

July 14, 1959

C. N. CAMPBELL, JR  
BULK DISPENSING CONTAINER

2,894,666

Filed March 5, 1956

2 Sheets-Sheet 1

FIG. 1 -

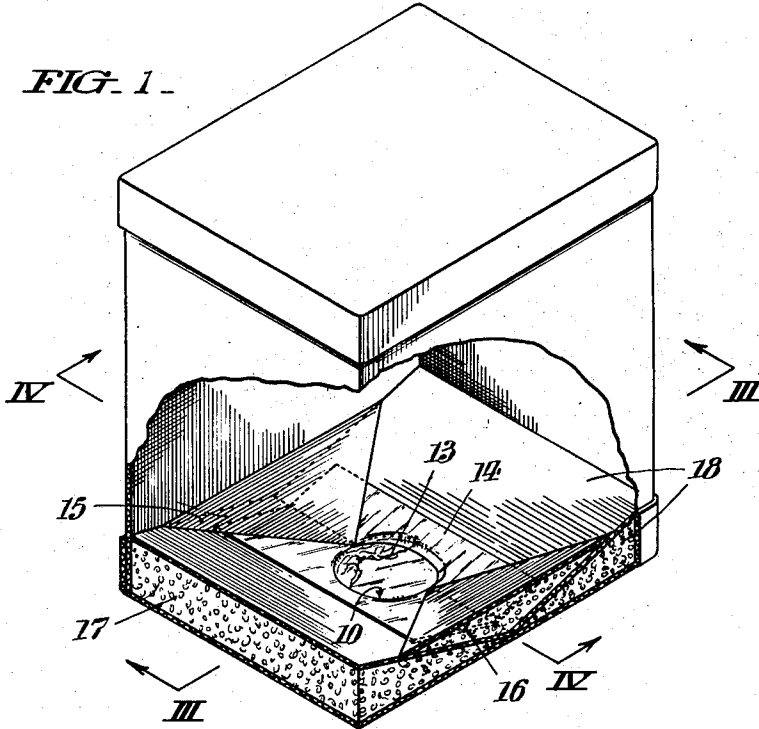
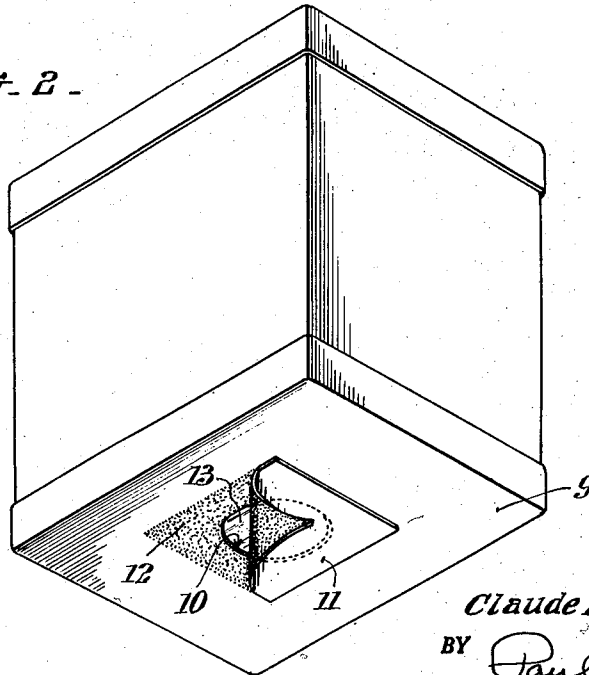


