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Fox et al.

[11] **3,841,339**

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[54] **STACKABLE SAFETY ASH TRAY**

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[52] **U.S. Cl.** ..... **131/235 R,** 131/241, D7/3, 220/23.6

[51] **Int. Cl.** **A24f 19/14**

[58] **Field of Search** 131/235, 240, 241; 220/23.6

[56] **References Cited**

UNITED STATES PATENTS

2,172,161	9/1939	Du Prey	131/240 R
2,352,756	7/1944	Annholt	131/240 R
2,564,834	8/1951	Devine et al.	131/241 UX
2,989,813	6/1961	Hess, Sr.	131/235 X
3,606,893	9/1971	Verberg	131/241

FOREIGN PATENTS OR APPLICATIONS

982,659	2/1965	Great Britain	131/240 R
420,554	12/1934	Great Britain	131/235 R
633,274	12/1949	Great Britain	131/240 R

OTHER PUBLICATIONS

No. 33, Stile Industria, August 1961.

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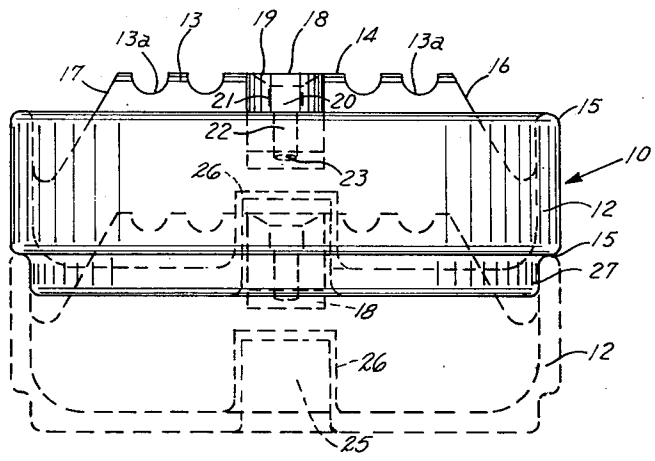
[57] **ABSTRACT**

A stackable safety ash tray having a flattened dish-shaped body with an upwardly extending sidewall around the outer edge. An elevated barrier having integrally formed cigarette snuffing devices is arranged across the ash tray body and is attached to the sidewall at a location below the upper edge of the sidewall. The snuffing devices are positioned in a generally vertical arrangement with stepped internal bores for insertion and extinguishing a lighted cigarette. The undersurface of the body is formed with recesses which conform to the upper surface of an identical ash tray whereby a plurality of the ash trays may be positioned in a stacked arrangement. When stacked, the cavity of each of the lower ash trays is sealed so that any burning material contained therein will be extinguished.

