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R. E. RUSSELL

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SMOKER'S ARTICLE

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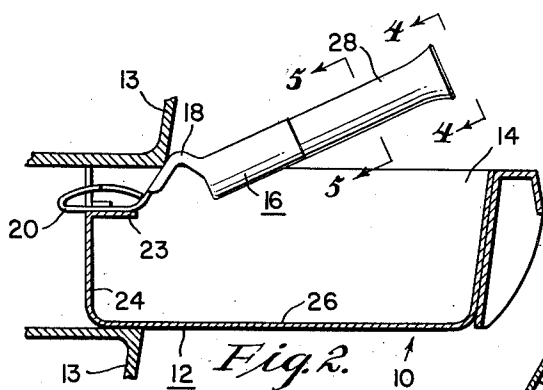


Fig. 2.

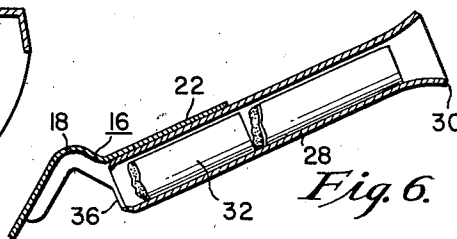


Fig. 6.

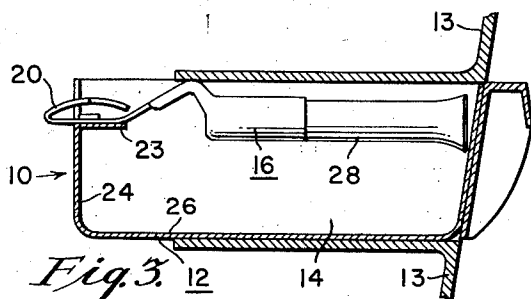


Fig. 3.

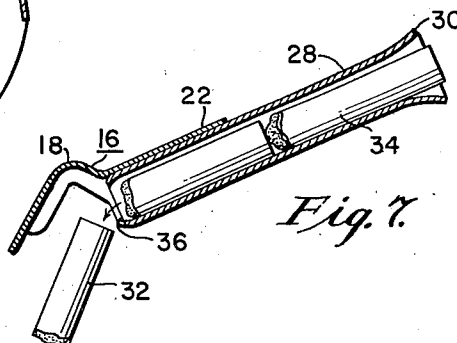


Fig. 7.

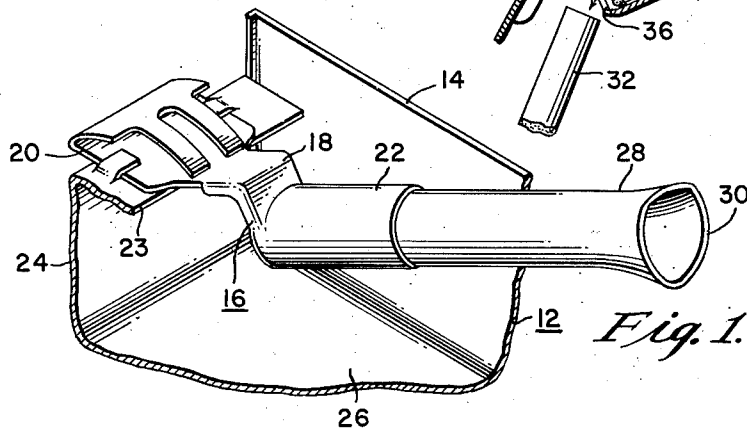


Fig. 1.

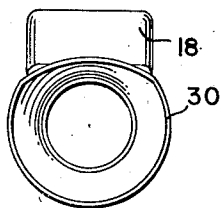


Fig. 4.

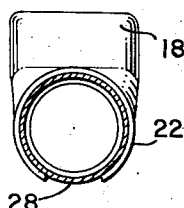


Fig. 5.

INVENTOR.
RICHARD E. RUSSELL
BY
Leonard L. Kalish
ATTORNEY.

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SMOKER'S ARTICLE

Richard E. Russell, Hughesville, Pa., assignor of one-fourth to Susan Elizabeth Russell, Hughesville, Pa., one-fourth to Richard Peale Russell, and one-fourth to Robert Louis Russell, both of the U. S. Military Academy at West Point

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2 Claims. (Cl. 131—235)

This invention relates to a smoker's article, and more particularly to an ash tray for holding and extinguishing burning or smoldering cigarettes, and the like.

