July 7, 1953 G. H. PACKWOOD, JR 2,644,615

SOAP DISPENSER

Filed Nov. 4, 1949 2 Sheets-Sheet 1

Fig. 1.

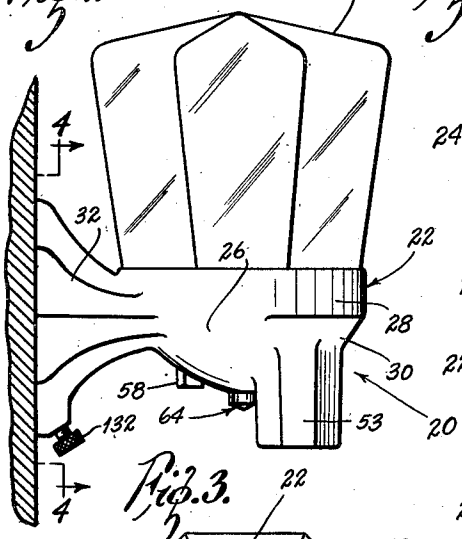


Fig. 2.

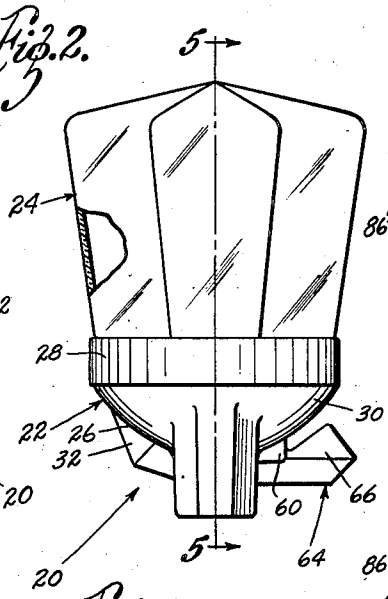


Fig. 10.

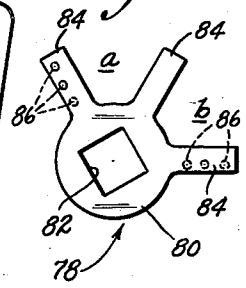


Fig. 11.

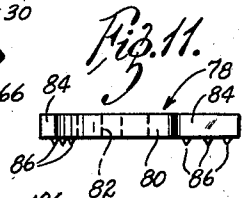


Fig. 3.

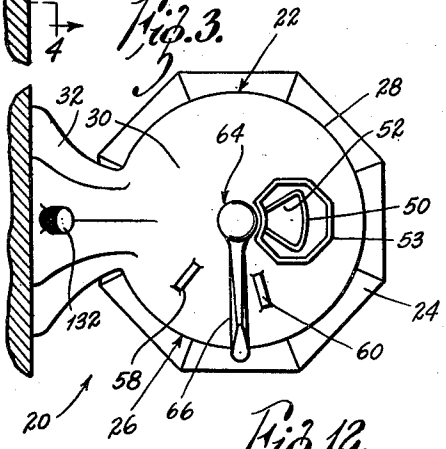


Fig. 4.

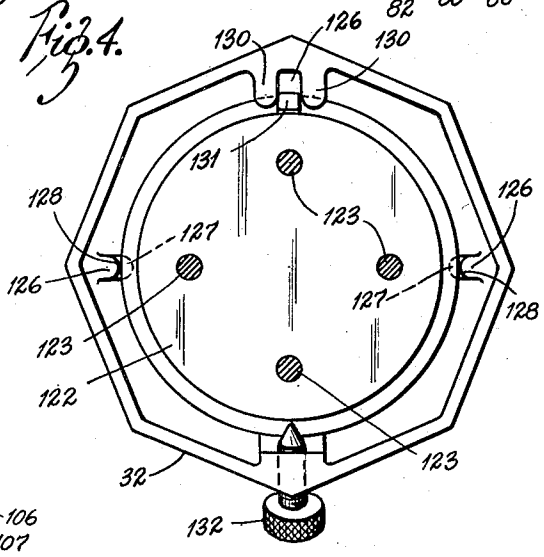


Fig. 12.

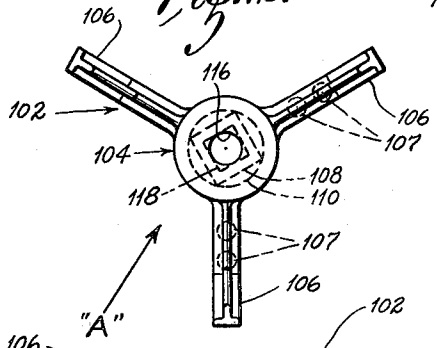


Fig. 13.

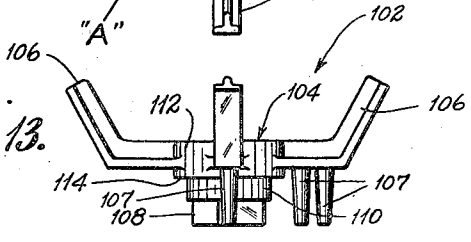
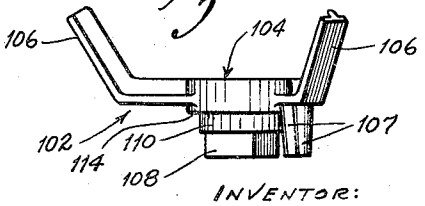


Fig. 14.



