May 25, 1965 R. Z. BUNTIC 3,185,359

DISPENSING DEVICE FOR SALT AND THE LIKE

Filed Jan. 29, 1964

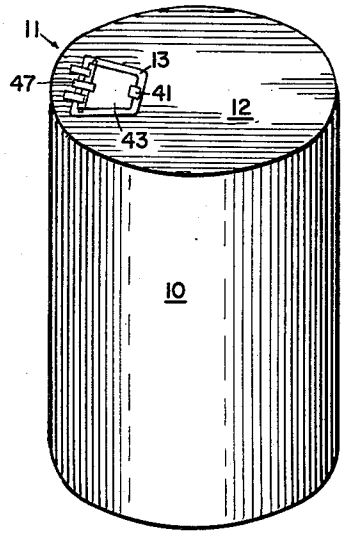

Fig. 1

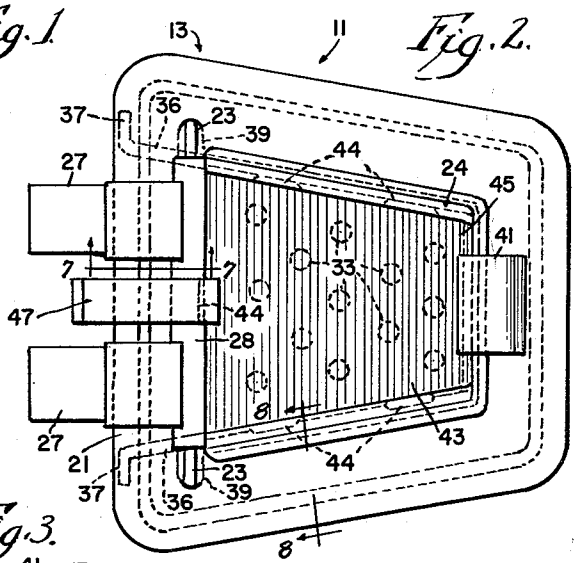

Fig. 2.

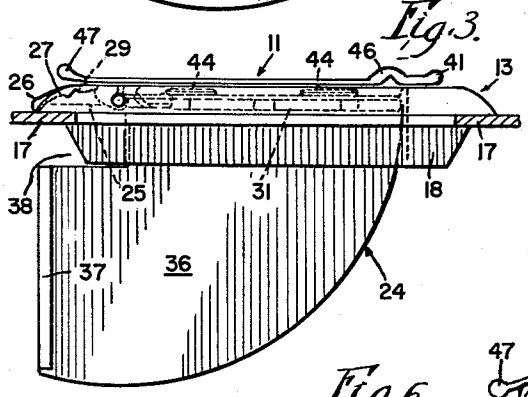

Fig. 3.

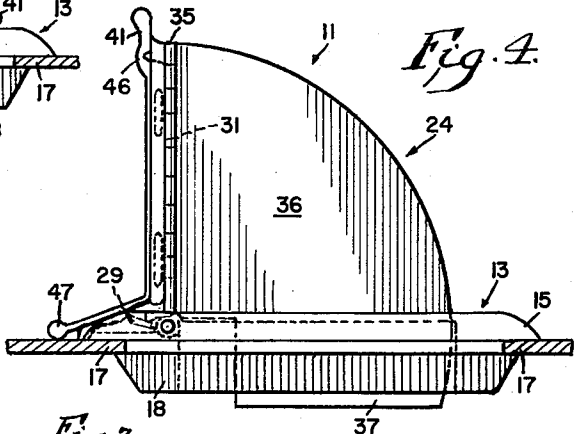

Fig. 4.

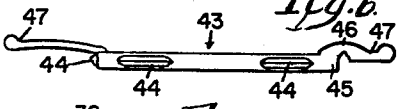

Fig. 6.

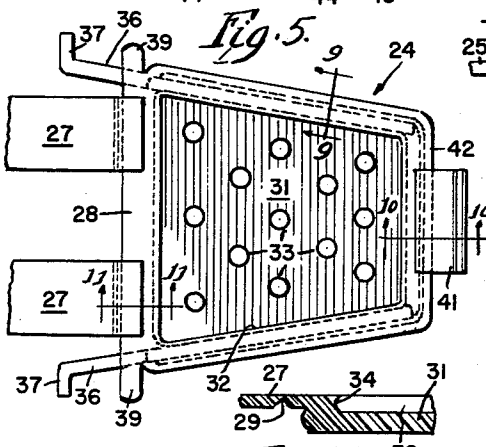

Fig. 5.