In conventional ash trays wherein a burning or smoldering cigarette is deposited on an exposed surface, the cigarette continues to burn or smolder for a significant period after being deposited within the ash tray. This constitutes a serious disadvantage inasmuch as the cigarette smoke may be objectionable to persons in the neighborhood of the ash tray. Moreover, the serious hazard is present that the still-burning cigarette may fall out of the ash tray and produce a fire. This hazard is particularly present with automobile ash trays, and ash trays mounted on other moving vehicles such as airliner seats and the like, where the ash tray may be subjected to a sudden displacement or jerking movement.

This invention has as an object the provision of an ash tray in which burning or smoldering lighted cigarettes are rapidly extinguished.

A still further object of this invention is the provision of an ash tray having a "self-cleaning" cigarette extinguisher.

These and other objects are accomplished by the ash tray of the present invention which comprises a receptacle adapted to receive cigarette butts and the like. The receptacle is provided with walls of sufficient height to prevent cigarette butts deposited therewithin from falling outwardly therefrom. An open-ended cigarette-extinguishing tube having a bore diameter somewhat larger than the cigarette diameter is positioned with its bottom end at a spaced distance from the inner surface of said receptacle. In operative position, the angle of the cigarette tube in respect to the inner surface of the receptacle is such that a cigarette placed therein is received for the extinguishing period within the tube. An extinguished cigarette positioned within the extinguishing tube is removed therefrom by being rammed through the tube by a subsequent cigarette deposited therein.

For the purpose of illustrating the invention, there is shown in the accompanying drawings one form thereof which is at present preferred, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and that the invention is not limited to the precise arrangements and organizations of the instrumentalities as herein shown and described.

In the following figures like reference characters refer to like parts:

Figure 1 is a fragmentary perspective view, viewed from above, of an ash tray constructed in accordance with the present invention.

Figure 2 is a side sectional view of the ash tray of Figure 1 showing the cigarette-extinguishing tube in operative position.

Figure 3 is a side sectional view, of the ash tray of Figure 1 similar to that of Figure 2, but showing the cigarette-extinguishing tube in its retracted position.

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

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Figure 5 is a view taken on line 5—5 of Figure 2.

Figure 6 is a side sectional view of the cigarette-extinguishing tube with extinguished cigarette butts retained in position therewithin.

Figure 7 is a side-sectional view of the cigarette-extinguishing tube during a self-cleaning stage, with an extinguished cigarette butt being discarded therefrom.

Referring to the drawings, the ash tray of the present invention is designated by the numeral 10 and comprises a receptacle portion 12 which may be reciprocally recessed within the dashboard 13.

Receptacle portion 12 is adapted to receive all of the extinguished cigarette butts deposited within ash tray 10, and comprises side walls 14 of sufficient height to retain extinguished cigarette butts therewithin. Receptacle portion 12 may be removed from dashboard 13 for cleaning purposes, such as to discard extinguished butts.

Tube holder 16 comprising a bent member having a central camming surface 18, a clamping end 20 and a tube-retaining end 22 is mounted on an turned flange 23 of rear wall 24. Tube holder 16 is preferably fabricated of spring steel such as 0.025" cadmium-plated spring steel and when mounted as shown in the drawings is spring-urged upwardly away from the base 26 of receptacle 12. Thus, camming surface 18 may be engaged with dashboard 13 when receptacle 12 is recessed in the dashboard (Figure 3), so that cigarette-extinguishing tube 28 may assume its retracted position within receptacle 12. Upon outward movement of receptacle 12 with respect to the dashboard 13, camming surface 18 may be disengaged, causing cigarette-extinguishing tube 28 to rise to operative position (see Figure 2).

The tube-retaining end 22 of tube holder 16 comprises a swaged portion which partially embraces cigarette-extinguishing tube 28. Cigarette extinguishing tube 28 comprises a tube having a bore approximately $\frac{1}{16}$ " to $\frac{3}{16}$ " larger than the diameter of the cigarette or the like to be deposited therewithin.

