

[54] **DISPENSER**

[75] Inventor: John W. Downey, Warren, Pa.

[73] Assignee: Whirley Industries, Inc., Warren, Pa.

[22] Filed: Mar. 1, 1973

[21] Appl. No.: 336,930

[52] U.S. Cl. 222/509, 222/510

[51] Int. Cl. B67d 3/00

[58] Field of Search 222/153, 402.11, 470, 472, 222/505, 509, 510, 518, 559

[56]

References Cited

UNITED STATES PATENTS

2,709,543	5/1955	Appel	222/509 X
2,845,203	7/1958	Potash	222/518 X
2,881,962	4/1959	Hausen	222/510 X
2,987,224	6/1961	Chapman	222/472 X

3,055,562	9/1962	Jepson	222/518 X
3,149,761	9/1964	Harris et al.	222/402.11 X

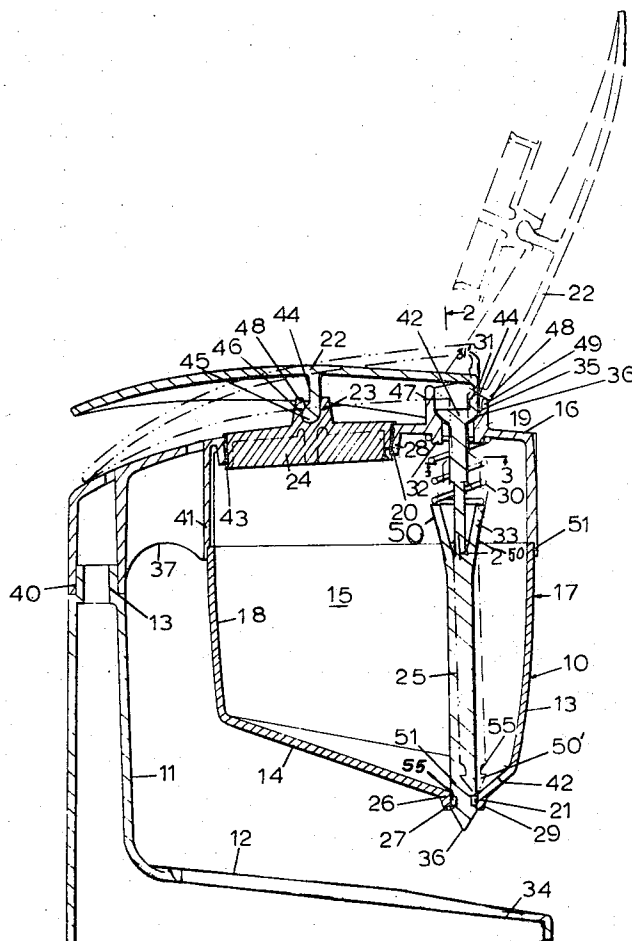
Primary Examiner—Robert B. Reeves
Assistant Examiner—Francis J. Bartuska
Attorney, Agent, or Firm—Charles L. Lovercheck

[57]

ABSTRACT

A dispenser made up of a support, a container carried by the support, and a dispensing handle. The container has a bottom that inclines toward one side and an opening formed in the bottom. The opening is aligned with an opening in the top and a rod extends through the top opening and through the bottom opening. A lever is fulcrumed to the filler top at the intermediate part of the lever and the lever is attached to the rod at the front part of the lever by means of a living hinge. The rod has a seal in a peripheral groove in its lower end.

