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ASH TRAY AND SILENT BUTLER

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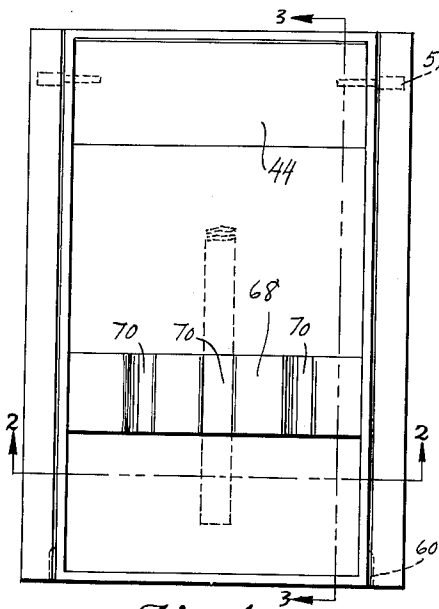


Fig. 1

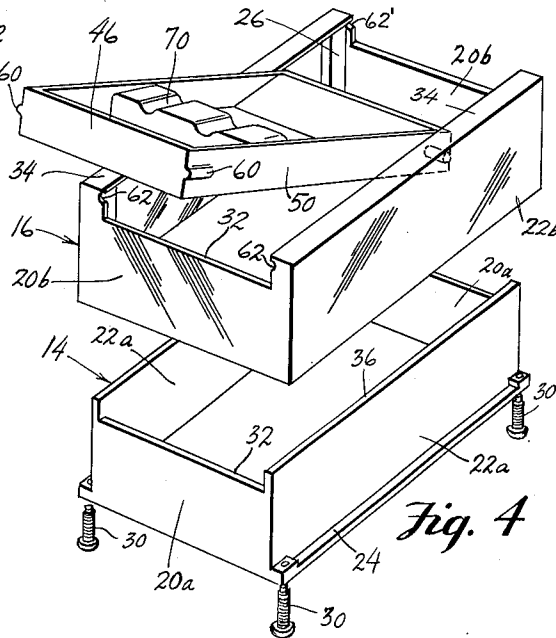


Fig. 4

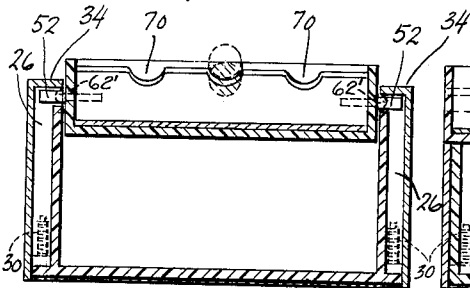


Fig. 2

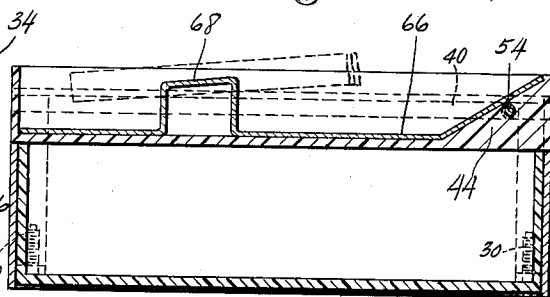


Fig. 3

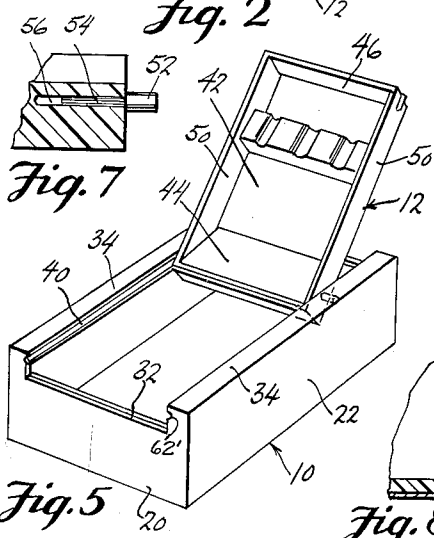


Fig. 5

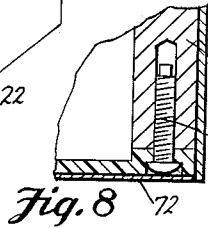


Fig. 8

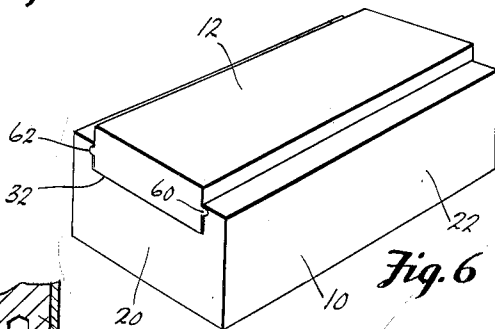


Fig. 6

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1

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ASH TRAY AND SILENT BUTLER

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4 Claims. (Cl. 220—38)

