Feb. 14, 1939. W. A. WELDEN 2,147,586

ASHTRAY AND THE LIKE

Filed Feb. 25, 1936

Fig. 4.

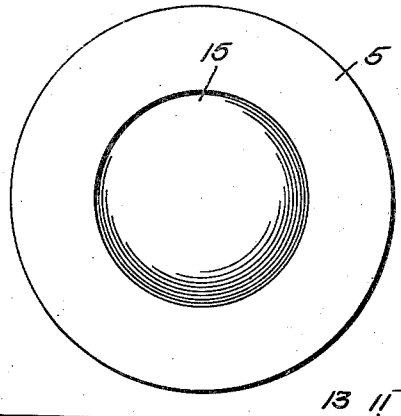


Fig. 1

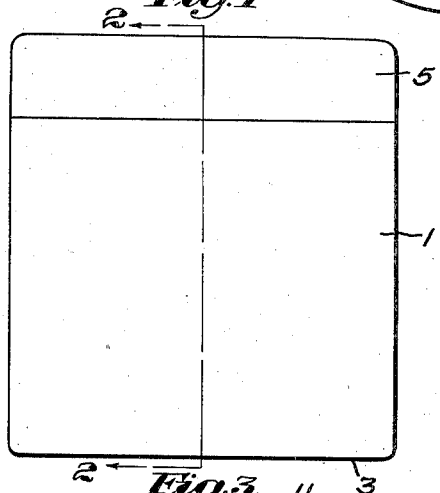


Fig. 2.

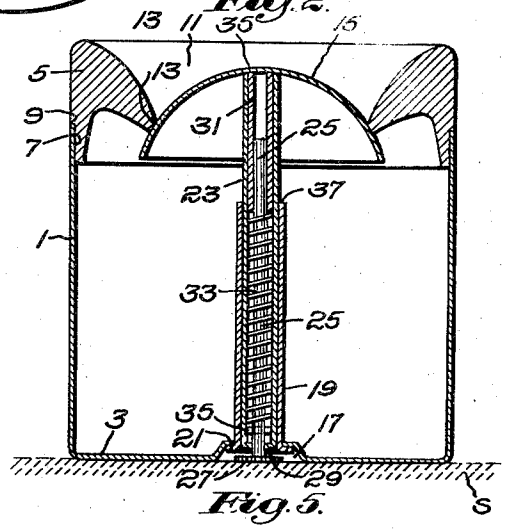


Fig. 3.

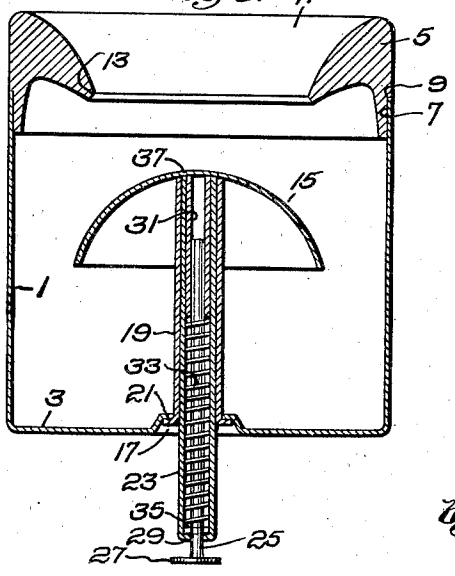
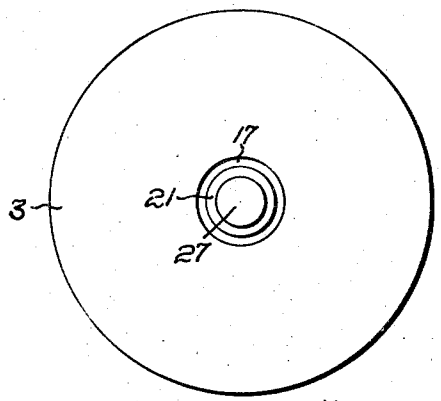


Fig. 5.



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ASHTRAY AND THE LIKE

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Application February 25, 1936, Serial No. 65,565

6 Claims. (Cl. 131—51)

My invention, which relates to ash trays, and has among its objects the provision of a tray provided with means for ready disposal of ashes and butts into a closed receptacle, will be best understood from the following description when read in the light of the accompanying drawing of an embodiment of the invention, the scope of which latter will be more particularly pointed out in the appended claims.

In the drawing:—

Figure 1 is a side elevation of an ash tray constructed according to the invention;

Fig. 2 is a section on the line 2—2 of Fig. 1, showing the ash tray resting upon a support;

Fig. 3 is a section corresponding to Fig. 2, with the parts in a different operative position; and

Fig. 4 is a plan view, and Fig. 5 a bottom view, of the ash tray according to Fig. 1.

As illustrated, the ash tray comprises a container of suitable material, for example metal, having the cylindrical side wall 1 and flat bottom wall 3.

The container shown has a removable top closure 5 made, for example, of molded phenol condensation product. The lowermost part of the cylindrical edge of the closure is shown as provided with a reduced diameter portion 7 adapted slidably to fit the interior surface of the uppermost portion of the side walls of the container, this reduced diameter portion forming, with the body of the closure, an exterior, downwardly facing, annular shoulder 9 adapted to rest upon the top edge of the side walls of the container.

Further, as illustrated, the container is formed at its upper side with a recess 11, which recess has a central bottom opening bounded by the annular seat 13 for a valve-like member 15, the latter conveniently being formed of sheet metal and, as illustrated, being approximately semi-spherical in shape with its convex side adapted to project through the bottom opening in the closure when the parts are in the position shown by Fig. 2.

