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SOAP DISPENSER

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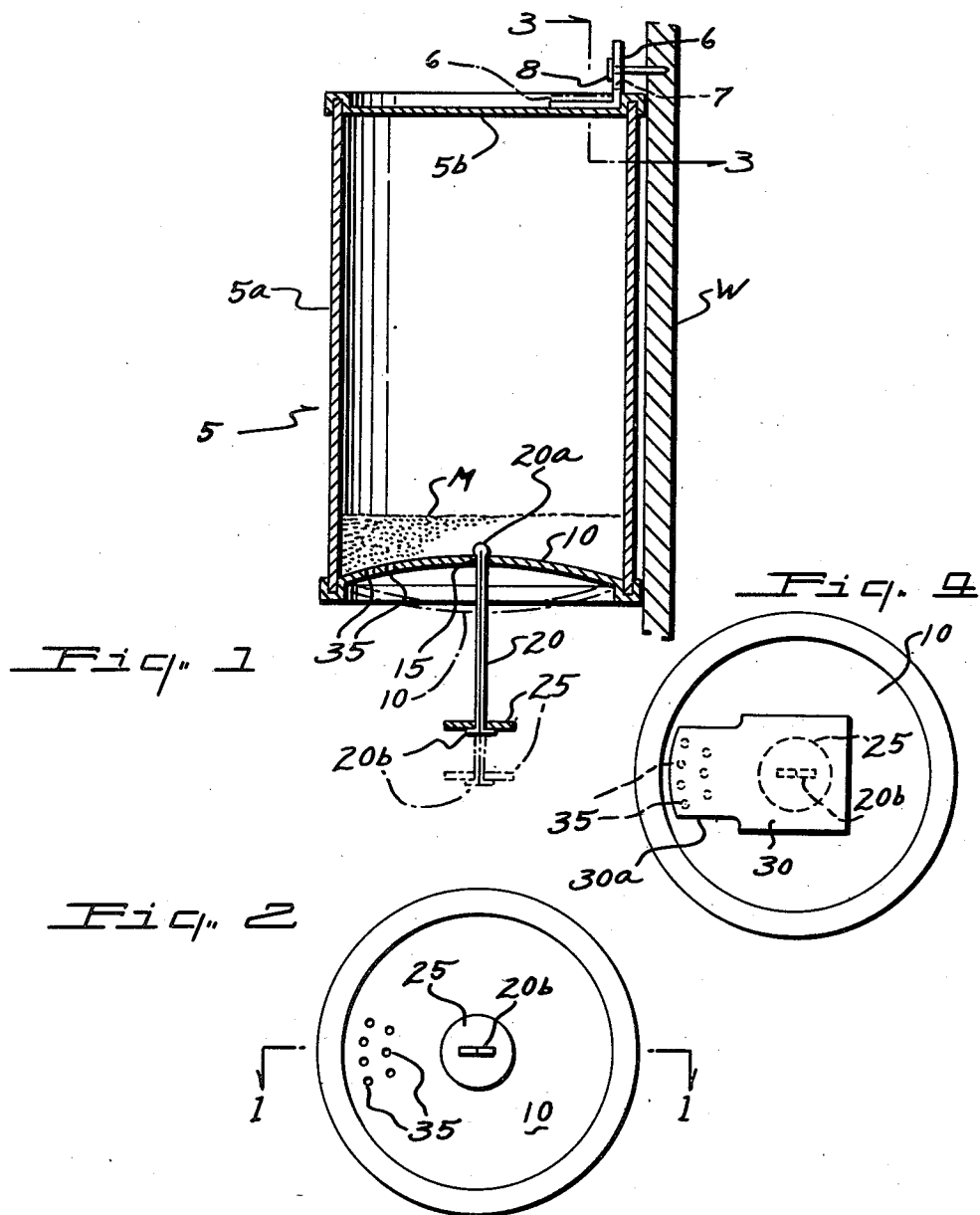
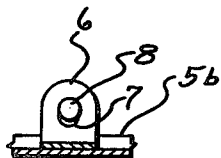
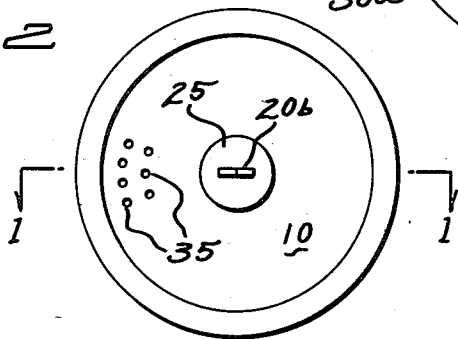


Fig. 2



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SOAP DISPENSER

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My present invention has to do with dispensing containers for powdered and granulated material and has for one of its objects the provision of an economical container, such as a conventional can, embodying simple and effective means for dispensing the contents, a small portion at a time, without having to utilize a separate dispenser for the purpose.

Another object of my invention is to provide a package or container in which a simple and efficient dispensing element is incorporated as a part of one of the end walls, so that the package or container in which the powdered materials are sold may be itself used as the dispenser.

Another object is the provision of a dispenser which effects a dispensing action by the simultaneous application of both vibration and air pressure.

