

June 21, 1932.

G. H. PACKWOOD, JR

1,863,871

DISPENSER

Filed Jan. 2, 1931

Fig. 1.

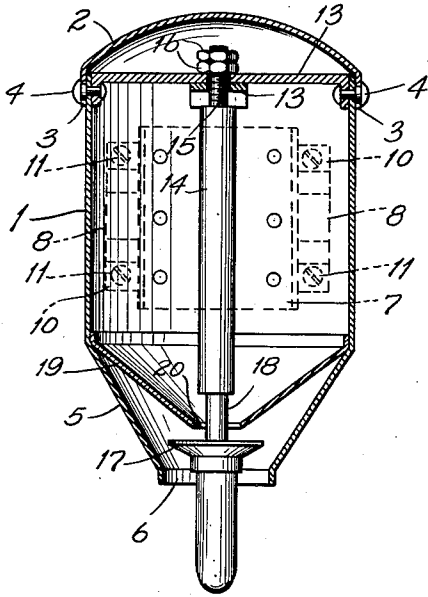


Fig. 2.

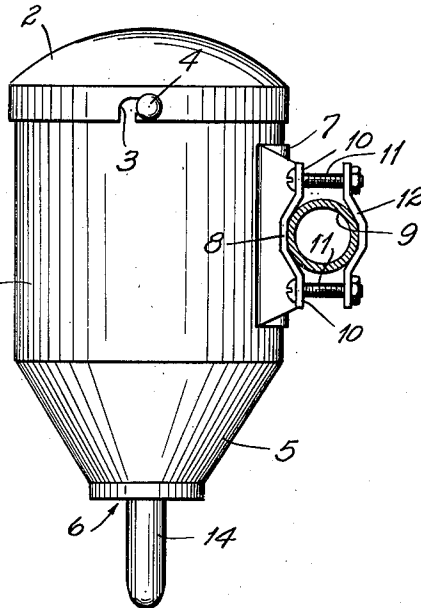


Fig. 3.

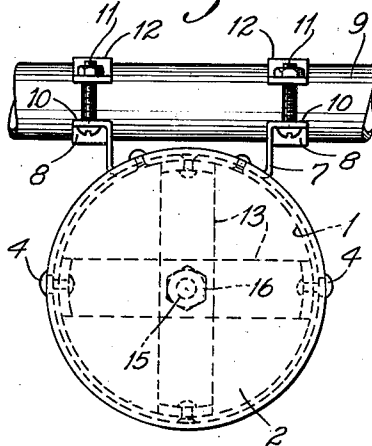


Fig. 4.

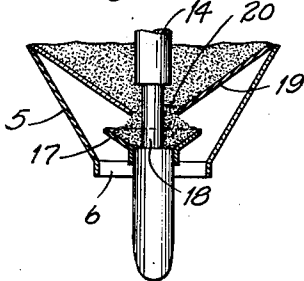
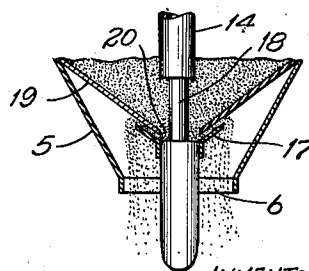


Fig. 5.



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UNITED STATES PATENT OFFICE

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DISPENSER

Application filed January 2, 1931. Serial No. 506,004.

My invention relates to dispensers for finely divided materials, such as powdered soap. It has for its principal object a device that will dispense a definite and regulatable amount at each dispensing stroke, that prevents removal of the contents of the dispenser except by the normal dispensing operation, that protects the contents of the dispenser from contact with splashing water from the hands of the user, that has a feed opening of constant and relatively large size, that eliminates clogging, and that is simple and inexpensive to manufacture and operate.

The invention consists principally in a dispenser having a vertically movable plunger disposed centrally thereof, which plunger has a dispenser cup thereon to receive the finely divided material from the lower end of the dispenser and to dispense said material when the plunger is raised. The invention further consists in the dispenser and in the parts and combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing,
Fig. 1 is a vertical sectional view of a dispenser embodying my invention,

Fig. 2 is a side elevation,

Fig. 3 is a top plan view, the cover being removed, and

Figs. 4 and 5 are detail views showing the operation of the dispensing cup.

The dispenser comprises a hollow body 1 that is provided with a cover 2 that has bayonet slots 3 that receive pins 4 secured to the body. The lower portion 5 of the body tapers downwardly and terminates in a short cylindrical mouth portion 6.

