

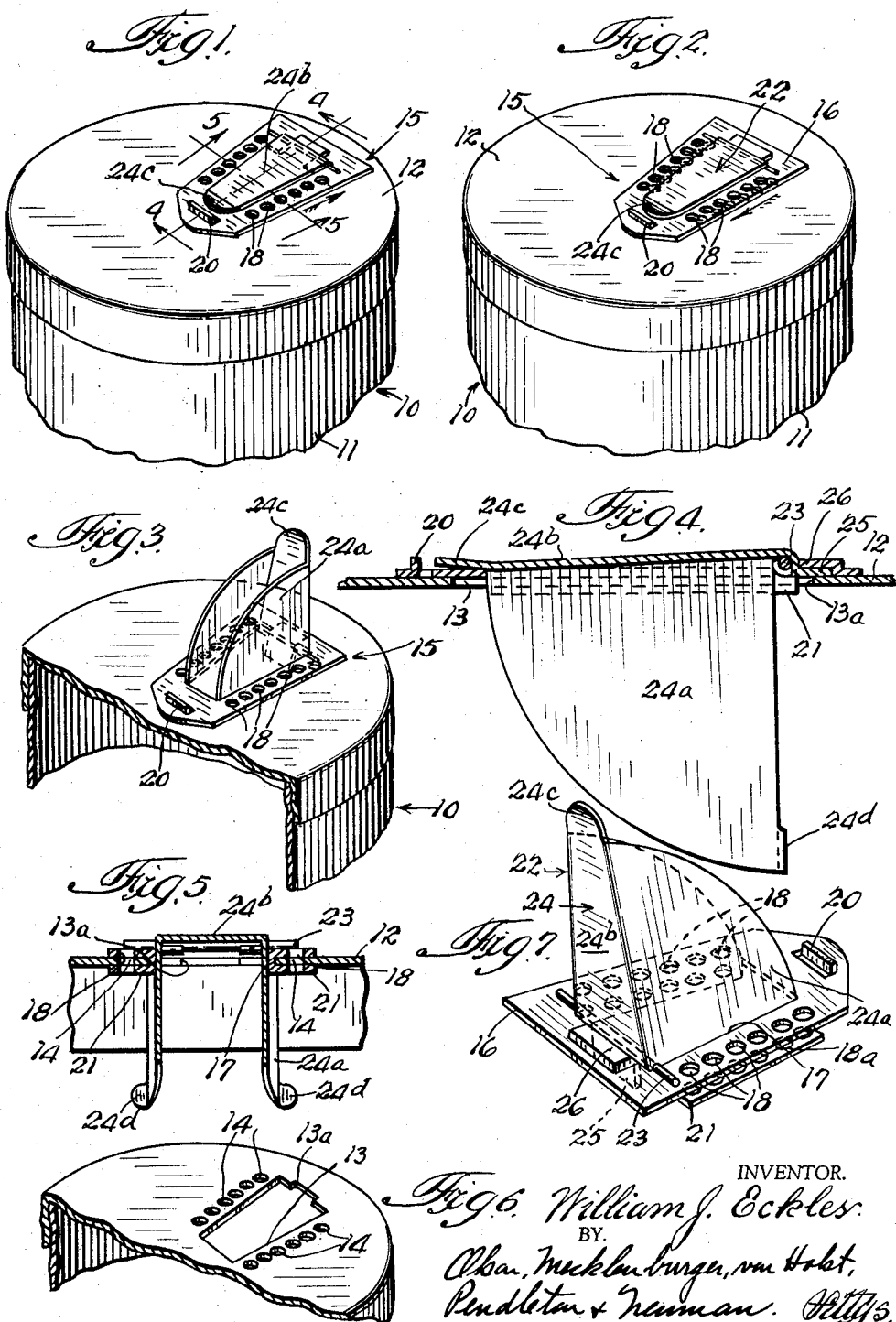
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DISPENSING APPARATUS

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2,903,167

DISPENSING APPARATUS

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3 Claims. (Cl. 222—480)

This invention relates to a dispensing apparatus and more particularly to a combination pouring spout and sifter adapted for use in dispensing granulated material, such as table salt or the like.

The instant dispensing apparatus is an improvement of the dispensing apparatus disclosed in my copending application Serial No. 670,253, filed July 5, 1957.

