United States Patent [19]

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[54] **PORTABLE DISPENSING CONTAINERS**

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[52] **U.S. Cl.** ..... **221/63**, 220/31 S

[51] **Int. Cl.** **B65d 43/10**

[58] **Field of Search** ..... 220/31 S; 221/63, 221/303, 309

[56] **References Cited**

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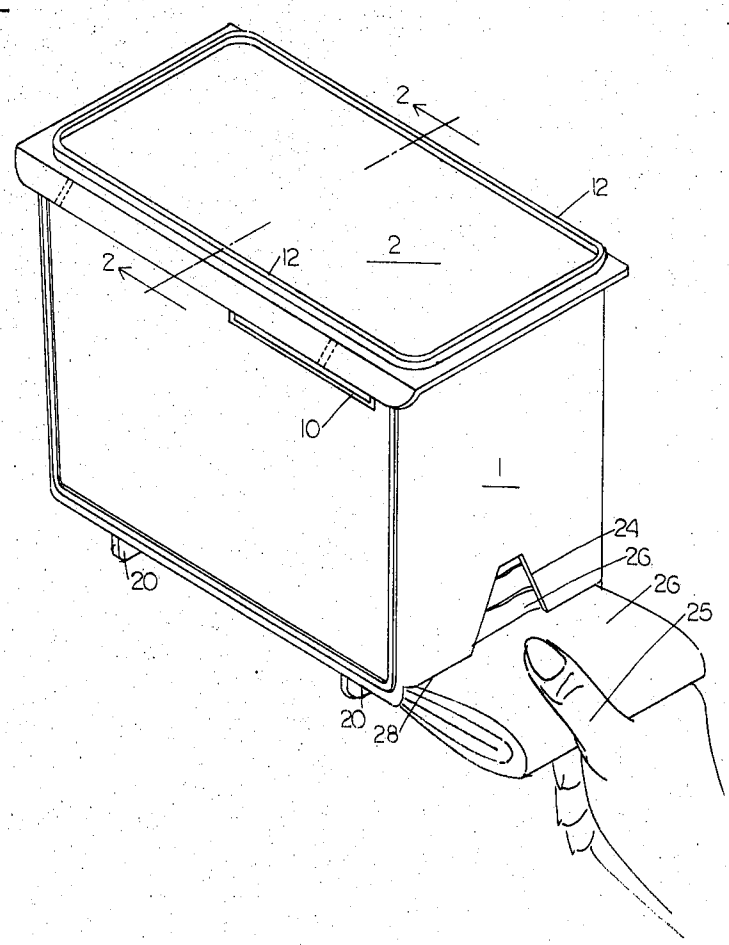
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[57] **ABSTRACT**

A portable container for storing and dispensing packaged folded articles stacked in the container. The materials when stacked in the container being adapted for removal one at a time by the use of only one hand by a person removing the material from the container. The container can be removably secured to a supporting surface by means of double faced pressure sensitive tape. It is also provided with legs for self supporting the container on any flat surface. In addition, it has slot means for removably securing it to vertical surfaces. A restrictive opening is provided for readily easy removal of a single package of material which, when removed, is replaced in removable position by another package of material in the container. The container has a hinged lid molded integral with the container and the hinge is constructed with spaced slots that prevent a crack or break in any part of the hinge from extending clear across the length of the hinge.

