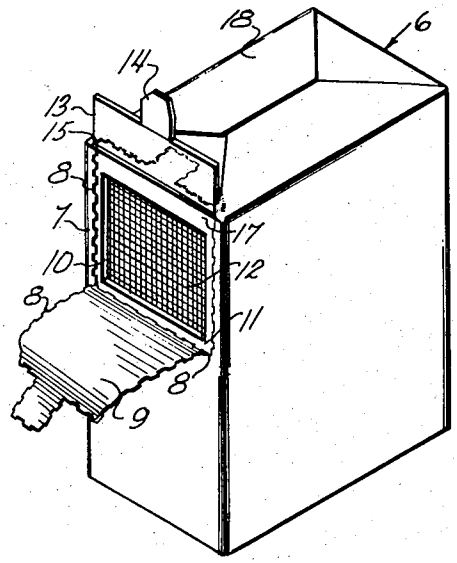
July 25, 1950 C. H. LETSCH 2,516,471

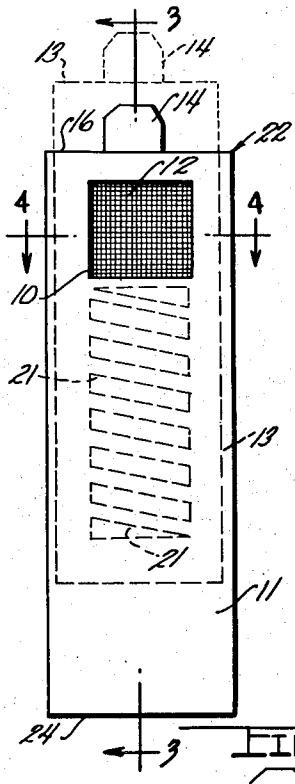
DISPENSING OR SIFTING PACKAGE

Filed Oct. 29, 1948

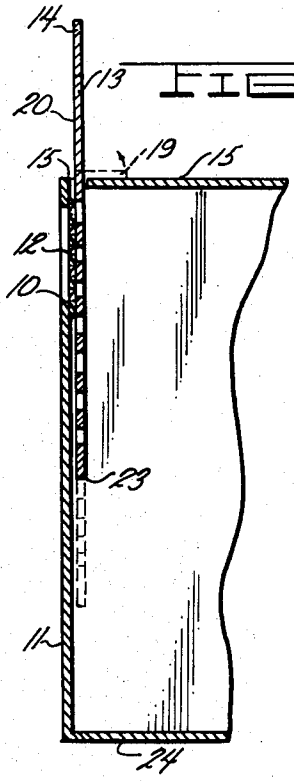
FIG—1



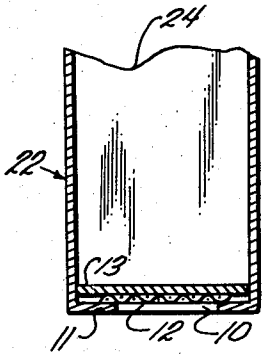
FIG—2



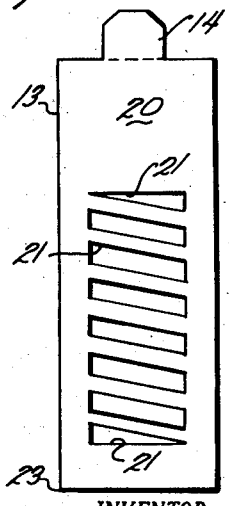
FIG—3



FIG—4



FIG—5



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DISPENSING OR SIFTING PACKAGE

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2 Claims. (Cl. 222—189)

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This invention relates to dispensers for dry comminuted or granular material, and particularly to a special dispensing or sifting package therefor.

The main object of my invention is to provide a package or container for dry materials supplied to the market in pulverulent or granular form, the package being especially designed for dispensing the material directly from the container for use.

Another object is to have a dispensing package or container of the indicated character provided with facilities for sifting the material dispensed in order to ensure uniformity of the latter and freedom from lumps or concretions.

A further object is to have such a package or container provided with a covering applied by the manufacturer or packer for initially sealing the contents and adapted to have a predetermined portion thereof torn off by the consumer for dispensing from the package at will.

It is also an object to provide a package as outlined with a manually-movable closure means for selectively exposing the contents to a dispensing opening in the package or preventing egress of the contents from the mentioned dispensing opening.

A practical object is, of course, to have such a dispensing or sifting package which is cheap to make and simple and effective in use.

Other objects and advantages of the invention will appear in further detail as the specification proceeds.

