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[54] **DISPOSABLE ASHTRAY ATTACHMENT FOR BEVERAGE CANS**

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[52] **U.S. Cl.** ..... **220/1 H**; 220/90.4; 206/496; 131/257; 131/231

[58] **Field of Search** ..... 220/1 H, 90.2, 90.4, 220/90.6, 85 F; 206/496; 131/231, 257

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[57] **ABSTRACT**

A disposable ashtray for use on an open pop top beverage can. The tray is formed out of a flat blank of an aluminized paper sheet that has been scored to define a floor and erectable side walls for the tray. The floor is formed with (1) a passage to matingly receive the actuator tab of the pop top can and (2) a perforated score line defining a key tab portion that is displaced out of the plane of the floor to penetrate through the drink opening of the can.

18 Claims, 4 Drawing Figures

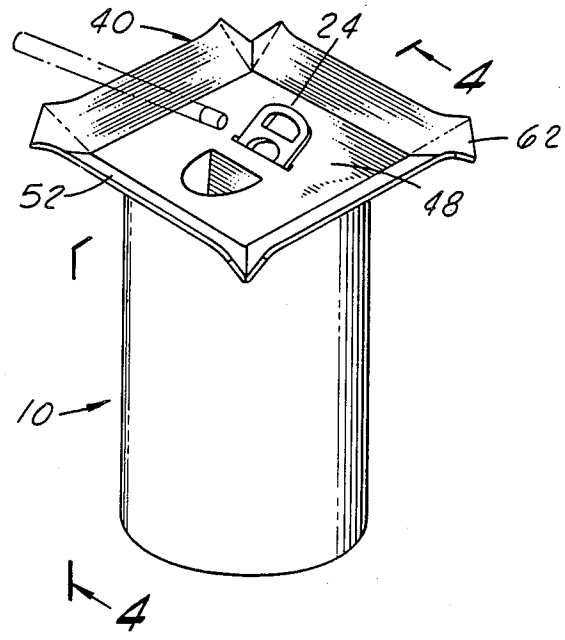
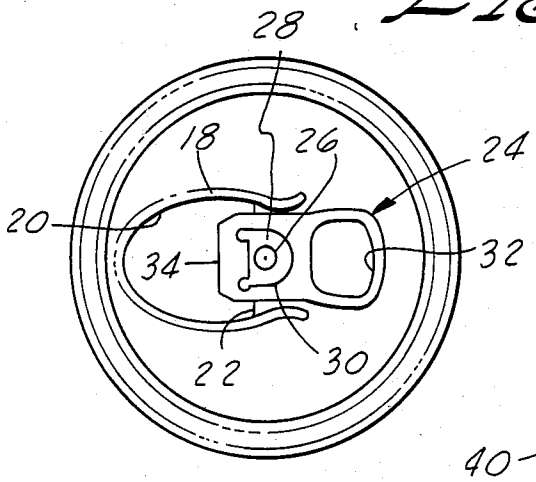


FIG. 1



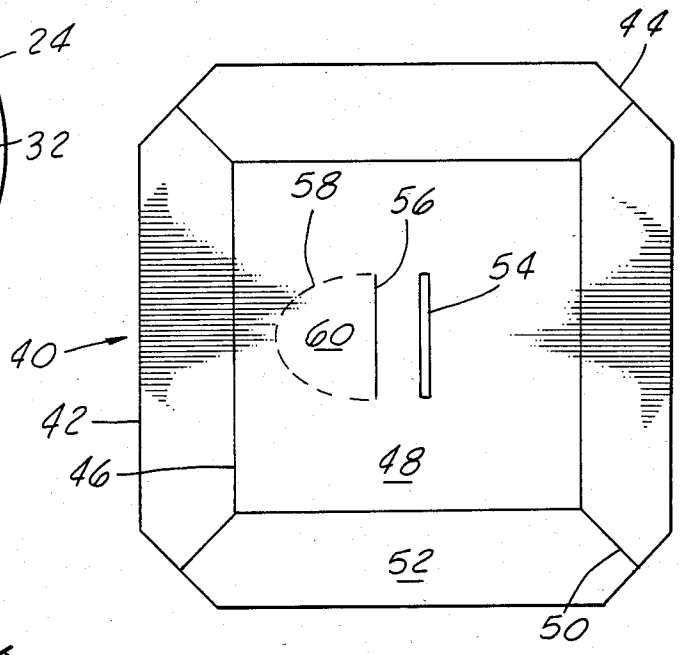
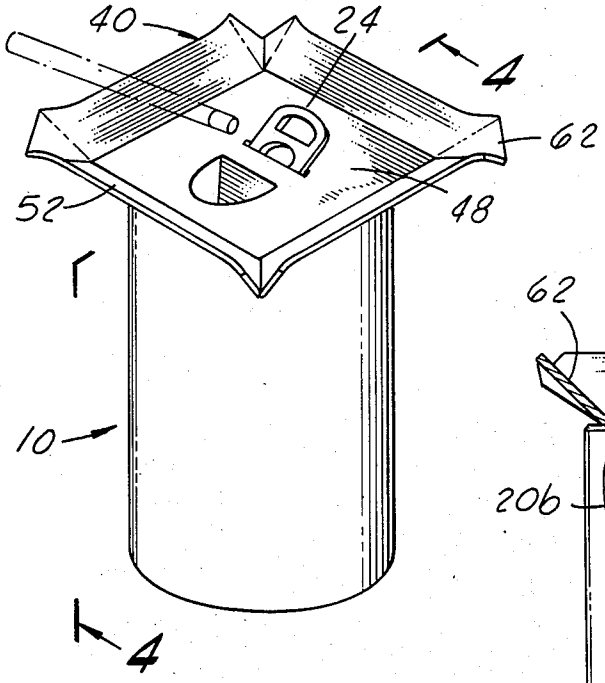


