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GARBAGE AND MISCELLANEOUS REFUSE RECEPTACLE

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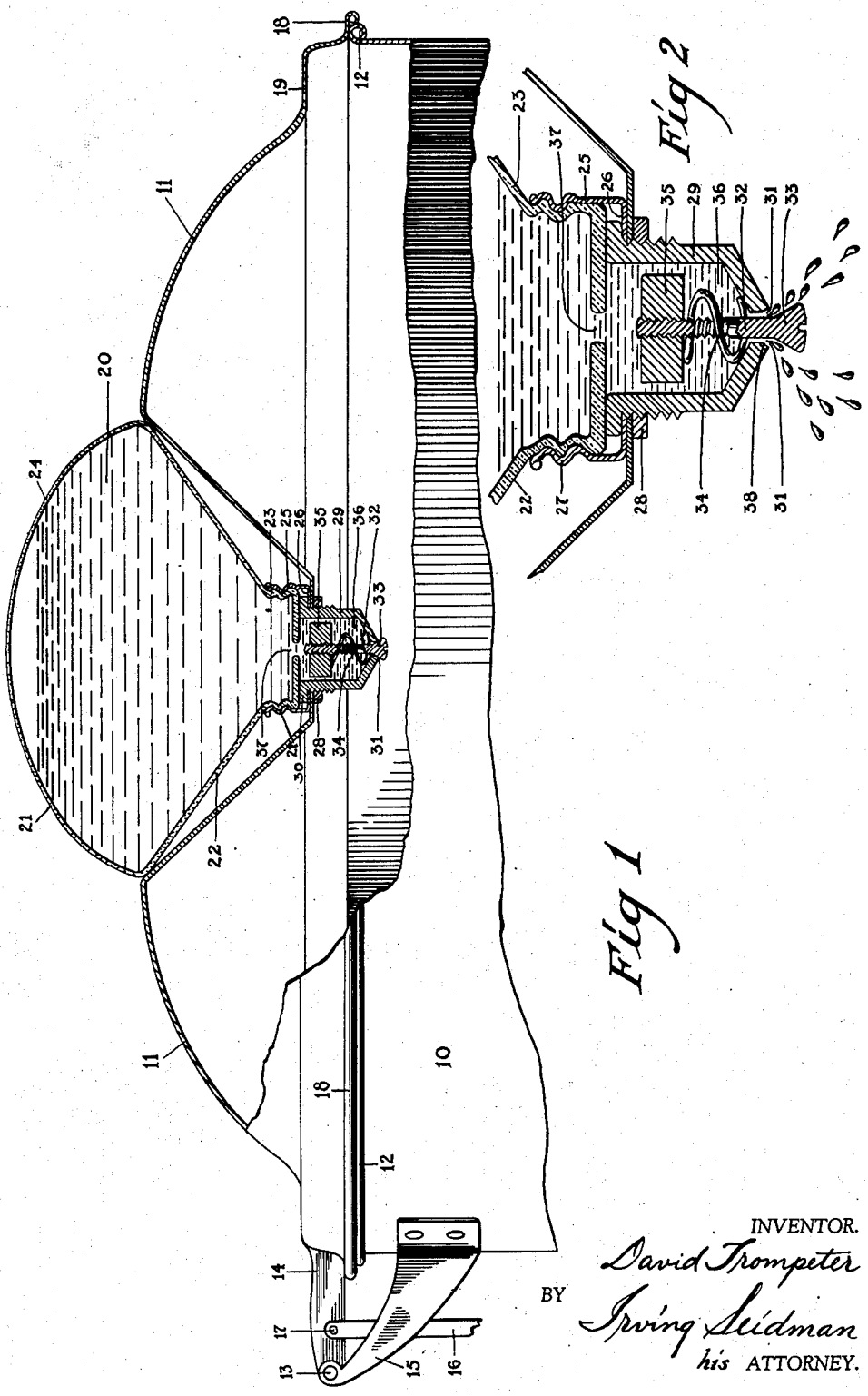


Fig 1

Fig 2

INVENTOR.
David Trompeter
BY
Irving Seidman
his ATTORNEY.

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GARBAGE AND MISCELLANEOUS REFUSE RECEPTACLE

David Trompeter, New York, N. Y.

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2 Claims. (Cl. 220—87)

This invention relates to garbage and miscellaneous refuse receptacles and, more particularly, to the type that have relatively moving parts as the receptacle and cover therefor.

The purpose of this invention is to provide a receptacle and garbage pail for domestic use or for institutions, such as hospitals, medical and dental offices, wherein a deodorant and/or germicide or the like is from time to time sprinkled automatically into the interior of the pail and the contents thereof, as the refuse is added.