5 Claims, 5 Drawing Figures



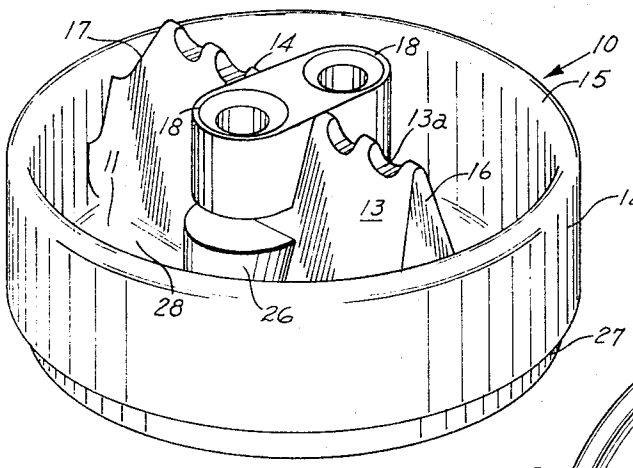


FIG. 1

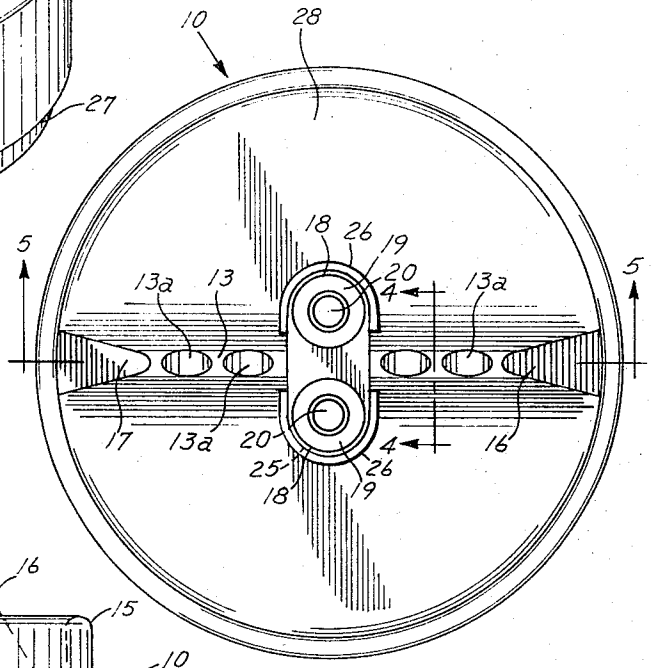


FIG. 2

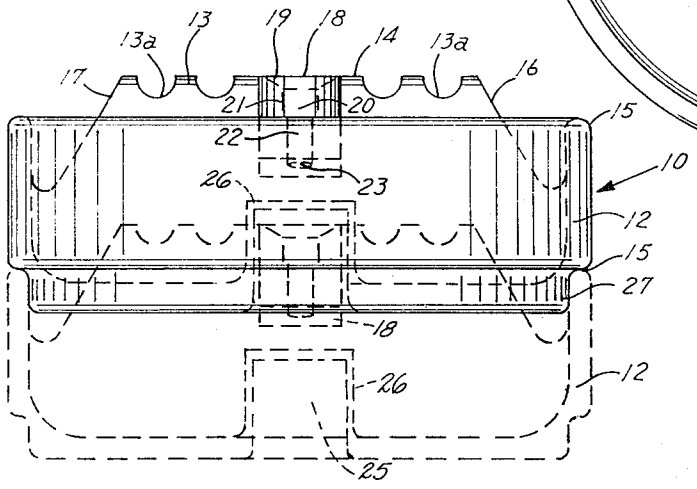


FIG. 3

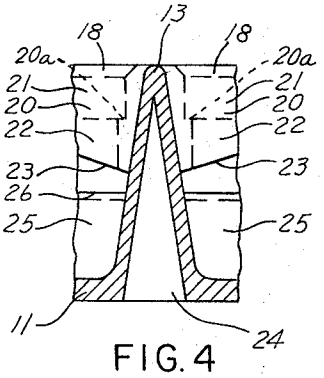


FIG. 4

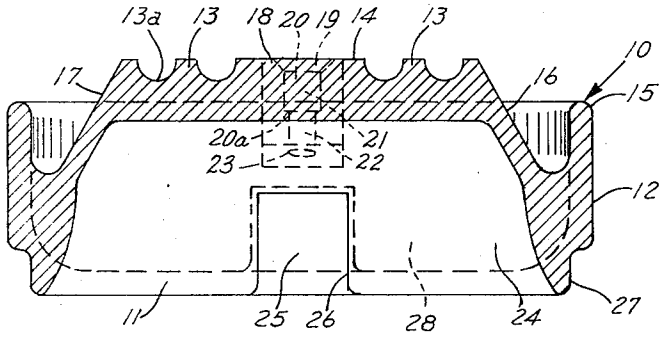


FIG. 5

STACKABLE SAFETY ASH TRAY

This invention is directed to a stackable ash tray. It is more specifically directed to a stackable safety type ash tray which provides a transverse elevated barrier positioned within the ash tray having integrally formed snuffing devices for a lighted cigarette.

As is well known, there are many ash trays on the market which provide pedestals and corrugations for the holding of a lighted cigarette. Anyone who has used this type of ash tray, however, is well aware that accidents do occur, such as when a lighted cigarette rolls from the edge of the ash tray onto furniture or carpets. Considerable damage and possible loss of life can result from accidents of this nature.

A problem also arises in the handling of ash trays when it is desired to store or carry these items. They are not only generally bulky, but because of the extensions, pedestals and the like, they seldom lend themselves to being stored in a small, compact area. This is especially true if a large number of ash trays must be stored or transported.

It is therefore an object of the present invention to provide an ash tray device which is easily stacked with a plurality of identical units, so as to provide an integral arrangement for easy carrying and storage.

A further object of the present invention is to provide an ash tray having snuffing devices provided centrally within the body which can be used to hold and quickly extinguish a lighted cigarette.

It is also an object of the present invention to provide an ash tray device which holds the cigarette in a position well within the boundaries of the outer edge of the ash tray to prevent the cigarette from rolling or falling from the device.

The present ash tray device consists of a relatively flat dish-shaped body having a narrow, generally vertical sidewall extending around the outer edge. A barrier for holding lighted cigarettes is arranged across the ash tray body. The central portion of the barrier is elevated above the sidewalls with the corners or ends of the barrier sloping downward, so that the barrier is joined to the sidewall at a point below the upper edge. Cylindrical recesses along the upper edge of the barrier are provided for holding the barrel of a lighted cigarette. The downward sloping ends of the barrier prevents a cigarette from being rested between the barrier and sidewall to prevent the cigarette from being overbalanced and possibly fall outside of the ash tray. One or more cigarette snuffing devices are incorporated in the barrier so that, by simply inserting the lit end of the cigarette without pressure, the cigarette will quickly be extinguished. By locating the snuffing devices close to the center of the ash tray, the cigarette is again prevented from accidentally falling from the ash tray.

