

Aug. 11, 1964

F. H. BARTZ

3,144,189

FOLDABLE EJECTOR INSERT FOR FOOD CARTONS

Filed July 6, 1962

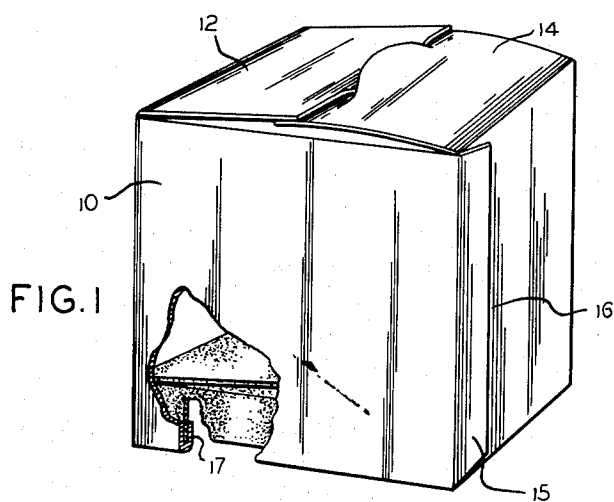
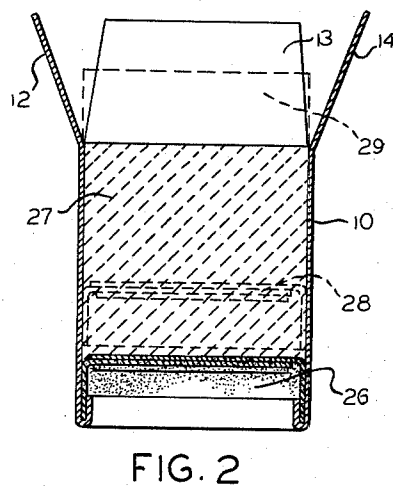
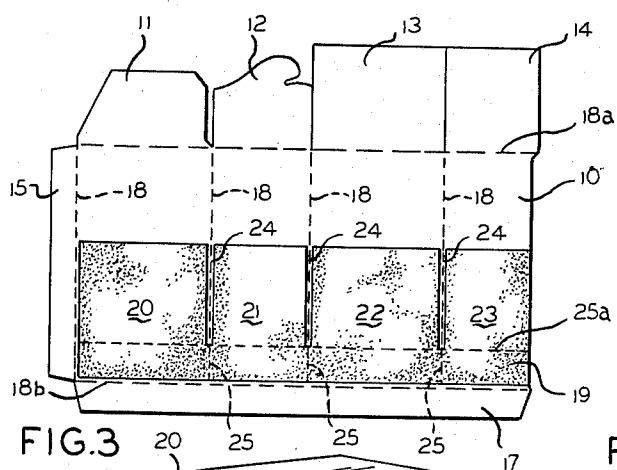
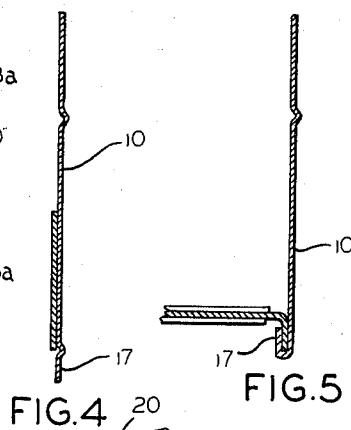


FIG. 5

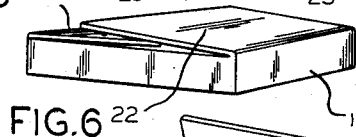


FIG. 7

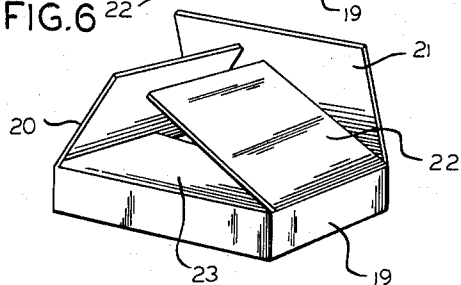


FIG. 8

INVENTOR
FRED H. BARTZ
BY

ATTORNEY

1

3,144,189

FOLDABLE EJECTOR INSERT FOR FOOD CARTONS

Fred H. Bartz, Hales Corners, Wis.
(9380 Loomis Road, Franklin, Wis.)
Filed July 6, 1962, Ser. No. 207,936
2 Claims. (Cl. 229-23)

This invention relates to carton constructions, and more particularly to a folding carton employed for packing perishable products, such as ice cream or the like.