10 Claims, 5 Drawing Figures



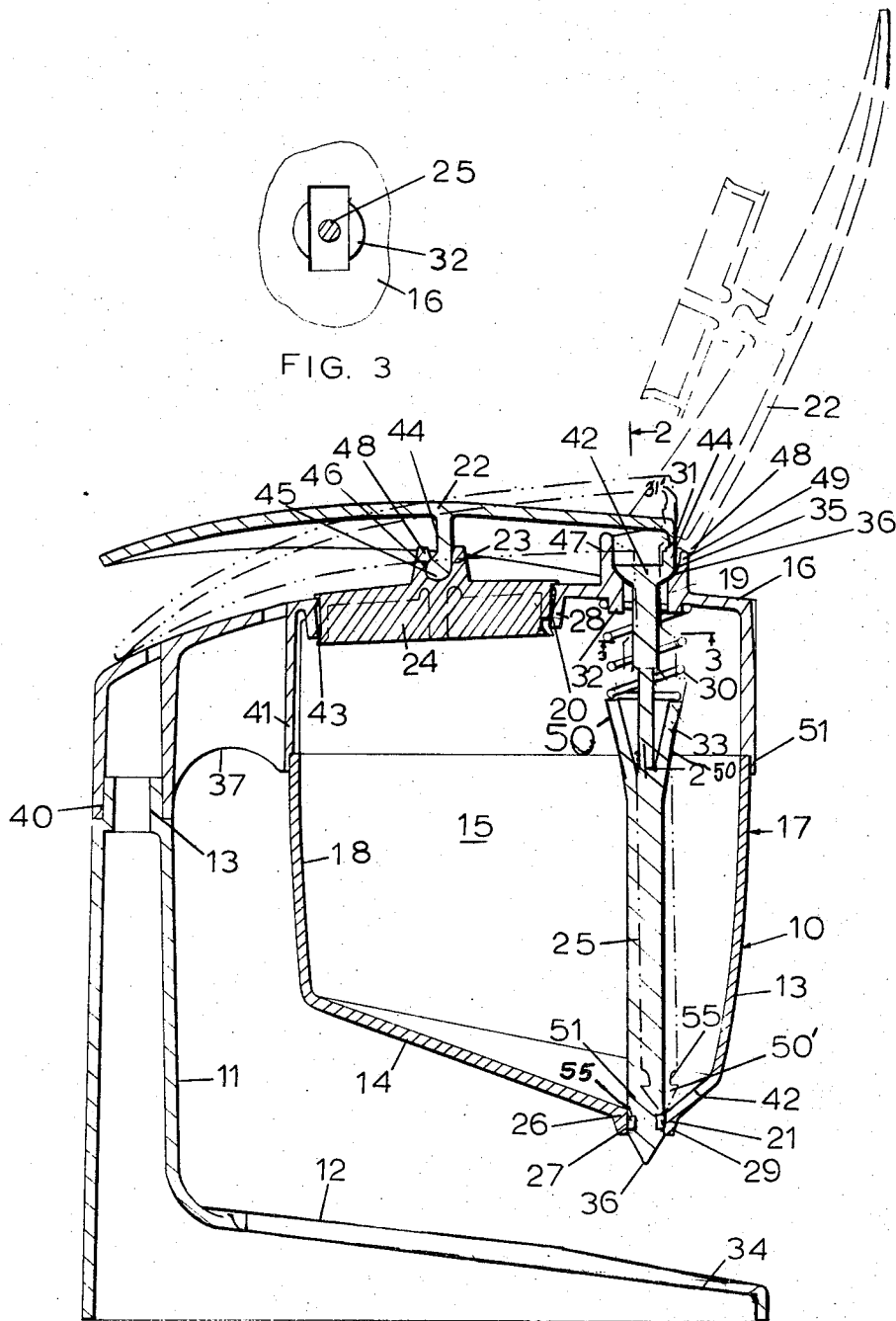


FIG. 1

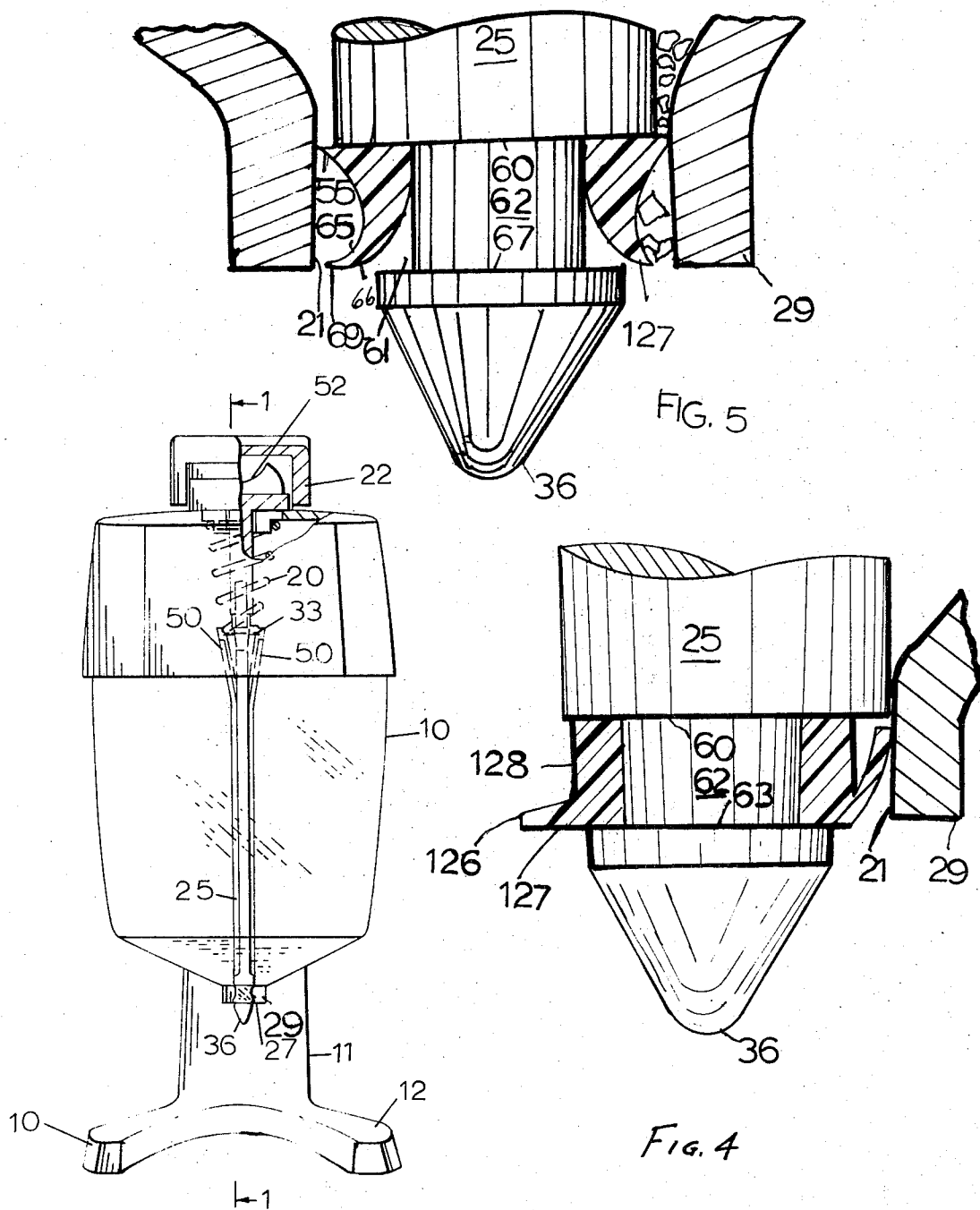


FIG. 2

FIG. 4

FIG. 5

DISPENSER

OBJECTS OF THE INVENTION

It is an object of the invention to provide an improved dispenser.

It is another object of the invention to provide a dispenser that is simple in construction, economical to manufacture, and simple and efficient to use.

Another object is to provide an improved actuating lever for a dispenser.

Another object of the invention is to provide a self closing container that prevents contamination of the container's food contents.

Another object is to eliminate the need for a spoon or other utensil in dispensing the unit's contents.

Another object is to provide a dispenser that is easily handled even by children.

Another object is to improve the person's aim in dispensing by placing the opening close to the target.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

GENERAL DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross sectional view taken on line 1—1 of FIG. 2.

FIG. 2 is a partial cross sectional front view taken on line 2—2 of FIG. 1 of the dispenser.

FIG. 3 is a partial view taken on line 3—3 of FIG. 1.

FIG. 4 is an enlarged partial cross sectional view of part of the lower end of the rod as shown in FIG. 1.

FIG. 5 is an enlarged partial view similar to FIG. 4 of another embodiment of the invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Now with more particular reference to the drawings, the dispenser is indicated generally at 10. The dispenser 10 has an L-shaped support in the form of a