In order to facilitate ready comprehension of this invention for a proper appreciation of the salient features thereof, the invention is illustrated on the accompanying drawing forming part hereof, and in which:

Figure 1 is a perspective view of a dispensing or sifting package made according to the invention and embodying the same in a practical form, the view showing the package opened in initial manner for dispensing the contents therefrom;

Figure 2 is an elevation of the same dispensing or sifting package with the outside wrapper removed;

Figure 3 is a vertical section taken on line 3—3 in Figure 2;

Figure 4 is a transverse section taken on line 4—4 in the same Figure 2;

Figure 5 is an elevation of a manually-movable slider or closure member normally forming part of the assemblage included in the term "dispensing or sifting package," shown in Figures 1 to 4.

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In the views, the same reference numerals indicate the same or like parts.

There are various commodities on the market which may well be sold in dispensing packages or at the present they may simply be found in sealed packages which are to be cut or torn open for removing the contents to a dispensing container of more or less conventional design, but this sometimes entails waste of the commodities by only partial use and the rest being allowed to stand and become lumpy or otherwise unfit for use by exposure to dampness, dust or the like. On the other hand, it is self-evident that the necessity for breaking the original package and entirely removing the contents to a dispensing container is a step which could be omitted if the original package could be used also for dispensing the contents thereof directly for use.

Upon considering this problem, it has occurred to me that the package for most comminuted material, such as flour, water base paints, plaster or many other such commodities, and granular material such as sugar and the like, could well be of such nature that if a portion of the original covering of the package is simply removed, the latter might be used for directly dispensing the material within the same in a well-regulated manner to provide accurate dispensing of exact amounts of the mentioned contents. As a result, I have succeeded in producing a dispensing or sifting package which serves as an original package in which the comminuted or granulated commodities may be sold and also serves for dispensing the contents thereof in convenient manner, as will now be more fully explained.

Hence, in the practice of my invention, and referring again to the drawing, a dispensing package or container, generally indicated at 6, is of substantially rectangular form and provided with an outside covering 7 of paper or other material upon the upper portion of one side of which are arranged a group of tear lines or perforations indicated at 8, 8, so that a tab 9 is readily torn out from said side, the tab in Figure 1 being shown partly torn and about to be torn completely away from the covering 7 to expose an opening 10 in the side 11 of the container proper. In this opening a fabric, metal, plastic, or other screen 12 is either secured within the opening 10 or forms part of the side 11 so that in fact the opening 10 and screen 12 may even consist of a perforated area upon the side 11. Within the mentioned opening 10 and screen or mesh 12 is located a vertically-slidable closure member or panel 13 having a tab 14 at the upper

end thereof by which to manipulate the sliding member 13 through an upwardly-open slot 15 in the top 16 of the container.

If desired, the weakened or perforated tearing lines 8, 8, etc., may be continued up over the forward edge 17 of the top 18 of the wrapping 7 to expose slot 15 and also expose the tab 14 which may normally occupy the horizontal position indicated at 19. On the other hand, the tab 19 and the upper end of slidable closure member or panel 13 may be accessible independently through the covering 7 in the top 18 thereof through an independent cut or slot so that the tab may be erected to form the normal tab 14 by which to draw the panel 13 up or down as the case may be. Due to the presence of the screen 12 or the area of perforations in box wall 11, the contents dispensed from opening 10 will at all times be sifted and free from lumps, fragments or concretions, and thus smooth, uniform and free flowing.

As best seen in Figure 5, the closure member or slide 13 has an upper closed or blank area 20, while beneath the latter and extending almost to the bottom is a row of transverse apertures 21, 21, etc., disposed in effective position to be drawn upwardly with the slide to register at least in large part with the opening 11 in the working side or end of the container which may generally be indicated at 22. The length of the series or row of apertures 21, 21 is such, however, that although when the closure member or slide 13 occupies its lowest position in which the lower end 23 thereof is adjacent to the bottom 24 of the container 22, the closed or blank portion 20 of member 13 will completely block the opening 10 and prevent any of the contents of the container from reaching the screen or mesh 12 in said opening, or in any manner issuing from the latter. If the slide panel or member 13 is raised merely a short distance by manipulating the tab 14, as indicated in broken lines in Figure 2, and also in full lines in Figure 1, only a few of the transverse and inclined apertures 21, 21 in member 13 will register with the opening 10 so that a limited amount of contents of the package may be dispensed by holding it in such position that the sidewall thereof faces downward, or is at least inclined in a downward direction. In fact, the speed of delivery of the comminuted or granular material through the screen mesh 12 in opening 10 can be nicely regulated by the degree of elevation imparted to panel 13. Naturally, if the latter is raised to sufficient height, there will be a sufficient number of the apertures 21 registering therewith to allow maximum delivery of the contents through the screen 12, the degree of elevation not being too important inasmuch as the row of apertures on panel 13 is so long that when once the entire screen 12 in the opening 10 registers with a number of the apertures, such position of the opening with respect to these apertures can occur in various positions along the series.

