April 22, 1952 J. D. SCHOFIELD 2,593,803

DISPENSING ATTACHMENT FOR CONTAINERS

Filed May 20, 1949

Fig. 1.

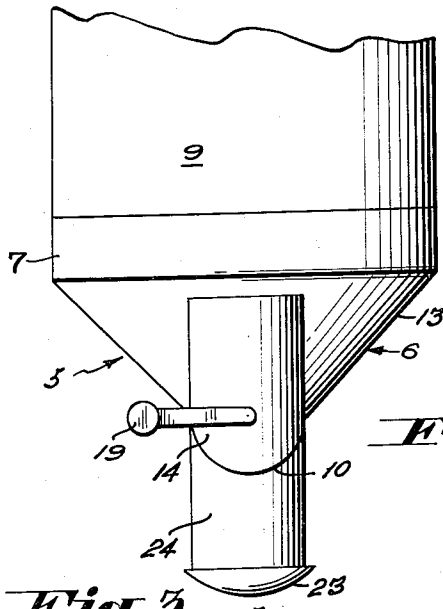


Fig. 2.

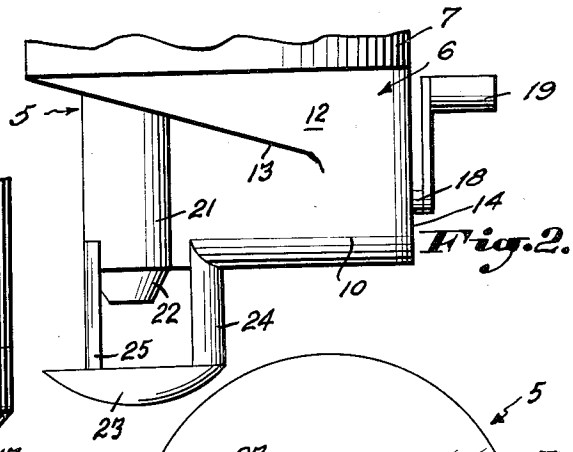


Fig. 4.

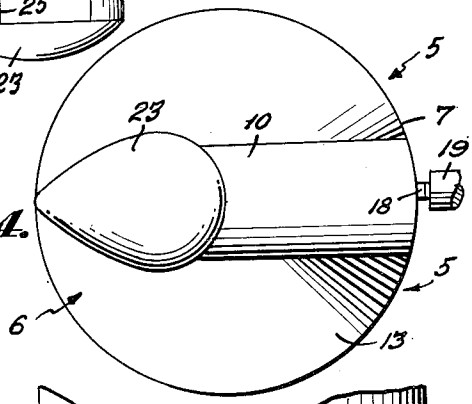
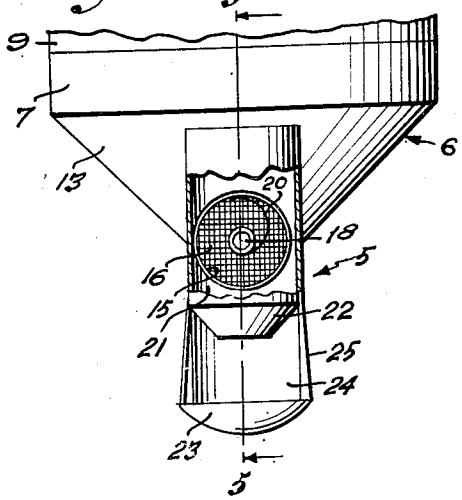


Fig. 3.



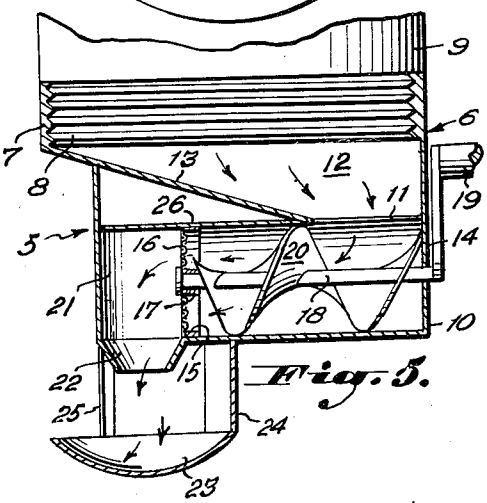


Fig. 5.

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DISPENSING ATTACHMENT FOR CONTAINERS

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1 Claim. (Cl. 222—189)

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This invention relates to an apparatus adapted to form a container attachment and to be detachably applied to the discharge end of a container for dispensing the contents thereof in measured quantities and in a finely divided or comminuted form.

More particularly, it is an object of the present invention to provide a dispensing attachment having conveying means and sieve means for breaking up lumpy substances into a finely divided form and by the use of which said substances, in a loose form, may be dispensed in measured quantities therefrom.

Still a further object of the invention is to provide a dispensing and comminuting apparatus having manually actuated pressure feed means for dispensing a material in desired quantities and for forcing the material through means for breaking up lumps which may exist therein to enable the material to be dispensed in measured quantities from the device and in a finely divided or comminuted form.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a rear elevational view showing the device in an applied, operative position;

Figure 2 is a side elevational view thereof looking from left to right of Figure 1;

Figure 3 is a front elevational view, partly in section of the device;

Figure 4 is a bottom plan view thereof, and

Figure 5 is a central sectional view taken substantially along a plane as indicated by the line 5—5 of Figure 3.