It is well known in the industry that products like ice cream, when "scooped" out of conventional cartons, leave a surface that will be coated by condensation. When frozen, this definitely affects the quality of the product. One purpose of this invention is to provide a means of permitting the contents to be "pushed" out of, or ejected from the carton where it may be sliced, or otherwise removed from the carton. When the carton opening is sealed again, the construction tends to force the remaining contents of the carton into direct contact with the inner faces of all of the carton walls, thereby minimizing air spaces that might be a source of contamination.

Another purpose of the invention is to provide a folding carton "blank" that is easily fabricated with a "push-up" or ejector blank.

Another object of the invention is to provide a carton with an ejector, as described, in which the ejector is assembled with the folded carton, and arranged in a manner which permits it to be folded into functioning position either before or during the carton filling operation. Both the carton and ejector can be stored in a "flat" condition.

A further object of the invention is to provide a device of the character described, that is, constructed of the same material or board as that of the carton.

The device is simple in construction, economical to manufacture and highly efficient for the purpose for which it is intended.

Other and further objects of the invention will become more apparent in the course of the ensuing specification and claims with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a conventional carton employed to protect ice cream or the like, and illustrating in fragmentary cross section the arrangement of the "ejector" or insert mounting;

FIGURE 2 is a vertical cross sectional view of the carton filled with a product, and showing the insert in position;

FIGURE 3 is a plan view of a conventional carton blank which is cut out and scored ready for folding, and with the insert placed thereon before folding;

FIGURE 4 is a fragmentary cross sectional view of the insert in its relation to the carton prior to folding;

FIGURE 5 is a similar view of the insert folded and inserted into a bottom channel formed by the carton wall;

FIGURE 6 is a perspective view of the folded insert that would be disposed inside the carton when ready for use;

FIGURE 7 is a perspective view of the insert shown in FIGURE 6, during the folding operation; and

FIGURE 8 is a perspective fragmentary view of the carton and insert, during the folding operation.

Similar characters of reference indicate corresponding parts throughout the several figures of the drawings, and specifically referring now to the same, the character 10 designates a conventional carton constructed of cardboard or the like, equipped with top sealing laps 11, 12, 13, and 14, at its upper end, and a tab member 15, which is adherently applied to the outer face of the carton as shown at 16 in FIGURE 1 to hold the carton in the posi-

2

tion illustrated. The lower edge of the carton 10, is shown equipped with an upwardly extending tab portion 17 (FIGURE 1). The blank which makes up the entire carton is creased or scored for folding as shown by the dotted lines 18. Lines 18 are so spaced as to define the side portions of the carton. Additional creased or scored lines 18a and 18b may extend transversely to the lines 18 at the tops and bottoms of the side portions so as to define the top flaps 11, 12, 13 and 14 and the bottom tab 17.