pedestal 11 and the pedestal is integral with the base 12 having spaced feet 34. A bracket 37 is supported on the pedestal by means of a joint 40 formed by a part on the pedestal interfitting with the bracket. The bracket 37 extends forward and is integral with the upper part 41 of the container. The upper part of bracket 41 receives the reduced size part 13 of the support 11. The container has a bottom part in the form of an upwardly facing cup which is received in the downwardly facing cup which forms the top. The container also has a front 17, a rear 18, and sides 15. The bottom 14 inclines downwardly and toward the front and the lower part of the front wall inclines downwardly and toward the rear at 42. The bottom 14 has an opening 21 which receives the lower end of the rod 25. The dispensing opening 21 extends through the boss 29. The upper part of the bowl has a top 16 that has a filler opening 20 in the boss 28. The lid 24 is received in the opening 20 and it has an annular enlarged part 43 that snaps under and underlies the boss 28 when the cover is in position. The handle lever 22 is fulcrumed to the lid 24 at 23; that is,

the handle lever 22 has an enlarged part 45 which is received in the slot 46 in the lid. The front end of the handle lever 22 is connected to the rod 25 by means of a living hinge 31. The rod 25 has an enlarged curved part 36 that rests in the contoured part 35 of the boss 47. The shoulder 31' on the front end of the lever 22 can engage the upper end 49 of the boss and thereby lift the rod 25 when the handle lever 22 is moved to the dashed line position at the left of FIG. 1.