FIG. 2 -



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FIG. 3 -

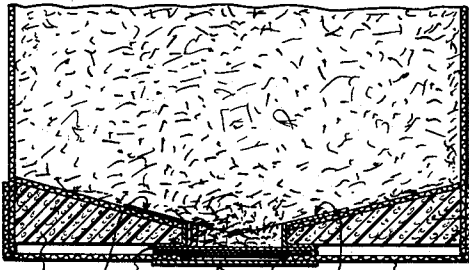


FIG. 4 -

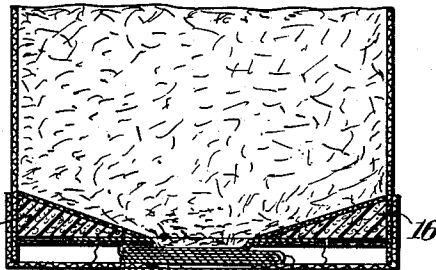


FIG. 5 -

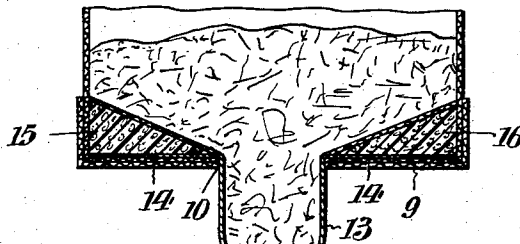


FIG. 6 -

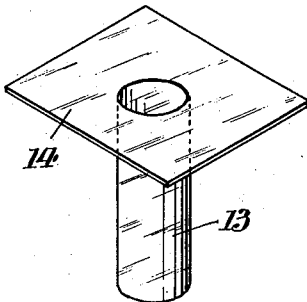


FIG. 8 -

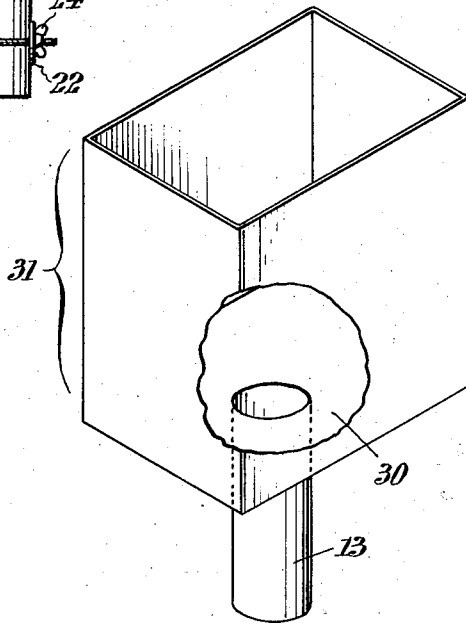
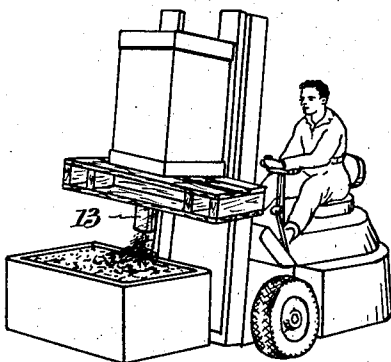


FIG. 7 -



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**BULK DISPENSING CONTAINER**

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Application March 5, 1956, Serial No. 569,563

6 Claims. (Cl. 222—528)

This invention relates to a container adapted to serve as a shipping package and as a dispensing unit for the material contained therein and particularly to such containers normally used for transporting chemicals and the like in the form of grains, powder, crystals, flakes, semi-liquids and liquids. Such containers are made of heavy paper board or of any other relatively inexpensive container material. Present containers are suitable for transporting the material to be shipped but are not well adapted to efficient distribution of the materials after shipment. Containers of this type may weigh, when full, over one thousand pounds or more, and it is the customary practice to place them in a convenient location in the plant and measure out the required amounts of chemicals by scoop, ladle or other means. This is an inefficient method of material distribution, since it requires workmen to engage in a great deal of unnecessary travel.

It is a primary purpose of this invention to provide a container for materials of the type described from which the chemicals can be evenly and efficiently dispensed.

It is also an object of this invention to provide a dispensing container which can be operated by fork-lift trucks and other transportation means usually found in industrial plants.

It is a still further object of the invention to provide a container which is adapted to dispense the material contained therein through a nozzle formed in the bottom of the container.

It is a still further object of this invention to provide a container having a bottom constructed to promote the flow of materials out of the container and having a nozzle affixed to the bottom of the container which can be concealed within the outer framework of the container when not in use.