The undersurface of the ash tray body, including the outer edge of the body and that portion under the barrier and snuffing devices, are recessed to conform to the upper surfaces of an identical ash tray, so that a plurality of the ash trays can be telescoped together in a stacked arrangement. When stacked, the ash trays form a continuously closed sidewall arrangement but still allow space within the ash tray cavity for cigarette stubs and ashes. This feature provides an additional advantage in that any burning material in the body cavity of the lower ash trays, when stacked, will be extinguished or suffocated. This feature is due to the telescoping of

the outer edges of the sidewalls, which seals the cavity, cutting off the air to any lighted embers contained therein.

The ash trays described herein can be molded or formed as a one-piece unit which renders their manufacture simple and low-cost. They may be formed from any material desired, such as metal, ceramics, heat resistant plastics or the like. Manufacturing tolerances are not critical but must be adequate to provide a desirable close fit for stacking and removing of the units.

Other features of this invention will appear in the following description and appended claims, reference being made to the accompanying drawings forming a part of the specification wherein like referenced characters designate corresponding parts in the several views.

FIG. **1** is a perspective view of an ash tray device according to the present invention;

FIG. **2** is a top plan view of the ash tray device;

FIG. **3** is a side elevational view showing the elevated barrier and a second ash tray device in phantom lines in a stacked position;

FIG. **4** is a partial sectional view of the elevated barrier taken along line **4—4** of FIG. **2**; and

FIG. **5** is a sectional view of the ash tray device taken along line **5—5** of FIG. **2** showing the recessed cavity formed in the underportion of the device.

Referring more specifically to FIG. **1**, the safety ash tray device is shown as having a shallow, dish-shaped body **11** with a generally vertically narrow sidewall **12** disposed around the perimeter of the body **11**. For the sake of illustration, the ash tray device shown herein is of a circular configuration. It is to be understood that any outer configuration, such as square, rectangle, oval or the like or even an irregular shape, can be provided as desired. The only requirement is that all stackable units must be of the same size and shape.

A barrier device **13** for supporting or holding lighted cigarettes is provided across the depression or cavity of the body. The barrier **13**, again for the sake of illustration, is shown as a straight unit which is diammetrically arranged across the ash tray body **11**. It, however, can be arranged in any position such as to form a chord of a circle or to form various segments by the use of a plurality of short sections. It is to be understood that any arrangement can be used as long as all units are identical.

The central portion **14** of the barrier device **13** is elevated above the upper edge **15** of the sidewall **12** and includes cylindrical depressions **13*a*** for holding a lighted cigarette. (See FIG. **3**) The outer corners **16, 17** of the barrier device **13** are bevelled downwardly at a sufficient angle so that the barrier **13** is joined to the sidewall **12** at a point below its upper edge **15**. The purpose in attaching the barrier at a point below the edge of the sidewall is to prevent a cigarette from being balanced or supported between the sidewall **12** and barrier **13**. In this way, a cigarette can only be supported within the confines of the outer sidewall of the ash tray, rendering it impossible for the cigarette to be overbalanced and fall from the ash tray.

Snuffing devices **18** are arranged generally vertical with respect to the barrier device **13**. A tapered or bevelled upper edge **19** connecting with the internal stepped bore **20** of the snuffing device **18** is provided to aid in the insertion of a lighted cigarette. The diameter of the upper portion **21** of the bore **20** is large

enough to permit the insertion of the cigarette therein, while the lower portion **22** of the bore **20** is of a smaller diameter, which restricts the passage of the cigarette. The intersection between the portions **21** and **22** forms a squared shoulder or step **20***a* which supports the lighted end of the cigarette. Thus, when a lighted cigarette is placed in an inverted position in the snuffing device, the fire is extinguished by suffocation without the necessity for crushing the end of the cigarette. The lower end **23** of the snuffing bore **20** is open to the ash tray cavity **28** and is tapered at an angle, so that the bore will remain open and not be clogged by cigarette debris.

As can be seen in FIGS. **4** and **5**, recesses **24, 25** are provided in the undersurface of the ash tray device. In the embodiment shown herein, the barrier device **13** is fabricated with an inverted V-shaped cross section which forms a recess **24** which is widest at the bottom edge, so that the upper end of a similar barrier device may be telescoped into the cavity provided. The internal recess **24** of the barrier device also communicates with an open, recess **25** formed by housing **26** which is provided directly under the snuffing devices and conforms to the outer configuration of these devices.