FIG. 2

FIG. 3



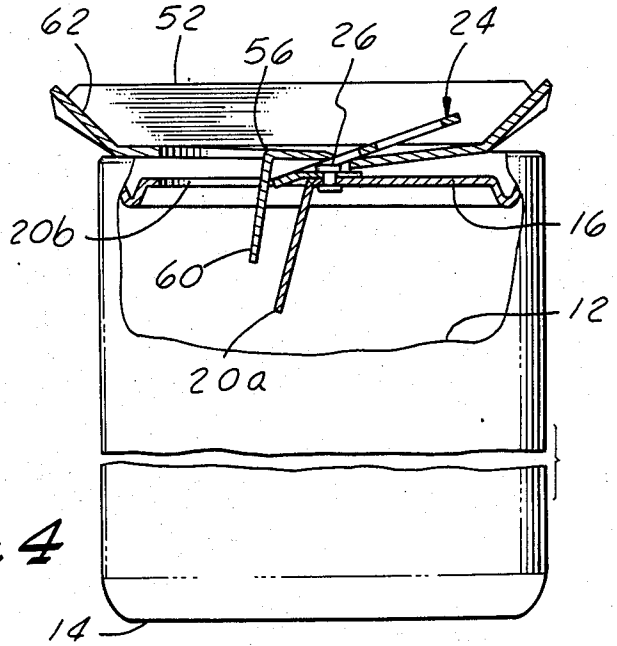


FIG. 4

DISPOSABLE ASHTRAY ATTACHMENT FOR BEVERAGE CANS

BACKGROUND OF THE INVENTION

The present invention relates to smokers' ashtrays adapted for temporary interconnection to the tops of beverage cans and, more particularly, to a disposable ashtray adapted for temporary attachment to the upper end of a "pop top" type of beverage can that has been opened.

SUMMARY

The ashtray of this invention comprises a thin, substantially square flat piece or blank of an aluminized sheet of paperboard, preferably having 45° cut corners. The blank is preferably die cut into the desired planform and may be on the order of 3½" across. On one side, the blank is formed with a floor and side-wall-defining pattern of crush scorelines each of which is parallel to and spaced inwardly about ⅝" from the corresponding edge of the blank. An additional crush scoreline is impressed in each corner extending normally to the corresponding 45° cut corner and terminating at its inner end in a corner of the score-defined square in the center of the blank. In the central floor area of the blank, preferably parallel to one of the edges, a passage means is formed, as by a punch or knife but, in any event, preferably of a width such that an upstanding pull tab of a beverage can can be snugly received into the slot or slit. Adjacent and parallel thereto, a crush scoreline of about the same length as the passage means is formed as the root end of an arcuate perforated scoreline whose opposite ends terminate at opposite ends of the crush scoreline. The area embraced within the perforated scoreline defines a key tab of a size to be receivable within the opening into the top of the beverage can on which the device is to be used.

