July 24, 1951 F. L. THWING 2,561,829

CIGARETTE EXTINGUISHING AND DISPOSAL MEANS

Filed June 19, 1946

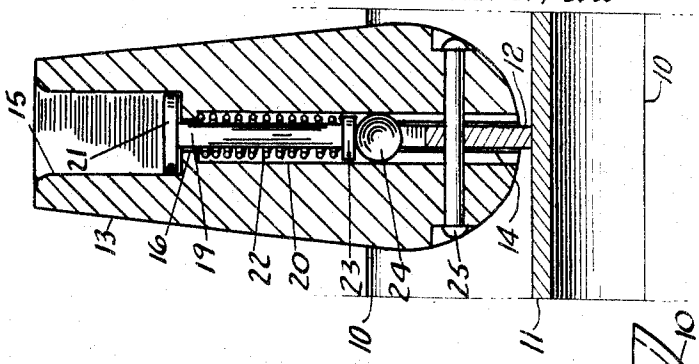


Fig. 2.

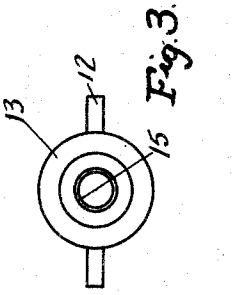


Fig. 3.

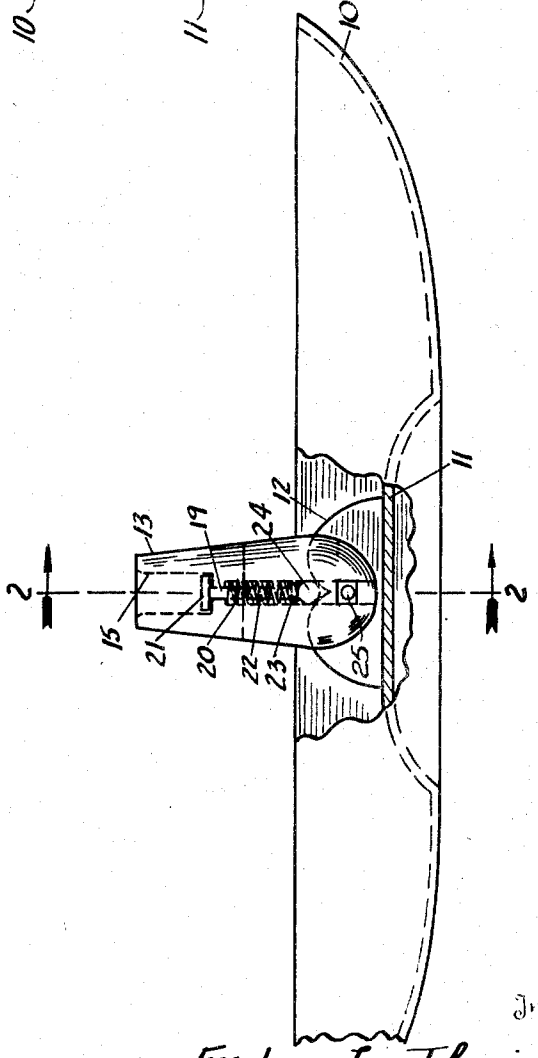


Fig. 1.

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Patented July 24, 1951

2,561,829

UNITED STATES PATENT OFFICE

2,561,829

CIGARETTE EXTINGUISHING AND DISPOSAL MEANS

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Application June 19, 1946, Serial No. 677,838

6 Claims. (Cl. 131—235)

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This invention relates to devices for extinguishing cigarettes or the like, and particularly to such devices having incorporated therein means for snuffing and ejecting the extinguished cigarette in a novel and efficient manner, and particularly in a manner which reduces scattering of ashes and partially burnt tobacco.

The primary object of the invention is to provide a device for positively extinguishing or snuffing out a cigarette or the like, and positively disposing of the stub by ejecting it into an ash tray or other receptacle without causing the hand of the operator to come in contact with ashes.

Another object of the invention is to provide a device for extinguishing a cigarette or the like, and having incorporated therein means for positively ejecting the stub and disposing of it by a simple lateral or tilting movement of the device.