With only the upper portion of the barrier device elevated, it is possible to provide the necessary internal cavity **24** for mating with these areas without providing openings within the sidewall **12** of the body **11.** Thus, the sidewall **12** is solid around the entire perimeter of the ash tray. A notched recess **27** in the lower edge of the sidewall **12** is provided which mates with the upper edge **15** of the sidewall **12** of a similar ash tray device. (See FIG. **3.**) With the notched recess **27,** each ash tray is held in a suspended position above the lower ash tray so that an ash retention cavity **28** will be retained within the ash tray. The outer recess **27** also provides a quasi-seal which restricts the passage of air into the cavity **28** when several ash trays are stacked together, so as to extinguish or suffocate any burning embers or materials that may remain within the ash tray. Thus, by simply stacking a plurality of the ash trays together and leaving these units for a short period of time, a person can be certain that all burning materials within the covered ash trays have been extinguished.

It is important that the recess cavities **24, 25** formed in the lower portion of the ash tray be positioned directly below and sized to correspond with the barrier configuration and snuffing devices used in the ash tray device. In this way, all units can be readily stacked, stored and removed, providing utmost convenience. The thickness of the body and sidewall can be modified as desired to provide an easily molded structure which has sufficient strength to be a lasting and durable unit. Although the individual parts of the ash tray may be machined and assembled, it may be more economical to form the ash tray according to this invention by a molding process where all parts are formed as an integral, one-piece unit.

While a stackable, safety type ash tray has been shown and described in detail, it is obvious that this invention is not to be considered as being limited to the exact form disclosed and that changes in detail and construction may be made therein within the scope of this invention without departing from the spirit thereof.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A stackable safety ashtray comprising:

a. a generally dish-shaped body means having a substantially flat base means and upwardly extending side wall arranged continuously around the outer perimeter of said base means so as to form an open interior cavity within said body means, the outer surface of said sidewall being arranged generally perpendicular to said base means, said sidewall having parallel upper and lower edges and the upper edges of said sidewall lying in a plane which is generally parallel to said base means,

b. a barrier means disposed across the interior cavity of said body means and attached to the inside surface of said sidewalls, the intermediate portion of said barrier means being arranged to extend above the upper edges of said sidewalls and including cigarette holding means for resting a lighted cigarette so that both ends are positioned over the interior cavity of said body means to prevent the cigarette from falling outside of the sidewalls of the ashtray, the end portions of the barrier means being sloped downwardly so that the upper surface of said barrier means intersects the sidewall at a point which is substantially below the upper edge of said sidewall to prevent a lighted cigarette from being positioned between the barrier means and said sidewalls,

c. at least one cigarette snuffing means attached to the side of the intermediate portion of said barrier means and arranged for extinguishing a lighted cigarette which is merely inserted therein, and

d. recessed means formed in the undersurface of said body means to permit similar ashtrays to be stacked, said recess means including means providing a recessed cavity formed in the bottom surface of said base means and a recessed notch formed around the perimeter of the lower edge of said sidewalls, said recessed cavity means being separated from said recessed notch means, said recessed cavity means being shaped to receive the upper intermediate portion of the barrier means of a similar ashtray, said recessed notch being sized to fit the upper edge of the sidewall of a similar ashtray whereby a plurality of ashtrays can be stacked with the edges of the sidewalls telescoped to form a seal around the upper edge of the body means of the lower ashtrays so that the interior cavity of each of the lower stacked ashtrays is substantially sealed to exclude air and extinguish any burning materials that may be present in the interior cavities.

2. An ashtray as defined in claim **1** wherein:

the barrier cigarette holding means includes means providing at least one semi-circular recess in the upper edge of said barrier means for holding the barrel of a cigarette.

3. An ashtray as defined in claim **1** wherein:

said snuffing means includes means providing a generally vertical stepped open bore having a bevelled upper end for guiding the insertion of the lighted cigarette and having a lower open end slanted at an angle with the longitudinal axis of said bore means to prevent clogging by cigarette debris, the upper portion of the stepped bore means having a diameter sized for free insertion of said cigarette and the lower portion of said bore means being coaxial with the upper portion and having a smaller diameter sized to prevent the cigarette from passing there-

through, the intersection between said bores means forming a step which supports said cigarette so that it is held in a position which will cause it to be extinguished.

4. An ashtray as defined in claim **1** wherein:

said body means, barrier means and snuffing means are formed as a one-piece, integral unit.

5. An ashtray as defined in claim **1** wherein:

said barrier means is formed in a hollow, inverted, V-shaped cross section whereby the open underportion of said barrier means forms a portion of said recessed cavity.

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