How those objects, as well as the other advantages inherent in the invention, are achieved will be understood from the following description of one of the practical forms in which it may be carried out, for which purpose I shall refer to the accompanying drawings, in which:

Fig. 1 is a section on line 1-1 of Fig. 2;

Fig. 2 is a bottom plan view;

Fig. 3 is a section on line 3-3 of Fig. 1; and

Fig. 4 is a fragmentary bottom plan view showing my dispensing container as it may be initially prepared for shipment.

In the drawings I show at 5 a container of round cross-section having side wall 5a and a top end wall 5b. The latter wall has secured thereto, as by soldering, a hanger 6 which is in the form of an angle iron having a hole 7 through one of its legs to receive a nail 3 driven into a building wall W against which the container is to be mounted, so that the container may be hung from the wall. The hanger is preferably made of pliant material such as tin so that, for shipping purposes, its legs may be bent into parallel position flatly against the end wall of the container, as shown in dotted line position in Fig. 1.

The bottom wall 10 of the container is normally inwardly dished or concavo-convex so as to provide a resilient diaphragm which may be flexed from its full line position to the dot-dash line position shown in Fig. 1 by the application of downward pressure and which will again flex inwardly to the normal full line position of Fig. 1 by virtue of its own resiliency. That is, when the central portion of said wall is pulled downwardly past the plane of the periphery of the wall, it automatically flexes into convex shape, providing a sudden single vibratory action. Powder or gran-

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ulated material M is contained in the container against the wall 10.

Bottom wall 10 has a central opening 15 through which a pull member 20 extends and is slidable. The pull member is in the form of a cotter pin with its enlarged end 20a resting against the inner surface of wall 10 and having its outer ends bent at right angles to retain a disc 25. Other forms of pull members may be substituted if desired.

When the container is packed for shipment, the pull member is pushed inwardly of the hole 15 until the disc rests against the outer surface of wall 10 and the container may be temporarily sealed against exposure to atmosphere by a paper or like seal strip 30 secured to the end wall 10 over the disc 25 by a suitable adhesive, as shown in Fig. 4.

Dispensing holes 35 are provided through wall 10 adjacent the periphery thereof so that the powder may be dispensed into the palm of the hand whose fingers are used to operate the pull 20. In practice the dispensing holes 35 are preferably not actually formed until the user is ready to hang the device in position for use—that is, the locations for punching the holes 35 are indicated by suitable marking, such as indentations in the outer surface of wall 10, at the time of manufacture and when ready for use the holes may be formed by any suitable punch. However, if desired, the holes 35 may be formed at the time of manufacture and then covered with an adhesive strip such as an extension 30a of the strip 30, as shown in Fig. 4, until ready for use.

To set up and operate the device, the user first removes the seal strip 30 and pulls the pull member outwardly to the position of Fig. 1, and either punches or uncovers the holes 35. The hanger 6 is then bent upwardly from the dotted line to the full line position of Fig. 1 and applied to the hanging nail 3. The device is then ready for use until the contents of the container are dispensed. For each dispensing operation the operator holds the palm upwardly under the dispensing holes 35 while grasping the pull 20 between the fingers of the same hand. By pulling downwardly on the pull member and thus flexing the wall 10 to the dot-dash line position of Fig. 1, air will be drawn into the container through holes 35. Then upon releasing the pull member 20, the wall 10 will, by virtue of its resiliency, flex inwardly of its own accord with a snapping, highly vibratory action, returning to the full line position of Fig. 1 and thus forcing the charge outwardly through openings 35, the dispensing action being further en-

hanced by the vibratory action of the sudden flexing of the wall 10.

I am aware that others have attempted to achieve dispensing of powdered materials through perforations in a container by providing a disconnected tapper to tap the outer surface of the perforated wall, but those attempts have not been satisfactory for several reasons. For instance, powdered materials usually have the tendency to pack and a mere tapping action is insufficient to effectively dispense them. However, I find that the combined action of the sudden vibration of the end wall by its automatic inward flexing and air ejection accomplished by said inward flexing of the end wall, as provided by my invention, is highly efficient and dependable under all conditions of operation.

While I have described a particular presently preferred embodiment of my invention, it is susceptible of modification within the scope of the appended claims.

I claim:

1. A dispensing device comprising a container adapted to contain a powdered material, said container having a perforated flexible material dispensing end wall so concaved that it is capable of automatically suddenly flexing into convex shape when its central portion is moved past the plane of its periphery, and a pull member affixed to the central portion of said end wall.

2. A dispensing device comprising a container having a resilient, flexible, concaved end wall

normally disposed in an inwardly flexed position, said wall presenting dispensing perforations adjacent its periphery and an opening through its central portion, and means for flexing said wall outwardly including a pull member having an inner end portion engageable against the inner surface of the end wall around the opening and slidably extending outwardly through said opening, said wall being automatically inwardly flexible by virtue of its own resiliency.

3. A dispensing device comprising a container having a top end wall and a resilient, flexible, concaved bottom end wall presenting dispensing perforations therethrough, said latter wall being disposed normally in an inwardly flexed position, means for flexing the bottom end wall outwardly including a manually operable pull member secured to the bottom end wall, and means for vertically suspending the container, including a hanger secured to the top end wall.

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