INVENTOR:
GEORGE W. PACKWOOD, JR.
BY Rogers & Eagle
ATTORNEYS.

July 7, 1953 G. H. PACKWOOD, JR 2,644,615

SOAP DISPENSER

Filed Nov. 4, 1949 2 Sheets-Sheet 2

Fig. 5.

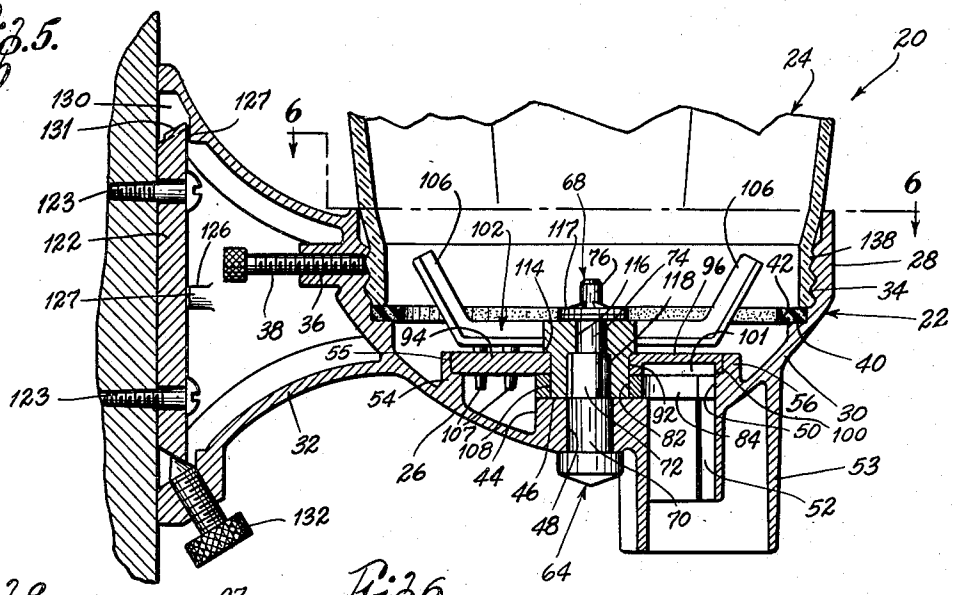


Fig. 8.

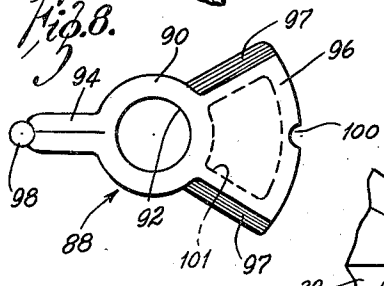


Fig. 6.

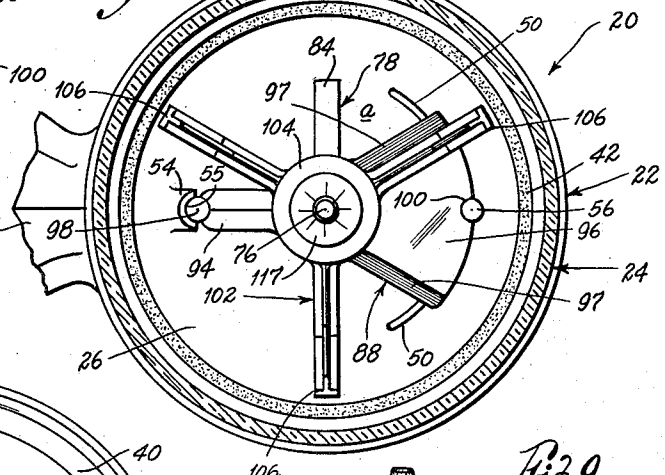


Fig. 7.

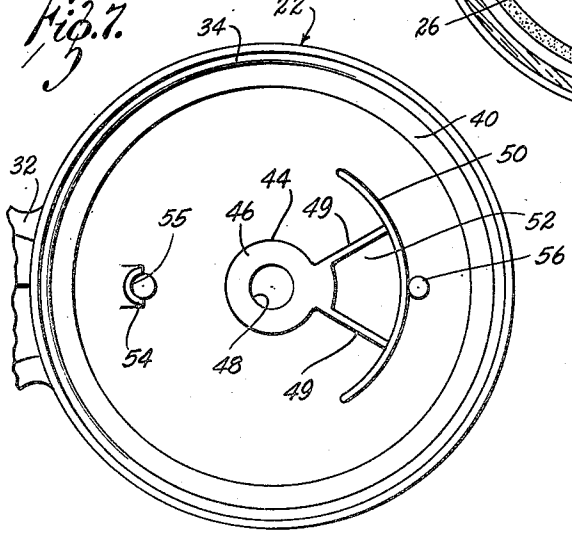
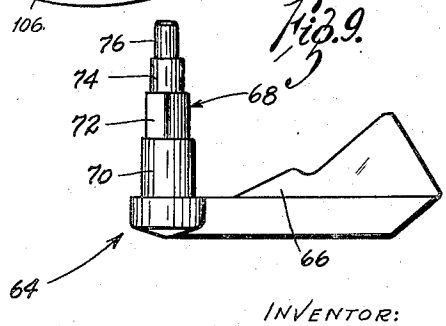


Fig. 9.



