Nov. 18, 1969 R. J. DORNBUSH 3,478,948

DISPENSING CONTAINER

Filed Feb. 26, 1968 2 Sheets-Sheet 1

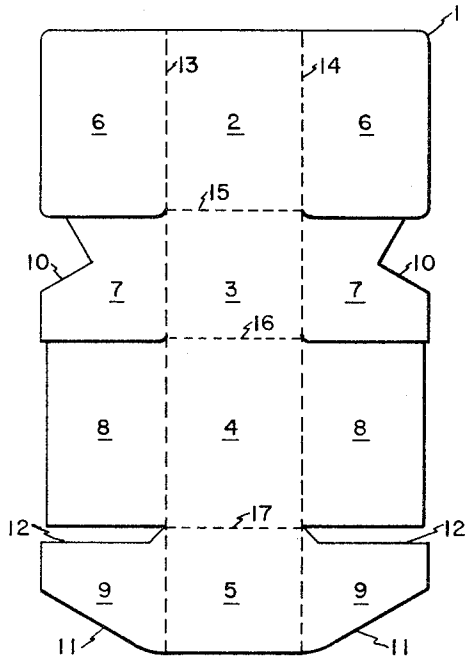


FIG. 1

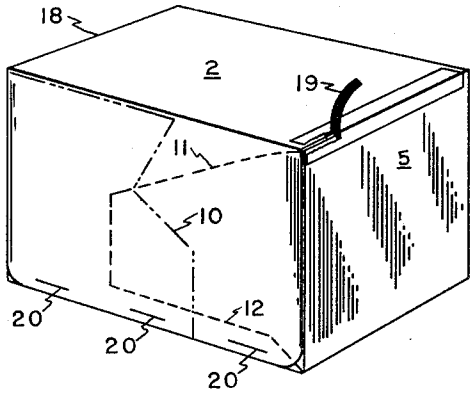


FIG. 2

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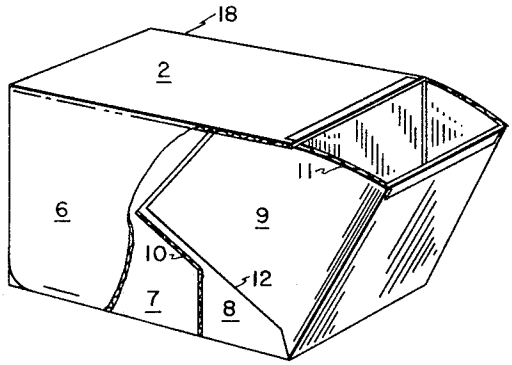


FIG. 3

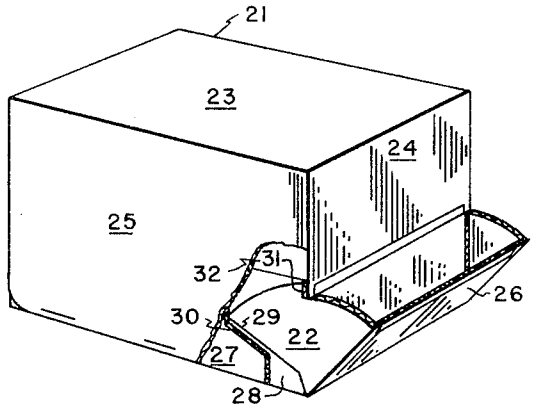


FIG. 4

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DISPENSING CONTAINER

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Int. Cl. B65d 5/72
U.S. Cl. 229—17 9 Claims

ABSTRACT OF THE DISCLOSURE

A foldably constructed dispensing container provided with a non-reclosable dispensing bin. Non-reclosure is achieved by sandwiching each of a pair of bin flaps between a side flap and an outer flap and in surface contact with a locking flap. Upon opening the bin, the bin flaps assume an edgewise alignment with the locking flaps thereby abuttingly preventing bin reclosure. Other features are disclosed for sealing the container and for achieving a locked-open condition.

Background of the invention

My invention relates to a dispensing container which opens for content removal and then is non-reclosable. It relates more specifically to such a container wherein the non-reclosure feature is achieved by means of a locking flap interposed between a cooperating pair of restraining flaps. Further, and in particular embodiment thereof it relates to a folded dispensing container provided with a dispensing bin which, upon opening, locks into a fixed open position.