This invention relates to a box having a cover movably attached thereto which can be inverted to serve as an ash tray and then can be turned over to dump the contents of the tray into the box and to act as a cover for the box. It is an object of the invention to provide a box or container having a lid or cover mechanically connected thereto but freely movable from a right-side-up position as a cover to an inverted position as an ash-tray. The embodiment of the invention hereinafter shown and described is in the form of a rectangular box the side walls of which have inturned flanges. A cover fits between these flanges and has near an end thereof a pair of trunnions which extend under the respective flanges and permit the cover to slide lengthwise and to be inverted end-for-end, but prevent complete separation of the cover from the box.

For a more complete understanding of the invention reference may be had to the following description thereof and to the drawing, of which—

Figure 1 is a plan view of an embodiment of the invention with the cover in its open or inverted position;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is an exploded perspective view showing the separate parts of the box;

Figure 5 is a perspective view of the box showing the cover in a partly opened position;

Figure 6 is a perspective view of the closed box;

Figure 7 is a fragmentary sectional view of the cover; and

Figure 8 is a fragmentary sectional view of the box.

The embodiment of the invention illustrated on the drawing consists primarily of a box 10 and a cover 12 which is attached to the box but is movable from an open position in which the cover 12 serves as an ash tray to a closed position as illustrated in Figure 6 in which the cover fits on the top and closes the box. For convenience of manufacture the box itself is double walled by reason of being formed of two chief members which are permanently assembled. These members are shown in Figure 4 and consist of an open rectangular receptacle 14 and a four sided frame 16. The receptacle 14 has end walls 20a and side walls 22a. The frame 16 is somewhat wider than the receptacle 14 and has end walls 20b and side walls 22b. The end walls 20a and 20b together make the double walls 20 of the box shown in Figures 5 and 6. In like manner the side walls 22a and 22b together form the side walls 22 of the box 10 but are spaced from each other as indicated in Figure 2. The receptacle 14 has outwardly projecting flanges 24 of equal width at the bottom of its side walls to close the gap between the wall elements 22a and 22b at the bottom of the side walls. Within the corners of the frame 16 are vertical filler pieces 26 which are integral with the frame itself and which extend from the thickened end portions of the flanges 24 to the top of the frame. These filler pieces 26 are provided with bores which extend upward from the bottom a sufficient distance to accommodate four

2

screws 30. These screws are driven up through the ends of the flanges 24 and into the filler pieces 26 so that the frame 16 is securely and permanently attached to the receptacle 14. As indicated in Figure 5 the double end walls 20 each have a rectangular recess 32 in the upper edge thereof which is long and shallow and extends nearly from one side of the end wall to the other. The side walls 22b of the frame 16 extend upward further than the side walls 22a of the receptacle 14. Each side wall 22b has an inturned flange 34 along its top edge, this flange extending inward to the adjacent ends of the recesses 32 in the end walls. The flanges 34 are spaced sufficiently above the top edges 36 of the side walls 22a to form horizontal slots 40 under the flanges 34, as indicated in Figure 5, these slots being terminated at both ends by the filler pieces 26.

A cover 12 is in the form of a tray having a bottom 42, end walls 44 and 46, and side walls 50. As indicated in Figure 3, the end wall 44 of the cover is in the form of a triangular prism, the outer face of the end wall and a portion of the bottom face of the cover being two sides of the prism, a sloping inner face being the third side of the prism. Projecting in opposite directions from the ends of this prismatic end wall 44 are two trunnions 52. These trunnions are axially aligned and each has a knurled portion 54 which is driven into a suitable bore 56 in the prismatic end wall 44 of the cover. The trunnions 52 project outwardly from the side walls 50 of the cover member near an end thereof and into the slots 40 so that vertical movement of the trunnions is prevented by the sides of the slots, that is, the top edges 36 of the walls 22a and the flanges 34. Movement of the trunnions along the slots 40 is limited by the filler pieces 26 at the ends of the slots which serve as stop means for said trunnions. The side walls 50 of the cover member engage or nearly engage the inner edges of the flanges 34, the cover itself fitting between the inner edges of these flanges and also between the inner walls 22a which are immediately below the inner margins of the flanges 34, as illustrated in Figure 2. The trunnions 52 which engage in the slots 40 maintain the box and cover in an assembled relationship but permit the cover to be moved bodily lengthwise of the box and to be swung over end for end as indicated in Figure 5 to an inverted position on the box wherein it serves as an ash tray, or to its position as a cover as illustrated in Figure 6. If desired, the side walls 50 of the cover may be provided with bosses 60 which are adapted to fit into small notches 62 in the ends of the shallow recesses 32. The spacing of the trunnions 52 from the adjacent end of the cover 12 is such that when the trunnions are at either end of the slots and engage the corresponding filler pieces 26, the opposite end 46 of the cover is flush with an end wall 20 of the box. When the bosses 60 enter the notches 62, they prevent the adjacent end of the cover from moving upward out of the box 10. At the same time the trunnions 52 hold the other end of the box cover or tray in position. When the cover is swung to its right side up position as in Figure 6, the bosses 60 fit into small notches 62' at the other end of the box to hold the cover in place as before. The trunnions 52 are always in the slots 40 at one end or the other thereof except when the cover is being shifted from the open to the closed position or vice versa.