INVENTOR:
GEORGE W. PACKWOOD, JR.
BY Rogers & Eggleston
ATTORNEYS.

Patented July 7, 1953 2,644,615

UNITED STATES PATENT OFFICE

2,644,615

SOAP DISPENSER

George H. Packwood, Jr., St. Louis, Mo.

Application November 4, 1949, Serial No. 125,489

11 Claims. (Cl. 222—181)

1

The present invention relates generally to the dispenser art, and more particularly to a novel soap dispenser which discharges a measured amount of soap each time the handle is actuated, and which is constructed to prevent water and steam from entering the mechanism or the soap container or from interfering with the free and unobstructed flow of dry soap. Although the description is made with reference to powdered soap, it will be evident that the dispenser is one that will easily and efficiently dispense granulated material, friable flake material, and oily material of the semi-liquid character.

In its preferred form, the dispenser includes a body member having a base portion and a bracket portion for removably fastening the device to a wall or the like. Especial features and objects of the invention will appear from the following analysis description and from the detailed description thereafter.

The base portion contains an opening at the upper end thereof to receive a standard size container of an easily replaceable type, and which may be a preserves jar. The base has an opening at its lower end through which soap or other material is discharged each time a handle is actuated. The base assembly, which preferably is a self-contained unit, includes a metering discharge device and material agitator inside the bowl, connected to a handle outside the bowl. The agitator stirs the material within the container and enables the metering device to positively discharge a predetermined amount of the material each time the handle is actuated. The arrangement is such as to prevent caking and clogging of the material in the dispenser under all circumstances, and to direct the material into the metering discharge mechanism.

A baffle member is disposed adjacent the discharge opening to prevent steam and water from entering the mechanism and the container, and the outlet conduit contains a secondary conduit disposed around it and spaced therefrom so that moisture from the operator's hands will be prevented from coming in contact with the outlet conduit itself; and further, to provide a dispenser that will continue operating even if its discharge elements are wetted. These elements are designed to receive the material discharged by the metering device, and are so related to the metering device that the material leaves the dispenser at the desired place.

It is an object of the present invention to provide a novel dispenser which can be used in a shower with water running down over it without

2

the water entering the mechanism or the container.

Another object is to provide a dispenser in which the operator can place his wet hands against the outlet and the water clinging to the outlet will not interfere with the free and unobstructed flow of dry material.

Another object is to provide a dispenser which contains positive means for preventing caking of the material within the container and the dispensing mechanism, and which will positively discharge the material by a combined action of agitation means and metering discharge means.

Another object is to provide a dispenser which discharges a measured amount of material, and particularly by a forcing action that prevents "starving," each time the handle is actuated, and which will so act with granulated, comminuted, flaky, and semi-liquid material. Especially it is an object to provide a dispenser that will break up any large particles such as flakes or agglomerated particles, and dispense a measured amount with each operation. And a further object is to provide a dispenser wherein the discharge parts are self-cleaning.

Another object is to provide a soap dispenser which can be easily and quickly recharged with soap. Another object is to provide a dispenser which can be recharged without removing it from its supporting bracket.

Other objects are to provide a soap dispenser which is of simple and rugged construction, and which can be easily and quickly assembled.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings wherein a preferred embodiment of the present invention is shown, in which:

Fig. 1 is a side elevational view of a dispenser constructed in accordance with the teachings of the present invention, shown fastened to a wall;

Fig. 2 is a front elevational view of the dispenser with the bowl partly broken away;

Fig. 3 is a bottom plan view of the dispenser;

Fig. 4 is an enlarged end view of the bracket portion of the dispenser taken from the wall side, as on the line 4—4 of Fig. 1;

Fig. 5 is an enlarged fragmentary vertical sectional view, taken on the line 5—5 in Fig. 2;

Fig. 6 is a fragmentary horizontal transverse sectional view taken on the line 6—6 in Fig. 5;

Fig. 7 is a plan view taken from about the same point as Fig. 6, showing the base portion only;

Fig. 8 is an enlarged top plan view of the baffle member;

Fig. 9 is an enlarged side elevational view of the actuator member;

Fig. 10 is an enlarged top plan view of the metering member;

Fig. 11 is an elevational view of the metering member;

Fig. 12 is an enlarged top plan view of the agitator member;

Fig. 13 is an elevational view of the agitator member as viewed from the bottom of Fig. 12; and

Fig. 14 is an elevational view of the agitator member as viewed from the direction of the arrow marked "A."

Referring to the drawings more particularly by reference numerals, 20 indicates generally a dispenser embodying the teachings of the present invention, which includes a body 22, and a container 24 removably attached thereto.

The body 22 includes a cup-like base portion 26 (Fig. 5) having a generally cylindrical rim 28, a concave bottom wall 30, and a hollow bracket portion 32 which is formed integral with the base portion 26 and extends horizontally from the side thereof, as shown in Figs. 1 and 5.

