

April 13, 1954

R. J. RUSSELL

2,675,146

DISPENSING JACKET FOR DISPOSABLE CONTAINERS

Filed June 14, 1950

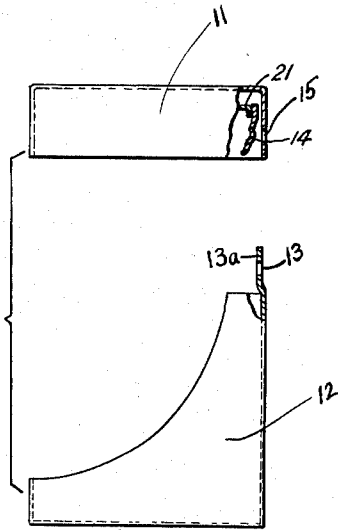


Fig. 1

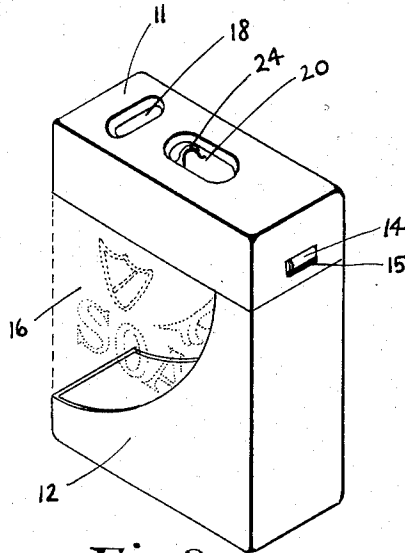


Fig. 2

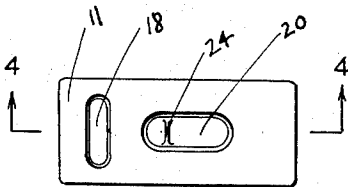


Fig. 3

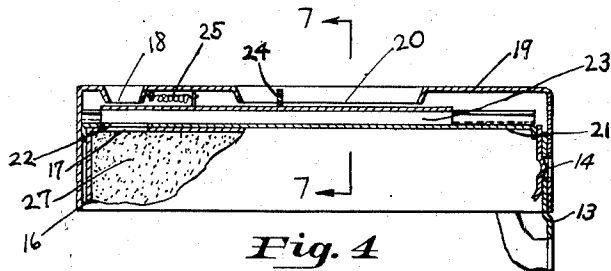


Fig. 4

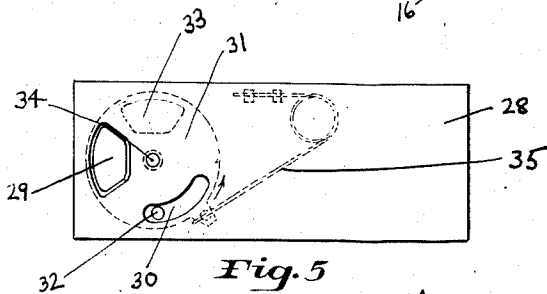


Fig. 5

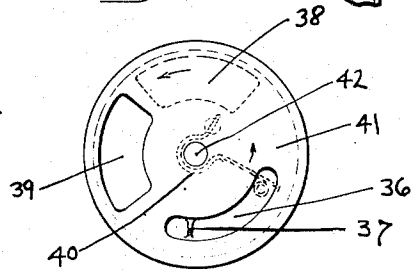


Fig. 6

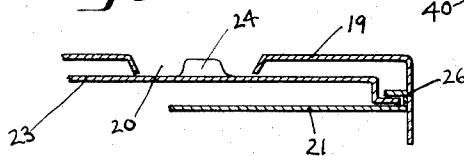


Fig. 7

INVENTOR.
Robert J. Russell

BY

Joseph Zallen
ATTORNEY

UNITED STATES PATENT OFFICE

2,675,146

DISPENSING JACKET FOR DISPOSABLE
CONTAINERS

Robert J. Russell, Northfield, Mass.

Application June 14, 1950, Serial No. 167,998

1 Claim. (Cl. 222-183)

1

This invention relates to dispensing receptacles and closures. In particular this invention relates to dispensing receptacles and closures adaptable for use with disposable containers of powdered or granular materials, such as soap powders, granulated foods and dry chemicals.

Although it is common in these days to package and ship dry powdered and granular materials in cheap disposable containers, little if any effective dispensing method is provided. Often it is necessary to pour the entire contents into some permanent, expensive, space-stealing hopper. Even where some dispenser is provided, once opened the container is subject to accidental spilling or exposure to dampness of the atmosphere, or to contamination. The typical cardboard containers for household soap powder or dry cereals are typically subject to being distorted or torn once the contents have been somewhat depleted. Further, any cardboard container is subject to acquiring moisture when stored on a wet shelf.

One object of this invention is to provide a dispensing receptacle for use with powdered and granulated materials in disposable containers, which receptacle shall protect the contents of the container from accidental spilling and dampness, yet allow easy access to the contents.

A further object of this invention is to provide such a dispensing receptacle which is simple and cheap to construct and into which a container is easily placed.

A further object of this invention is to provide such a receptacle as described above which will dispense with only the slight movement of a finger.

A still further object of this invention is to provide in connection with disposable containers a dispensing closure which will protect the container from contamination or accidental spilling of the contents.

Other objects of this invention will be readily ascertainable from a description of preferred embodiments which follows below. In one embodiment designed for use with containers of rectangular cross-section

Figure 1 is an exploded view showing the upper and lower members and their means for cooperative attachment.

Figure 2 is a perspective view showing the upper and lower members assembled and indicating in phantom a box of soap powder inserted in the receptacle ready for use.