In instances where the container incorporating the improved dispensing apparatus is subjected to vigorous shaking in order to sift the contents from the container, it is oftentimes desirable to positively lock the pouring spout in a closed position and prevent accidental opening thereof.

Thus, it is one of the objects of this invention to provide a combination pouring spout and sifter which includes means for positively locking the pouring spout in a closed position notwithstanding the vigorousness of the shaking to which the container incorporating the improved apparatus is subjected.

It is a further object of this invention to provide a combination pouring spout and sifter which is simple yet sturdy in construction, facile to manipulate, inexpensive to manufacture, and effective for dispensing the contents from the container either by pouring in a single large stream or by sifting in a plurality of relatively fine streams.

It is a still further object of this invention to provide a combination pouring spout and sifter which is compact, does not weaken the container, and does not interfere with the containers, incorporating the improved apparatus, being stacked on top of one another when such containers are packed for shipment or arranged for display.

Further and additional objects will appear from the description, accompanying drawings, and appended claims.

In accordance with one embodiment of this invention, a dispensing apparatus is provided for use on a container surface provided with an elongated primary aperture and a plurality of secondary apertures arranged in a pair of relatively spaced substantially coextensive elongated rows disposed adjacent the opposite elongated sides of the primary aperture. The improved apparatus comprises a first member slidably mounted on the apertured container surface and in overlying relation with respect to said primary and secondary apertures. The first member is provided with an elongated first opening disposed in continuous registered relation with the container surface primary aperture upon sliding of said first member, and a plurality of second openings arranged in rows corresponding to the rows of secondary apertures formed in said container surface, the rows of second openings being disposed in registered relation with the rows of secondary apertures only when the first member is in a predetermined position of slidable adjustment. Carried by the first member is a spout member which is pivotal about an axis disposed adjacent one side of the first opening and substantially transverse to the rows of second

openings. The spout member includes an elongated first portion extending in one direction from the pivotal axis and is adapted to assume an overlying position with respect to the first opening and effect closing off same.

5 Extending in the opposite direction from the pivotal axis of the spout member is a second portion which pivots as a unit with the first portion. The second portion of the spout member is adapted to be disposed intermediate a portion of the container surface circumjacent the primary aperture and a portion of the first member superposed therewith, when said first member is in its aforementioned predetermined position of slidable adjustment, whereby the spout member is locked in a closing position with respect to the first opening formed in the first member.

For a more complete understanding of this invention, reference should be made to the drawing, wherein:

Figure 1 is a fragmentary perspective view of a container incorporating the improved dispensing apparatus and showing the latter in a position for permitting sifting of the contents from the container;

Fig. 2 is similar to Fig. 1, but showing the improved dispensing apparatus in changed position, wherein the second openings of the slide member are out of registration with the secondary apertures formed in the container end surface and the spout member is in its closed position, thereby rendering the improved apparatus inoperative for either sifting or pouring the contents from the container;

Fig. 3 is similar to Fig. 2, but showing the spout member of the improved dispensing apparatus in position for permitting pouring of the contents from the container;

Fig. 4 is an enlarged sectional view taken along line 4—4 of Fig. 1;

Fig. 5 is an enlarged sectional view taken along line 5—5 of Fig. 1;

Fig. 6 is a fragmentary perspective view of the container shown in Fig. 1 with the improved dispensing apparatus removed therefrom; and

Fig. 7 is an enlarged perspective view of the improved dispensing apparatus.

Referring now to the drawings and more particularly to Figs. 1-3, a container 10 for use in packing granulated material, such as table salt and the like, is shown, having a tubular body 11 and flat disc-like ends 12. Provided in one of the disc-like ends 12 are an elongated primary aperture 13 and a plurality of secondary apertures 14 arranged in a pair of rows, said rows being disposed adjacent the elongated sides of said primary aperture (see Fig. 6). The secondary apertures 14 are relatively small by comparison with aperture 13 and are arranged in linear spaced relation with each row. The number, size, and arrangement of the secondary apertures relative to the primary aperture may be varied as desired without departing from the scope of this invention.