The rim 28 contains internal threads 34. Preferably, these threads are standard glass jar threads, so that any jar having such threads may constitute the container 24. A horizontal threaded opening 36 (Fig. 5) is provided, and may be contained in that portion of the side wall 28 which is within the hollow bracket portion 32, with a set screw 38 disposed therein to secure the container 34 against removal. If it is desirable to replace the container 24 without removing the dispenser 20 from its support, as will appear, the setscrew 38 is left loose, tightened, or is located outside the bracket. This screw is adapted to be turned in to project its end back of the end of the thread on the container, so that it can block unscrewing of the container without being forced against the side thereof. An annular horizontal surface 40 is contained in the base portion 26 below the threads 34, and a gasket 42 of rubber or the like is disposed thereon, to seal the container 34 with the dispenser base 26. This prevents ingress of any water to the interior of the dispenser.

As shown in Figs. 5 and 7, a somewhat cylindrically shaped boss 44 projects upwardly from the bottom of the base 26. It has a flat upper surface 46 and a cylindrical vertical opening 48 through its center. At one side (Fig. 7) two walls 49 extend radially from the boss 44 to an arcuate wall 50. This wall 50 extends laterally beyond the ends of the radial walls 49. The radial walls 49 have their upper edges flush with the top of the boss 44, but the arcuate wall 50 projects above that level. The radial walls and the arcuate wall define a discharge opening 52 of a generally sectorial shape. These walls project below the dispenser base to provide a sectorially shaped discharge chute. On the underside of the base, the chute is surrounded by a hexagonal shield tube 53 that projects a substantial distance below the bottom of the discharge chute.

A small boss 54 (Figs. 5 and 7) is located to one side of the central boss 44. It has a semi-circular recess 55 extending part way down it. Opposite the boss 54, there is a second boss 56 of circular shape, projecting above the outer edge of the arcuate wall 50.

As shown in Fig. 3, stop members 58 and 60 depend from the bottom surface of the base portion 26, for a purpose to appear.

An actuator member 64 (Fig. 9) comprises a handle portion 66 and a shaft portion 68 formed normal thereto. The shaft portion 68 extends upwardly through the opening 48. As shown in Fig. 9, the shaft portion 68 includes a round part 70 adjacent to the handle portion 66, a square-shaped part 72 having rounded corners, above the part 70, a round part 74 above the part 72, and a round part 76 of reduced diameter above the part 74. The round part 70 fits in the opening 48 in the base member 22, in such wise as to close the opening and to have a bearing action therein, permitting oscillation of the shaft 68.

A metering member 78 consisting of a hub and three radial arms, shown in Figs. 10 and 11, is disposed over the shaft 68 of the actuating member, to oscillate over the surfaces 46 and 49 (Fig. 7). The hub 80 of the metering member 78 contains a square-shaped opening 82 in the center thereof. The three spaced, radial arms 84 extend outwardly from the hub 80, the outer ends of the arms 84 extending to adjacent the inner surface of the arcuate wall 50. These arms provide two material receiving sectors *a* and *b*. The angle included between each adjacent part of arms 84 on the metering member substantially equals the angle of the passage 52 between the flanges 49. The metering member rides on the upper surface 46 of the hub 44 in the dispenser base, and may also ride on the upper edges of the radial walls 49. Its upper surface is flush with the upper surface of the arcuate wall 50. The two outer arm-like portions 84 contain depending conical projections 86 for the purpose of agitating and keeping in a loose condition the powdered material that accumulates under the arms 84, as will appear.

A baffle member 88 of the configuration shown in Fig. 8 is disposed above the metering member 78 (Figs. 5 and 6) on the actuator shaft 68. The baffle member 88 includes a disc-like hub 90 containing a circular opening 92 in the center thereof (that acts as a bearing for an agitating member to be described), an arm 94 extending to one side of the hub 90, and a fan-shaped portion 96 extending to the other side thereof. The fan-shaped portion 96 contains opposed bevel edges 97 for the purpose of preventing the jamming and caking of the material on the edges of the baffle, when the arms 84 approach and pass under the edges 97. This insures that the metering and discharging elements remain clean.

The arm 94 contains a cylindrically shaped boss 98 at its outer end, and a semi-circular notch 100 is contained in the outer edge of the fan-shaped portion 96. As shown in Figs. 5 and 7, the boss 98 is disposed in the recess 55 of the boss 54 in the base 26, and the notch 100 in the baffle receives the boss 56 that projects from the oposite side of the base 26. The baffle 88 is thus securely held in place over the metering member 78 and the arcuate wall 50. The sector end of the baffle plate 88 is slightly wider than the outlet 52, and the sections *a* and *b* between the arms 84 of the meter 78, so that in extremes of movement each pair of arms 84 will be below the edges of the baffle, and will close the lateral slots between the edges 97 of the baffle and the tops of the walls 49. The underside of the sector end of the baffle is sectorially recessed at 101.

An agitator member 102 of the configuration shown in Figs. 12, 13 and 14 is disposed on top of the baffle member 88. The agitator member 102 includes a hub 104 and three equally or nearly

equally spaced arms 106 extending outwardly from the upper portion thereof. The free ends of the arms 106 extend upwardly at an acute angle to the horizontal, and two of them contain depending agitating prongs 107.