Another object of the invention is to provide a device as in the foregoing objects wherein the extinguishing device comprises a barrel adapted to receive the lighted cigarette or the like, which is normally in a predetermined position, preferably an up-right position, and which device positively ejects the stub from the barrel by tilting the barrel to a second position.

Another object of the invention is to provide a device as described which is inexpensive to manufacture from the standpoint of materials, is easy to fabricate and assemble and is attractive in appearance.

Further objects and numerous of the advantages of my invention will become apparent from the following detailed description and the annexed drawing, wherein

Figure 1 is a side view of an ash tray having my invention mounted thereon, a portion of the ash tray being broken away.

Figure 2 is a cross sectional view taken along the line 2—2 of Figure 1, with parts illustrated in elevation.

Figure 3 is a plan view of the extinguishing and ejecting mechanism of Figure 1.

Referring to the drawings, numeral 10 designates an ash tray which may be an ash-receiving receptacle of generally conventional form, the receptacle or tray having a portion at the bottom dished upwardly or inwardly, as shown at 11. Upstanding from the portion 11 is a plate 12, which forms a cam surface as will be described,

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the cam surface being heart-shaped, that is corresponding to the shape of the upper portion of a heart as shown. The cam plate 12 is centrally located as respects the ash tray 10. Numeral 13 designates a round elongated barrel member having a slight taper, as shown, and the lower part of which is rounded in hemispherical form, as shown. The barrel member 13 has a transverse slot 14 in its bottom portion as may be seen on Figure 2, and the barrel member is fitted down over the cam plate 12, or in other words, the cam plate 12 fits into the slot 14. The barrel member 13 is pivoted to the cam plate 12, the barrel member 13 being journalled on a pin 25 which extends transversely through the lower part of the barrel member 13 and cam plate 12, as shown on Figures 1 and 2.

The barrel member 13 has a bore 15 in its upper portion of a size to snugly receive the lighted end of a burning cigarette or the like. Numeral 16 designates a relatively small counter-bore connecting with another larger bore 20 which extends longitudinally through the remaining distance of the barrel member 13, the slot 14, of course, communicating with the bore 20. In the bore 20 and extending through the counter bore 16 in which its fits nicely is a plunger member 19 comprising a stem having a disc 21 at the upper end located in bore 15, and having a disc 23 at the lower end located in the bore 20. Numeral 22 designates a coil spring which is around the stem of the plunger 19, and the lower end of which bears against the disc 23 at the lower end of the stem, and the upper end of which engages the shoulder at the upper end of the bore 20. The disc 23 at the lower end of the stem 19 normally bears against a cam follower or steel ball 24 so that the ball is urged downwardly relatively to the barrel 13, and when the barrel 13 is in an up-right position, as shown in Figure 1, the ball engages and latches so to speak in the indentation or notch 12' in the central upper part of the heart-shaped cam plate 12. Due to the thrust exerted against the ball 24 by the coil spring 22, it will be seen, of course, that the arrangement normally holds the barrel 13 in a vertical up-right position.

When the barrel member 13 is tilted or rotated to right or left by means of applying the finger to the side of the barrel, the ball 24 is caused to

ride up on a higher portion of the cam plate 12, forcing the plunger member 19 upwardly in the barrel 13 and compressing the coil spring 22. If the barrel member is then released, since the thrust exerted by the coil spring 22 against the ball 24 is not normal to the surface of the cam plate 12 there being a component of force in a direction towards the center of the cam plate 12, the barrel member 13 will automatically return to a vertical up-right position, latching itself in that position.

Thus in the operation of the device when a lighted cigarette is to be extinguished, the lighted end is simply inserted in the bore 15 and this action quickly extinguishes the cigarette. The barrel 13 is then tilted with the finger, either to the right or left, and as described above, the plunger 19 moves outwardly, that is upwardly, in the barrel 13, and the disc 21 at the upper end of the plunger forces or ejects the extinguished stub out of barrel 13, and it drops into the tray or receptacle 10.