Other objects and advantages will be apparent from the following description and drawings of which:

Fig. 1 is a perspective view partially cut away showing a container made in accordance with the invention;

Fig. 2 is a perspective view of a container made in accordance with the invention showing the bottom thereof;

Fig. 3 is a partial sectional view along the line III—III of Fig. 1;

Fig. 4 is a partial cross sectional view along the line IV—IV of Fig. 1;

Fig. 5 is a view similar to Fig. 3 showing the dispensing nozzle in operating position;

Fig. 6 is a perspective view showing the dispensing nozzle structure;

Fig. 7 is a perspective view showing a container made in accordance with the invention in actual operation from a fork-lift truck; and

Fig. 8 is a perspective view partially cut away showing the dispensing nozzle in its operating position.

The bottom structure of a specific form of container made in accordance with the invention as shown in the drawings has a base 9 and a compound sloping floor focusing upon the outlet opening 10. The compound slopes are built up of geometric sections 15, 16,

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17 and 18 which may be made of paper board or the like. When the container is filled with the material to be transported, a sealing patch 11 is placed over the opening 10. The patch 11 may be affixed in any known manner, but it is preferred to use an adhesive 12 to avoid the need for staples or the like. As shown in Figs. 3 and 4 when the container is used as a shipping package, the dispensing nozzle 13 is folded over the opening 10, and flange 14 is placed above the floor portions 17 and 18 and inserted between the floor portions 17 and 18 and 15 and 16 as shown in Figs. 1, 3 and 4.

When it is desired to dispense the material from the container, the patch 11 is removed and the nozzle 13 is unfolded and is withdrawn through the opening 10, thereby opening the body of the nozzle 13 to the contents of the container as shown in Fig. 5. The floor portions 17 and 18 drop against the base 9 when the nozzle 13 is removed.

Any suitable flexible material may be used for the nozzle 13 provided it is sufficiently tough to withstand the physical stresses caused by the weight of the material to be dispensed and also provided it is not subject to chemical attack by the materials. It has been found that polyethylene sheet material serves this purpose very well.

The dispensing of materials through the nozzle 13 may be controlled, as shown in Fig. 5 by any suitable clamping means. The clamping means shown comprises a pair of rods 20 spaced about the nozzle 13, a pair of opposed plates 21 and 22 mounted on the rods 20 and a pair of opposed wing nuts 23 and 24 which are threadably attached to the rods 20.

As shown in Fig. 7, a container made according to the invention may be placed in a fork-lift truck adapted to leave the nozzle 13 free to dispense the materials.

A modified form of the invention is shown in Fig. 8. There the flange 14 of the nozzle 13 is extended to form the base 30 of the liner 31. The liner 31 is shaped to fit the interior of the container. The base 30 may be disposed either over or under the compound sloping floor as desired. Since the material of the liner 31 is flexible, it can be formed to adapt itself to different floor shapes. The primary advantage of this modified form is that it provides for protection of the side walls of the container which may be of particular importance in the case of some active chemicals or liquids.

Other modifications may be made in the dispensing package specifically described above without departing from the spirit of the invention as defined by the following claims.

Having thus described my invention, I claim:

1. In a container, material dispensing means comprising an opening through the bottom of said container, a plurality of geometrically shaped pieces disposed with respect to each other and the bottom of said container to form a sloping floor biased in the direction of said opening, a flexible plastic nozzle coincident with said opening having flange portions integrally attached thereto, said flange portions being at least partially disposed between said geometrically shaped pieces, said nozzle being foldable and adapted to be held within said container by the bottom thereof over said opening when folded and means for covering said opening

2. In the container of claim 1 wherein said dispensing nozzles comprises a flexible plastic sheet material.

3. In the container of claim 1 wherein said dispensing nozzle is made of polyethylene sheet material.

4. In the container of claim 1 wherein the means for covering said opening comprises a patch adapted to be adhesively attached to the bottom of said container when said nozzle is held within said opening.

5. In the container of claim 1 in which the flange portions of said nozzle extend across the bottom of said

container and upwardly across the remaining inside vertical surface of the container.

6. A container comprising wall portions, a floor substantially at right angles to said wall portions having an exit opening therein, a foldable dispensing nozzle disposed within said container having one end coincident with said exit opening and floor means in said container for directing material in said container to said opening wherein the means for directing the material comprises a first pair of paper-board pieces of triangular cross section meeting at their apexes and a second pair of paper-board pieces of triangular cross section disposed transversely upon said first pair.

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