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F. J. HOLSTED

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RECIPROCATING TRAP CHAMBER DISPENSING CONTAINER

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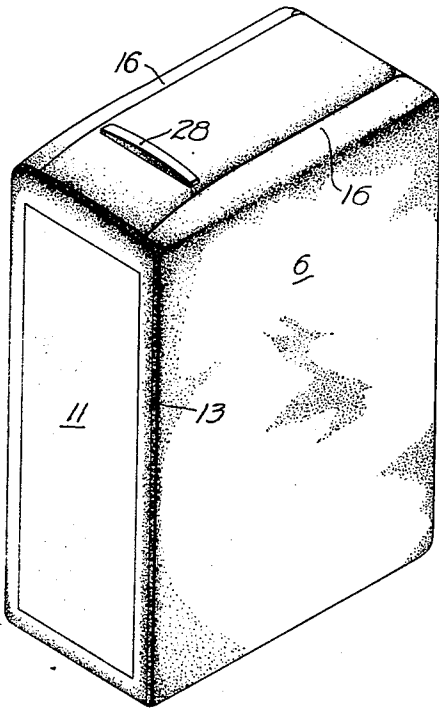


FIG. 1.

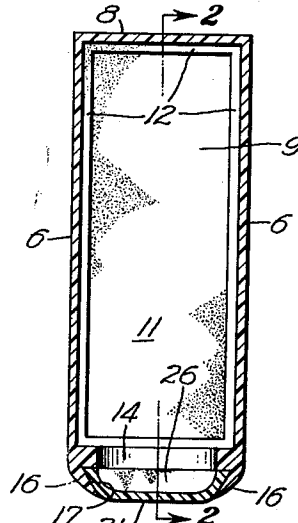


FIG. 3.

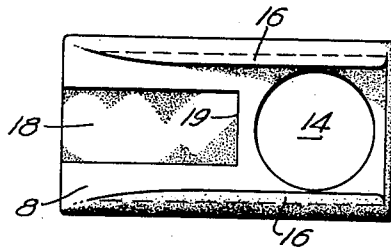


FIG. 4.

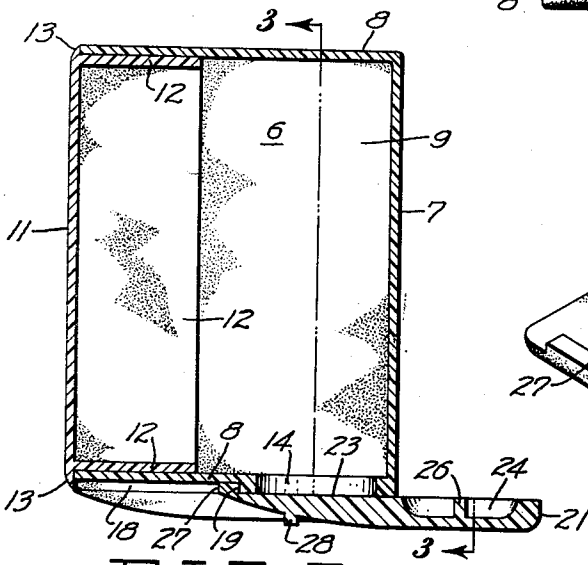


FIG. 2.

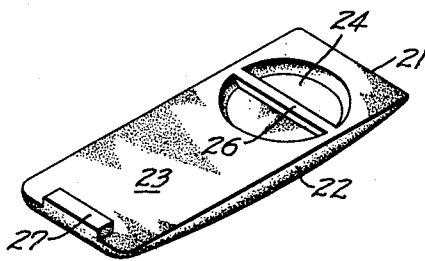


FIG. 5.

INVENTOR
FORREST J. HOLSTED

BY *Joseph B. Gardner*
his ATTORNEY

UNITED STATES PATENT OFFICE

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RECIPROCATING TRAP CHAMBER DISPENSING CONTAINER

Forrest J. Holsted, Oakland, Calif.