The same type of cover carrying a source of deodorant and disinfectant supply and discharge means may be used upon a toilet seat to sprinkle the interior of a toilet bowl.

In this invention one of the relatively moving parts of the receptacle, preferably the cover, carries a source of the chemical supply and the discharge means functioning to supply portions of said chemical to the interior and contents of the receptacle intermittently and at properly related times, after closing of the cover when refuse has been deposited within the receptacle.

One of the objects of this invention is to produce a permanent receptacle having as permanent parts thereof a source of germicide supply and discharging means for same, replaceable and adapted to be readily attached to the suitable container of the chemical employed, so that when the contents thereof are expended or exhausted it can be readily removed and discarded and a new and full one substituted therefor.

Another object is to provide a reliable yet simple arrangement of parts, providing a source of supply of the deodorant and/or germicide and discharging means at so inexpensive a cost of manufacture and assembly that receptacle thus equipped and constructed can be sold at a comparatively low price and substantially at the same price of receptacles of the same general type and capacity now on the market, but without such sanitary advantages.

A form of invention favored is a receptacle wherein the cover carries said source of supply and discharge means and in association with said cover, an attaching means for the germicide container to contact a delivery opening on the cover of the garbage receptacle, in the same manner as used in spray guns, viz., by using the source of supply, screwed tightly thereon, and engaging the delivery opening.

The form of discharge means, which is normally inoperative except just after the cover is closed or slammed shut, discharges some of the deodorant or germicide but remains inoperative thereafter, only functioning for the fraction of time required for the counterbalanced valve to function, causing the discharge of the germicide and thus eliminating wasting amounts of the deodorant or germicide employed.

In this preferred form, said discharge means has a valve which is normally closed at all times, except when the cover is momentarily slammed upon the stationary relative portions of the receptacle, for instance, when the cover, which is preferably the hinged type, commonly and commercially called "step-on" cans, is permitted to slam in the normal closing operation, then and only then does this counterbalanced valve cause the spray to be discharged. Naturally, this function depends on the relative parts and movements of the receptacle. The liquid naturally drips through from the germicide container to a pocket in the valve, the amount in this pocket being the only amount discharged at each of the closing operations, the valve being so constructed that it seals itself without any loss of the liquid at all times.

Various other objects and advantages of the invention will be pointed out or become apparent hereinafter.

The invention will be clearly understood from the following description when taken in connection with the accompanying drawing and illustrations. The embodiments are as follows:

Figure 1 is a side view, partly in section, showing one embodiment of the invention applied to the hinged-cover foot operated garbage can commonly called a step-on pail, the upper part of the can only being shown.

Figure 2 shows a cross-section of the valve and the lower portion of the fluid receptacle, the valve being shown open, spraying the liquid.

Referring in detail to the drawing, numeral 10 indicates the upper part of the garbage receptacle, such receptacle showing the hingedly mounted cover 11. As these parts are shown, the receptacle 10 is of the common cylindrical type having an upper circular bead 12 surrounding its open top. The cover is circular, of conventional dished formation and the hinging point is referred to as rivet 13, such rivet pivotally joining arms 14 and 15, suitably secured to and offset from the cover and receptacle respectively. The usual lift link for raising the cover is indicated at 16 pivotally connected to arm 14 at 17. The bottom of the receptacle is not shown but the lower end of the link 16 is connected to a treadle arm carried on the receptacle bottom, which arm when pressed causes the link 16 to rise sufficiently to raise the cover, thus opening the receptacle. However, there are some hinged types that swing down wherein 16 pulls downward instead of pushing upward. This directional motion is of slight importance, both movements causing an opening of the cover 11 sufficiently to permit a deposit of refuse in the pair. As the cover 11 is shown it has a peripheral bead 18 and a flat annular outer portion 19 which lies over the bead 12 when the cover is in a closed position on the

receptacle. The liquid 20 is supplied to the interior of the receptacle 10 and is carried in container 21 of a suitable size, shape and construction. This container, as shown, is of a cylindrical form with a dished wall 22 at one end, such wall axially of the container terminating in a threaded neck 23, such as may well be fabricated in large quantities inexpensively by glass or can manufacturers, since the container may be a bottle or a tin can. As the container is shown in position on the cover the dished wall 22 becomes the bottom wall, so that the dishing thereof insures complete draining of the liquid in the container. This container may be refilled or replaced from time to time, as it becomes empty. Before such replacement this container may be stored by placing it on its circular wall 24, then serving as its bottom, the neck 23 being covered with the familiar type of threaded cap, thus sealing the opening 37 and thereby preventing evaporation or other unintentional loss of the germicide.