The upper ends of the arms 106 are disposed near to the inner surface of the container 24 where there is more likelihood of a retarded downflow of the material, because of the normal tendency of the material to drop from the center.

As shown in Figs. 12 to 14, the hub 104 of the agitator is divided externally into three tiers; a bottom tier 108 which is of square-shaped cross section, of a height and size equal to the thickness and size of the opening 82 of the metering member 78, an intermediate tier 110 which is of cylindrical shape, and of a height and size equal to the thickness and diameter of the opening 92 of the baffle member 88, and an upper tier 112 which is also of cylindrical shape but of an increased diameter so as to provide a shoulder 114 between it and the tier 110.

A vertical passageway extends through the hub 104 of the agitator 102, and is divided into a circular upper portion 116 and a lower squared portion 118 (Fig. 5). The circular upper portion 116 extends through the upper tier 112 and the squared portion 118 extends upwardly through the bottom and intermediate tiers 108 and 110. As is evident from Fig. 5, the shaft 68 of the actuator 64 extends through the axial passageway in the agitator 102. The squared part 72 of the actuator shaft interfits with the squared part 118 in the actuator hub 104, and the round part 74 of the actuator shaft extends through the circular part 116 of the agitator opening. A quick acting spring-tension lock-nut 117, such as a "Tinnerman" nut, is placed over the reduced part 76 of the shaft 68, to securely hold the agitator, shaft and bowl together, and prevent an excessive lost-motion condition in the assembly even with extended use.

As shown in Fig. 5, the agitator hub extends through the baffle 88 and the meter 78. The baffle member 88 rotatably receives the cylindrical part 110 of the agitator hub and the metering member 78 receives the squared part 108 of that hub. The baffle member and the metering member are confined between the upper surface 46 of the base 44 on the dispenser bottom or base, and the shoulder 114 on the agitator hub.

By the foregoing, the actuator shaft 68 and the agitator 102 are attached for rotation together in the dispenser base, and the metering member 78 is mounted to rotate with the agitator. The lugs 107 depending from two of the agitator arms 106 project into the bowl below the metering parts, and stir up material therein with each operation of the valve, as will appear.

The hollow bracket portion 32 (Fig. 5) of the body 22 contains attaching means for supporting the dispenser in a manner to aid in its operation. The hollow bracket 32 interengages with an undercut attaching plate 122 (Fig. 5). This attaching plate is shown as having holes to receive four attaching screws 123 by which it may be secured to a wall. It will be understood that the plate may be provided with other shapes or accessory elements known in the art, so that it can be mounted on other things, such as pipes.

The attaching means between the bracket 32 and the plate 122 include several back-up lugs 126 (Fig. 4) spaced around the opening in the bracket. Each lug 126 has a ledge 127 that limits the movement of the plate 122 inwardly of the bracket 32, and toward the open end of the bracket from the ledge 127 has a rounded nose 128 facing centerward of the bracket to stabilize the dispenser against lateral movement on the plate 122.

In addition, there is a clamping means that holds the bracket 32 to the plate 122, but permits rotation of the dispenser to an upside-down position for servicing or permits removal of the dispenser from the plate 122, and hence from the wall. The clamping means includes a pair of spaced boss-like lugs 130 (Fig. 4) that flank the top back-up lug 126. The two lugs 130 are rounded on their radially inner ends and are undercut to engage over the oppositely undercut edge of the attaching plate 122 at the top thereof, whereby to hang the upper end of the bracket 32 onto the plate. The plate 122 has, at its top, a lug 131 projecting from its beveled periphery, and adapted to engage between the two lugs 130. The rounded ends of the lugs permit the bracket to be rotated from its upright position, in either direction. Opposite the two clamping lugs 130, and at the bottom of the bracket 32, a taper-pointed setscrew 132 (Fig. 5) is threaded through the bracket preferably as shown, so that its tip may lock behind the undercut edge of the plate, thus releasably clamping the bottom of the bracket 32 to the plate 122.

The container 24 (Figs. 1, 2 and 5) has external threads 138 at its open end which are disposed in engagement with the threads 34 of the base portion 26. The open end of the container 24 abuts the gasket 42 so as to form a watertight seal.

As shown in the drawings, the container 24 is of a special shape, but it is to be understood that standard one-quart, two-quart or one-gallon mason jars or other jars can be used equally well.

Operation

The dispenser is shown as assembled for use. It will be understood that a quantity of powdered or granulated or flake soap, cleanser or other material is disposed in the container 24, and fills the base cup 26, covering the discharge means. In the inoperative position, the baffle wing 96, overlying the discharge chute 52, prevents direct egress of soap or other material from the dispenser. In this position, too, the handle 66 is at one extreme of its movement against either the stop 58 or the stop 60, so that one of the two recesses *a* and *b*, such as the recess *b*, is disposed over the discharge opening, and the arms 84 defining this recess *b* close the edges of the discharge area below the sector-shaped baffle wing 96. As shown in Fig. 6, the other arm 84 is displaced about 60° more or less from the baffle wing 96, so that soap or other material may fall into the recess *a*. In this position, in the preferred construction, the radial center lines of the two arms 84 of the meter will substantially coincide with the radial edges of the recess 101 on the underside of the baffle wing 96, and the arms 84 will extend over the radial walls 49 of the discharge passage 52. The recess 101 thus preferably extends beyond the outside edges of the walls 49, so that material pushed into the egress slots below the radial edges of the baffle plate can roll upwardly into the recess 101 instead of being impacted against the walls 49.