The rod 25 has shoulders 33 on the upper ends of stop levers 50, and a reduced size upper portion on the rod receives the compression spring 30 which in turn rests against the shoulders 33 on the integral levers 50. The upper end of the spring 30 rests against the under part of the top 16 around the boss 32. Stop levers 50 are integrally fixed to rod 25. These levers 50 may be swung in toward the rod 25 to allow spring 30 to pass over them during the assembly operation. Thus the spring urges the rod 25 to the position shown in full lines. When the rod is pulled up, the point 36 of the rod is pulled out of the bore 21 to the position shown in dashed lines at 50', thus the rod is completely clear of the opening 21 when it is in its lifted position. The handle lever 22 can be retracted less to dispense a lesser amount of sugar or other material.

When the pressure on handle lever 22 is released, the point 36 slides down the inclined surface 42 and into the bore 21. The top 16 has the flanges 51 which defines a space into which the upper end of the bowl 17 is received.

The boss 47 extends up from the top 16 of the upper part 41 of the container. The boss 47 has an upwardly facing half cylinder shaped seat 36 formed in it. Hole 19 is formed in the bottom of the seat. The half cylinder shaped member 42 is fixed to the upper end of rod 25 and integrally molded thereto. The half cylinder 42 rests in the half cylinder shaped seat 36. A laterally extending member 44 is integrally fixed to the forward edge of half cylinder 42 and is fixed to the lower edge of the living hinge 31. The living hinge 31 is a web of plastic that is integrally attached to the upwardly extending member 44 and to the handle lever 22 so that the handle lever 22 can be swung to the position shown in dashed lines at the upper right of FIG. 1.

Thus when the lid 24 is in place and handle lever 22 rocks about its fulcrum 45 in the slot 46, the end of the handle lever 22 can be raised, lifting the lid 24 with it since the fulcrum 45 underlies the rear edge of the slot 46. The transverse fulcrum member is in the form of a cylinder integrally attached to the downwardly extending bracket that is in turn fixed to the handle lever 22. When the rear edge of the handle 22 is swung down, rod 25 is pulled up, removing its conical point 36 from the bore 21. The rear edge of the part of the boss 47 has a half cylinder shaped slot 52 that has an axis extending parallel to the handle lever 22. The handle lever 22 can be swung up to the position shown in dashed lines at the upper right of FIG. 1 and the handle lever then rotated with the rod 25, thus the half cylinder attached to the rod 25 will rest in the slot 52 holding the rod 25 in the position shown in FIG. 1 in dashed lines.

The sealing member 27 is made in a novel way that enables it to prevent grains of sugar from falling through it when the rod is in closed position. The sealing ring 27 is generally wedge shaped in cross section and its upper end is slightly larger than the diameter of

the bore 21. A radially outwardly extending fin 55 is formed on the sealing member. The fin 55 rests on the shoulder 60 defined by the upper edge of slot 61. Seal 27 is compressed between the shoulder 60 and the inside of bore 21 when the rod 25 is in closed position. The fin stops all flow of granular material, such as sugar, when the rod is in the full line position shown in FIG. 1. Seal 127 has a groove 65 in its outer periphery and a curved inner surface 66 that meets the surface of groove 65 at 67 forming a finned edge. The sealing ring is made of a material in the range of a soft durometer so that grains of sugar are not forced out from it but are trapped and indent the rubber end and are held therein.

In the embodiment of the seal shown in FIG. 4, the sealing ring 127 is similar to the ring 27 in the embodiment of FIG. 5. Ring 127 has a cylindrical part 128 that is in the form of a hollow cylinder having an inner cylindrical surface and an outer cylindrical surface. An integral annular fin 126 is attached to the cylindrical part 128 and extends radially outwardly therefrom. The fin engages the inner surface of the bore 21. The ring 127 has flat ends that rest against the flat ends 60 and 61 of the groove 62 and a cylindrical inner bore 63 rests on the bottom of the groove 62. Fin 126 has an outer diameter larger than the inner diameter of the opening and larger than the outer diameter of the shaft 25 so that the fin 126 folds back on cylindrical part 128 and forms a seal thereby preventing granular material and other material from flowing therefrom.