7 Claims, 5 Drawing Figures



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SHEET 1 OF 2

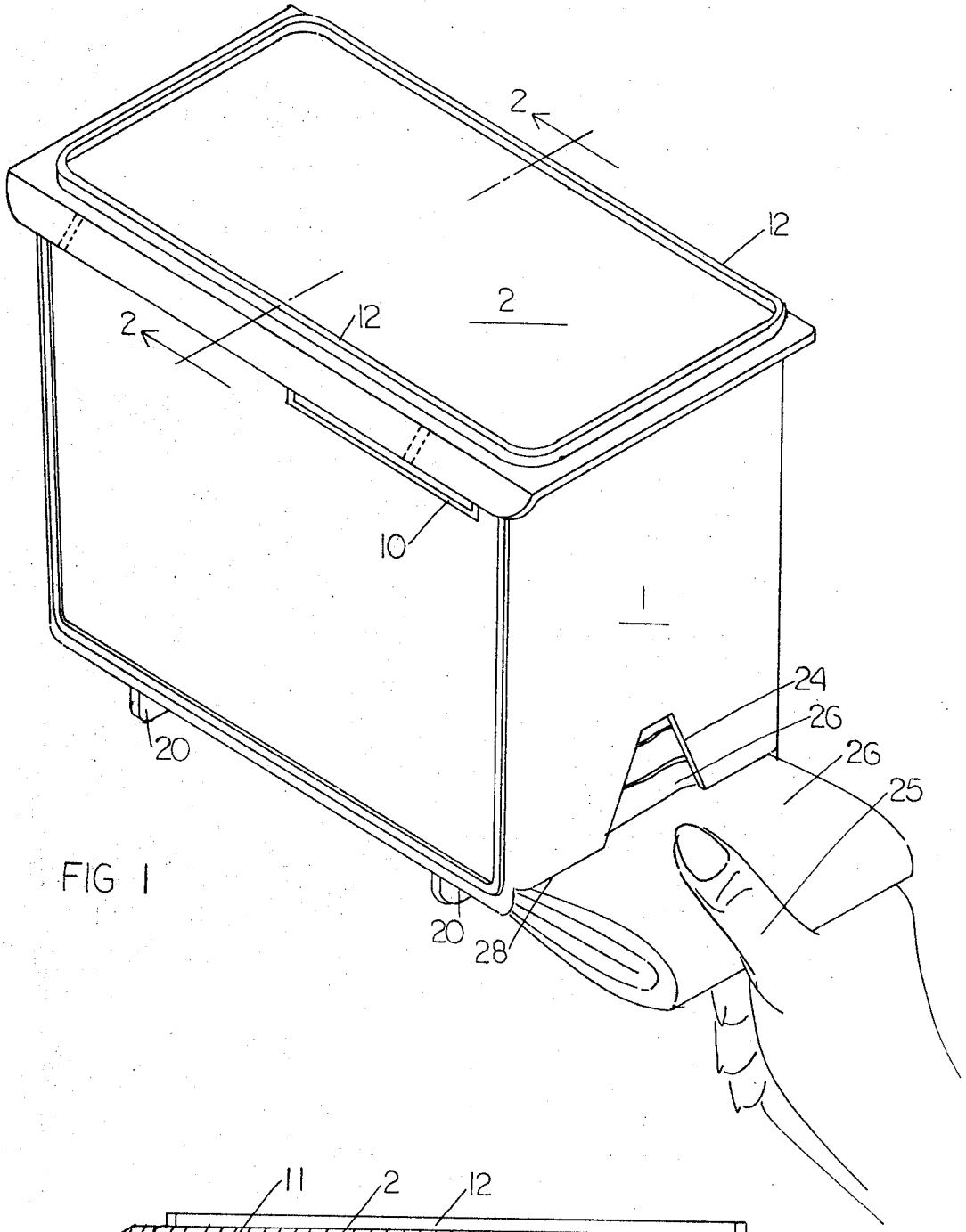


FIG 1

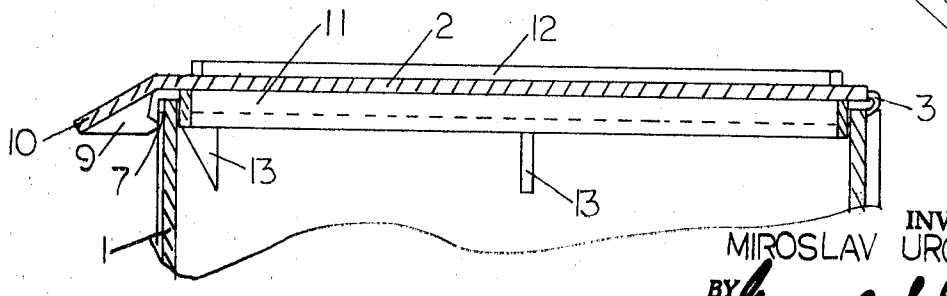


FIG 2

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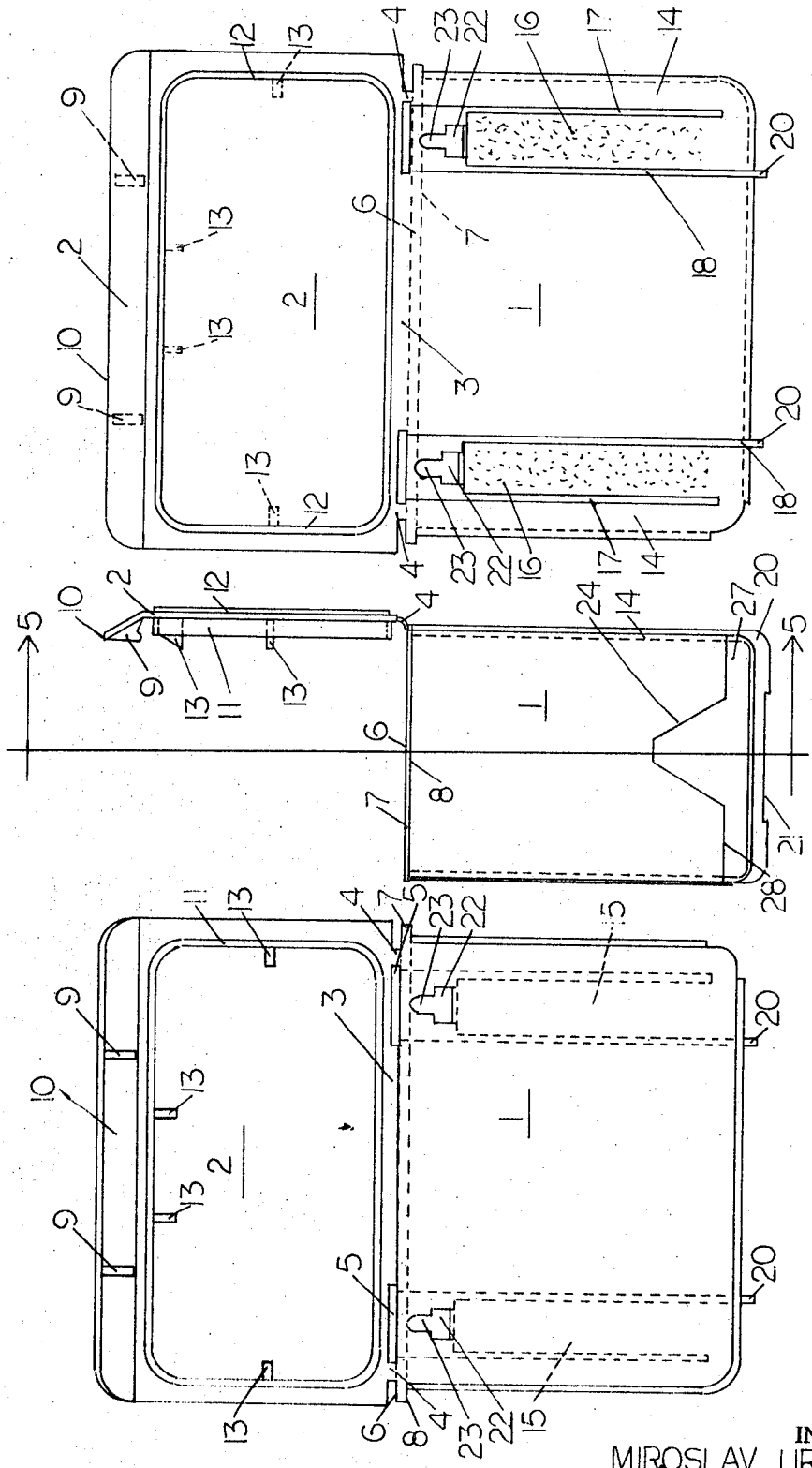


FIG 3

FIG 4

FIG 5

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PORTABLE DISPENSING CONTAINERS

It is an object of my invention to provide a portable dispensing container for packaged materials that is molded as a one piece unit of plastics and has a hinged lid molded integral with the container.

Another object of my invention is to provide a flexible live hinge securing the container and lid together during the molding of the container and the lid.

A further object is to provide a lidded refillable container for packages stacked in the container that is portable and can be removably supported and readily secured on surfaces by double faced pressure sensitive tape in addition to legs for self supporting the container in a standing upright position.

A primary object of my invention is to provide a portable refillable container for packaged folded or unfolded materials, that is, disposable diapers and the like, that will permit a person holding a baby to remove a package from the container with one hand.

These and other objects will become apparent in the specifications and drawings illustrating the preferred embodiment of my invention.

IN THE DRAWINGS

FIG. 1 is a perspective view of my storing and dispensing container showing a hand of a person removing a package from my dispensing container.

FIG. 2 is a section in elevation of a lid and fragment of a container taken on line 2—2 of FIG. 1 showing the latch means between the lid and container.

