

Feb. 26, 1963

M. YEZEK

3,079,063

CARTON

Filed Feb. 8, 1960

FIG. 1

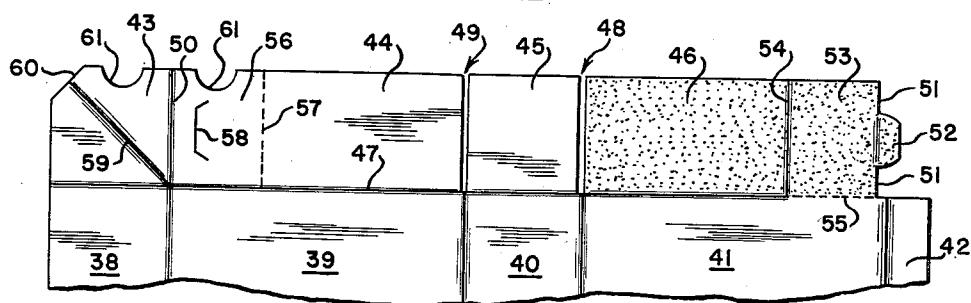


FIG. 2

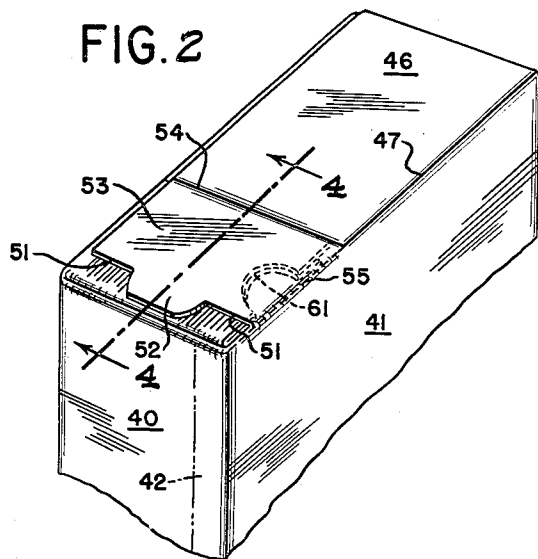


FIG. 4

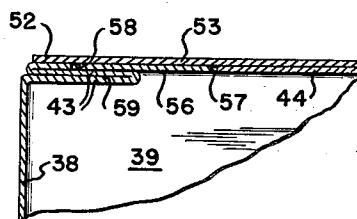


FIG. 5

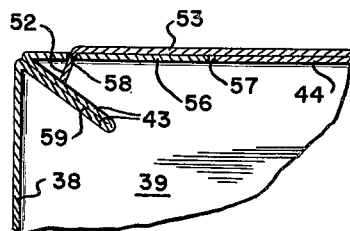
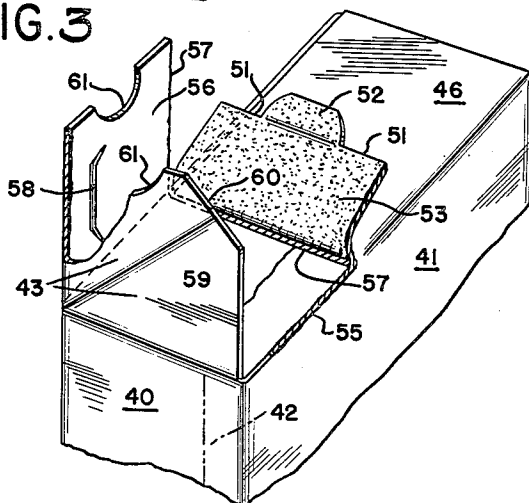


FIG. 3



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3,079,063
CARTON

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Filed Feb. 8, 1960, Ser. No. 7,487
3 Claims. (Cl. 229-17)

This invention relates to an improved carton for dried, comminuted material and to an improved blank from which the carton may be formed.

Cartons embodying the invention are similar in many respects to the carton disclosed and claimed in my prior Patent No. 2,933,230, being of the so-called "pouring-spout" type with top end and side flaps of novel configuration and appropriately scored and cut so that when the said top flaps are bent and/or broken upon the indicated weakened lines and the carton opened, one of the top end flaps and the adjacent end of one top side flap together form a pouring spout at one corner for ready removal of the contents of the package, said spout being foldable to reclose the carton. Provision is made in the opposite top side flap for a closure flap which may be folded downwardly over the pouring spout section when it is collapsed to provide a more positive closure for the carton and also a means for securing the flaps in closed position.

The invention contemplates a simplified and highly efficient opening and reclosure structure at one extremity of the carton top which may be readily opened by the consumer for the removal of the desired quantity of the contents and which may then be tightly reclosed after the desired quantity has been removed.