In any event, when the closure panel or member 13 is pushed down to its lowest position, as already mentioned, the imperforate closed portion 20 thereof will register with and cover opening 10 and prevent any further delivery of material through the screen in the opening 10, so that for all purposes, a container or box 22 is then closed until further quantities of the contents will be needed.

As clearly shown in the drawings, the slide 13 is elongated and nearly as long as the height of the box or container. Likewise, the row of openings 21 is elongated and extends over most of the length of the slide 13. The row of openings 21 is more than twice as long as the height of the opening 10 covered by the screen 12. The arrangement is such that the tab 14 may be held for reciprocating the slide 13 longitudinally with the row of openings 21 arranged adjacent to the opening 10. When this mode of operation is followed, the elongated row of openings 21 will coact with the screen 12 for efficiently sifting the powdered contents of the box into a container or the like when the opening 10 is held downwardly. Since the row of openings 21 is substantially longer than the height of the opening 10, the length of reciprocation or stroke of the slide 13 may be considerable, and the sifting action will continue as long as any portion of the row of opening 21 is adjacent to the opening 10. Since the openings 21 are inclined or slanting transversely, as clearly shown in Figure 5, the powdered contents of the box adjacent to the slide 13 and screen 12 will be shifted both longitudinally and transversely over the screen 12 by the slide 13. This compound movement of the adjacent layer of powdered material over the screen 12 which is caused by the inclined openings 21 when the slide 13 is reciprocated results in a very effective sifting action.

The box or container 22 may be a carton of paper, cardboard or other cellulosic material sufficiently rigid to hold its shape, or any other material which will serve the purpose, and similar remarks apply to the closure member or panel 13. The outside wrapper 7, as already intimated, may be of paper, or even plastic material, or any other sheet material used for packaging, whether opaque, translucent or transparent, while the screen 12 may be metal or fabric mesh or perforated card or paper applied to the inside of wall 11, or else integral with and forming part of said wall and simply consist of an area of perforations in said wall, if so desired. On the other hand, if desired, a portion of panel 13 may have a plain large opening corresponding to opening 10 in addition to the series of transverse inclined apertures 21, 21, so that it will be possible to use either the regulating or limited opening area afforded by a group of the latter when they completely register with opening 10, or else have this opening completely exposed to the contents for maximum delivery through the same. As this feature is so obvious upon mere mention thereof that it is clearly nothing more than the enlargement of one of the several apertures now shown in the series, it is thought superfluous to illustrate.

Manifestly, variations may be resorted to and parts and features may be modified further or used without others within the scope of the appended claims.

Having now fully described my invention, I claim:

1. A combined carton and sifter for finely divided material, comprising a box including a substantially flat side and ends, one end being provided with a narrow slot arranged near and slightly inwardly of the flat side, the flat side having a relatively large opening near its end adjacent to the slot, a sifting screen secured to the flat side adjacent to and covering the relatively large opening of the flat side, and a substantially flat elongated slide mounted within the box adjacent to the inner face of the substantially flat side and extending slidably through

the slot, the slide being provided with an elongated row of separate longitudinally spaced openings, the row of openings being substantially longer than the length of the relatively large opening in the flat side, whereby the slide may be reciprocated longitudinally when the row of openings is adjacent to the relatively large opening for sifting the contents of the box through the screen.

2. A combined carton and sifter for finely divided material, comprising a substantially rectangular box including a substantially flat side and ends, one of said ends being provided with a transverse narrow slot arranged adjacent to and slightly inwardly of the flat side, the flat side being provided near its end adjacent to the narrow slot with an opening, a screen secured to the flat side and arranged adjacent to and covering the opening of the flat side, and an elongated flat substantially rectangular slide mounted within the box adjacent to the inner face of the flat side and adapted to extend slidably through said slot, one end portion of the slide being imperforate and adapted to completely cover the opening of the flat side when the slide is in an inner inoperative position, the slide being provided adjacent to its opposite end with an elongated longitudinal row of separate longitudinally spaced transversely inclined elongated sifting apertures, the row of sifting apertures being substantially longer than the length of the opening in the flat side, whereby the slide may be reciprocated over the opening in the flat side with a long stroke for sifting the contents of the box.

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