After the top of a pop top beverage can has been opened the ashtray of this invention is used as follows. After the actuating handle or tab for the pop top can has been set at a desired angle relative to the top of the can, the slit in the floor of the ashtray is passed thereover. Either before or after this step the perforated score key tab is pressed downward out of the plane of the body of the blank to penetrate the opening into the top of the can. The ashtray is thus keylocked against displacement relative to the can top by virtue of the downwardly depending tab of the ashtray penetrating the can and the engagement of the pull tab of the can with the slit of the ashtray floor. The sidewalls of the ashtray can then be erected by folding along the crush scorelines extending in parallelism to the edges of the blank. There is thus defined at each cut corner of the ashtray an essentially upwardly concave trough adapted to support a cigarette or cigar in a downwardly inclined position. If desired, the inner burning end of the tobacco product can be supported on the top of or within an opening of the actuator handle of the can.

A plurality of the ashtray blanks of this invention, e.g., six in number, can be packaged together in a flat condition to occupy a minimum of space in a package of convenient size for carrying in a shirt pocket or purse, or for inclusion in a "sixpack" carton of beverage cans. After use, when it is desired to dispose of an ashtray, it can be readily folded up and thrown away into any convenient receptacle including the beverage can with which it was used.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a substantially full scale top plan view of the top of an exemplary form of pop top beverage can with which the ashtray of this invention is usable.

FIG. **2** is a substantially full scale plan view of one side of the ashtray blank of the invention and essentially a mirror image of the other side.

FIG. **3** is a perspective view of the ashtray of the invention after the flat blank of FIG. **2** has been formed into an operative condition and affixed to an open pop top beverage can.

FIG. **4** is a partial sectional view taken in the plane of the line **4—4** of FIG. **3**.

DESCRIPTION OF THE PREFERRED EMBODIMENT

While the invention will be explained in detail, it is to be understood that it is not limited in its application to the materials, the details of construction, and the arrangements of the components set forth in the description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purposes of description and should not be regarded as limiting.

The drawings show a merely exemplary embodiment of a pop top beverage can **10**. This can may be made of a spun or drawn metal, e.g., aluminum, and has a cylindrical side wall **12**, a flat or sometimes inwardly dimpled bottom wall **14**, and a top wall **16** that may be recessed slightly relative to a top circumferential flange or bead. The top **16** has a "pop top" opener mechanism and as such may, for example, have a raised integrally formed rib **18** of a generally horseshoe shaped configuration surrounding a frangible line **20**, the opposite ends of which terminate at opposite ends of a straight bend line **22**. Upon actuation of the pop top opener a tab portion **20*a*** of the can top **16**, embraced by the line **20**, is severed from the balance of the top and bent inwardly into the interior of the can leaving a drink opening **20*b***. For that purpose the top of the can is fitted with an actuator handle, designated generally at **24**, an inner end portion of which is secured to the can top **16** by means of a fastener or rivet **26**. The fastener **26** extends through a semi-circular rivet tab portion **28** of the actuator handle **24**, the tab **28** being separated from the body of the member **24** along a line **30**, of substantially semicircular form, when an outer end loop **32** of the handle is lifted away from its normal position lying against the top **16**. Thus, initial lifting of the actuator **24** causes an innermost end **34** of the actuator to open the can by tearing the tab **20*a***, enclosed by the tear line **20**, downwardly and away from the can top after which, if desired, the now erect ring portion **32** of the actuator may be turned back in the opposite direction.

As stated, the particular configuration of can **10** illustrated in the drawings is merely exemplary and the ashtray of this invention is not limited in use to the specific embodiment of can illustrated. Rather, the invention is usable with any type of can, jug or container in which an opening can be formed in the top, cover or lid by means of an adjacent handle which, after actuation, can be left disposed at some angle relative to the plane of the top of the can.

The ashtray comprises a thin flat blank **40** which preferably has the planform of FIG. **2**. The blank **40** may be made of any sheet material, e.g., aluminum foil or paperboard, which is resistant to ignition by the burning end of a cigar or cigarette, of sufficient thickness to be self-supporting in flat configuration, and of a sufficiently inelastic or stiff material to be essentially permanently or semi-permanently deformable into a cuplike shape, e.g., like that illustrated in FIG. **3**. In its preferred form the blank **40** takes the form of a 10 or 12 point paper sheet material which is laminated on both sides with aluminum foil to have a 12 to 14 point finished gauge of thickness.

Preferably, the blank **40** is die cut into the essentially square configuration shown in FIG. **2** comprising four orthogonally related straight edges **42**, adjacent ends of which are joined by a relatively short 45° cut corner **44**. On one face, the blank is formed with four crush scorelines **46** each of which is parallel to the corresponding or adjacent outer edge **42**. The four scorelines **46** together define a centrally disposed square **48** adapted to serve as the floor or bottom of the ashtray when it is fully formed and, preferably, large enough in area to fully cover the top of the can **10**. Preferably, and assuming approximately a $3\frac{1}{2}$" dimension across the blank **40**, each of the crush scorelines **46** may be spaced on the order of $\frac{5}{8}$" from the adjacent edge **42**. In each corner area of the blank **40** another short crush scoreline **50** extends from a corner of the square area **48** outwardly to the center of the corresponding cut corner **44**. The area bounded by a pair of lines **50**, a line **46** and an edge **42** defines one of four similar sidewalls **52** on the ashtray.