To obtain a measured amount of soap or other material from the dispenser 20, the operator places one hand under the tubular portion 53 and moves the handle portion 66 of the actuator

member 64 forward to a position against the stop 60. When the actuator member 64 is rotated, its shaft 68 rotates within the boss or hub 44, and rotates the agitator member 102 which stirs or agitates the soap or other material by means of the arms 106 and the depending teeth-like elements 107. The ends of the arm-like portions 106 also "kick" or direct the material in the container 24 toward the exposed one of the recesses *a* and *b*. The agitator 102, in turn, rotates the metering member 78 about 60° more or less, so as to move the recess *b* from under the fan-like baffle wing 96 of the baffle member, and to push the arms 84 defining the recess *a* beneath the baffle wing. The outside arm 84 of the recess *a* pushes the soap or other material through the slot between the baffle wing 96 and the discharge recess ledge 49, causing such material to be discharged through the chute 52 into the hand of the user. Meanwhile the other recess *b* of the meter 78 is being moved from beneath the baffle wing 96 on its other side, to receive the material for ultimate discharge on a return movement of the handle.

For another discharge of soap or other material, the operator moves the handle portion 66 in the opposite direction, thereby causing the two arm-like portions 84 of the recess *b*, with the soap or other material between them, to pass under the fan-shaped portion 96 of the baffle member. In each operation, the dispensed material is positively discharged through the discharge slots. Any large portions are sheared into smaller ones, and are "rolled" over the ledges 49 and perhaps up into the recess 101 on the baffle, so that packing is minimized. The arcuate extent of the wall 50 permits material to descend centrally into the openings *a* and *b* during initial movement of the meter 78, so that the meter arm 84 reaches the end of the wall 50 before it reaches the baffle 88. This reduces packing tendencies.

As the arm-like portions 84 pass under the fan-shaped portion 96, one of the beveled edges 97 scrapes the soap off the top of the arm-like portions 84, thereby limiting the soap to the amount between said portions and preventing packing of the soap onto the top of the arms or beneath the baffle member 88.

The depending conical teeth 86 (Fig. 11) on the arm-like portions 84 and the depending teeth 107 (Fig. 13) keep the soap or other material loose and free from packing or caking, with the result that a minimum of friction or binding action is set up between the soap or other material and the moving members 78 and 102. Consequently a minimum force is required to move the handle member 66. Also, the soap or other material will easily and quickly fall from the recesses of the base portion 26 when this member is turned downward. And, as the material is injected into the top of the discharge passage 52 by an arcuate force, it will be driven with a centrifugal component toward the outer part of the wall 50. The outer water shield 53 is sized to baffle the outwardly and downwardly moving material and to confine it to the hand of the user.

The extremes of movements of the discharge mechanism elements are positively defined, by the depending stop members 58 and 60 (Figs. 2 and 3) on the body member 22, stopping further movement of the handle member 64. Thus all stopping strain is removed from the inside mechanism and from the members 78 and 102. As shown, the baffle wing 96 completely overlies the two arms 84 of the metering member 78 that are over the discharge opening.

By virtue of the fact that the baffle member has discharge slots under each edge, and that the metering member moves a leading arm 84 out from under one edge of the baffle 88 as a trailing arm moves under the opposite edge, there is a minimum likelihood of impacting material beneath the baffle. There is no wall or pocket to which the metering member moves and against which it could pack the material.

Because the tubular shield portion 53 is spaced from the discharge chute 52 and the end of the former is below that of the latter, the operator can place his wet hand against the outer bottom edge of the portion 53 and the moisture clinging to the inner wall thereof will not be close enough to the falling soap to cause the latter to cling to the wall and clog the opening. Soap or other material will not collect at the inner diameter of the dispenser chute 52 because centrifugal force throws the material to the outer diameter of the chute 52 and the chute 52 prevents the material from hitting the outer shield 53.

Also, because of the fact that the only way steam or water can enter the container 24 is to be trapped between the arm-like portions 84 as they move past the opening 52 and out from under the baffle member 88, it is practically impossible for steam or water to enter the container 24 and coagulate the soap or other material even if water were to be flowing down over it while it was being used.

If any moisture should reach the metering member 78, it might cause some material to adhere to it. However, the wetted part of the metering member is shortly moved into the dispenser (on a subsequent stroke) where it is again loaded with a large mass of dry material. The small amount of moisture will be so distributed through the new charge of soap that the total moisture content of the adhering mass will be brought below the amount at which adherence to the parts takes place. Furthermore, the metering member, when out from under the baffle, is driven through a mass of agitated material, both above and below it. Such produces a tumbling action that will aid in clearing the meter 78 of any adhering material.

In this type of dispenser, designed for refilling by application of a new filled jar or container of soap or other material to the dispenser base, it is desirable to have all of the working parts assembled on the dispenser base portion, free of the container. And it is convenient to be able to resupply the dispenser with soap or other material without the necessity of removing it entirely from the wall.