In the present embodiment of the invention the flat bottom wall of the container is pressed inwardly to form a recess 17 through which extends a tube 19 having an exterior end flange 21 soldered or otherwise secured to the under side of the container at the bottom of the recess. This tube serves as a guide for the tubular stem 23 of the valve 15, the stem slidably extending into the tube and its upper end being soldered or otherwise secured to the under side of the valve. As further illustrated, slidably mounted in the tubular stem 23 is a plunger 25, the lower end portion of which extends through the bottom of the stem and is provided at its lower extremity with a flat, disk-like head 27. The stem at its lower end is shown as formed with an inturned flange 29, having a perforation through which the plunger extends, so that the plunger at its lower end is guided by the wall of the perforation. Interiorly of the stem at its upper end portion is a sleeve 31 which at its upper extremity is also soldered to the valve 15, the upper end of the plunger extending into and slidably fitting this sleeve and being guided by it. Interiorly of the stem and surrounding the lower part of the plunger is a light compression spring 33, which at its upper end abuts the lower end of the sleeve 31, and, at its lower end, abuts a pin 35; this pin extending through a perforation, diametrically formed in the plunger, and projecting radially therefrom at opposite sides thereof.

In the above construction, when the bottom of the container rests upon a support S, as indicated in Fig. 2, the plunger 27 is pressed inwardly and causes the spring 33 yieldingly to hold the valve 15 against its seat 13, so as to close the bottom opening of the recess 11 in the closure 5 for the container. When the container is lifted from the support the valve is no longer pressed against the seat 13, but moves downwardly relative to the closure and the container under the influence of gravity into the position illustrated by Fig. 3. In this latter position the valve rests upon the top edge 37 of the tube 19, the spring 33 under these conditions moving the plunger 25 downwardly relative to the stem to cause the pin 35 carried by the plunger to rest against the upper side of the inwardly projecting flange 29 at the bottom of the tubular stem 23, this flange thus acting to retain the plunger in said stem. When the container is again placed upon the support S the head 27 of the plunger engages the support and presses the parts upwardly until the upper surface of the valve 15 again engages the seat 13. The parts are so designed that during the closing operation of the valve the latter contacts the seat 13 before the plunger has been moved inwardly far enough to cause its lower face to lie in the plane of the lower face of the bottom of the container.

It will be noted that in the embodiment of the invention above described the tubular member 23 and plunger 25 from one aspect form a stem for the valve consisting of two parts having a connection between them permitting lost motion longitudinally of said stem. This lost motion connection, in conjunction with the spring 33, is effective to hold the valve firmly against its seat,

which would be next to impossible of accomplishment, in a practical sense, in the absence of the lost motion, because of the practical impossibility of insuring that the stem is of exactly the right length to hold the valve against its seat when the lower end of the stem is in contact with the support. Also it provides a construction which eliminates errors caused by discrepancies in manufacture, and insures proper closure of the valve in instances where the closure is not forced downwardly relative to the container far enough to cause the shoulder 9 to rest upon the top edge of the side walls of the container, which might happen if foreign matter is interposed between said shoulder and top edge. It further insures that the valve will be seated when the container is placed upon a support with an irregular surface.

It will be understood that wide deviations may be made within the scope of the appended claims from the particular embodiment of the invention illustrated and described.

I claim:

1. A device of the character described comprising a container having an opening, a movable valve for said opening, and means adapted to be operated by contact with a support for said container for moving said valve to a predetermined position, said means having a yieldable support-contacting part relative to which said container moves to engage said support after said valve is moved to said position.

2. A device of the character described comprising a container having an opening, means providing a valve for said opening urged toward open position, a seat for said valve, and means adapted to be operated by contact with a support upon which the bottom of said container is placed for holding said valve against said seat said means having a yieldable support-contacting part relative to which said container moves to rest upon said support after said valve is moved into contact with said seat.

3. A device of the character described comprising a container having an upper opening, a vertically movable valve for said opening adapted to move downwardly into open position under the force of gravity, a stem for said valve, a hollow guide receiving said stem, the interior of said guide opening upon the under side of the bottom of said container, said stem having a relatively movable part adapted to extend through said guide to below said bottom and to contact a support upon which said bottom is placed, and a spring acting to urge said part downwardly relative to said valve.

4. A device of the character described having, in combination, a container, a removable closure for said container formed to provide upon its upper surface a depression with a bottom opening, a vertically movable valve having a sloping upper surface adapted to project through said opening from the under side of said closure and to engage said closure to close said opening, an upwardly projecting tubular member carried by the bottom wall of said container, the interior of which member opens upon the under side of the bottom of said container, a downwardly extending stem for said valve projecting into and guided by said tubular member, said stem having a lower portion extending through said member to below the bottom of said container, and a compression spring cooperating with the body of said stem and said portion thereof for yieldingly urging said portion downwardly relative to said valve.

5. A device of the character described comprising a container, a cover for said container having an opening, which cover is carried by said container for relative vertical movement, means providing a valve member for said opening mounted for vertical movement away from said opening into the interior of said container, means adapted to be operated by contact with a support upon which the bottom of said container is placed for holding said valve in closed position, said last mentioned means having a yieldable support-contacting part relative to which said container moves to rest upon the support after said valve is moved to closed position.

6. A device of the character described having, in combination, a container, a removable top cover therefor provided with an opening, a valve in said container operatively beneath said cover adapted to cooperate with said opening and seat on said cover for closing said opening, operating means for closing said valve carried by said container independently of said cover, said operating means being actuated to close said valve by contact with the support upon which the bottom of said container rests and comprising a support-contacting part beneath the bottom of said container, means yieldingly urging said part outwardly of said container relative to said valve when said valve seats on said cover, said container being movable to rest its bottom upon said support after said valve is moved by said operating means to seat on said cover by contact of said part with said support.

WILLIAM A. WELDEN.