At about the center of the floor portion **48** of the blank **40**, a passage means, which may take the form of a narrow slit **54**, is cut through the material of the blank of a length about the same as the width of the widest portion of the actuator handle **24** of the can **10** to be passed therethrough. Preferably, this slit is sufficiently narrow that its opposite long edges will snugly engage opposite sides of the actuator handle **24**. While a through slit, slot or cut **54** is preferred the passage means could also, perhaps, take the form of a perforated score. However, a through slit, having a width defined by the kerf of the cutting tool or punch, is preferred as being easier to mount on the actuator handle **24**.

Parallel to the slit **54**, and spaced therefrom on the order of approximately $\frac{1}{4}$" in the illustrated case, is a crush scoreline **56**, of substantially the same length as the slit **54**, whose opposite ends terminate at opposite ends of an arcuate perforated scoreline **58** disposed on the opposite side of the score **56** from the slot **54**. The area bounded by the scoreline **56** and score **58** comprises a key tab or lock tab **60**, whose configuration may be substantially that of the tab **20***a* bounded by the frangible line **20** of the can top **16**, or approximately so. It will be understood that the contour defined by the scoreline **58** should be such that when the key tab **60** is depressed downwardly out of the plane of the ashtray bottom **48**, pivoting on hinge score **56** as shown in FIG. **4**, that the opposite side edges of the tab **60**, where it intersects the plane of the can top **16**, engage opposite sides of the opening **20***b* made in the top of the can after it has been opened.

The can **10** is opened in the usual manner by means of raising the loop handle **32** of the actuator **24** away from contact with top **16**. As a result the can tab **20***a* is torn out of the plane of the can top **16** to bend on line **22** and protrude downwardly through opening **20***b* into the interior of the can, as indicated in FIG. **4**. When the contents of the can have been consumed, or substantially so, it provides a convenient fireproof receptacle into which the ashes of tobacco products, cigarette and cigar butts, and other burning or burnable material, such as matches of paper and wood, may be disposed, especially if a portion of the liquid product or added water is held at the bottom of the can.

Assuming the can **10** to be in readiness for use as a container for such waste, the actuator handle **24** can be adjusted to any desired convenient angle relative to the top of the can **16** such that the slot **54** of a blank **40** can be mounted thereon. It will be understood that in mounting the ashtray onto the container **10** by means of the slot **54** the blank **40** should be oriented such that its tearable tab or key lock portion **60** overlies the opening **20***b* which has been made in the can. The tray is then moved downwardly along the actuator **24** until its bottom or floor **48** abuts the the upper end of the can **10**. In the illustrated case, with the particular exemplary embodiments of the ashtray and can illustrated, the floor of the ashtray seats on the upper end rim of the can **10** in slightly spaced relation above the recessed top **16** of the can. However, it should be appreciated that the invention is not limited to a square planform and could be devised with an accordian pleated wall surrounding a circular floor portion adapted to seat directly on top **16** of the can. In any event, after the ashtray has been seated in place its key tab **60** is manually severed, for example by thumb pressure along the line **58**, to be folded into the penetrating position illustrated in FIG. **4**. Thereafter, if not previously accomplished, the side walls **52** of the ashtray are manually erected by folding along the crush scorelines **46** thus creating an upwardly concave trough **62** in each corner of the ashtray adapted to securely hold a burning cigarette, for example. It will also be observed that the now upstanding loop end **32** of the actuator **24** provides a convenient means for knocking ashes off of the end of the burning tobacco product or as a rest for the lit end of the product.

Assuming the condition of FIG. **4** and, further, that no liquid is within the can **10** so that a lighted cigarette could remain burning after having been discarded into the can, the tab **60** provides a means of sufficiently impeding the flow of air into the can to ensure that a burning cigarette or the like would be extinguished notwithstanding the absence of any liquid. More specifically, the tab **24** can be turned to a more erect upstanding position such that the ashtray can be lifted sufficiently to expose the downwardly bent tab **60** which can then be manually turned back into the plane of the ashtray floor **48**. Thereafter, the ashtray can be reseated back onto the top of the can **10** and, due to the area of the floor **48** and the tab **60** being in a closed condition, will sufficiently restrict the flow of fresh air into the can such that the burning cigarette will be extinguished and the escape of noxious fumes from the can will be stopped.

