April 30, 1935. R. D. MacKENZIE 1,999,245

CIGAR AND CIGARETTE EXTINGUISHER

Filed Aug. 6, 1931

Fig. 1.

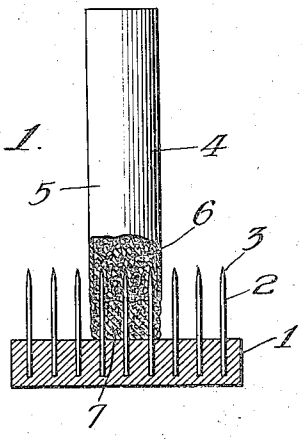


Fig. 2.

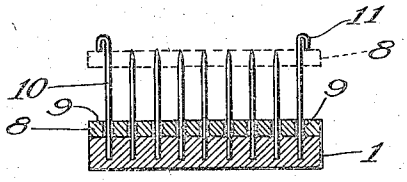


Fig. 3.

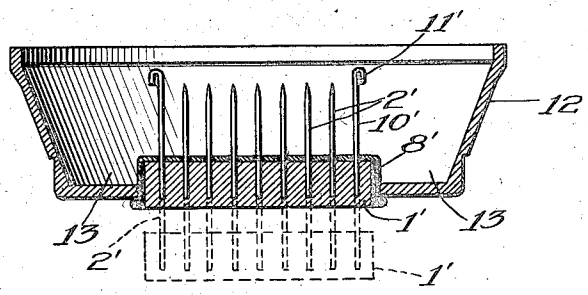
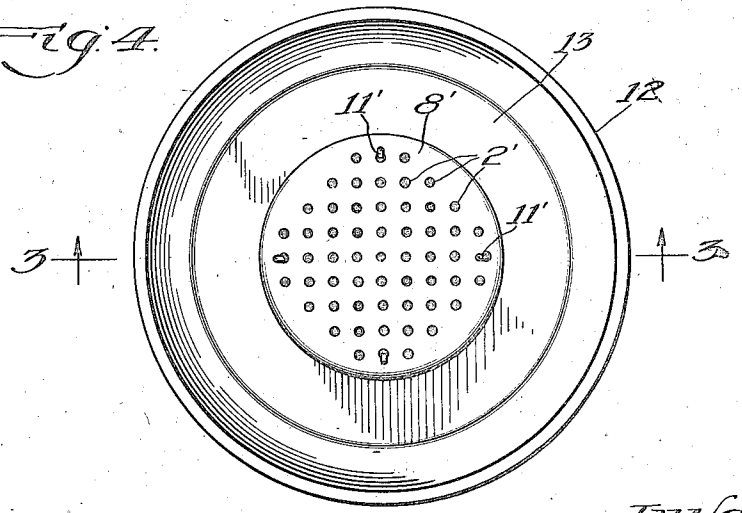


Fig. 4.



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CIGAR AND CIGARETTE EXTINGUISHER

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3 Claims. (Cl. 131—51)

This invention relates to improvements in cigarette or cigar extinguishers and refers specifically to a method and means for completely and conveniently extinguishing a burning cigarette or cigar which may be used, if desired, in conjunction with ash receivers, smoking sets or the like, or may be used as a complete unit in itself.

The utility, object and advantages of my invention will be apparent from the accompanying drawing and from the following detailed description.

In the drawing, Figure 1 is a sectional view illustrating suitable apparatus for carrying out my invention shown in conjunction with a burning cigarette.

Figure 2 is a similar view of a slightly modified form of apparatus.

Figure 3 is a sectional view taken on the line 3—3 of Figure 4.

Figure 4 is a top plan view of an ash receiver provided with my improved cigarette or cigar extinguisher.

Referring in detail to the drawing, 1 indicates a base which may, if desired, be constructed in any sectional shape. Preferably the material comprising the base 1 is such as has relatively high heat conducting properties such as copper, brass, or other metallic substance.

A plurality of pins 2 may be imbedded in the base 1 and may project upwardly from said base and terminate in points 3. The pins 2 may be disposed over the entire area of the base 1 and may be constructed of metal such as brass, steel, or in general any material which has relatively high heat conducting properties.

The pins 2 imbedded in the base 1 may be disposed sufficiently close to each other throughout the area of the base so that a cigarette 4 having the usual cross sectional area when positioned at right angles to the plane of the base, in other words, when positioned with its axis parallel to the axes of the pins 2 may permit one or a plurality of said pins to pass longitudinally into the end of the cigarette. To extinguish a lighted cigarette or cigar, the cigarette 4 having the usual paper wrapper 5 enclosing tobacco 6 and having a lighted end 7, may be impaled upon the pins 2, the axis of the cigarette being positioned parallel to the axes of the pins. The lighted end of the cigarette when so positioned is extinguished within a very short period of time.

The phenomenon which takes place to cause the extinguishing of the lighted cigarette or cigar is, that those pins 2 which project into the incandescent or lighted portion of the cigarette or cigar immediately absorb or conduct the heat from the territory adjacent the pins thereby cooling the material within said territory. It can readily be seen that to obtain efficient cooling action the material comprising the pins 2 must be such as to rapidly conduct the heat from the incandescent portion of the cigarette or cigar and dissipate it to the atmosphere or to a remotely positioned body where the heat is subsequently dissipated to the atmosphere. By providing a metal base 1 the heat conducted by the pins positioned within the incandescent portion of the cigarette or cigar is immediately transferred to the base and from thence it is dissipated to the atmosphere.

