

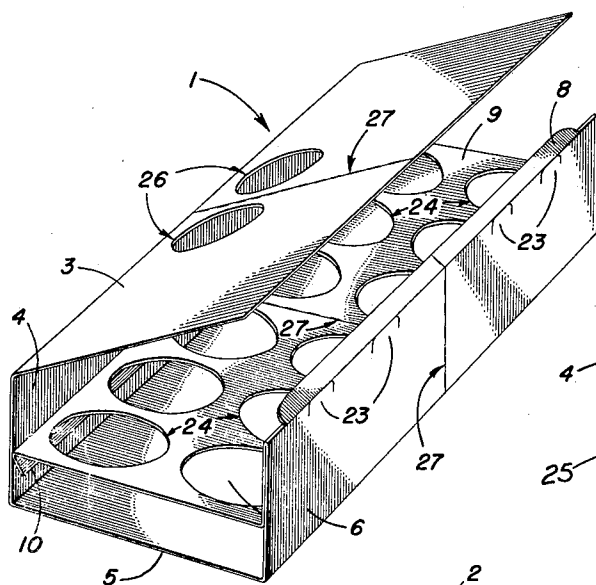
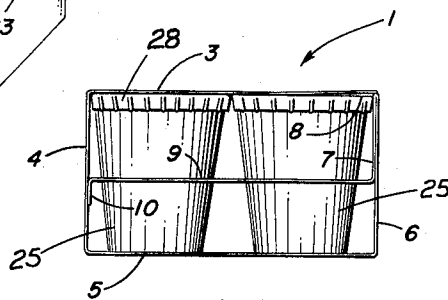
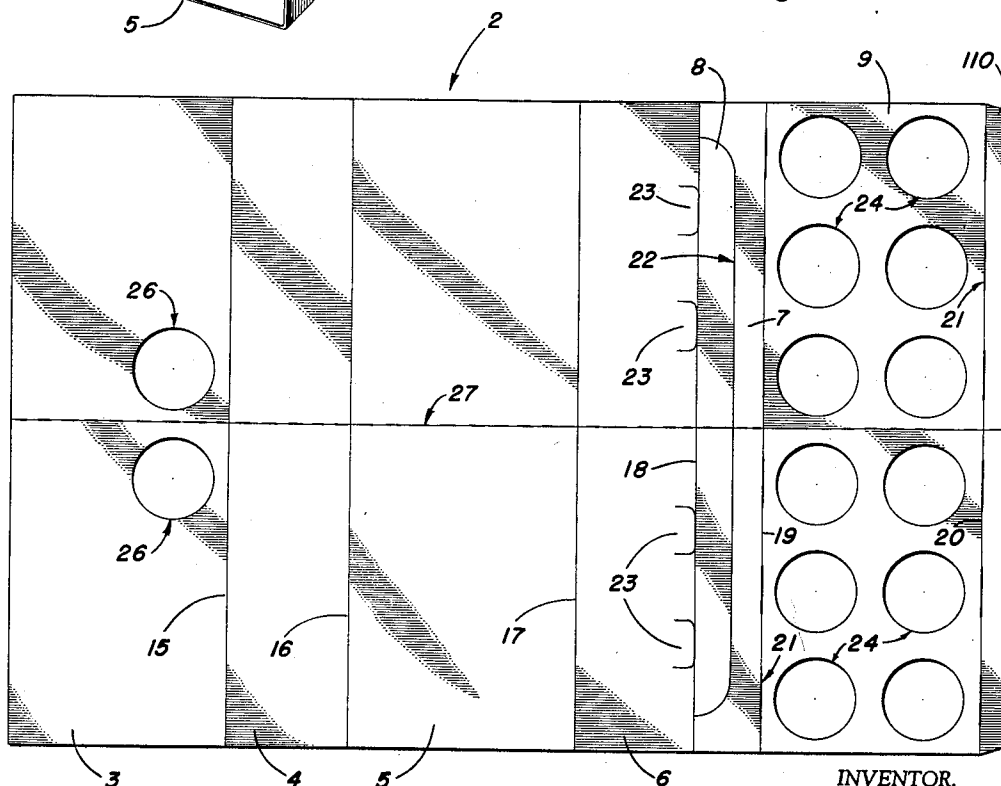
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2,919,844

CARTON FOR CUPS

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2,919,844

CARTON FOR CUPS

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1 Claim. (Cl. 229—28)

This invention relates to a carton for the packaging of cups and more particularly to a carton for supporting a plurality of cups. It is especially useful for products which are partially or completely frozen after the cups have been sealed in the carton.