While the present embodiment illustrates an extinguishing tube for cigarettes, it is to be understood that similar tubes can be constructed and used for the extinguishing of lighted cigars and the like.

Cigarette extinguishing tube 28 should be fabricated of a metal having a high heat conductivity such as aluminum, copper, cadmium-plated steel, etc. The tube should be of a length such that when a burning or smoldering cigarette butt is inserted therewithin, the extinguishing is achieved in an appreciably shorter time than when the cigarette is deposited on an exposed surface. Thus, in the case of a cadmium-plated steel tube having an axial length of $2\frac{3}{4}$ inches or thereabouts and an inside diameter of about $\frac{3}{8}$ inch, extinguishing of a cigarette can be achieved within about 5 to 7 seconds. The upper or forward end 30 of the cigarette tube 28 is flared to permit introduction of a smoldering cigarette therewithin.

By having the bottom or far end of cigarette-extinguishing tube 28 positioned at a distance from the inner surface of receptacle 12, the cigarette extinguishing tube 28 is rendered self-cleaning. Thus, an extinguished cigarette butt 32 retained within cigarette-extinguishing tube 28 (Figure 6) is removed therefrom by being rammed free when a subsequent cigarette butt 34 is inserted within cigarette-extinguishing tube (Figure 7).

When cigarette extinguishing tube 28 becomes soiled such as by the deposition of tars and the like on its inner wall surface, it can be removed from its engagement with tube holder 16 and cleaned, such as by running a pipe cleaner therethrough.

Alternatively, in place of the construction shown in the drawings, the cigarette-extinguishing tube can be mounted in the wall of receptacle 12, with flared forward

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end 30 positioned in front of the wall and rear end 36 positioned behind the wall, or cigarette-extinguishing tube 28 may be reciprocally mounted upon the upper edge of said wall. In ash trays for home or office use, cigarette-extinguishing tube 28 may be fixedly positioned in respect to the base of receptacle 12.

While the construction shown in the drawings shows but a single cigarette extinguishing tube, it is, of course, to be understood that a plurality of such tubes can be mounted upon the receptacle 12, and that different sizes of such tubes can be mounted on the same ash tray to permit extinguishment of cigarettes, cigars and other tobacco products.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having described my invention, I claim:

1. For use and mounting in an opening in the dashboard of an automobile or the like, an ash tray having a bottom and having rear and front walls extending upwardly therefrom and adapted to be mounted in the aforesaid opening in the dashboard for in and out movement in relation thereto, said ash tray including a cigarette-receiving tube open at both ends, formed of metal and whose inner bore is of a diameter slightly greater than that of a cigarette, a spring-mounting supporting said tube in spaced relation to said front and rear walls and said bottom, said tube and said spring-mounting therefor being so disposed in relation to said front and rear walls and said bottom as to tend resiliently to swing said tube upwardly about a pivotal-zone near said rear wall, and so that when said tube is in its depressed position its front end will be near said front wall, with its rear end facing said rear wall, an upwardly-facing cam connected with said tube and said spring-support, a cam-

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depressor carried by the dashboard in operative juxtaposition to said cam and adapted to engage said cam and to depress it and to retain it in a depressed position when said ash tray is moved into the dashboard.

2. For use and mounting in an opening in the dashboard of an automobile or the like, an ash tray having a bottom and having rear and front walls extending upwardly therefrom and adapted to be mounted in the aforesaid opening in the dashboard for in and out movement in relation thereto, said ash tray including a tube-holder, a spring-mounting supporting said tube holder, a cigarette receiving tube open at both ends, formed of metal and whose inner bore is of a diameter slightly greater than that of a cigarette, said cigarette receiving tube and said tube-support being telescoped in relation to each other, said tube-holder and said spring-mounting therefor being so disposed in relation to said front and rear walls and said bottom as to tend resiliently to swing said tube upwardly about a pivotal-zone near said rear wall, and so that when said tube is in its depressed position its front end will be near said front wall, with its rear end facing said rear wall, an upwardly-facing cam connected with said tube and said spring-support, a cam-depressor carried by the dashboard in operative juxtaposition to said cam and adapted to engage said cam and to depress it and to retain it in a depressed position when said ash tray is moved into the dashboard.

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