In addition, it may be observed that when a lighted cigarette or cigar is disposed adjacent a cooler surface such as a metal or glass surface, condensation appears upon said surface adjacent the heated end of the cigarette or cigar. This same phenomenon is also utilized in the extinguishing of the lighted cigarette or cigar inasmuch as condensation forms upon those pins which project into the incandescent portion of the tobacco and consequently the extinguishing action is facilitated.

It is to be understood, of course, that the base 1 if desired may be constructed of any material whether of good heat conducting properties or not since if the exposed portions of the pins 2 are sufficiently long, the heat absorbed by the pins which project into the incandescent portion of the tobacco may be dissipated directly from the pins to the atmosphere and in this manner the cigarette or cigar may be extinguished. However, a base constructed of metal or another material having high heat conducting properties is preferable.

Inasmuch as my invention is dependent upon the rapid removal of heat from the incandescent portion of the tobacco of the cigarette or cigar, it is preferable to dispose the pins 2 as close as possible so that the heat may be removed from the incandescent tobacco more rapidly. However, if the pins are disposed too close together or are too thick, difficulty may be encountered in impaling the cigarette upon the pins. In addition it may be desirable to extinguish a cigarette or cigar temporarily with the intention of subsequently lighting it. By disposing the pins too close together or by utilizing pins having relatively large diameters, the end of the cigarette will be substantially ruined. Consequently, an arbitrary spacing of pins must be selected which will efficiently extinguish a cigarette or cigar and which will permit its subsequent use.

It is to be understood, of course, that the cigarette or cigar may be extinguished by impaling the lighted end thereof at right angles to the pins 2, inasmuch as the heat from the incandescent portion of the tobacco will be carried away by the pins and dissipated. However, in extinguishing the cigar or cigarette in this manner, a substantial portion of the end of the cigarette will be destroyed and consequently cannot be subsequently used.

As has been hereinbefore described, condensation forms upon the surfaces of the pins which project into the heated portion of the cigarette or cigar and, consequently, through repeated use, an accumulation of nicotine or other chemicals which may be used in the treatment of the tobacco, will form upon the surfaces of the pins and act as a heat insulating medium, thus preventing the efficient removal of heat from the incandescent tobacco. In addition, accumulations of this character forming upon the surfaces of the pins prevent, in time, the ready impalement of the cigarette and cause the unburned tobacco to adhere to the sides of the pin. Therefore, upon removing the cigarette or cigar the end of the same will be ruined. To obviate this difficulty the pins 2 may project upwardly through a plate 8 which may be provided with a plurality of apertures 9 corresponding to the number of pins projecting from the base 1. The arrangement is such that said plate may be readily moved upwardly or downwardly along the length of the exposed portions of the pins and will effectively scrape the surfaces of said pins thereby removing condensation, ashes or any gummy deposits upon the surfaces of the pins. A plurality of guide rods 10 may be imbedded in the base 1 and may be provided with a projection 11 at their upper ends which may prevent the removal of the plate 8 from the pins. This construction is shown in Figure 2 and constitutes an extinguishing unit which may be mounted upon an ash tray, a smoking set or the like.

A device which may illustrate the utilization of my invention is shown in Figs. 3 and 4 wherein 12 indicates an ash receiver or tray which may be constructed of any suitable material. An aperture may be formed in the central portion of the tray 11 into which may be inserted a depressed member 8'. The member 8' may be provided with a plurality of relatively small apertures through which pins 2' may project upwardly into the interior of the tray 12. The pins 2' may be embedded in a suitable base 1' which may be constructed of a material similar to the material constituting the base 1. However, it is desirable to use a relatively heavy material such as lead or the like. Guide rods 10' may also be imbedded in the base 1' and may be provided with projections 11' which may prevent the removal of the pins 2' and the base 1' from the plate 8'.

The use of an ash tray or receiver of this character is obvious in view of the description of the device shown in Figs. 1 and 2. However, after the cigarette has been extinguished the same may be removed from the pales 2' and may be deposited in the depressed, annular portion 13 of the tray 12. To remove the condensation or accumulation of gummy material which may form upon the surfaces of the pins 2, the tray 12 may be lifted and in so doing the weighted base 1' will fall, as shown best in dotted lines in Figure 3, until the projections 11' contact the upper surface of the plate 8'. In this manner the surfaces of the pins 2' will be effectively cleaned. The tray 12 may then be replaced upon a desk, table or the like and in so doing the base 1' may be returned to its normal position within the concavity formed by the flanged plate 8'.

It is to be understood, of course, that I do not wish to be limited to the precise structure shown and described inasmuch as the broad concept of my invention may be utilized in numerous modifications which will not depart from the spirit of the invention. Hence, I do not wish to be limited except as necessitated by the prior art.

I claim as my invention:

1. In combination, an ash receiver having an opening in the bottom thereof, a plate disposed in the bottom of the receiver and having means securing the same in the opening provided with a plurality of apertures, a plurality of pins slidably positioned in said apertures, a second plate upon which said pins are mounted, and means secured to said second plate limiting slidable movement of the pins with respect to the first plate.

2. In combination, an ash receiver having an opening in the bottom thereof, a plate disposed in the bottom of the receiver and having means securing the same in the opening provided with a plurality of apertures, a plurality of pins slidably positioned in said apertures upon which a cigar or cigarette may be impaled, a second weighted plate disposed beneath said ash tray bottom upon which said pins are mounted and means limiting the slidable movement of the pins with respect to the first plate.

3. In combination, an ash receiver, having a plurality of apertures in the bottom thereof, a plate of heat conducting material positioned beneath said apertures, a plurality of heat conducting pins mounted upon said plate and projecting through said apertures, said plate and pins being movable with respect to said receiver bottom, and means limiting the movement of said plate and pins with respect to said receiver bottom.

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