Various cartons of this type have been developed in the past. This invention, however, is designed to provide a carton of this type which is easier to seal and which provides a reinforced upper portion of the front wall to better protect the cups where they are closest to the exterior walls of the box.

This invention is also designed to provide a carton which optionally may be sealed by adhesive or by stapling, depending upon the type of equipment available to the user. It is designed to provide a box which may be formed from a single piece blank and utilizing a minimum of material for the size of carton involved. At the same time, this invention provides a carton adapted to positively support the cups against any lateral or longitudinal shifting once they have been placed in the box. The carton clamps the cups, top and bottom, so that the covers for the cups, protecting their contents, cannot be disengaged until the carton has been opened. The design of the carton is such that individual cups cannot be moved without tearing or otherwise damaging the carton. This discourages pilfering of the carton's contents.

These and other objectives and advantages of this invention will be understood by those acquainted with the design and manufacture of paper board cartons upon reading the following specification and the accompanying drawings.

In the drawings:

Fig. 1 is an isometric view of the erected carton with the lid partially raised.

Fig. 2 is a flat pattern of the carton before folding.

Fig. 3 is an end view of the carton with the cups in place.

Referring specifically to the drawings, the numeral 1 indicates a carton formed from a rectangular blank 2.

The carton has a top panel 3, a back panel 4, a bottom panel 5 and a front panel 6. These panels are integral with each other. Integral with the front panel 6 are both a front flap 7 and a sealing flap 8. Integral with one edge of the front flap 7 is a rack panel 9 having an attachment flap 10 extending along one edge. Where the back panel 4 is joined to the top panel 3 and the bottom panel 5, fold lines 15 and 16 are provided, respectively.

The fold line 17 is provided between the front panel 6 and bottom panel 5. A common fold line 18 is provided at the juncture of the front panel 6 and the front flap 7 and sealing flap 8, since the sealing flap and the front flap hinge about the same axis.

The rack panel 9 is joined to the front flap 7 by a fold line 19 and to the attachment flap 10 by a fold line 20.

The top panel 3, back panel 4, bottom panel 5, front panel 6 and rack panel 9 each extend the full length

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of the carton. The back panel 4 and the front panel 6 each have a height equal to that of the carton. The width of the front flap 7 is only a portion of the height of the front panel 6, preferably about one-half of it.

The fold lines 19 and 20 may be partially relieved by the use of spaced slits 21 along the fold lines. The slits 21 reduce the resistance of the material to bending at the fold line.

The sealing flap 8 is formed by severing it from the front flap 7. The severance line 22 starts at the fold line 18 and extends into the front flap 7 approximately half the width of the flap and then along the flap and returns adjacent the other edge of the carton to the fold line 18. Thus, the sealing flap 8 is entirely freed from the front flap 7 and is secured only to the front panel 6. The ends of the sealing flap 8 are spaced from the side edges of the carton to provide a secure and integral attachment between the front flap 7 and the front panel 6.

A plurality of tabs 23 are cut in the front panel 6. The tabs 23 are severed from the panel along three sides with one side being coincident with the fold line 18. When the box is folded, the tabs are hinged to the front panel 6 along their lower edge.

The rack panel 9 is provided with a plurality of apertures 24, each designed to receive one of the cups 25. The size of the apertures 24 is such that the cups will pass through them and, when seated on the bottom panel 5, will be firmly held by the rack against movement laterally or longitudinally of the carton.

