June 11, 1929. I. L. GREEN 1,717,025

DISPENSING CONTAINER

Filed Nov. 20, 1926

Fig. 1.

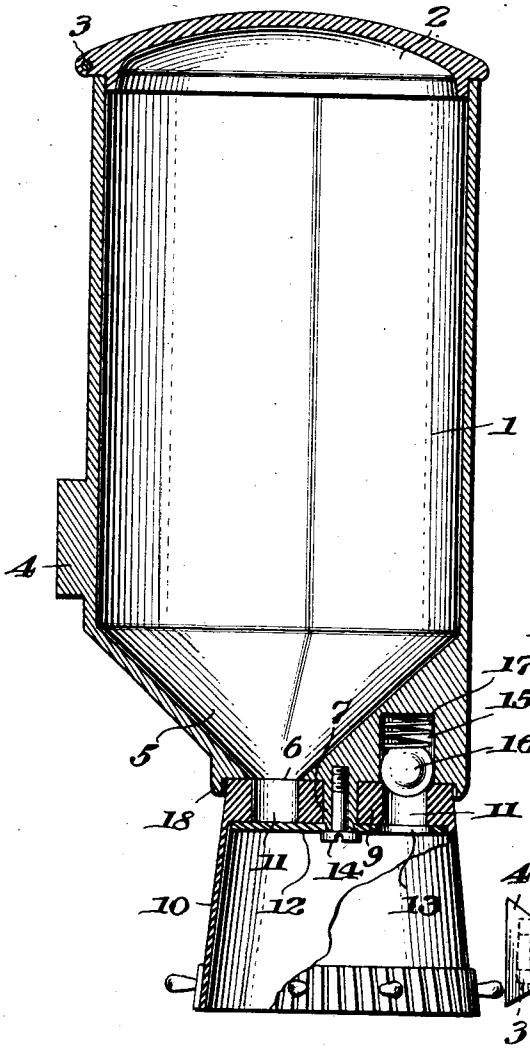


Fig. 3.

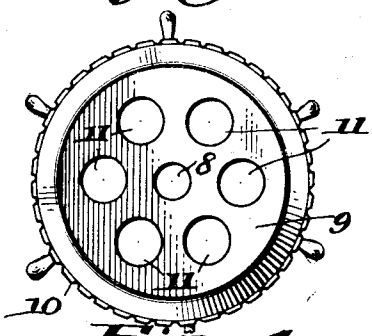
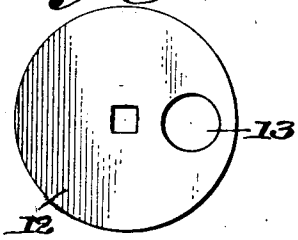


Fig. 4.



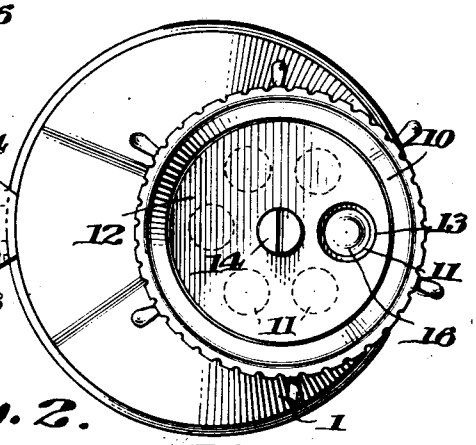


Fig. 2.

Inventor;

Ira L. Green

By Preston Sweeten

his Atty.

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UNITED STATES PATENT OFFICE.

IRA L. GREEN, OF WHITE RIVER JUNCTION, VERMONT.

DISPENSING CONTAINER.

Application filed November 20, 1926. Serial No. 149,781.

This invention relates to an improvement in dispensing containers.

The object of my invention is to dispense a regulated quantity of material from a container, while insuring that the residue of the material remaining in the container is kept in a dry, sanitary condition. The device may be used for dispensing powdered soap or any other kind of powdered, granular, or similar materials.

This novel form of dispensing container consists in a hopper, supported in any suitable manner, and terminating in a converging lower end having a constricted outlet. An inverted cup-shaped shell having openings in the bottom thereof fits against the bottom of the hopper, with the openings in position to register with the outlet. The shell is mounted on a post depending from the hopper for oscillatory or rotary movement, and a spring-pressed ball is in position to enter the openings to resiliently and momentarily hold the shell in a position with one of the openings registering with the outlet. A plate is secured in a fixed position against the under side of the shell bottom, and has a single opening therein to successively register with each of the openings in the shell bottom. The shell bottom is made relatively thick so that, as the shell is rotated in either direction, a fixed quantity of material is carried in each of the openings until it registers with the opening in the plate, when said material falls by gravity through the shell into the hand or suitable receptacle.

In the accompanying drawings:

Fig. 1, is a vertical section through the complete dispenser;

Fig. 2, is a bottom plan view thereof;

Fig. 3, is a top plan view of the cup-shaped shell; and

Fig. 4, is a plan view of the plate.

As shown in Fig. 1, the numeral 1 represents the hopper, provided with the cover 2, hinged thereto as at 3. This hopper may be supported, if desired, by means of the dovetailed block 4, fitted into a suitable bracket (not shown). The hopper is provided with a conical bottom 5, having a constricted outlet 6.