This invention was conceived as a result of background problems related to self service merchandising. For selling items such as cabinet knobs, toys, service parts and the like it is highly desirable to provide a container adapted for bulk shipment of the product but yet suitable for easy opening and set up as an attractive dispenser. These general objectives are met by a number of prior art containers, typically structures such as that disclosed in U.S. Patent 2,684,792. However, prior art containers are generally subject to reclosure. In supermarket shopping where the opened dispenser performs a display function it is important to protect sales by preventing closure by passing customers.

Thus there has existed a requirement for a container adapted for the above stated shipping and dispensing functions, but moreover non-reclosable after opening. Additionally it has been desired to construct such a container from a single-piece blank and to combine non-reclosure with restricted opening to achieve locking in an opened position.

Summary of the invention

I have found that a non-reclosable feature can be incorporated into a folded dispensing container by providing the container with a pair of bin flaps defining side walls of a dispensing bin and placing at least one of the bin flaps in partial face-to-face contact with a corresponding locking flap. The locking action is performed in cooperation with an associated side flap and an associated outer flap which said flaps, upon opening of the bin, force the bin flap into edgewise alignment with the locking flap. Thereafter the previous face-to-face contact cannot be regained.

I have found further that the above non-reclosing feature may be combined with a restricted opening feature by appropriate configuration of the upper edge of the bin flap. Also, in relation thereto, I have found that closure for shipment is facilitated by trimming the lower edges of the bin flaps. This provides clearance for insertion of self-clinching staples after loading through the side. This

avoids the need for a gluing operation and makes an ideal shipping package. Accidental opening is precluded by application of a sealing strip to the front wall of the bin.

Description of the drawings

FIG. 1 is a blank for use in assembly of my container in the preferred embodiment.

FIG. 2 is a pictorial drawing showing a set up and closed container in the preferred embodiment.

FIG. 3 is a partially sectioned pictorial drawing showing a set up and opened container in the preferred embodiment.

FIG. 4 is a partially sectioned pictorial drawing showing a set up and opened container in an alternative embodiment.

Description of preferred embodiments

The preferred embodiment of my container is constructed from a single-piece blank as shown in FIG. 1. The blank is generally designated by the numeral **1** and is divided by parallel score lines **15**, **16**, and **17** into a top panel **2**, a rear panel **3**, a bottom panel **4**, and a front panel **5**. Parallel score lines **13** and **14** further divide blank **1** into a pair of outer flaps **6**, **6** attached to top panel **2**, a pair of locking flaps **7**, **7** attached to rear panel **3**, a pair of side flaps **8**, **8** attached to bottom panel **4**, and a pair of bin flaps **9**, **9** attached to front panel **5**. Locking flaps **7**, **7** are provided with recesses **10**, **10** the function of which will be described subsequently. Similarly bin flaps **9**, **9** are trimmed as shown generally at **11**, **11** and **12**, **12**.

Blank **1** is folded to make container **18** as shown in FIG. 2. Folds are made along score lines **15**, **16**, and **17** to place panels **2**, **3**, **4**, and **5** in top, rear, bottom and front positions respectively. The flap folding sequence is such that flaps **8** and **6** are on the inside and outside respectively with flaps **7** and **9** in partial face-to-face contact and sandwiched between flaps **8** and **6**. Recess **10** and trim lines **11** and **12** assume positions as illustrated by broken lines in FIG. 2. As shown in the figure, trim line **12** provides clearance between the lower edge of the bin flap and the bottom of the container. This permits use of staples **20** to secure the outer flap while yet permitting unrestricted movement of the bin flap. Container sealing is completed by applying a removable sealing strip across the abutting edges of top panel **2** and front panel **5**. The container is easily opened by pulling off the sealing strip or alternatively, as shown at **19**, by pulling a tear cord imbedded within the sealing strip.

The function of recess **10** is illustrated in FIG. 3 wherein the container **18** is depicted in a fully opened position. As shown, bin flap **9** has been opened beyond face-to-face contact with locking flap **7**. Flaps **6** and **8** have cooperated to place flaps **7** and **9** into edgewise alignment. This action is further assisted by pressure forces from any contents within the container. Any reclosure force is then resisted by engaging contact between the lower edge of flap **9** and the recessed edge of flap **7**. The locking angle is, of course, determined by the geometry of recess **10** and trim line **12**. However, it is obvious that recess **10** and trim line **12** are not essential to the practice of my invention. It is required only that flaps **7** and **9** be configured for partial face-to-face contact in the fully closed position and consequent edgewise alignment after bin opening.