FIG. 3 is a view in elevation showing the back of the container and the lid integral with the container.

FIG. 4 is a view of the dispensing side of the container in elevation showing the slot for removal of materials and the lid integral with the container.

FIG. 5 is a view in elevation of a section through the container with the lid integral with the container taken on line 5—5 of FIG. 4.

Referring to FIGS. 3, 4 and 5 there is illustrated a hollow container 1 having a lid 2 with an elongated molded integral hinge 3 and shorter hinge sections 4 separated from the elongated hinge 3 by slots 5. Since the container, the lid in a horizontal perpendicular position to the container and hinge sections are molded simultaneously the slots are like-wise molded at the same time.

The shorter hinge sections are molded substantially thicker in cross section than the hinge portion 3 of the integral hinge. This additional thickness is due to a larger flume in the mold to permit the easy flow of the plastic into the cavity in the mold for the lid. The larger flume in the mold reduces the molding pressure required and insures easy flow of the plastic into the lid cavity and reduces flow marks in the lid. These slots act as stop gaps and prevent a crack or tear in the hinge from separating the lid from the container and the lid will be hinged to the container even though part of the hinge may be torn or broken from use. Fatigue tests on the hinge have proven that the hinge has long life and usage beyond extreme normal unlimited usage. Around an open top 6 of the container which is flexible there is a protruding lip 7 having an underside 8 for spaced snap latches 9 molded to the lid. The snap latches are adapted to removably secure the lid in closed condition on the container. A slight downward pressure on the lid causes the latch to hook on the under side of the protruding lip and keep the container closed. Likewise a slight upward pull on an outer edge 10 of the lid, which over hangs the container, allows the lid to swing on its hinges and present the container in open condition. Molded integral with the lid there is a reinforcing internal rib 11 and external rib 12. Molded into the internal rib 11 there are spaced abutments 13 for pressure removable engagement with the inside top of the container and these abutments together with the rib 11 hold the snap latches in engagement with the lip to keep the lid in closed position on the container.

Molded in a back 14 of the container there are channels 15 for double faced sensitive tape 16. The double faced sensitive pressure tape allows the container to be attached to a surface by pressing on the container. The channels are formed by ribs 17 and 18. The ribs 18 extend down beyond a bottom 19 of the container to form legs 20 that extend crosswise of the bottom of the container. The legs 20 have an under cut 21 to provide stabilized contact with a surface upon which the container is placed in movable condition.

At the upper ends of the channels there are shaped openings 22 for easy passage of heads of screws or nails secured in a surface for removably but safely securing the container on a vertical surface. These openings are connected to slots 23 that are smaller than the heads of screws or nails (not shown) secured in a surface upon which the container is hung and prevented from self removal from the nails or screws.

Close to the bottom of the container there is an inverted V opening 24 to provide a thumb or finger 25 insertion to grip a package 26 of material prior to removing the package or material from the container. While I have illustrated the opening on one end the same opening may be placed on both ends of the container. The inverted end terminates in a horizontal slot 27 that extends across the side of the container to facilitate the easy removal of a package from the container. The distance of a top 28 of the slot 27 is varied depending upon the thickness of a package to be stored in and removed from the container. This insures that only one package or piece of material will be removed at one time.

The upper portion of the inverted V opening 24 serves also as a visual inspection window and reminder to resupply the container when the supply of disposable diapers becomes low.

In use the container is filled with a stack of packages or sheets of materials. It is portable and can be supported on any relatively flat surface. If it is desired to secure it to a vertical surface the container can be pressed against a surface and the double faced sensitive tape will secure the container to the surface against which it is pressed and keep the container in handy operable condition. The container can also be removably secured to a vertical surface by means of screws, nails or hooks by utilizing the slots at the top of the channels. When the container is secured either standing or in hanging position a mother with a baby in one arm can readily use her hand of the other arm to remove a package of disposable diapers or other folded materials from the container with ease and undisturbed by the knowledge that her baby is secured from danger of falling if the child was not secured in her one arm.