Fig. 11.

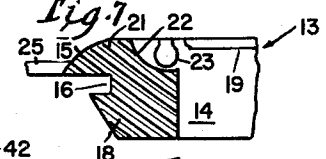

Fig. 7.

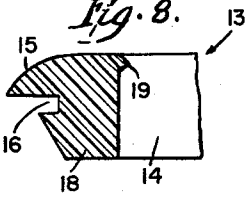

Fig. 8.

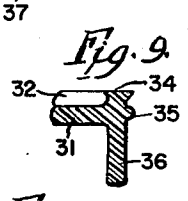

Fig. 9.

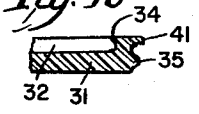

Fig. 10

Inventor:
Robert Z. Buntic
By Wilson & Geffert
Attorneys

United States Patent Office

3,185,359
Patented May 25, 1965

3,185,359

DISPENSING DEVICE FOR SALT AND THE LIKE

Robert Z. Buntic, Elmhurst, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware

Filed Jan. 29, 1964, Ser. No. 340,931
6 Claims. (Cl. 222—480)

The present invention relates to a dispensing device for a container and more particularly to a novel combination pouring spout and shaker for a container of the type employed for storing and dispensing finely divided, powdered or granulated material such as salt particles and the like.

Pouring spouts and sifters or shakers have been used separately on dispensing containers and various combinations of the pouring spout with a sifter have been proposed. However, such constructions have disadvantages and objectionable features in construction, operation or use. The present invention provides an efficient and practical combination pouring spout and shaker of a unique and novel construction which supplies a long felt want in the field of dispensers for salt and other granulated or powdered materials.

An important object of the present invention is the provision of a dispenser for a container having a combination pouring spout and a shaker or sifter including a housing or body part defining the pouring or discharge passage, the housing being securely mounted within an opening in the top or end wall of the container. This housing is in the form of a generally trapezoidal frame having a relatively large discharge passage or opening within which the pouring spout is movable between fully open and closed positions, the spout in such changed positions moving through an arc of approximately 90°.

Another important object of the present invention is the provision of a substantially U-shaped pouring spout which is pivotally or hingedly mounted within the opening in the housing for movement between an open and a closed position. The spout includes generally sector-shaped side walls provided with outwardly extending flanges along one edge of the side walls and a connecting wall or base having spaced apertures providing a dispensing plate, said connecting wall or base joining the side walls to form a spout and being perforated to provide a shaker or sifter when the spout is closed and the dispensing apertures are uncovered. The spout is positively inter-engaged with the frame enclosure of the housing in closed position with the flanges on the side walls limiting opening movement of the spout.

A further important object of the present invention is the provision of a novel cap or cover which positively inter-engages with the perforated dispenser plate of the spout to close the shaker portion and is secured and hinged to the periphery of the dispenser plate so as to be easily opened and expose the shaker or sifting apertures.

The present invention further comprehends the provision of a novel cap for the shaker portion of the spout having a pair of outwardly extending tabs on opposite edges of the cap. One tab is secured to the periphery of the dispenser plate of the spout and extends therebeyond to act as the lifting tab for opening or closing the spout and also provides a hinge for the cap. The opposite tab acts as a lifting tab to open or close the cap.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

In the drawing:

FIGURE 1 is a perspective view of a container for particulate or finely granulated material such as salt to be dispensed through the novel combination dispensing spout and shaker or sifter in the top thereof.

FIG. 2 is an enlarged top plan view of the dispenser including the housing, pouring spout, shaker and closure or cap.

FIG. 3 is an enlarged side elevational view of the dispenser with the pouring spout and the closure or cap in closed position.

FIG. 4 is a side elevational view similar to FIG. 3, but with the pouring spout moved to fully open position and the cap closed for pouring.

FIG. 5 is a top plan view of the pouring spout showing the perforated dispensing plate with the cap open or removed.

FIG. 6 is a side elevational view of the separated cap for the shaker.

FIG. 7 is a fragmentary vertical cross sectional view taken on the line 7—7 of FIG. 2 but with the spout and cap removed, the section being viewed in the direction of the arrows.

FIG. 8 is a fragmentary vertical cross sectional view taken on the line 8—8 of FIG. 2 with the spout and cap removed.

FIG. 9 is a fragmentary vertical cross sectional view taken on the line 9—9 of FIG. 5 and viewed in the direction of the arrows.

FIG. 10 is a fragmentary vertical cross sectional view taken on the line 10—10 of FIG. 5.

