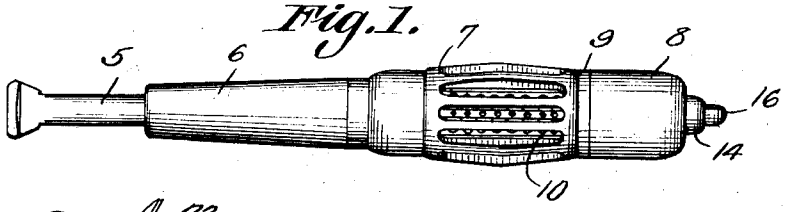
Sept. 11, 1928. 1,683,688

H. R. MILAN

CIGAR AND CIGARETTE LIGHTER

Filed Jan. 13, 1927

Fig. 1.



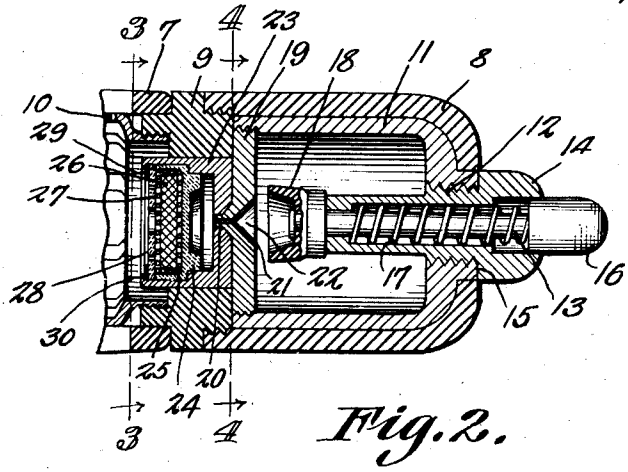


Fig. 2.

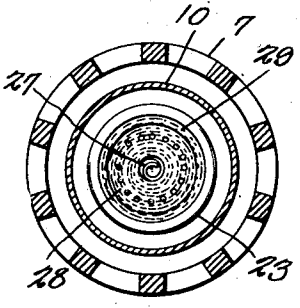


Fig. 3.

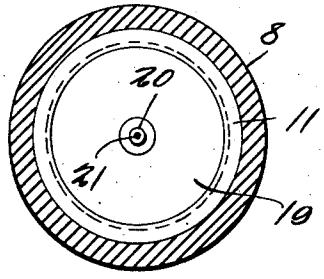


Fig. 4.

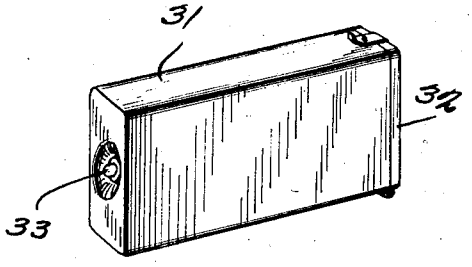


Fig. 5.

Inventor

Horace R. Milan

By C. A. Snow & Co.

Attorneys.

Patented Sept. 11, 1928. 1,683,688

UNITED STATES PATENT OFFICE.

HORACE R. MILAN, OF NEW YORK, N. Y.

CIGAR AND CIGARETTE LIGHTER.

Application filed January 13, 1927. Serial No. 160,953.

This invention relates to cigar and cigarette lighters, and more particularly cigar and cigarette lighters especially designed for pocket and personal use, the primary object of the invention being to provide a device of this character embodying heating wires which are heated to a white heat by a catalytic action, set up by directing the vapors of alcohol against a disk of black platinum sponge supported adjacent to the heating wires, thereby providing a flameless lighter which may be used with efficiency by motorists.

Another object of the invention is to provide a device of this character so constructed that a predetermined quantity of alcohol will be vaporized with each lighting operation, to the end that the heating wire will automatically cool when the alcohol ejected by the lighter has been consumed or burned.

A still further object of the invention is to provide a lighter which may be removably supported at the outer end of a cigar or cigarette holder, in such a way that the cigar or cigarette may be lighted by merely pressing a plunger head at the end of the holder.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is an elevational view of a cigar or cigarette holder equipped with a lighting device constructed in accordance with the invention.

Figure 2 is an enlarged sectional view through the lighter.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a sectional view taken on line 4—4 of Figure 2.

Figure 5 is a perspective view illustrating a modified form of lighter for pocket use.

Referring to the drawing in detail, the device in its preferred form as illustrated by Figure 1 is supported at the outer end of a cigar or cigarette holder, which includes a stem 5, body portion 6 and outer or guarding section 7 in which a cigar or cigarette may be positioned.

The lighter includes a substantially tubular casing 8 which is preferably constructed of a material corresponding with the material employed in the construction of the cigarette holder with which the device is used, and as shown, this casing is provided with internal threads cooperating with threads of the member 9 that has an extension fitted into the outer end of the cigarette holder.

Internal threads are provided on the member 9 and cooperate with threads of the guard section 10 forming a part of the guard proper 7. Mounted within the casing 8 and held in position by means of the member 9. is an inner casing 11 formed with internal threads cooperating with threads provided on the barrel 12 in which the plunger 13 operates so that the barrel may be securely held within the inner casing.

This inner casing provides a container or receptacle for alcohol used in the operation of the device, for setting up a catalytic action with elements to be hereinafter more fully described.

At the outer end of the barrel 12 is an enlargement 14 provided with a shoulder 15 adapted to engage the inner casing 11 to restrict movement of the barrel, and at the same time the enlargement provides means to be gripped by the person using the device to remove the barrel to refill the inner casing or container.