Secured to said body 1 is a clamp bracket 7 that has curved portions 8 adapted to receive a pipe 9. Said bracket 7 has flat portions 10 on either side of said curved portions 8 that are perforated to receive a screw 11. Clamp plates 12 may be provided to cooperate with said bracket 7, said plates 12 being mounted on the other side of the pipe 9 and being secured in position by means of said screws 11. If desired, the flat portions 10 of said bracket 7 may be placed flatwise against a wall or the like and secured there-
to by screws.

Secured in the top of the body 1 as by said pins 4 are cross plates 13 that extend at right angles to each other. These cross plates 13 permit powdered soap or other finely divided material to be poured into the dispenser body, but the spaces between them are so small as to prevent the material from being removed from the top of the body.

Disposed at the center of the body 1 is a vertical plunger 14 having a reduced threaded upper end portion 15 extending through holes in said cross plates. On said threaded end of said plunger are nuts 16. The lower end of said plunger 14 extends beyond the bottom of the dispenser body. The distance that the plunger 14 may be raised by contact with the lower end thereof depends upon the adjustment of said nuts 16 on the upper end of the plunger.

A dispenser cup member 17 is secured to the plunger near its lower end, said cup preferably having a flaring body; and the plunger has a portion 18 of reduced diameter above said cup 17. Mounted in the lower portion of the body is an inverted conical false bottom member 19 that has a central opening 20 through which passes the reduced portion 18 of said plunger 14.

The fine particles of the soap or other material in the body flow through the opening 20 into the dispenser cup member 17, the slope of the false bottom member 19, the size of the central opening 20, the side of the reduced portion of the plunger 14 and the nature of the soap or other material all affecting the quantity of the material that flows into said dispenser cup. When the plunger 14 is raised by pressure on the lower end thereof, the dispenser cup 17 is moved upwardly with the plunger and the lower portion of the false bottom member 19 engages the mound of soap in said dispenser cup, causing a portion of said soap to fall over the edges of said dispenser cup. The impact of the plunger 14 against the cross plates 13 causes sufficient vibration of the dispenser to make the soap therein flow downwardly and out through the opening 20.

The flaring dispenser cup prevents water from being splashed onto the soap or other

material in the dispenser, the amount of soap dispensed at a single operation may be adjusted, a very large opening is provided, thereby minimizing the risk of clogging, the soap is fed in the form of a ring instead of in the form of a compact mass that is apt to ball in the hand of the user, the contents of the dispenser are protected from removal through the top, there is only one moving part which is easily accessible and other obvious advantages are inherent in the structure. Obviously numerous changes may be made without departing from the invention and I do not wish to be limited to the precise construction shown.

What I claim is:

1. A dispenser for finely divided material including a hollow body having a tapering bottom portion with a central opening therein, a vertical plunger movably mounted in said body and extending through the opening in said bottom portion, said plunger being reduced in size for a short distance above and below the part passing through said opening and a dispenser cup member secured to said plunger below said bottom portion.

2. A dispenser for finely divided material including a hollow body having a tapering bottom portion with a central opening therein, a vertical plunger movably mounted in said body and extending through the opening in said bottom portion, said plunger being reduced in size for a short distance above and below the part passing through said opening and a flaring dispenser cup member secured to said plunger below said bottom portion.

3. A dispenser for finely divided material comprising a hollow body having a tapering lower end portion with a central opening, a conical false bottom in said body having a central opening, a vertical plunger movably mounted at the center of said body and extending below the lower end of said body, a cross plate having an opening through which extends the reduced upper end of said plunger, nuts on the upper end of said plunger, whereby the stroke of said plunger may be adjusted and a dispenser cup member secured to said plunger beneath said false bottom member.

4. A dispenser for finely divided material including a hollow body having a bottom portion with a central opening therein, a vertical plunger movably mounted in said body and extending through the opening in said bottom portion, a member in said body in position to be engaged by said plunger on its upward stroke, whereby movement of said plunger and the force of the impact agitate and loosen said finely divided material and cause a portion thereof to fall through said bottom opening and a dispenser member secured to said plunger below said bottom portion of said body.

5. A dispenser for finely divided material including a hollow body having a tapering bottom portion with a central opening therein, a vertical plunger movably mounted in said body and extending through the opening in said bottom portion, a member in said body in position to be engaged by said plunger on its upward stroke, whereby movement of said plunger and the force of the impact agitate and loosen said finely divided material and cause a portion thereof to fall through said bottom opening and a dispenser member secured to said plunger below said bottom portion of said body.

Signed at St. Louis, Missouri, this 30 day of December, 1930.

GEORGE H. PACKWOOD, JR.