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2 Claims. (Cl. 222-366)

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This invention relates to storage containers for flowable materials from which measured quantities of the materials may be dispensed as needed.

An object of the invention is to provide a dispenser of the class described in which provision is made for selective dispensing of the contents in predetermined measured quantities or in proportional amounts of said quantities.

Another object of the invention is to provide a dispensing container comprising a group of pre-molded parts capable of being assembled in operative relationship without additional fitting work of any kind and which are all held in interlocked association by the assembled engagement of the parts.

A further object of the invention is to provide a container of the type referred to in which the volume of material remaining in the container may at all times be easily observed.

Still another object of the invention is to provide a device of the character described which is designed to be moved bodily between non-dispensing and dispensing positions each time that a quantity of the contents is to be removed thus causing repeated fluffing of the material and rendering it more readily flowable than is the case with similar material which is allowed to stand inert in a compressed condition between dispensings.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adopted within the scope of the invention as set forth in the claims.

Referring to the drawing:

Figure 1 is a perspective view of the dispensing container of my invention in storage position.

Figure 2 is a vertical sectional view of the container in dispensing condition with the measuring slide extended. The plane in which the view is taken is indicated by the line 2-2 of Figure 3.

Figure 3 is a vertical sectional view of the container taken in the plane indicated by the line 3-3 of Figure 2.

Figure 4 is a bottom plan view of the container with the measuring slide and the chamber closure removed.

Figure 5 is a perspective view of the measuring slide.

In the form in which I have chosen to illus-

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trate my invention, I provide a preferably integrally molded box-like receptacle having parallel side walls 6, a front wall 7 and end walls 8 defining a chamber 9 into which loosely packed and flowable material in the nature of ground spices or other granulated or finely comminuted substances may be loaded through the charging opening of the chamber created by the absence in the receptacle of a rear wall opposite the front wall 7. A removable closure plate 11, having an attached skirt 12 entering the chamber in frictional engagement with the inner surfaces of the side and end walls 6 and 8, is provided for retaining the material in the chamber. The marginal portions of the closure plate extending beyond the skirt 12 provide a flange 13 which overlies the surfaces of the wall members 6 and 8 bordering the charging opening so as to provide a smooth surface contour for the receptacle. In addition, the closure plate 11 is preferably made of transparent material so that, without opening the receptacle, the volume of contents in the chamber 9 may be easily seen through the closure plate.

One of the end walls 8 is thickened considerably and is provided, as shown in Figure 4, with an aperture 14 forming a discharge port for the chamber 9, a pair of spaced and relatively parallel lips 16 defining a dovetail groove 17 extending diametrically across the port 14, and with a travel limiting groove 18 extending substantially medially of the dovetail groove. The groove 18 opens at one end rearwardly of the receptacle in the plane of the charging port and at the other end terminates in an abutment 19 located between the ends of the dovetail groove 17 and at a calculated position which will govern operational movements to be presently described. I further provide a measuring slide 21, best shown in Figure 5, having longitudinal side edges 22 complementary with and slidable in the grooves 17 in such manner that the upper plane surface 23 of the slide lies in contiguous but relatively slidable engagement with the surface of the wall 8 forming the bottom of the dovetail groove. Formed in the slide 21 adjacent one end of the latter and opening at the surface 23 thereof is a measuring recess 24 preferably formed as a circular depression equivalent in diameter to the port 14 and having a partition 26, comprising an integral part of the slide, which divides the recess into two separate cavities of preferably equal size constituting standards of volumetric measurement. Although the cavities may be made of any size to provide de-

sired measurements of the particular material to be dispensed it is preferable to make the cavities equivalent, in combination, to the volume of material capable of being held by one-fourth of a teaspoon since this quantity is a standard which is very widely used. The opposite end of the slide is provided with a spud 27 capable of being received slidably in the groove 18 and capable of impinging against the abutment 19 or against the flange 13 defining the opposite ends of the aforesaid groove. A projection 28, rising from the slide on the exposed surface thereof opposite the surface 23, is provided as a finger grip by means of which the measuring slide may be manually moved in the slide guide groove.