Any suitable means for supporting cigarettes within the tray may be mounted therein. As shown, the tray is provided with a metal liner 66 which has a transversely raised portion 68 (Figure 3), this transverse portion being indented as at 70 to hold individual cigarettes as indicated. The top of the transverse member 68 preferably slopes toward the end of the tray remote from the trunnions 52 so that a cigarette laid thereon as indicated in

3

Figure 3 will have its burning end at the slightly higher elevation than its other end. When ashes, burnt matches, etc. accumulate in the tray when in the position shown in Figure 3, the tray is displaced toward the left to disengage the bosses 60 from the notches 62. Thereupon the tray is tilted on the trunnions 52 as an axis so that the contents of the tray fall by gravity into the interior of the box 10, the prismatic wall 44 at the end of the tray providing a chute to guide the ashes, etc., so that there is no corner in which they can catch or accumulate. If desired, the swing of the cover member can be continued until it is in the position shown in Figure 6 after being pushed longitudinally enough to engage the bosses 60 in the notches 62 at the adjacent end wall 20.

The box when closed as shown in Figure 6 presents a stepped top which is in itself ornamental, the box being capable of being ornamented as desired to make an attractive article for a table top. When wanted for use as an ash tray, the cover member is quickly and easily inverted to the position shown in Figures 2 and 3.

While any desirable or suitable materials can be used in the construction of the device hereinbefore described, the tray itself and the receptacle 14 may conveniently be made of a molded synthetic resin such as Bakelite. The rectangular frame 16 may conveniently be made of die cast metal. The trunnions 52 and the screws 30 are preferably of metal. A pad 72 of felt or the like is preferably cemented to the bottom of the box 14. These materials are given by way of illustration and not limitation, and it is evident that various modifications may be made in the details of the structure herein described without departing from the spirit or scope of the invention as defined in the following claims.

I claim:

1. A rectangular box comprising two chief members one of which is an open receptacle with a bottom, end walls and side walls, the other said member being a bottomless rectangular frame having end walls and side walls adjacent to the walls of the receptacle and forming double walls therewith, the side walls of said frame having at their top edges intumed flanges overhanging the top edges of the side walls of said receptacle and spaced therefrom to form a horizontal slot under each said flange, a cover member having side walls fitted between the inner edges of said flanges, a pair of trunnions projecting in opposite directions from said side walls of the cover into said slots near an end thereof and hori-

4

zontally movable in said slots to the other end thereof, and stop means at the ends of said slots limiting the movement of said trunnions therein.

2. A rectangular box having end walls and side walls, each said end wall having a shallow recess in its top with the ends of the recess spaced inward from the ends of the wall, each said side wall having an inner member and an outer member with an intumed flange spaced above the top edge of the inner member to form therewith a horizontal slot, a cover having ends fitting in said recesses, trunnions projecting laterally from said cover near an end thereof into said slots, and stop means in said side walls near the ends thereof engageable by said trunnions to limit the travel thereof in said slots.

3. A box and cover as described in claim 2, one of the end walls of said cover being prismatic with a sloping face within the cover, said trunnions consisting of pins having a portion embedded in said prismatic end wall, whereby said sloping face serves as a chute when said cover is rocked about said trunnions from its inverted position to an upright position.

4. A rectangular box having end walls and side walls, each said end wall having a shallow recess in its top with the ends of the recess spaced inward from the ends of the wall, the ends of said recesses each having a notch therein, each said side wall having an inner member and an outer member with an intumed flange spaced above the top edge of the inner member to form therewith a horizontal slot, a cover having ends fitting in said recesses, trunnions projecting laterally from said cover near an end thereof into said slots, said cover having an external boss projecting from each side thereof at the end remote from said trunnions, said bosses and notches being so located that the bosses move into fitted engagement with the notches at either end of the box when the cover moves longitudinally into position with its end walls flush with the end walls of the box, and stop means in said side walls near the ends thereof engageable by said trunnions to limit the travel thereof in said slots.

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