To recharge the dispenser 20 with soap powder or other material, the setscrew 132 is loosened and the bracket portion 32 loosened upon or disengaged from the disc-like member 122.

If the screw 132 is only loosened, the entire dispenser may be rotated about the plate 122 so that it is turned upside down. Then, if the setscrew 38 has not been tightened, as commented on above, the container 24 can be unscrewed from the body 22. A new and filled container 24, or the same one refilled, still upright, is then screwed into the inverted body 22, and the entire assembly reverted on the plate 122, seating accurately in upright position when the lug 131 seats again between the lugs 130. If the setscrew 132 is loosened to the extent that the bracket portion 32 can be entirely disengaged

from the member 122, then the container 24 can be removed. When the container 24 is reassembled on the member 22, then the setscrew 38 can be tightened or not tightened just as described. The setscrew 132 is tightened so as to wedge its conical-shaped tip 133 behind the lip 134, thereby securely locking the dispenser 20 in position.

It will be evident how the refilling operation may be performed by complete removal of the bracket 32 from the plate 122.

If desirable, the setscrew 132 can be made without the knurled head and slots provided in its body portion so that a special wrench is required to loosen it, thereby discouraging pilfering.

Thus it is apparent that there has been provided a novel dispenser which fulfills all of the objects and advantages sought therefor. While it is especially valuable for use with powdered soap, it will be apparent that it may be used with other finely divided material, or friable flake material, or with other material capable of descending into the metering recesses and of being pushed through to the discharge opening.

It is to be understood that the foregoing description and the accompanying drawings have been given only by way of illustration and example, and that changes and alterations in the present disclosure which will be readily apparent to one skilled in the art are contemplated as within the scope of the present invention, which is limited only by the claims which follow.

What is claimed is:

1. In a dispenser, a cup-like base having a discharge opening in the lower part thereof, a baffle covering the opening but spaced thereabove to provide an egress slot between the baffle and the wall of the opening, a metering member movable transversely within said base from outside the baffle to beneath it to convey material to the discharge opening, and an agitating means connected with the metering member and movable therewith, the agitating means projecting downwardly into the open portion of said base adjacent the metering member to disturb the material adjacent thereto, said agitating means extending above and below said metering member.

2. In a dispenser, a cup-like base having a discharge opening in the lower part thereof, a baffle covering the opening but spaced thereabove to provide an egress slot between the baffle and the wall of the opening, a metering member movable transversely within said base from outside the baffle to beneath it to convey material to the discharge opening, and an agitating means connected with the metering member and movable therewith, the agitating means projecting downwardly into the base to disturb the material therein, the agitating means projecting above and below the level of the baffle and the metering member.

3. In a dispenser for material of granulated, flaky, or semi-liquid character such as cleaning agents or the like: a cup-like base, a discharge opening in the base having side walls projecting above the bottom of the base; a metering discharge means, including a transverse baffle covering the discharge opening, with an egress slot at its opposite edges, between said edges and the base; a metering member having a medial arm disposed below the baffle, and outer radial arms spaced from the medial arm to define material receiving spaces on opposite sides of the medial arm, said spaces having the approximate size of the discharge opening, and means moving the metering member back and forth transversely within said base to alternate each of said spaces beneath the baffle while the other space is out from under it, the side walls of the discharge opening rising above the bottom of the base adjacent the edges of the baffle so that the parts of the metering member that are out from under the baffle are spaced above the bottom of the base.

4. In a dispenser for material of granulated, flaky, or semi-liquid character such as cleaning agents or the like: a cup-like base, a discharge opening in the base having sides projecting above the bottom of the base; a metering discharge means, including a sector-shaped baffle extending transversely within said base covering the discharge opening and being immovable relative thereto, with an egress slot at its opposite edges, between said edges and the base; a metering member having a medial arm disposed below the baffle, and outer radial arms spaced from the medial arm to define material receiving spaces on opposite sides of the medial arm, said spaces having the approximate size of the discharge opening, and means moving the metering member back and forth transversely within said base to alternate each of said spaces beneath the baffle while the other space is out from under it, the sides of the discharge opening rising above the bottom of the base adjacent the edges of the baffle so that the parts of the metering member that are out from under the baffle are spaced above the bottom of the base, the metering member being pivoted for movement in the base about a vertical axis and having projections depending from the outer radial arms.

5. In a dispenser for material of granulated, flaky, or semi-liquid character such as cleaning agents or the like: a cup-like base, a discharge opening in the base having sides projecting above the bottom of the base; a discharge means, including a stationary sector-shaped transversely extending baffle covering the discharge opening, with an egress slot at its opposite edges, between said edges and the base; a metering member having a medial arm disposed below the baffle, and outer radial arms spaced from the medial arm to define material receiving spaces on opposite sides of the medial arm, said spaces having the approximate size of the discharge opening, means moving the metering member back and forth transversely within said base to alternate each of said spaces beneath the baffle while the other space is out from under it, the sides of the discharge opening rising above the bottom of the base adjacent the edges of the baffle so that the parts of the metering member that are out from under the baffle are spaced above the bottom of the base, the metering member being pivoted for movement in the base about a vertical axis, and agitating means projecting into the base to disturb the material therein, said agitating means extending above and below the baffle and the metering member.