The plunger 13 is provided with a head 16 which is normally held in a position as shown by Figure 2 or to the limit of its outward movement, so that a person using the device, may by forcing the head 16 inwardly, cause the plunger to operate to accomplish its purpose. A coiled spring indicated at 17 encircles the plunger and acts to normally urge the plunger to the limit of its outward movement.

Carried at the inner end of the plunger and forming a part thereof, is a cup-shaped head 18 formed preferably of soft rubber, which head is adapted to contact with the metal disk 19 formed with threads to permit the same to be positioned in the casing 11 as shown by Figure 2.

A nozzle indicated at 20 is formed integral with the disk 19 and extends from the central portion thereof, the nozzle being sup-

plied with an exceptionally fine bore 21 merging into an enlarged opening 22 defining a pocket for the reception of a predetermined quantity of alcohol to be forced from the container when the plunger is operated.

Mounted within the member 9 is a housing 23 which is formed with an opening to accommodate the nozzle 20 as shown by Figure 2, the housing being designed to support the elements that cooperate with the alcoholic fumes in setting up a catalytic action to produce heat.

The reference character 24 indicates a circular block of lavite, however it is to be understood that other porous material may be employed in this capacity without departing from the spirit of the invention. As shown, this block of lavite is hollowed out and disposed directly in front of the nozzle 20 so that the alcohol forced through the nozzle by the plunger will be directed to a point centrally of the member 24, to the end that the alcohol may permeate evenly throughout the entire body portion of the block of lavite to insure an even heating of the wire 25 held within the block of lavite 24.

The heating wire is coiled in such a way that it will conform to the cut out portion formed in the outer surface of the block of lavite 24 to form a container for the disk of black platinum sponge indicated at 26. A substantially flat coil of heating wire 27 is positioned against the disk of black platinum sponge to the end that the wire houses the disk of black platinum sponge.

A guard disk indicated at 28 is formed of mica and is provided with a plurality of openings to allow the heat from the heating wire to be drawn therethrough to light a cigar or cigarette, which is held against the guard disk 28 by the person endeavoring to light the cigar or cigarette.

The disk 28 is held in position by means of washer 29, which in turn is held in position by the inturned flange 30 formed at the end of the housing 23.

In the use of the device, the head 16 is forced inwardly operating the plunger and causing the cup-shaped head 18 to force a quantity of alcohol trapped in the enlarged opening 22, through the nozzle and onto the block of lavite 24 in a fine stream. The block of lavite 24 being porous, readily absorbs the alcohol which is converted into a vapor in its passage through the lavite material, the vapors contacting with the disk of black platinum sponge, setting up a catalytic action to generate heat, which heats the wire 25 surrounding the disk of black platinum sponge to a white heat, to the end that a cigar or cigarette pressed against the disk 28 may be lighted when the person holding the cigar or cigarette draws air through the cigar or cigarette, in the natural way creating a draught through the lavite and black platinum sponge.

In the form of the invention as illustrated by Figure 5, the principle of the invention as previously described is carried out, the elements being supported in a rectangular casing indicated by the reference character 31, there being provided a hinged closure 32 at one end thereof, which hinged closure is designed to normally close the end of the casing in which the lavite and black platinum sponge forming the heating element, are supported.

The reference character 43 indicates the plunger head which may be pressed by the operator in forcing a quantity of alcohol onto the block of lavite material supported within the casing.

It might be further stated that the holder may be of any desired construction, however in the present showing I have preferred to employ a holder supplied with a guard that embodies openings through which air may be drawn to permit a cigar or cigarette held therein to be guarded while being smoked.

I claim:

1. A cigar lighter including an open ended body portion, a liquid container supported within the body portion, a heating element supported in the open ended body portion and including a coil of heating wire, a disk of black platinum sponge supported within the coil of heating wire, a porous member for supporting the coil and disk of black platinum sponge, and means for forcing a quantity of liquid onto the porous member to mingle with air entering the body portion to set up a catalytic action whereby the wire is caused to glow.

2. A cigar lighter including a body portion having openings to admit air to the interior thereof, a liquid container mounted in the body portion, an absorbing member supported within the body portion adjacent to the container, means for forcing a quantity of liquid onto the absorbing member, a coil of heating wire and a disk of black platinum sponge arranged adjacent to the absorbing member to cause the wire coil to heat when the vapors from the absorbing member mingle with the air in the body portion and contact with the black platinum sponge.

3. A cigar lighter including a body portion having openings to admit air to the interior thereof, an alcohol container at one end of the body portion, a nozzle forming a part of the alcohol container, means operating in the container for forcing a predetermined quantity of alcohol through the nozzle, a porous member disposed within the body portion and adapted to absorb alcohol directed thereto, heating wires supported by the porous member, a disk of black platinum sponged housed by the heating wires, said

disk of black platinum sponge adapted to absorb alcoholic vapors from the porous member and set up a catalytic action with the alcoholic vapors and air entering the body portion to heat the heating wires.

4. A cigar and cigarette lighter including an open ended body portion, an alcohol container mounted within the body portion, an absorbing member disposed adjacent to the container, means for forcing a predetermined quantity of alcohol from the container and onto the absorbing member, a heating wire mounted on the absorbing member, said absorbing member adapted to absorb alcoholic vapors and set up a catalytic action with the air entering the body portion to heat the wire.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

HORACE R. MILAN.