Having thus described my invention I claim:

1. A one piece dispenser molded of plastic material for storing and dispensing articles stacked in horizontal layers comprising:

a container having a bottom and having integral side walls rising from the bottom;

said side walls delineating an open top;

a lid disposed at the open top of the container for closing the open top of the container, said lid having a free overhanging edge;

an integral segmented hinge connecting one edge of said lid to a top edge of the container walls, said segmented hinge comprising an elongated central hinge portion having a relatively thin cross section and outboard substantially shorter hinge portions spaced from the ends of said central hinge portion, said outboard portions having a substantially thicker cross section thereby permitting easier flow of plastic material through the hinge portions to the top during molding;

snap latch means mounted on the free overhanging edge of the lid;

latch-engaging means on the upper edge of one of the container walls engagable with the snap latch means of the lid securing the lid in closed position relative to the open top of the container upon downward pressure on the lid;

said container having an opening adjacent the said bottom arranged to present a portion of the lowermost horizontal article within the container for hand engagement and withdrawal from the container.

2. A dispenser for storing and dispensing articles as set forth in claim **1** in which the opening adjacent the bottom of the container is delineated by spacing the lower edge of one of said walls above the bottom of the container to provide an open slot for withdrawal of the lowermost horizontal article from the container.

3. A dispenser for storing and dispensing articles as set forth in claim **1** in which the opening adjacent the bottom of the container is delineated by spacing the lower edge of one of said walls above the bottom of the container to provide an open slot for withdrawal of the lowermost article from the container, said slot having an opening of a generally inverted V shaped configuration extending upwardly from the upper edge of the slot, said opening providing clearance for finger engagement with the lowermost horizontal article of a stack which is resting upon the bottom of the container.

4. A dispenser for storing and dispensing horizontal articles as set forth in claim **1** in which the lid has a continuous downwardly projecting rib interfitting with and engaging the internal wall surfaces of the container adjacent said opening for imparting rigidity to said container when the lid closes the top thereof and in which the hinge, which interconnects with one edge of the lid with an upper edge of one of the side walls, is arranged to spring bias the lid in a direction to normally spring the lid to an open position upon single handed release of the latch means mounted on the free edge of the lid.

5. A dispenser for storing and dispensing horizontal articles as set forth in claim **1**, in which the molded wall of the container, which includes the molded integral segmented hinge connection between the wall and the lid of the dispenser has two sets of spaced vertical ribs forming a shallow recess therebetween, one of the vertical ribs in each set connecting with a leg integral with the bottom of said container, and has double sensitive adhesive tape received in the recess between said ribs adapting the container to be adhesively secured to a vertical surface with the dispensing opening presented for single hand engagement and withdrawal of the articles individually from the dispenser.

6. A molded one piece dispenser for storing and dispensing relatively flat disposed articles individually from a stack of articles within the dispenser comprising:

a generally rectangular container having a bottom and having integral molded side walls rising upwardly from the bottom and delineating an open top;

said container formed from yieldable plastic material;

a lid interfitting the open top of the container for closing the open top of the container;

a segmented molded hinge interconnecting one edge of said lid with an upper edge portion of one of said side walls and forming an integral connection between the edge of the wall and lid, said lid having a free angulated opposite edge for overhanging an opposite side wall of said container;

a lip extending externally and peripherally from an upper edge portion of the side walls, and;

snap latch means mounted on the free angulated opposite edge of the lid and engageable with the lip on the upper edge of the side wall opposite the said hinge for securing the lid in closed position;

said hinge being generally semi-cylindrical in cross section projecting outwardly from the wall and lid of the dispenser, said semi-cylindrical hinge section being biased in a direction to normally spring the lid to an open position upon one-handed release of the snap latch means mounted on the free edge of the lid;

said semi-cylindrical hinge having interrupting slots spaced apart along the length of the hinge, said slots inhibiting a fracture of part of the hinge from extending along the entire length of the said molded hinge;

one of said sides having an opening adjacent the bottom of the container arranged to present the lowermost article of the stack for single hand engagement and withdrawal from the container.

7. A dispenser for storing and dispensing articles as set forth in claim **6** in which the snap latch means, which is mounted upon the free edge of the lid, is in the form of a spur projecting downwardly from the free edge portion of the lid;

said spur having a camming portion which is angulated from the edge of the lid inwardly toward an exterior wall of the dispenser;

said angulated section terminating in a latch surface engagable with the lower edge of the lip which extends externally from the upper edge portion of the side wall, thereby to latch the lid in closed position upon forcing the lid downwardly to the said closed position, and;

a series of abutments projecting downwardly from the lid and interspaced between the latching elements, said abutments engaging the internal surface of the wall between the latch elements as the lid is shifted to said closed position, and;

said abutments engaging the internal surface of the yieldable wall and preventing the same from being sprung inwardly as a consequence of the camming action of said latching elements.

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