It will be seen that the combination of the mating engagement of the actuator **24** with the slot **54** of the ashtray and the penetration of the tab **60** into the interior of the can provide a very safe and secure interconnection between the two items preventing any significant displacement of the ashtray relative to the can. In that connection it will be observed from FIG. **4** that the actuator **24** can be pressed towards the can top **16** in order to clamp one edge of the slot **54** in the ashtray

floor **48** between the underside of the actuator **24** and the upper surface of the can top **16** or top surface of the actuator tab portion **28**. At any time, the ashes, cigarette and the disposable ashtray itself can be inserted into the opening **20***b* to totally conceal all evidence of smoking. A small amount of drinkable product or water within the can will ensure immediate smokeless dousing of the ashes and cigarette or the like.

I claim:

1. A blank for use on the top of a can in which an opening can be made through the top wall of the can by means of an actuator handle connected to the top wall of the can, said blank comprising:

a flat piece of a thin sheet material having a score to define a floor that is bordered by an area of the blank which can be erected into an upstanding wall;

said floor being formed with a passage means through which the actuator handle of the can top can be passed after the handle has been actuated to form an opening through the top wall of the can;

said floor also being formed with a key tab portion that is displaceable out of the plane of said floor for penetration into the opening made in the top wall of the can by the actuator handle;

said passage means through said floor and said key tab portion of said floor being so oriented relative to one another that said key tab portion is positioned for registration with the opening of the can top wall when the actuator handle has been inserted through said passage means of said floor.

2. The blank of claim **1** in which:

said passage means comprises a scoreline having a length sufficient to receive the width of the actuator handle of the can on which the blank is to be used.

3. The blank of claim **1** in which:

said passage means comprises a slot of a length and width to matingly receive the actuator handle of the can which the blank is to be used.

4. The blank of claim **1** in which:

said key tab portion comprises a perforated scoreline.

5. The blank of claim **1** in which:

said key tab portion has a configuration which is substantially that of the opening to be made in the top wall of the can by the actuator handle.

6. The blank of claim **1** in which:

said key tab portion comprises a hinge defined by a press score in said thin sheet material, the opposite ends of said hinge terminating at opposite ends of an arcuated perforated scoreline.

7. The blank of claim **6** in which:

said key tab portion has a width such that opposite sides of the key tab portion engage opposite edges of the opening in the top wall of the can after said key tab portion has been displaced out of the plane of the floor for penetration into the opening made into the top wall of the can by the actuator handle.

8. The blank of claim **1** in which:

said floor has a quadrangular planform.

9. The blank of claim **8** in which:

said floor has a rectangular planform.

10. The blank of claim **9** in which:

said floor defining score is centrally disposed on said blank with the sides of said floor in parallel spaced relation to the edges of said blank;

the edges of said blank being formed with 45° cut corners,

corner areas of said blank each being formed with a scoreline disposed normally to the corresponding cut corner and having its inner end intersecting a corner of said floor defining score,

whereby upon erecting of the wall areas of the blank an upwardly concave trough is defined at each of said cut corners of said blank.

11. The blank of claim **1** in which:

said floor area has a circular planform.

12. The blank of claim **1** in which:

said thin sheet material comprises aluminum foil.

13. The blank of claim **1** in which:

said thin sheet material comprises a paperboard material.

14. An ash receiver comprising:

a beverage can, and a tray mounted on top of said can;

said can having a top wall in which an opening has been formed by means of an actuator handle integrally mounted on said top wall;

said tray comprising a floor area having a passage means through which said actuator handle extends when said tray is seated on the top of said can;

said floor area having an opening therethrough in registration with said opening in said top wall of said can.

15. The ash receiver of claim **14** in which:

said floor area also has an integral key tab portion having a free end which has been deflected out of the plane of said opening of said floor to project through said opening in said top wall and into the interior of said can.

16. The ash receiver of claim **15** in which:

said tray comprises a thin sheet of a stiff material that has been scored to define wall areas around said floor of said tray;

said wall areas being folded to an upright position relative to said floor.

17. The ash receiver of claim **16** in which:

said floor area of said tray is rectangular, each of the corner areas of said tray being formed with a 45° cut corner;

each of said corner areas of said tray having a radially oriented scoreline such that the upright wall areas of said tray define a concave trough in the corner area.

18. The ash receiver of claim **14** in which:

said passage means of said floor area of said tray comprises a slot of a configuration to matingly receive said actuator handle;

one edge of said slot being clamped between the inner end of said actuator handle and said top wall of said can.

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