to the other through contact 21, head 20 and contact 22, or vice versa, and heat contact 22 due to the high resistance of the carbon. As soon as the end of contact 22 becomes incandescent, the contacts may be removed from the electrodes and a cigar, cigarette or a pipe may be lighted by bringing the tobacco in contact with the incandescent end thereof. It is also evident that other material may be ignited by being brought into contact with the incandescent end of contact 22.

My improved lighter is particularly adapted for use in a motor vehicle, as it is unaffected by the wind, and it may readily be passed from the front to the back seat while incandescent, as it has no wires attached to it. A partially smoked pipe-full of tobacco, which is impossible to light with the ordinary electric lighter and difficult to light with a gasoline lighter, may be relighted by plunging the incandescent end of contact 22 into the bowl of the pipe.

While I have described my invention as taking a particular form, it will be understood

that modifications may be made without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

I claim:—

1. A lighter including a handle of non-conducting material, a contact of low resistance material secured to the handle, and a contact of high resistance material having one end connected to the other contact.

2. A lighter including a handle of non-conducting material, a copper head on the handle, a copper contact on the head, and a carbon contact secured in the head and spaced from the copper contact.

In testimony whereof I have signed my name to this specification.

JOSEPH T. BURNS.