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DISPENSING RECEPTACLE FOR POWDERED AND GRANULAR MATERIALS

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My invention relates to receptacles for containing powdered and granular materials and for dispensing such materials in small quantities from the container. It is the object of my invention to provide a dispensing receptacle particularly adapted for use with scattering powders, soap powders, and the like, such as are commonly sold in "sprinkle-top" cans, from which the material is discharged by inverting and shaking the can. A further object of my invention is to provide a dispensing receptacle in which the material may be placed either in bulk, or while in the original container in which it is sold, and from which the material may be discharged in controlled quantities, the discharged material being delivered into the hand of the user while the discharging operation is effected with the same hand.

A device embodying my invention is illustrated in the accompanying drawings, in which Fig. 1 is a perspective view of the receptacle as seen from a point somewhat below the level thereof. Fig. 2 is a vertical section of the receptacle, showing the same as used for material in the sale-containing thereof, and Fig. 3 is a partial vertical section, showing the receptacle as used for bulk material.

In carrying out my invention according to the illustrated embodiment thereof, I provide a metal back-plate 10, having at the upper end thereof curved tongues 11 for receiving a hinge-pintle, and having at its lower end a forwardly projecting flange carrying at its front end an upwardly extending lip 12. Near the vertical edges of said back-plate are holes 13 for receiving screws 14 by which the plate is attached to a wall or other fixed vertical support 15. The main body of the receptacle is a rectangular metal box 16 which is open at the top, the upper rear edge thereof having tongues which are curled about the pintle 17, the latter passing through the similar tongues 11 on the back-plate 10, and thus forming a hinge connection between the receptacle and the back-plate. A flanged cover 18 is adapted to fit over the top of the body 16, the rear part of said cover having tongues which are curled about the pintle 17 to pivotally connect the cover therewith. The front flange of the cover has an opening therein adapted to receive a pin 19 which is carried on the front side of the box 16 adjacent to the upper edge thereof, said pin serving to hold the cover in closed position, and being disengagable therefrom, to permit opening of the cover, by springing the side of the box slightly inward.

Upon the bottom of the box is secured an angle-plate having an integral flange 20 extending downwardly at the rear side of the receptacle into the space between the back-plate 10 and the lip 12. Said angle-plate also has a front flange 21 which is longer than the rear flange 20 and projects down from the intermediate portion of the bottom of the receptacle. Upon the portion of the bottom in front of the flange 21 is secured the channel-plate 22 of which the intermediate portion is offset downwardly to form a rectangular trough open at its front end, its rear end being closed by the flange 21. A strip 23, integral with the plate 22 and having a width equal to the bottom of the rectangular trough, is extended downwardly from the front end of the trough and then turned backward and upward, the rear portion of said strip being attached to the bottom of the trough, and the front portion forming a depending lip at the open end of the trough, as shown. The trough of the channel-plate forms a horizontal discharge passage for the material which is admitted thereto at its inner end through an opening 25 in the bottom of the receptacle 16. The depth of said discharge passage, proportional to its length from the opening 25 to the outer end, is so related to the flow-angle of the material that the latter will not flow by gravity to the open end of the passage, but will merely fill the inner portion of the trough adjacent to the opening 25.

In the arrangement shown in Fig. 2, the material to be dispensed is contained within the cylindrical can A having perforations B in the end thereof, said can being placed in the receptacle 16 with its perforated end downward and resting upon the shelf-plate 24. Said plate is disposed loosely in the lower portion of the receptacle, having short downwardly extended flanges which rest upon the bottom of the receptacle, and the central portion of the plate having a large opening therein beneath the perforations B of the container A. The shelf-plate merely serves to hold the can A slightly above the bottom of the receptacle 16, so that the material may escape freely from the perforations B and thus reach the opening 25 to the discharge passage. When bulk material is to be dispensed from the receptacle, the shelf-plate may be removed or omitted from the structure, as shown in Fig. 3.

The operation of the device will be clearly
apparent from Fig. 2. The hand of the user is held beneath the discharge opening, and the fingers engaged with the flange 21 of the angle-plate, as indicated in said Fig. 2. By then bending the fingers the receptacle is swung forwardly about the axis of the pintle 17 until the flange 20 engages the lip 12, as indicated by dotted lines in the figure, and the jar or jostle resulting from the sudden stopping of the forward movement causes a portion of the material in the discharge passage to be thrown out into the hand, or onto a cloth, sponge, or the like, held in the hand. The shaking of the receptacle also causes further portions of the material to be discharged from the container A, so as to be available to supply the discharge passage through the opening 25. If, after pulling the receptacle forwardly, the hand be held stationary and the fingers relaxed to allow the receptacle to fall back into the normal position, a second jar is caused by striking the back-plate, and a slight additional quantity of the material may be discharged. By repeating the operation, to shake the receptacle and alternately strike the stops which limit its movement, any desired quantity of the material may be delivered.

Now, having described my invention, what I claim and desire to secure by Letters Patent is:

1. A device of the class described, comprising a fixed support, a receptacle having the upper portion thereof pivotally connected with said support, stopping means carried by the support and engageable with a part of the receptacle to limit oscillating movement thereof about the pivotal axis, the lower portion of the receptacle having a discharge-passage extending horizontally and proportioned to normally prevent gravitational flow of granular material through the same, said passage being constantly open to enable material to be moved through the same by shaking of the receptacle, and means to facilitate manual actuation of the receptacle between the limits formed by the stopping means.

2. In a device of the class described, a fixed vertical support, a receptacle pivotally connected with said support and normally resting against the front thereof, a stop member carried by said support and arranged to limit outward swinging of the receptacle relative thereto, means manually engageable to oscillate the receptacle between the support and said stop member and means forming at the bottom of said receptacle a horizontal discharge passage open at the front end and communicating at the rear end with the interior of the receptacle.

3. In a device as set forth in claim 2, a shelf-plate removably disposed in the lower portion of the receptacle and provided with means for holding the body-portion thereof in spaced relation to the bottom of the receptacle, for the purpose described.

4. In a device of the class described, a receptacle having a discharge opening in the bottom thereof, means disposed about said discharge opening and forming a discharge passage extending horizontally therefrom, the length and depth of said passage being proportioned to normally inhibit gravitational flow of material through the same, and means supporting said receptacle for oscillation between fixed limits in a direction longitudinal of said passage, whereby to effect intermittent movement of material through said passage to the open end thereof.

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