The arrangement of the parts is such that when the slide is in retracted position, with the spud 27 engaging the closure flange 13, the slide will be faired into the general contour of the receptacle and the measuring recess 24 as a whole will be in axially vertical alignment with the chamber discharge port 14. In this position, when the receptacle is inverted as shown in Figure 2, the flowable material in the chamber may pass through the port and fill the sections of the recess 24. If the slide is now moved manually to extended position as shown, or until the spud 27 impinges against the abutment 19 of the groove 18, the measuring recess with its contents will be moved to an exposed position exteriorly of the receptacle whereupon the said contents may be dumped into a suitable receiver and the slide returned to its retracted position for recharging of the measuring recess if desired or the receptacle may be inverted to the position wherein it is shown in Figure 1 and stored until further needed. The quantity of contents dispensed from the chamber 9 at each full reciprocation of the slide will equal exactly one fourth teaspoonful. If, for any reason, one-eighth teaspoonful of material is required it is only necessary to extend the slide until one cavity is exposed and the partition 26 is substantially aligned with the face of the front wall 7. The slide is held in this position while the receptacle is inverted to dump the contents of the exposed cavity and is then moved to its retracted position for further dispensing or in conditioning the receptacle for storage.

It will be noted that the flat end wall 8 opposite the wall carrying the dispensing slide forms the surface for supporting the receptacle in storage position and that each time that the receptacle is moved between storage and dispensing positions and back again, it is repeatedly inverted. This causes a fluffing of the comminuted contents of the chamber and results in easier flow thereof through the discharge port 14 and more uniform volume in the successive quantities which are dispensed. It will also be noted that when the receptacle is in storage position, as shown in Figure 1, the discharge port and measuring slide will occupy an elevated position so that leakage of very finely divided material from the chamber cannot occur. It will further be obvious to those skilled in the art that the receptacle lends itself well to construction in a variety of manners and from a comparatively wide range of materials but it is my preference to construct it substantially as shown from the three interfitting parts which may be form-molded from any of the synthetic resins. It will be still further noted that the various parts are so designed that no inaccessible crevices or recesses exist in which material may

lodge and from which the material would be difficult to remove. This greatly facilitates maintenance of the device in a thoroughly sanitary condition.

I claim:

1. A dispensing receptacle comprising a body having opposed end walls and side walls and having a material-receiving chamber therein provided with a discharge port in one of said end walls, displaceable closure means forming a side wall of said chamber in association with said body for opening and closing said chamber, a slide on said ported end wall and movable between retracted and extended positions relative to said body and in a direction trans-axially of said port, said slide having a material-receiving recess therein registrable, when the slide is in retracted position, with the discharge port and to receive material from said chamber passed through said discharge port, said recess being in an exposed position exteriorly of said body when the slide is moved to extended position, means forming portions of said body defining the limits of movement of said slide toward extended position, and means forming portions of said closure defining the limits of movement of said slide toward said retracted position.

2. A dispensing receptacle comprising a body having end and side walls and having a material-receiving chamber therein provided with a discharge port in one end wall, the other of said end walls being comparatively flat and providing for resting said body on a supporting surface in storage position with the ported end wall in an elevated position, displaceable closure means forming a side wall of said chamber in association with said body for opening and closing said chamber, a slide on said ported end wall and movable between retracted and extended positions relative to said body and in a direction trans-axially of said port, said slide having a material-receiving recess therein registrable, when the slide is in retracted position, with the discharge port and to receive material from said chamber passed through said discharge port, said recess being of substantially the same cross-sectional area as that of said port, a partition formed as a portion of said slide and traversing said recess for dividing the latter into a plurality of cavities, said cavities being exposable in succession exteriorly of said chamber when the slide is moved, said slide being movable on and along portions of said body, a portion of said slide engageable with portions of said body for limiting the maximum movement of said slide toward said extended position, and other portions of said slide engageable with portions of said closure for limiting the movement of said slide toward said retracted position.

FORREST J. HOLSTED.

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