Cooperating with the apertured end of the container 10 is the improved dispensing apparatus 15. The apparatus 15 in this instance comprises a first member 16 which is mounted in overlying relation with respect to apertures 13 and 14, and is slidable relative to end surface 12 in a direction parallel to the elongated axis of aperture 13. Slide member 16 is provided with an elongated first opening 17 which is adapted to be in continuous registered relation with respect to primary aperture 13 upon sliding movement of member 16. Slide member 16 is provided also with a plurality of second openings 18 which are arranged in rows corresponding to the rows of secondary apertures 14 formed in container end surface 12. Second openings 18 are adapted to register with secondary apertures 14 only when the slide member

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16 is in a predetermined position of slidable adjustment, as seen more clearly in Fig. 1. In this instance such predetermined position is when the slide member is moved to its fullest extent toward the outer periphery of end 12. Slide member 16 is provided with a struck-out portion or bead 20 formed at one end thereof to facilitate manual adjustment of the slide member relative to the container end surface 12. The slide member 16 is provided with a pair of bent portions 21 which are adapted to subtend and slidably engage portions of the container end surface which are circumjacent the primary aperture 13. Portions 21 in this instance are integral with the exposed portions of member 16 and are provided with a plurality of apertures 18a which are in coincident relation with respect to the plurality of second openings 18 formed in the exposed portion of the slide member 16. The bent portions 21 of member 16 prevent accidental disengagement of the apparatus from the container. The longitudinal length of bent portions 21 is less than the length of the corresponding elongated side of aperture 13 and thereby permits relative sliding movement of member 16. In addition, because of primary opening 13 being slightly wedge-shaped so that the inner side thereof is slightly narrower than the outer side, the bent portions 21 of member 16 become wedged between the elongated sides of opening 13, when the slide member 16 is in the position shown in Figs. 2 and 3 and thus frictionally retain member 16 in such position.

To facilitate assembly of slide member 16 on end surface 12, the bent portions 21 are initially bent at right angles to the plane of the exposed portion of member 16, whereupon portions 21 are inserted through aperture 13 and then the portions bent outwardly so as to engage the underside of the container end 12.

Carried by slide member 16 is a spout member 22 which is pivotal about an axis 23, the latter being disposed adjacent one side of first opening 17 and substantially transverse with respect to the rows of openings 18. Spout member 22 includes a first portion 24 which extends in one direction from axis 23, as shown more clearly in the drawings. Portion 24 includes a pair of quadrantal imperforate side sections 24a which are adjacent the elongated sides of first opening 17 and slidably engage the bent-back portions 21 of member 16. Corresponding edge portions of side sections 24a are interconnected by a web section 24b which is of such dimension as to overlie completely first opening 17 when spout member 22 is in one position of pivotal adjustment (see Figs. 1, 2, and 4). The edge of web section 24b remote from axis 23 overlies a portion of the end surface circumjacent the primary aperture 13 and is offset upwardly a slight amount to form a finger tab 24c to facilitate pivoting of the spout member 22 about an axis 23. The inner or concealed edges of side sections 24a are provided with laterally extending ears 24d which are adapted to function as stops by contacting the concealed bent-back portions of member 16 and limit the extent to which spout member can be pivoted to its open position.

Spout member 22 is provided with a second portion 25 which extends in an opposite direction from axis 23 relative to first portion 24. Second portion 25 in this instance comprises a tongue which is integral with first portion 24 whereby first and second portions 24 and 25, respectively, pivot as a unit about axis 23. A suitable cut-out 13a may, if desired, be formed in one side of primary aperture 13 for accommodating tongue 25. The depth of the cut-out 13a, however, is less than the extent to which the tongue protrudes from axis 23 for a purpose to be described more fully hereinafter. Tongue 25 is adapted to be disposed within a pocket formed by a portion of the container end surface 12 circumjacent cut-out 13a, and an offset portion 26 formed in slide member 16 (see Fig. 4), only when the spout member is in its overlying or closed position, with respect to opening 17,

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and when slide member 16 has been moved to the position shown in Fig. 1—that is to say, moved to its fullest extent toward the outer periphery of end surface 12. When tongue 25 is in the pocket, the spout member 22 is locked against pivoting about axis 23 and thus prevents the spout member accidentally pivoting to its open position when the apparatus 15 is in its sifter position.