Preferably, the top panel 3 is provided with a pair of holes 26, one on each side of the score line 27. These holes permit visual inspection of the lid 28 of at least one of the cups so that the inscription describing the contents of the cup may be read. Thus, a single carton may be used for a number of different products without changing the inscription on the carton itself.

The carton may be initially folded by bending the front flap 7 down against the inside face of the front panel 6. In this position it is secured to the front panel 6 by suitable means, preferably adhesives. The attachment flap 10 is bonded to the back panel 4 in such a position that the rack 9 is parallel to the bottom panel 5. In securing the rack 9 to the back panel 4, the attachment flap may extend either up or down from the rack, although the latter provides a carton of slightly improved appearance. For purposes of shipment, the carton is then folded flat with the rack pressed down against the bottom panel and the top panel lying flat on the rack. It will be recognized that a different sequence of folding may be adopted, the one described being merely illustrative.

To fill the carton, the customer erects the box by causing the front and back panels to assume a position normal to the plane of the bottom panel. The filled cups 25 with their lids 28 in place are then placed in the carton by inserting one cup in each of the apertures 24 in the rack 9. The carton is closed by applying adhesive to the outer face of the sealing flap 8 which is then folded inwardly to engage the inside face of the top. In this position the top clamps down against the lids 28 of the cups 25. Where it is desired to close the carton by stapling rather than adhesives, the stapler is inserted through the openings formed by the tabs 23. In this operation, the tabs 23 bend inwardly while the stapler is in position. When the stapler is removed, the tabs 23 reassume a position closing or substantially closing the openings in which they fit.

It will be recognized that the cups need not be filled when they are initially placed in the carton. The cups may be first placed in the carton and then the carton passed through a filling machine where the cups are charged with their contents and capped.

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Where the carton is used for a product which must be frozen, the closed cartons are moved into a refrigerator for chilling. The carton forms a tunnel through which air may flow around the cups to freeze their contents rapidly. It will be recognized, however, that this carton may be used for a number of products other than those which must be frozen. As an example, they may be used for packing jellies, jams, cheese spreads and other types of commodities adapted to being merchandized in individual containers of limited capacity. It will also be recognized that the cups may be of any suitable material such as paper, plastic, metal or glass.

The invention provides a strong and effective carton utilizing a minimum of material and involving a minimum of equipment, time, and expense to erect and close. At the same time, it holds its contents firmly whereby it will not be damaged by shifting within the carton. Once sealed, the contents of the carton may not be removed unless the carton is actually torn open to provide access to its contents. This assures the purchaser of the full quantity of product represented on the exterior of the carton. The carton is lightweight and compact, reducing both its manufacturing cost and the cost of shipment. While a preferred embodiment of this invention has been described, it will be recognized that modifications of it may be made. Such of these modifications as embody the principle of the invention are to be considered as included in the hereinafter appended claims, unless these claims by their language expressly state otherwise.

I claim:

A blank for a carton for packaging a plurality of

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smaller containers, said blank being rectangular and having in the order recited a top panel, a back panel, a bottom panel, a front panel, a front flap, a rack panel, and a sealing flap; a creased fold line at the juncture between each of said panels and said flaps and panels; said rack panel having a plurality of perforations therein spaced from each other and from all edges of said panel; said bottom, top and rack panels each being of identical size; a sealing flap separated from said front flap along a line of severance of generally U-shaped configuration extending laterally of said blank a major portion of the width thereof; the ends of said line of severance being at the creased fold line between said front panel and said front flap; the main portion of said line of severance being parallel to said creased fold line and spaced therefrom approximately one-half the width of said front flap; the fold lines along both edges of said rack panel having a plurality of spaced slits whereby said fold lines will offer less resistance to bending than the others of said fold lines when said blank is folded.

References Cited in the file of this patent

UNITED STATES PATENTS

25	1,928,297	Mabee	Sept. 26, 1933
	2,072,371	Kaplan	Mar. 2, 1937
	2,411,144	Bergstein	Nov. 19, 1946
30	2,761,785	Steger	Sept. 4, 1956
	2,833,457	Tyrseck	May 6, 1958