Suitably secured in place on the cover 11 is a metal shell 25 having an annular bottom wall 26, side wall 27 being the threaded type forming a screw contact means or nipple means for anchoring container 21 to the pail cover, the thread of said side wall 27 matching the thread of the container neck 23. This threaded metal shell is secured in any suitable way to the cover as by brazing, soldering, welding, or otherwise, or by bolting down by means of the locking nut 28 on the valve. Container 21 is screwed into the anchoring shell 25, which is securely fixed to the pail cover 11 in a leak-proof manner so that said container 21 can be removed with ease by being unscrewed and replaced by another container. To facilitate attaching a filled container without loss of liquid 20, the container 21 has a very small opening 37 therein, such as is commonly used in facial liquid bottles in the glass industry. This small hole or opening is called a sprinkler finish which only emits a few drops of liquid at a time and becomes airbound unless jarred or shaken when inverted when enough of the liquid is discharged at each slam of the cover to more than fill the discharge valve. This action permits of inverting an open bottle without loss of liquid. The discharge valve, which is comprised of a main cylindrical body portion 29, has an outer side, the upper part of which is threaded and an upper cylindrical extension 30, providing an annular shoulder which extends at the top of the valve and beyond the main body valve portion 29. Between the shoulder and the nut 28 shell 25 is securely anchored to valve 29. A valve shaft 32 extends through the opening 31 of the valve 29; the head 33 of said valve shaft completely seals opening 31 when said shaft is pulled upward by spring 34 which is anchored against the plunger balance 35 of the valve unit, said plunger being fixed and adjustable by a screw thread to shaft 32, thus controlling the amount of liquid to be discharged through opening 31. The space between the outer wall of plunger 35 and the inner wall of valve 29 is just large enough to permit the plunger action of 35 to draw the liquid into the hollow space 36 when the liquid is discharged from the valve interior. The amount of liquid discharged is exactly the volume of hollow space 36.

Figure 2, a cross-section of the enlarged valve, shows the outer shell 29, the plunger 35, the valve seating 38 at the opening 31, the valve shaft 32 and head 33, as indicated in the drawing.

The action of this valve is explained as follows: assume that cover 11, shown closed on the receptacle in Figure 1, is opened and then closed, the slamming motion causes the counterbalanced weight of plunger 35 to overcome the balance force of spring 34, thus lowering valve shaft 32 and valve head 33 from the seating 38, thus opening the valve 29 at 31 and forcing the liquid out in all directions over the valve head 33. This action is shown in Figure 2. As the counterbalanced momentum motion of plunger 35 is overcome by the spring 34, the valve head 33 is pulled tightly against the valve seating 38, thus closing the valve and prohibiting any dripping or further discharge of the liquid until the slamming motion of the cover is again repeated.

In the appended claims, wherever a substance is referred to there is meant any deodorant, disinfectant or the like, in any form but, for convenience of handling, preferred to be in liquid form.

As to the several possible embodiments of the invention heretofore described, it is pointed out that the principle underlying the invention of having naturally occurring relative moving parts of the receptacle automatically function to deliver into the body of the receptacle a charge of deodorant or germicide or a like substance, may be otherwise employed by having such a substance discharged from a point on the cover of from a high point on the receptacle cover, or by employing other valve discharge means for said substance.

It is now deemed undesirable to have such discharge point at some other location than that above mentioned. Only a valve discharge means has been shown, but simply as a preference, particularly where a liquid is the substance employed, which is the preferred form. Within the invention, however, is any type of substance discharging means, whether valved or not, and wherever located.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. In a receptacle having a plurality of relatively movable parts, the combination of a source of supply for a disinfectant and deodorant, means for attaching and detaching said source of supply, means for discharging such disinfectant and deodorant comprising a valve, a valve pocket, a counterbalanced weight, a threaded shaft screwed into said weight, a spring between said weight and valve base, all within said valve pocket, a shaft head coacting with said valve base to open and close the valve aperture to emit said substance.

2. In a receptacle of the class described having a plurality of movable parts, a receptacle cover hingedly mounted upon said receptacle, a source of supply for a disinfectant and deodorant mounted upon said receptacle cover, a threaded neck for said source of supply, a threaded shell to receive and hold said supply source, a counterbalanced valve fixed to said threaded shell coacting with said supply source to discharge the disinfectant and deodorant into the receptacle upon actuation of the receptacle cover.

DAVID TROMPETER.