From the foregoing it will be seen that the device positively extinguishes the cigarette and ejects it into the tray automatically as a result of the tilting of the barrel 13. The extinguished stub is not touched by the hand of the operator, and the nature of the operation is such that the disposal of the cigarette is accomplished in a clean manner, since the extinguished stub is positively ejected from the barrel 13 and caused to drop into the tray. The positive action of the plunger 19 insures against ashes, tobacco or fragments of paper sticking in the bore 15, or otherwise fouling it. The butt when disposed into the tray is in the form of a uniform, straight and slightly compressed stub, so that scattering of ashes or bits of tobacco is eliminated or reduced to a minimum. As pointed out, this is accomplished without the operator's touching the extinguished stub and with a positive action which prevents any fouling of the operative parts.

The foregoing is a representation of a preferred form of my invention, and it is to be understood that the invention may be practiced in other forms and embodiments, all falling within the scope and domain of my invention, and the invention is, therefore, to be limited only in accordance with the claims appended hereto.

I claim:

1. In a cigarette extinguisher, a supporting member having a pair of cam surfaces with an indentation therebetween, a cigarette receiving member pivotally mounted upon said supporting member for limited pivotal movement in a single plane in either direction from a normal position, an ejector mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, a follower movable within said receiving member and engaging said cam surface and the facing extremity of said ejector, and resilient means for normally maintaining said ejector and follower in retracted position with said follower engaging the indentation between said cam surfaces, pivotal movement of said receiving member in either direction from said normal position moving said follower along one of said cam surfaces and advancing said ejector to eject a cigarette from said receiving member, the engagement of said follower with said cam surface returning said receiving member to said normal position.

2. In a cigarette extinguisher, a supporting member having a cam surface, a cigarette receiving member pivotally mounted upon said supporting member for limited pivotal movement in a single plane from a normal position, an ejector mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, a cam follower movable within said receiving member and engaging said cam surface and the facing extremity of said ejector, and resilient means for normally maintaining said ejector and follower in retracted position with said follower engaging said cam surface, pivotal movement of said receiving member moving said follower along said cam surface and advancing said ejector to eject a cigarette from said receiving member, the engagement of said follower with said cam surface returning said receiving member to said normal position.

3. In a cigarette extinguisher, a supporting member having a cam surface, a cigarette receiving member oscillatably mounted upon said supporting member for limited movement from a normal position, an ejector mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, a cam follower movable within said receiving member and engaging said cam surface and the facing extremity of said ejector, and resilient means for normally maintaining said ejector and follower in retracted position with said follower engaging said cam surface, movement of said receiving member moving said follower along said cam surface and advancing said ejector to eject a cigarette from said receiving member, the engagement of said follower with said cam surface returning said receiving member to said normal position.

4. In a cigarette extinguisher, a supporting member having a cam surface, a cigarette receiving member oscillatably mounted upon said supporting member for limited movement from a normal position, ejecting means mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, and resilient means for normally maintaining said ejecting means in retracted position with the inner extremity of said ejecting means engaging said cam surface, movement of said receiving member advancing said ejecting means along said cam surface to eject a cigarette from said receiving member, the engagement of said ejecting means with said cam surface returning said receiving member to said normal position.

5. A combination ash tray, cigarette extinguisher and ejector including a supporting member fixed on said tray and having a cam surface, a cigarette receiving member pivotally mounted upon said supporting member for limited pivotal movement in a single plane from a normal position, an ejector mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, a cam follower movable within said receiving member and engaging said cam surface and the facing extremity of said ejector, and resilient means for normally maintaining said ejector and follower in retracted position with said follower engaging said cam surface, pivotal movement of said receiving member moving said follower along said cam surface and advancing said ejector to eject a cigarette from said receiving member, the engagement of said follower with said cam surface returning said receiving member to said normal position.

6. A combination ash tray, cigarette extinguisher and ejector including a supporting member fixed on said tray and having a cam surface,

a cigarette receiving member oscillatably mounted upon said supporting member for limited movement from a normal position, ejecting means mounted within said receiving member for reciprocable movement with respect to the longitudinal axis thereof, and resilient means for normally maintaining said ejecting means in retracted position with the inner extremity of said ejecting means engaging said cam surface, movement of said receiving member advancing said ejecting means along said cam surface to eject a cigarette from said receiving member, the engagement of said ejecting means with said cam surface returning said receiving member to normal position.

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