FIG. 11 is a fragmentary vertical cross sectional view taken on the line 11—11 of FIG. 5.

Referring more particularly to the drawing in which is disclosed an illustrative embodiment of the present invention, FIG. 1 discloses a container **10** for the packaging and storage of salt or other granulated, powdered or finely divided materials to be dispensed with the present novel dispensing device **11** secured within an opening in the top or end wall **12** of the container **10**. The dispensing device is formed of a suitable non-corrodible and non-hygroscopic material such as polyethylene or similar plastic and includes a housing or body **13** which is generally trapezoidal in shape having a generally trapezoidal dispensing opening or passage **14** for a pouring spout.

The housing has an upper peripheral flange or rim **15** defining therebelow an outwardly opening slot or groove **16** extending completely around the housing to conformably receive the edge **17** of the top **12** defining the opening for the dispenser between the flange **15** and the edge of a depending lower portion **18** of the housing extending downwardly into the container. The upper portion of the inner periphery defining the opening **14** includes an inwardly projecting bead or ridge **19** (FIG. 8) which extends around three sides of the opening. The fourth side **21** of the housing is provided with a curved or arcuate recess **22** and opposite, aligned channels **23** (FIGS. 2 and 7) extending into the housing at the opposite ends of the side **21** to provide a pivotal mounting for the pouring spout **24**.

A pair of flexible hinges 25 extend rearwardly from the curved recess 22 to a point outside the rim 15 and are then folded back at 26 and extend forward at 27 and secured to the rear edge 28 of the pouring spout 24. The flexible hinges are notched at 29 to allow for ready flexing or bending of these hinges when the spout is moved to its open position. The pouring spout 24 includes a depressed perforated dispensing plate 31 with the recessed upper portion 32 receiving a cap or cover 43; the plate 31 containing a plurality of apertures 33 for sifting discharge of the contents when uncovered. The inner edge of the plate defining the recess 32 has an inwardly extending bead or ridge 34 (FIGS. 9, 10 and 11) cooperating with the cap or closure for the plate 31 to retain the cap in closed position.

The outer periphery of the plate has a bead 35 (FIGS. 9, 10 and 11) spaced below the upper surface thereof which cooperates with the bead or ridge 19 to securely but releasably hold the dispensing plate 31 and the spout 24 within the housing 13. Depending from the non-parallel edges of the plate 31 are a pair of sides 36 which terminate at their lower ends in outwardly extending flanges or stops 37. Each side has the general shape of a sector of a circle except that the flanges 37 do not coincide with a radius of the circle and a portion of each side is removed as at 38 to allow for proper pivotal movement of the spout 24 in the housing 13.

The rear edge 28 of the perforated dispensing plate 31 includes a generally cylindrical projection 39 extending from each end of the edge 28 (FIG. 5) which are adapted to be received in the channels 23 in the housing 13 to provide for pivotal movement of the spout. A lifting tab 41 is secured to the front edge 42 of the plate 31 of the pouring spout 24 to bodily lift the spout 24 including its cap or closure 43 from engagement in the housing 13 to its elevated position (FIG. 4) for freely pouring the salt or other granulated or finely divided contents from the container.

The cap or closure 43 of a generally trapezoidal shape conformably fits within the recess 32 in the dispenser plate 31. The cap has several spaced relatively short detent ridges or beads 44 (FIGS. 2 and 6) on three edges of the cap to releasably engage with the bead or ridge 34 on the plate 31 to retain the cap in the recess 32 covering the dispensing apertures 33. The one edge 45 of the cap has a hinge portion 46 integral with the lifting tab 41 for the pouring spout 24. On the opposite edge of the cap is a lifting tab 47 to lift the cap from the recess 32 so that the cap will hinge or pivot about the hinge portion 46 of the tab 41 to uncover the perforated dispenser plate 31 to allow the container to be used as a shaker with the spout closed.

The dispenser 11, including the spout 24 and the dispenser cap 43, is normally closed as seen in FIGS. 1 and 3 with the beads on the housing, spout and cap retaining the dispenser closed to prevent accidental spillage and loss of the contents within the container. If the contents of the container are to be poured into another receptacle, the cap 43 is retained closed and the tab 41 is manually lifted so that the pouring spout 24 with its closed cap 43 is rotated about the projections 39 to open position where the flanges or stops 37 on the sides 36 abut the lower surface of the depending portion 18 of the housing 13. When the spout 24 is opened to the position shown in FIG. 4, the return portions 27 of the hinges 25 buckle upwardly and tend to exert pressure against the rear edge 28 of the dispenser plate 31 to retain the spout in its open position.