Where there is no cut-out 13a provided, the longitudinal dimension of primary aperture 13 should be such as to permit the slide member 16 to be moved a sufficient amount so as to enable the free edge of the tongue 25 to clear the portion of the end surface 12 circumjacent the outer side of aperture 13.

Thus, it will be seen that an improved dispensing apparatus has been provided which permits the pouring spout to be positively locked in its closed position when desired, and remain in such position notwithstanding the vigorousness of shaking to which the container is subjected. The improved apparatus is simple, sturdy, and compact in construction, easily manipulated, and does not interfere with the packaging of several such containers for shipment or the arrangement of such for display.

While the particular embodiment of this invention is shown above, it will be understood, of course, that the invention is not to be limited thereto, since many modifications may be made, and it is contemplated, therefore, by the appended claims, to cover any such modifications as fall within the true spirit and scope of this invention.

I claim:

1. A dispensing apparatus for use on a container having a surface thereof provided with an elongated primary aperture and a secondary aperture in juxtaposition therewith, said apparatus comprising a first member mountable for reciprocatory rectilinear sliding movement on such container surface and disposed in overlying relation with such primary and secondary apertures; said first member being provided with a first elongated opening positionable in continuous registered relation with such primary aperture, and a second opening positionable in registration with such secondary aperture only upon said first member being disposed in a predetermined position of sliding adjustment; a spout member carried by said first member and pivotal about an axis disposed adjacent one side of said first opening and substantially transverse to the direction of movement of said first member, said spout member, when in one position of pivotal adjustment, overlying and closing off said first opening; and means associated and movable with said spout member and engageable in overlying relation with a portion of the container surface circumjacent the primary aperture to effect locking of said spout member in an overlying position with said first opening when said first member is in said predetermined position of slidable adjustment and said secondary aperture and second opening are in registered relation.

2. A dispensing apparatus for use on a container having a surface thereof provided with an elongated primary aperture and a secondary aperture in juxtaposition therewith, said apparatus comprising a first member mountable for reciprocatory rectilinear sliding movement on such container surface and disposed in overlying relation with such primary and secondary aperture; said first member being provided with a first elongated opening positionable in continuous registered relation with such primary aperture, and a second opening positionable in registration with such secondary aperture only upon said first member being disposed in a predetermined position of sliding adjustment; a spout member carried by said first member and pivotal about an axis disposed adjacent one side of said first opening and substantially transverse to the direction of movement of said first member, said spout member extending in one direction from said axis and when in one position of pivotal adjustment, overlying and closing off said first opening; and a tab affixed to said spout member and disposed relative thereto on the op-

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posite side of said spout member axis, said tab being movable as a unit with said support member and adapted to overlie a portion of the container surface circumjacent the primary aperture and render said spout member immovable about said pivotal axis, when said spout member is in overlying relation with said first opening and said first member is in said predetermined position of sliding adjustment.

3. A dispensing apparatus for use on a container having a surface thereof provided with an elongated primary aperture and a plurality of secondary apertures arranged in rectilinear spaced relation with respect to one another to form a row disposed in close proximity to and substantially parallel with one side of the primary aperture, said apparatus comprising a first member mountable for reciprocatory rectilinear sliding movement on such surface in a direction parallel to the direction of alignment of said secondary apertures and in overlying relation with such primary and secondary apertures, said first member being provided with an elongated first opening positionable in continuous registered relation with such primary aperture, and a plurality of second openings arranged in rectilinearly spaced relation to form a row substantially coextensive with and disposed in close proximity to an elongated side of said first opening, said second openings being positionable in registration with such secondary apertures only upon said first member

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being disposed in a predetermined position of sliding adjustment; and an elongated spout member carried by said first member and pivotal about an axis disposed adjacent one side of said first opening and substantially transverse to the direction of movement of said first member, said spout member, when in one position of pivotal adjustment, having a first portion thereof extending in one direction from said pivotal axis for positioning in overlying and closing off relation with respect to said first opening, and a tab portion extending in the opposite direction from said pivotal axis, said first and tab portions being movable as a unit about said pivotal axis, said tab portion being positionable in overlying relation with respect to a portion of the container surface circumjacent the primary aperture to effect locking of said spout member against pivotal movement, only upon said spout member first portion being in overlying and closing off relation with respect to said first opening and said first member assuming said predetermined position of sliding adjustment.

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