The bottom 5 is provided with a depending post 7, preferably integral therewith, which has the main portion thereof round to fit into the round hole 8, in the bottom 9, of the inverted cup-shaped shell 10, and forms a bearing support for said shell. The bottom 9 is provided with a plurality of openings 11 therein, and when the shell is in position on the post 7, these openings 11 are in position to successively register with the outlet 6, upon a turning of the shell in either direction about the post 7. The outer end of the post 7 is squared to receive a plate 12, provided with a single opening 13 therethrough, in position to successively register with the openings 11. The shell 10 and plate 12 are held in position on the post 7 by means of a screw 14 passing therethrough, as shown in Fig. 1.

The bottom 5, of the hopper 1, is provided with a recess 15 therein, as shown in Fig. 1, which receives a ball 16, and a spring 17 is interposed between the bottom of the recess and the ball for normally tending to force the ball outwardly. The ball 16 is in position to momentarily and resiliently stop rotation of the shell 10 while one of the openings 11 is in registry with the outlet 6, for receiving a charge of material therefrom and while another opening 11 is discharging a quantity of material through the opening 13, in the plate 12.

A peripheral lip 18, is formed on the bottom 5 of the hopper 1, to overhang the edge of the shell 10 and prevent any liquid from flowing through between the bottoms 5 and 9.

The operation of the device will be obvious from the foregoing description. The plate 12 is fixed on the post 7, and is non-rotary thereabout, whereas the shell 10 either rotates or oscillates in either direction about the axis of said post.

After the granular or pulverulent material has been placed in the hopper 1, the shell 10 may be rotated to successively bring each of the openings 11 into registry with the outlet 6, and as each of said openings is moved away from said outlet it confines the charge of material therein and slides said charge over the surface of the plate 12 until it registers with the opening 13 therein, when the charge drops by gravity through the shell into the hand or suitable receptacle. When an opening 11 is in registry with either the outlet 6 or the opening 13, or both, the spring-pressed ball 16 enters an opening 11, and momentarily but resiliently prevents further rotation.

Thus it is evident that a simple form of dispensing container is provided, which is

simple in construction and operation, and inexpensive in manufacture, and which may be actuated to dispense measured quantities of granular or similar powdered material.

I claim:

1. A device of the character described, including a hopper having an outlet therein, a post depending from said hopper, a shell rotatably mounted on said post, and having a plurality of openings in the bottom thereof in position to successively register with the outlet, and a plate fixed to said post beneath the bottom of the shell, and having an opening therein out of alignment with the hopper outlet and in position to register with the openings in the shell bottom.

2. A device of the character described, including a hopper having an outlet therein, a post depending from said hopper, a shell rotatably mounted on said post, and having a plurality of openings in the bottom thereof in position to successively register with the outlet, a plate fixed to said post beneath the bottom of the shell, and having an opening therein out of alignment with the hopper outlet and in position to register with the openings in the shell bottom, and a spring pressed ball mounted within the hopper for engaging the openings in the shell for momentarily and resiliently limiting rotation of the shell when an opening thereof is in registry with the opening in the plate or the outlet.

3. A device of the character described including a hopper having an inclined bottom terminating in a constricted outlet, supporting means for said hopper, a cover for the hopper, the bottom of the hopper having a depending post thereon, and having a recess therein, a shell having the bottom thereof fitted over said post and rotatably mounted thereon, said bottom having a plurality of openings therein in position to successively register with the outlet, a plate fixed on said post and abutting against the bottom of the shell, said plate having a single opening therein out of alignment with the outlet, whereby rotation of the shell successively moves each opening into registry with the outlet for receiving a charge of material therefrom, and slides said charge over the surface of the plate and into registry with the openings therein, a spring-pressed ball in position to enter the openings in the shell bottom to momentarily limit rotation of the shell, and a peripheral lip formed on and depending from the bottom of the hopper and overhanging the upper edge of the shell.

4. A device of the character described including a hopper having an outlet therein, and a manually operated plate associated with the hopper and having an opening therein in position to be moved into registry with the outlet, and a spring-pressed ball mounted adjacent said plate for resiliently and momentarily holding said plate in registry with the outlet.

5. A device of the character described including a hopper having an outlet therein, a manually operated plate having an opening therein in position to be moved into registry with the outlet, said hopper having a recess in a portion thereof, a ball mounted in said recess in position to engage the plate for momentarily tending to hold the plate against rotation, and a spring interposed between the end of the recess and the ball for resiliently holding the ball in contact with the plate.

6. A device of the character described including a hopper having an outlet therein, a post depending from said hopper adjacent said outlet, a shell having the bottom thereof rotatably fitted over the post, said bottom having a plurality of openings therein in position to register with the outlet, and a non-rotatable plate connected with the post and having a single discharge outlet therein in position to register with the openings in the shell bottom.

7. A device of the character described including a hopper having an outlet therein, a post depending from the hopper adjacent said outlet, an inverted shell having the bottom thereof rotatably fitted over the post, said bottom having a plurality of openings therein in position to register with the outlet, a non-rotatable plate fixed to the post beneath the shell bottom and having a single discharge outlet therein, within the shell, in position to register with the openings in the shell bottom, and a spring pressed ball mounted in the hopper in position to engage the openings in the shell bottom for momentarily tending to hold the shell against rotation.

In testimony whereof I affix my signature.

IRA L. GREEN.