If the dispenser 11 is to be utilized as a shaker for sifting the contents through the spaced apertures 33 of the dispensing plate 31, the spout 24 is retained closed with the beads 19 and 35 on the housing 13 and spout 24, respectively, interengaged or interlocked, and then the tab 47 is lifted to release the cap 43 and cause it to hinge about the hinge portion 46 of the tab 41 and expose the shaker apertures 33 in the perforated dispenser plate 31. When the contents are to be stored and sealed against exposure, the cap 43 is snapped into the recess 32 in the plate 31 to close the apertures 33.

Having thus disclosed the invention, I claim:

1. A dispensing device mounted in an opening in the top or end wall of a container for salt and other granulated, powdered or finely divided materials comprising, a housing having an opening therein and a peripheral groove receiving the edge of the container defining the opening therein, a substantially U-shaped spout pivotally mounted in said housing including a perforated dispensing plate providing the base of the spout and joining a pair of spaced sides depending into the opening in the container, interengaging means on the outer periphery of said dispensing plate and on the inner periphery of said housing to normally retain the spout in closed position, a cap mounted on said dispensing plate and hingedly connected thereto opposite the pivotal mounting for the spout for closing passage of the contents of the container through the perforations in the dispensing plate, a lifting tab on the cap opposite to said hinge connection, and a second lifting tab integral with said hinge connection for the cap and secured to the plate for pivoting said spout to open position.

2. A dispensing device mounted in an opening in a wall of a container for salt and other granulated, powdered or finely divided materials comprising, a housing having a peripheral groove receiving the edges of the container defining the opening and having a discharge passage therein, a generally U-shaped pouring spout pivotally mounted in the discharge passage of the housing including a pair of spaced generally sector-shaped side walls connected by a base providing a perforated dispensing plate, said plate having a recess above the perforations, a pivotally mounted cap adapted to be received within said recess to close the perforations, a pair of lifting tabs mounted on opposite edges of the cap, one tab being secured to the front edge of the dispensing plate and acting as a hinge for opening and closing of the cap and for elevating the spout to open pouring position, the opposite tab utilized to open the cap, a pair of spaced flexible hinges integral with and extending rearwardly of the housing and folded back and secured to the rear edge of the dispensing plate, said flexible hinges adapted to pivot the spout to pouring position, interengaging means on said dispensing plate and housing to releasably retain the spout in closed position, and separate interengaging means on said cap and dispensing plate to releasably retain said cap in closed position.

3. A dispensing device as set forth in claim 2, in which the opposite sides of said spout include outwardly extending flanges adapted to abut the lower surface of said housing when the spout is in pouring position to limit pivotal movement thereof.

4. A dispensing device as set forth in claim 2, in which the spout is provided with stops for limiting its pivotal movement to open position.

5. A dispensing device as set forth in claim 2, in which said pivotal mounting for the spout includes opposite outwardly extending aligned projections at the rear edge of the dispensing plate and said housing having aligned and spaced channels receiving said projections.

6. A dispensing device mounted in an opening in the end wall of a container for salt and other granulated, powdered or finely divided particles with the components of said device composed of a plastic composition, comprising a housing having a peripheral flange overlying the edges of the container defining the opening and a peripheral groove receiving the edges defining the opening, said housing having a passage therethrough and a peripheral ridge in said housing defining said passage, a generally U-shaped pouring spout received in said passage and pivotally mounted in the housing, said spout including a base providing a perforated dispensing plate having a recess above the perforations for receiving a closure and a pair of spaced side walls terminating in outwardly projecting

flanges providing stops to limit opening movement of the spout, a pair of flexible hinges extending rearwardly and secured to the rear edge of the dispensing plate to yieldably and pivotally mount the spout in said housing, interengaging means on said dispensing plate and housing to releasably retain said spout in closed position, a closure adapted to be received in the recess in said perforated dispensing plate to cover said perforations, a pair of lifting tabs mounted on opposite edges of said closure, one tab being secured to the front edge of said dispensing plate to act as a lifting tab for elevating said spout and as a hinge for pivotal movement of said closure, the opposite

tab acting as a lifting tab for opening and closing of said closure, and interengaging means on said dispensing plate and on said closure to releasably retain the latter in closed position in said recess.

References Cited by the Examiner

UNITED STATES PATENTS

3,016,168	1/62	Larson	222—545 X
3,024,950	3/62	Frison	222—480

LOUIS J. DEMBO, *Primary Examiner.*