By referring to FIGURE 3, it will be noted that a separate sheet or blank is placed in position as shown. This sheet 19 has slots 24 which are spaced in accordance with the spacing of lines 18. Blank 19 has a length equal to the combined length of the side portions in blank form (FIGURE 3). The slots 24 extend from the upper edge of blank 19 to points spaced from the lower edge. The slots 24 have a length equal to or slightly less than the width of the smallest side portion. The lower portion of blank 19 is creased or scored along the dotted lines 25, so that when the carton blank and the sheet 19, which are aligned with the slots 24 which constitutes an insert, are folded in a manner to bring the tab 17 upward as shown in FIGURES 5 and 8, the creases 18 and 25 will permit both the carton 10, and the sheet or insert 19, to be folded in a position as shown in FIGURE 8. The tab member 15 is then adherently applied to the outer face of the carton as shown at 16 in FIGURE 1 to hold the carton in the folded form. A creased or scored line 25a extends transversely to said slots 24 at the inner ends of the slots so as to provide flange portions adapted to be flush against the sides of the carton. These flange portions guide the bottom defining portions and hold them in the transverse position as they are moved outwardly. While the carton 10 and the insert 19 are being folded as shown in FIGURE 8, the projecting tabs 20, 21, 22 and 23 of the insert 19 will be positioned alongside the inside surface of the carton 10. In this position the carton 10 and the insert 19 may be stored flat and then opened into tubular form, as by the conventional mechanical equipment used in a filling operation.

Before the actual filling of the carton occurs, the flaps 20, 21, 22, and 23 of the insert 19, are forced downward, either manually or mechanically to a position shown in FIGURES 1, 6 and 7, which will provide a "push-up" or ejecting means shown at 26 in FIGURE 2, to force the contents shown at 27 in the carton upward as indicated by the dotted lines. As the insert 26 is pushed upward to the position shown at 28 in dotted lines in FIGURE 2, the contents of the carton shown at 27 may be sliced off at 29. The sealing flaps 11, 12, 13 and 14 may be re-closed so as to seal the carton. The contents 27 will be in direct contact with all of the inner surfaces of the carton walls.

Tab 17 provides a slot for the reception of the guiding flanges of the bottom blank 19. This tab prevents movement of the bottom blank outwardly through the bottom of the carton while allowing ready movement toward the top of the carton.

This arrangement thus minimizes any residual air spaces within the carton and thus minimizes contamination, thus maintaining the quality of the product.

Whereas I have shown and described an operative form of the invention, it should be understood that this showing and description thereof should be taken in an illustrative or diagrammatic sense only. There are many modifications in and to the invention which will fall within the scope and spirit thereof and which will be apparent to those skilled in the art. The scope of the invention should be limited only by the scope of the hereinafter appended claims.

3

I claim:

1. A carton blank assembly for ice cream and the like including a sheet creased along parallel lines to define plural sides of a carton and creased along another line extending transversely to said first named lines to define top flaps of the carton with the top flaps adjacent to the portions of the sheet defining the sides, means at one side of said sheet defining securing means for the carton, a crease extending transversely to said parallel lines so as to define a bottom holding tab adjacent to said portions defining said sides but on the other sides of said sheets from said top flaps, and a bottom defining blank positioned over the portions of said sheet defining said sides, said bottom defining blank having slots formed therein at positions such that said slots overlies the creased portions of said sheet defining said sides, the bottom edge of said blank being positioned alongside the crease defining said bottom holding tab whereby upon folding of the sheet along said lines into carton form, portions of said blank divided by said slots may be folded over one another to define a movable bottom of said carton with portions thereof positioned between said sides and said bottom holding tab.

2. A carton construction including a sheet of material folded along lines defining plural sides of a carton and

4

top closure flaps for a carton, means securing said sheet in said folded form, and a movable bottom for said carton, said movable bottom including a second sheet of material having slots extending from one edge thereof inwardly to a point spaced from the opposite side edge thereof so as to divide said sheet into areas having widths corresponding to the widths of said sides of said carton, the portions of said second sheet defining said areas being folded over one another so as to extend transversely to the sides of said carton, said second sheet having other portions alongside said first named portions and extending parallel to and positioned flush with the sides of said carton, said carton having a bottom tab secured to the bottoms of said side portions and folded inwardly in overlapping relation to the sides of said carton so as to provide a receiving slot around the sides of said carton for said other portions of said second sheet.

References Cited in the file of this patent

UNITED STATES PATENTS

1,889,581	Williams	Nov. 29, 1932
2,005,245	Stover	June 18, 1935
2,534,402	Blair	Dec. 19, 1950
2,973,127	Royce	Feb. 28, 1961