Another feature of the preferred embodiment is the engaging contact between the upper edge of flap **9** and the lower surface of panel **2**. This contact limits bin opening, the amount of such opening being controlled by the trimming **11** at the upper edge of flap **9**. As illustrated in FIG. 3, the bin opening limit has been set equal to the

reclosure locking limit. This locks the bin in a fixed-open position.

The above described method of limiting bin opening is conveniently achieved because the preferred embodiment of my container has a full height front panel. Obviously it is practical to use a shortened front panel such as panel **26** of container **21** (see FIG. 4). In the alternative embodiment an extension panel **24** is foldably attached to top panel **23**. A tucking flap **32** is foldably attached on either side of panel **24**. As shown in FIG. 4, container **21** has on each side an outer flap **25**, a locking flap **27**, a bin flap **22**, and a side flap **28**. Flap **27** is provided with a locking recess **30** and flap **22** has its lower edge trimmed as at **29**. Bin opening is limited by trimming the upper edge of bin flap **22** to leave a projection thereon. Upon opening the bin, the above described projection rotates into abutting contact with the lower edge of panel **24** as shown at **31**. By adjusting recess **30** as well as the trimming of flap **22** it is possible to lock the bin in a fixed-open condition at any desired position.

The embodiments of my invention as above outlined are only representative of many possible combinations. For instance a useful container could be made with a different flap folding sequence or with my novel locking means employed on only one side thereof. Also the container could be inverted or rotated in orientation without departing from the scope of my invention.

The embodiments of my invention in which an exclusive property or privilege is claimed are defined as follows.

I claim:

1. A folded dispensing container comprising:

a front panel defining the front wall of a dispensing bin;

a pair of inwardly directed bin flaps foldably attached to opposed side edges of the front panel; and

reclosure restraining means comprising:

a side flap disposed interiorly of a corresponding bin flap,

an outer flap disposed exteriorly of said bin flap, and

a locking flap interposed between the side flap and outer flap and by the cooperative action thereof urged laterally toward the corresponding bin flap;

the locking flap and corresponding bin flap extending toward each other for partial face-to-face contact, said contact being so limited as to vanishingly diminish during partial opening of the bin thereby producing edgewise alignment of the locking flap and bin flap for edge abutting reclosure restraint.

2. A folded dispensing container according to claim **1** further comprising:

a bottom panel foldably joined along its front edge to the front panel;

a rear panel foldably joined along its bottom edge to the bottom panel; and

a top panel foldably joined along its rear edge to the rear panel;

said container being of single-piece construction and said side flap, outer flap, and locking flap being foldably attached to the three panels above set out on corresponding sides thereof.

3. A folded dispensing container according to claim **2** further comprising means for restricting bin opening to a predetermined amount and cooperating with said locking flap to lock the bin in a fixed-open position.

4. A folded dispensing container according to claim **3**, the rear panel and the front panel being of substantially equal height and the bin flaps being trimmed along their upper edges to permit opening of the bin; the amount of trim being such that the trimmed edges engage the under surface of the top panel when the bin flap lower edges clear the locking flap recesses, thereby halting the bin opening sequence and locking the bin in a fixed open position.

5. A folded dispensing container according to claim **4** further comprising reclosure restraining means on both sides thereof, each of said reclosure restraining means being defined as above set out.

6. A folded dispensing container according to claim **5**, the locking flaps being provided with area reducing recesses for producing said partial face-to-face contact with the bin flaps.

7. A folded dispensing container according to claim **6**, the outer flaps being foldably attached to opposed sides of the top panel, the locking flaps being foldably attached to opposed sides of the rear panel, and the side flaps being foldably attached to opposed sides of the bottom panel.

8. A folded dispensing container according to claim **7** further comprising on each side a row of staples joining the outer flaps to the side flaps, each row of staples being disposed in proximity and parallel to the fold line joining the corresponding side flap to the bottom panel, and the bin flap lower edges being trimmed to provide clearance for the rows of staples.

9. A folded dispensing container according to claim **8** further comprising a removable sealing strip for joining the front edge of the top panel to the upper edge of the front panel and thereby maintaining the dispensing bin in closed position for shipment.

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U.S. Cl. X.R.

206—31; 119—52