Figure 3 is a plan view of the upper member.

Figure 4 is a vertical section above the line

2

4-4 of Figure 3 showing the construction of the upper member and the relative alignments of the various openings.

Figure 5 is a plan view of the upper member showing a shutter as an alternate method of dispensing.

Figure 6 is a plan view of the upper member adapted for a cylindrical container and shows another shutter form of construction for the dispensing.

Figure 7 is a vertical section through line 7-7 of Figure 4 and illustrates the construction of the slide.

Referring to Figure 1 the upper member 11 and the lower member 12 are shaped to fit over a carton of soap powder and are adapted for locking by means of an engaging slot 13, snap spring 14 and locking slot 15. When engaged, the tongue portion 13A is inserted under spring 14 so that the spring extends through slot 13 into slot 15. In Figure 2 the snap spring 14 is shown in the locking slot 15. When the disposable container 16 is inserted into the lower member 12, the container spout 17 is located directly under the dispensing opening 18 of the upper member 11. Referring to Figure 4, we observe that the upper member 11 is constructed of an outer frame 19 provided with a frame recess opening 20 and the dispensing opening 18, an inner guard plate 21 provided with a guard plate opening 22 located in line with both the container spout 17 and the dispensing opening 18, a movable slide 23 provided with a finger manipulator 24 protruding through the frame recess opening 20, and a coil or tension spring 25 connected between the outer frame 19 and the movable slide 23. To operate the dispensing receptacle, it is only necessary to push the movable slide 23, which is in this case a sliding plate, away from the openings 18 and 22 by pushing the finger manipulator 24 back a short distance, pouring out the required amount of the contents, and releasing the manipulator 24, which allows the spring 25 to move the plate 23 back to its original position of blocking the openings 18 and 22. As will be noted in Figure 7 the sliding plate 23 can be easily constructed from a single flat sheet of metal which can be bent to fit into runners 26. These runners 26 and guard plate 21 can also be formed from a single sheet of metal. Of course, other materials, such as plastics or laminates, may be used. As can be seen on examination of the drawing, the upper member provides a flat surface since the finger manipulator is recessed. This allows for easy packing of con-

ainers in receptacles. Further, the guard plate 21 prevents the material 27 in the container from contaminating the interior of the upper member 11. The lower member 12 covers sufficient surface of the container to keep it from losing its shape. However, the upper member alone can be used if adapted to crimping over the top of a container if the disposable container is heavy enough not to require a lower member to maintain rigidity.

Instead of the spring arrangement illustrated in Figure 4, various other spring arrangements are possible. For example, Figure 5 illustrates a shutter arrangement in which the upper member 28 is provided with a dispensing opening 29 and a recessed opening 30. A shutter 31, provided with a finger manipulator 32 protruding through the recessed opening 30, and with a shutter opening 33, revolves on a pivot 34 in such a manner that pushing finger manipulator 32 will allow the user to expose the shutter opening 33 to the dispensing opening. A turn spring 35, connected to the shutter 31 and to the outer frame of the upper member 28, provides effective means for restoring the shutter 31 to closed position when the finger manipulator 32 is released.

Another possible form of upper member, particularly adapted to cylindrical containers is illustrated in Figure 6. Here, a shutter 36 is similarly manipulated by finger manipulator 37 so that a shutter opening 38 can be moved to coincide with the dispensing opening 39. To return the shutter plate to closed position, a turn spring 40 is provided, which is attached to the shutter 36 and to the upper member 41 and revolves around a center pivot 42.

As will certainly be obvious, there are various equivalent methods of operating such a recessed slide or shutter; also, other common methods of engagement, such as snaps and catches may be used to attach the upper and lower members.

My invention is thus simple and inexpensive to manufacture. It can be fabricated from sheet metal or plastic, or other suitable material, and can be adapted for use on disposable containers of all kinds, types and shapes, including paper, cardboard and laminates, and cylinders, cubes and hexahedra. The mechanism, in addition to being simple, is extremely compact, adding very little height to the container. Many dry materials, such as sugar, salt, soap powder, carbon

black, oatmeal, deliquescent solids, flour, fertilizer and sand can be dispensed with the dispensing receptacle.

Other variations from the examples illustrated will suggest themselves to anyone skilled in the art of making such a receptacle. I do not, therefore, intend to limit this invention to the precise disclosure, but wish to also include all the obvious equivalents.

I claim:

A rigid closure for dispensing powdery materials from disposable containers having a flat upper surface; said closure being shaped to fit over such containers, having a flat top surface and comprising in combination a rigid outer frame, an inner guard plate, a movable member enclosed by said outer frame and said guard plate, and spring means; said outer frame having a flat top surface and being provided with substantially recessed dispensing and actuating openings; said guard plate being formed from a single piece of material in which two opposite edges are bent to form runners and being provided with an opening cooperating with said recessed dispensing opening; said movable member being formed from a single piece of material in which two opposite edges are bent to form flanges slideably mountable in said runners and having a digital manipulator protruding into said recessed actuating opening but not extending beyond said top surface, said spring means acting to have said movable member positioned between said dispensing openings when there is no displacing force on said actuator.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
137,332	Sturtevant	Apr. 1, 1873
1,613,518	Kendall	Jan. 4, 1927
2,041,024	Rueger	May 19, 1936
2,062,365	Lehew	Dec. 1, 1936
2,141,352	Forsberg	Dec. 27, 1938
2,183,585	Peters	Dec. 19, 1939
2,360,414	Gibson	Oct. 17, 1944

FOREIGN PATENTS

Number	Country	Date
28,466	Australia	Aug. 16, 1930