Referring more specifically to the drawing, the novel measuring, dispensing and comminuting apparatus constituting the invention is designated generally 5 and comprises a body member, designated generally 6 having an annular upwardly opening internally threaded end 7 which is adapted to be threadedly engaged with the externally threaded open end or neck 8 of a jar or other container a portion of which is indicated at 9 in Figures 1, 3 and 5 and in each of which figures the container 9 is shown in an inverted position as it will be disposed when the device or apparatus 5 is in use.

The body member 6 also includes an integral conduit 10 which is disposed beneath and spaced from the annular upper end 7 and with its axis substantially parallel to the plane thereof. Said conduit 10 is provided with a restricted inlet 11

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in the top thereof and which defines the restricted outlet end of a hollow intermediate portion 12 of the body 6 and which forms a passage between the upper end 7 and the conduit 10. Said passage as formed by the intermediate body portion 12 includes a downwardly inclined bottom wall 13 which extends from a portion of the upper body portion 7 to one end of the opening 11 and which forms a deflector for deflecting the material from the container 9 and which flows by gravity into the intermediate body portion 12 toward its outlet 11 and into the conduit 10 adjacent the closed end 14 thereof. Said closed end 14 of the conduit 10 is disposed in the same plane as a portion of the periphery of the open end 7 and remote to the upper end of the baffle or deflector 13 and the opposite, outlet or discharge end 15 of the conduit 10 is disposed beneath and spaced from a portion of said upper end 7 and beneath a portion of the deflector 13. Said discharge end 15 is provided with a mesh wire fabric closure 16 in which is supported a centrally disposed bearing 17 for journaling one end of a screw conveyor shaft 18, the opposite end of which extends through and is journaled in said end wall 14. A crank 19 is fixed to or formed integral with said last mentioned end of the shaft 18 and is disposed outwardly of the wall 14. A screw conveyor 20 is fixed to the shaft 18 and disposed in the conduit 10 and extends substantially from end-to-end thereof.

The dispenser body 6 is provided with an integral conduit portion or chute 21 which is disposed beyond and communicates with the discharge end of the conduit 10 and which is provided with a tapered discharge opening 22 at the bottom thereof which is disposed above and opens into a measure or measuring receptacle 23 which is supported therebeneath at its rear end by a depending arcuate rear wall 24 which is fixed to and depends from the bottom portion of the conduit 10. The measure 23 is supported at its sides by depending strap members 25 which are fixed to and depend from the conduit 21 and are secured at their lower ends to the side edges of the measure 23. The body 6 also includes a wall 26 one end of which closes the top of the conduit 21 and the opposite end of which closes the top of the conduit 10 between its outlet 15 and inlet 11.

The dispensing device 5 is inverted from its operative position as illustrated in the drawing and while inverted its inlet end 7 is detachably applied to the open end of the container 9 after which said container with the dispenser

5 applied thereto is inverted to position the dispenser in its operative position as illustrated in the drawing. The container 9 may contain any normally loose or finely divided substance such as sugar, salt, tooth powder et cetera which has a tendency to lump. The contents of the container 9, not shown, will flow by gravity into the body portion 12 and will be directed by the deflector 13 to flow by gravity downwardly through the port 11 into the end of the conduit 10, located remote to its outlet 15. While the container 9 and dispenser 5 are manually supported with one hand as by grasping said container 9, the other hand is employed for revolving the crank 19 in a clockwise direction as seen in Figure 1 for rotating the conveyor screw 20 in a direction for feeding the material from right to left of Figure 5 toward the outlet 15. The conveyor screw 20 will exert sufficient force against the material to force it through the screen 16 which functions as a sieve or divider for breaking up any lumps therein so that the material will be dispensed therethrough into the container 21 in a finely divided, loose or comminuted state. The material will fall by gravity from the conduit 21 through its restricted outlet 22 into the measure or receptacle 23 and the operator may regulate the rate of discharge of the material into the receptacle 23 by the rate of speed at which the crank 19 is manually revolved and may watch the discharge of the material into the measure 23 so that he may cease turning the crank when the measure is filled. The container and dispenser are then tipped counter-clockwise as seen in Figure 5 so that the contents of the measure 23 will be dispensed or poured from its open, left-hand end, as seen in Figure 5, into any receptacle or elsewhere that the material is to be utilized. Obviously, the measure 23 may be of any desired size.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claim.

I claim as my invention:

A portable dispensing and measuring device comprising a container for a finely divided material to be dispensed and measured, a body member having an open end detachably connected to an open end of the container and supported by the container and therebeneath when the container is in an inverted position, said body member including a conduit disposed beneath and spaced from the open end of the container, the axis of the conduit being disposed at a right angle to the axis of the container, an intermediate portion of the body member defining a passage between the container and one end only of the conduit through which the material is conveyed by gravity to the conduit, the opposite discharge end of the conduit having a foraminous closure, a manually actuated screw conveyor disposed in the conduit for conveying the material therethrough toward said discharge end and for forcing the material through said closure to eject it therefrom in a finely divided form, a chute forming a part of the body member into which said discharge end opens, said chute having a downwardly opening discharge end, and a measuring spoon having a flat rim secured to and rigidly supported by the body member beneath the discharge end of the chute for receiving and measuring the material dispensed from the chute, the flat rim being parallel to the screw conveyor and facing the chute, said chute being disposed perpendicular to the axis of said conduit and to the plane of the measure.

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