6. In a dispenser, a cup-like casing having a discharge opening in the bottom thereof; a shaft-like actuating member pivotally mounted in a vertical axis in the casing adjacent the discharge opening; an agitator member for agitating the contents of the casing removably disposed on said actuating member and movable therewith, said agitator member including a hub portion; a metering member removably disposed on the hub portion of the agitator member and movable therewith, said metering member being movable

transversely within the casing across the discharge opening; a sector-shaped baffle member removably disposed about the hub portion immediately above the metering member, said baffle member being fixed above the discharge opening and being of a size and shape to prevent the contents of the casing from falling directly through said opening; said agitator member extending above and below the baffle and the metering member.

7. In a dispenser, a cup-like casing having a discharge opening in the bottom thereof; an actuating member including a shaft-like portion removably journaled in a vertical axis in the casing adjacent the discharge opening, the shaft-like portion extending into the interior of the casing; an agitator member including a hub portion having outwardly extending arm-like portions adjacent the upper end thereof removably disposed on the shaft-like portion for movement therewith, all but one of said arms extending above and below said opening; a metering member removably disposed on the hub portion and movable therewith, said metering member being movable transversely within the casing across the discharge opening; a baffle member removably disposed about the hub portion immediately above the metering member, said baffle member being fixed relative to the casing and containing a portion above the discharge opening of a size and shape to prevent the contents of the casing from falling directly through the discharge opening; and removable retaining means adjacent the upper end of the shaft-like portion maintaining the members in assembled position.

8. In a dispenser, a cup-like casing having a discharge opening in the bottom thereof; a boss with a flat upper surface and an opening therethrough adjacent the discharge opening; an actuating member including a shaft-like portion removably and rotatably mounted in a vertical axis in the opening in the boss, said shaft-like portion extending into the interior of the casing; an agitator member including a hub portion having outwardly extending arm-like portions adjacent the upper end thereof removably disposed on the shaft-like portion for movement therewith, the lower end of the hub portion being adjacent the upper surface of the boss, and all but one of said arms extending above and below said opening; a metering member including outwardly extending arm-like portions removably disposed on the hub of the agitator member for movement therewith, said metering member bearing on the upper surface of the boss and the arm-like portions thereof being movable transversely within said casing across the discharge opening; a sector-shaped baffle member removably disposed about the shaft-like portion above the metering member and containing a portion above the discharge opening of a size and shape to prevent the contents of the casing from falling directly through the discharge opening, said baffle member having its outer ends supported by the casing so as not to bear on the metering member; and removable retaining means adjacent the upper end of the shaft-like portion maintaining the members in assembled position.

9. In a dispenser, a cup-like casing; means for removably fastening a container for material to be dispensed to the upper end of the casing in an inverted position; a disc-like member containing means for fastening it to a fixed support, said disc-like member including an overhanging ridge-

like portion at its periphery; a bracket extending from the casing for removably attaching the casing to the disc-like member so as to permit the casing to be rotated relative to the disc-like member without removing it therefrom whereby the container can be moved to a position under the casing for removal and replacement, the bracket having projections engaging over the overhanging portion of the disc-like member; and means for tightly wedging the projections of the bracket portion against the disc-like member so as to maintain the casing in selected position, said positioning means including two spaced depending ears on said bracket adapted to be engaged by a dog on said disc to effect said selected positioning.

10. A dispenser, comprising a cup-like base having a discharge opening in the lower part thereof; a stationary sector-shaped baffle disposed over the discharge opening and spaced therefrom; a metering member disposed between the baffle and the discharge opening, said metering member including a medial arm and outer radial arms spaced therefrom to define material receiving spaces on opposite sides of the medial arm, said spaces being smaller than the baffle and said outer radial arms having depending projections extending below said opening; and means for moving the metering member back and forth transversely within said base to alternate each of said spaces beneath the baffle while the other space is out from under it, the bottom surface of the baffle inwardly of its periphery being recessed to provide a space into which the material carried by the metering member can expand.

11. A dispenser, comprising a concave base; a discharge opening adjacent the bottom of the base and having side walls extending above the bottom of the base, one of said walls being arcuate in shape and concentric to the vertical axis of said base and extending above the other walls; a stationary sector-shaped baffle member disposed over the discharge opening with one edge thereof bearing on said arcuate wall; a metering member mounted for pivotal movement in the vertical axis of said base between the baffle member and the discharge opening, said metering member including a medial arm and outer radial arms spaced therefrom to define material receiving spaces on opposite sides of the medial arm, said spaces being smaller than the baffle and said outer radial arms having depending projections extending below said opening; and means for moving the metering member back and forth transversely within said base to alternate each of said spaces beneath the baffle while the other space is out from under it, the outer ends of the arms of the metering member passing close to the inner surface of the arcuate wall during said movement.

GEORGE H. PACKWOOD, JR.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
464,823	Foster	Dec. 8, 1891
1,204,111	Anderson	Nov. 7, 1916
1,345,865	Little	July 6, 1920
1,455,970	Resek	May 22, 1923
1,700,483	Bonomo	Jan. 29, 1929
1,940,888	Smith	Dec. 26, 1933
2,399,016	Gits	Apr. 23, 1946