The foregoing specification sets forth the invention in its preferred practical forms but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A dispensing container comprising a container body having a top, bottom, and sides, said bottom having a dispensing opening therein, said bottom being inclined toward said dispensing opening, a filler opening and a control opening in said top, a lid fitting into said filler opening, a lever fulcrumed to said lid, a rod, a half cylinder having a flat top and a rounded bottom fixed to said rod, an end of said lever being connected to said flat top by a living hinge, whereby said rod may be raised to a dispensing position, an end of said rod extending through said dispensing opening and a sealing member on said end of said rod, said rod is fixed to said living hinge by means of said half cylinder, a boss integrally fixed to said top, a slot in said boss receiving said half cylinder when said rod is in closed position in said dispensing opening.
2. The container recited in claim 1 wherein said boss has a second half cylinder shaped slot formed in its rear portion, said second slot extending perpendicular to said first mentioned slot,

said handle being adapted to be swung with said lid to a position in alignment with said rod and to be rotated 90° whereby said half cylinder rests in said second mentioned slot and said rod is held out of said dispensing opening.

3. The container recited in claim 2 wherein said bottom forward of said dispensing opening is inclined downwardly and toward said pedestal, and the distal end of said rod slides down said inclined bottom into said dispensing opening when moving from open to closed position.

4. The container recited in claim 2 wherein said rod has a lower end thereon received in said opening, a peripheral groove formed in said lower end, said peripheral groove receiving a sealing ring, said sealing ring being made in the form of a sleeve tapering to a relatively thin section at its upper end,

said upper end of said sleeve overlying said rod at the upper end of said groove.

5. The container recited in claim 3 wherein said rod has a groove around it adjacent its lower part, said sealing ring disposed in said groove whereby a seal is formed to close said opening.

6. The container recited in claim 4 wherein said rod has a groove around it adjacent said lower end, and said sealing ring comprising a relatively soft sleeve received in said groove, said sleeve is adapted to have an upwardly facing part engaging material in said container.

7. The container recited in claim 5 wherein a compression spring is disposed between means on said rod and adjacent said top, said compression spring engages said top and urges said rod to move to said closed position.

8. The container recited in claim 1 wherein said rod has a groove therein and said sealing member comprises a sleeve having an outwardly extending fin on its upper end, said fin overlying a part of said rod on its upstream end of said rod adjacent said groove, said rod is slightly smaller in diameter than said dispensing opening, said fin is slightly larger in diameter than said groove.

9. The container recited in claim 7 wherein said compression spring is concentrically received on said rod,

said means on said rod comprises at least one stop lever member integrally fixed to a side of said rod and extending upwardly generally parallel to said rod, said lever having a shoulder on its upper end, said spring resting on said shoulder at its lower end,

said lever being resiliently biased to swing outward from said rod whereby said rod may be inserted through said hole in said top and through said spring and said stop lever may be deflected toward said rod as said stop lever passes through said spring and said stop lever is adapted to swing outward to bring said stop under the end of said spring whereby said spring urges said lever to bring it into said dispenser opening.

10. A container comprising a bowl having a bottom and a top, a hole in said bottom,

5

said bottom sloping toward said hole from all sides,
an actuating rod, handle and lid attached together,
said rod extending through said top,
said rod having an elongated boss fixed to the top 5
thereof,
a lateral slot in said top receiving said boss when said
rod is disposed in said opening whereby said open-
ing is closed,
said lid being adapted to fit into a filler opening in 10
said top,
a fulcrum connection between said handle and said
lid spaced from said rod whereby said handle can
be rocked around said fulcrum and pull said rod

15

20

25

30

35

40

45

50

55

60

65

6

out of said opening,
said boss being fixed to said handle by means of a
hinge member,
a second slot extending perpendicular to said first
mentioned slot,
the bottom of said second mentioned slot being dis-
posed above said first mentioned slot,
said handle being adapted to rotate said rod whereby
said elongated boss rests in said second mentioned
slot for holding said rod out of said opening,
a compression spring on said rod urging said rod into
said opening.

* * * * *