The reclosure feature of the carton is most important to maintain good moisture protection once the carton is opened. In the case of non-moisture protective cartons, the reclosure feature prevents spilling of the contents after opening and reclosure of the carton.

It is therefore an object of this invention to evolve a novel and improved readily openable carton structure which will provide a pouring spout for the removal of the contents after the upper closure flap thereof has been raised.

It is a further object of this invention to provide novel reclosure means for the carton whereby it can be tightly reclosed after removal of the desired quantity of the contents.

With the above objects in view, the invention, generally stated, resides in a carton having side and end wall panels and top closing flaps arranged to provide a preferably rectangular top opening at one corner. Hinged to the top edges of the side and end wall panels at said corner are flap extensions which form the two sides of a corner pouring spout and which are foldably connected so as to fold downwardly and to lie flat in said opening, preferably with sufficient area to substantially close the opening. For example, a vertical folding connection between the flap extensions at the corner of the carton together with a diagonal fold line across one or the other flap extension, will enable a bellows-type fold to be made.

The upper layer of the bellows or otherwise folded flap extensions is provided with a locking slit and a swingable cover is foldably or hingedly secured to the inner edge of said opening which extends between the side wall panels so as to swing downwardly over the folded flap extensions and close said opening. A tab on said cover is arranged to enter said slit and thus to lock the cover in reclosed position after use, and in new cartons the cover is adhesively or otherwise secured to said upper layer of folded material with said tab lying flat over the slit.

Referring to the drawings,

FIG. 1 is a plan view showing a form of blank from which a carton embodying the invention can be formed;

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FIG. 2 shows a closed and sealed carton made from the blank of FIG. 1;

FIG. 3 shows the carton of FIG. 2 opened with its pouring spout extended;

FIG. 4 is a detail view on the line 4-4 of FIG. 2 showing the carton of FIG. 2 in closed condition; and

FIG. 5 is a detail view similar to FIG. 4 showing the carton in reclosed condition.

FIGS. 1-5 inclusive show an embodiment of the invention in which the blank comprises foldably connected sections 38, 39, 40, 41 and 42. FIG. 1 shows only the upper end of the blank, the lower end being conventional. The upper end of each of the panels 38, 39, 40 and 41 is provided with a flap extension 43, 44, 45 and 46 respectively, each extension being connected to its associated panel by a fold line 47. Flaps 45 and 46 are separated from each other by a cut indicated at 48, and flaps 44 and 45 are similarly separated by a cut indicated at 49, but flaps 43 and 44 are integral with one another, being foldably connected by the fold line 50 similar to the fold line 28 of FIG. 1 of my prior patent referred to above.

The side flap 46 is cut away at the end of the blank as indicated at 51 to form a tab 52, and the end section 53 on which the tab 52 is formed is foldably connected with the remainder of the side flap 46 by means of a fold line 54, and is detachably connected with the side wall panel 41 by means of a tear line 55 shown in dotted lines. Thus by grasping the tab 52, the end section 53 can be torn loose from the side wall panel 41 along the line 55 and lifted up relative thereto, bending relative to the flap 46 about the fold line 54 which acts as a hinge.

The opposite side flap 44 is similarly provided with an end section 56 that is detachably connected with the remainder of the flap 44 by means of the tear line 57 shown in dotted lines. This end section 56 is also provided with a locking slit 58.

As already mentioned, end section 56 is foldably connected with the end flap 43 by means of the fold line 50, and said end flap 43 is provided with a diagonal score line 59 to provide for a bellows-type fold such as described in my prior patent mentioned above, the corner of the end flap being cut away at 60 in the same manner and for the same reasons. Finger notches 61 in the edge of the end section 56 and in the edge of the end flap 43 are arranged so as to be in registry when the carton is closed.

FIGS. 2 and 4 show the carton in the closed and sealed condition in which it is offered for sale to the consumer. The end section 53 is coplanar with the remainder of the side flap 46 and lies flat over the bellows-folded end flap 43 and end section 56 with the tab 52 projecting toward the end of the carton and covering the slit 58. When it is desired to use part or all of the contents of the carton, the tab 52 is grasped and pulled upwardly so as to lift the end section 53, breaking its adhesive or other connection with the underlying bellows-folded section and tearing it away from the side wall 41 along the tear line 55, said entire end section 53 being thus foldable upwardly about the hinge line 54. This position of the end section is shown in perspective in FIG. 3. It will be evident that when the end section 53 has been so lifted and folded back, the bellows-folded end section 56 and end flap 43 can be lifted up by inserting a finger in the registering finger notches 61 to the position shown in FIG. 3 in which said two members 56 and 43 form the two sides of a trough-like pouring spout at the corner of the carton.

As soon as the desired amount of the contents of the carton have been dispensed, the spout structure can be folded downwardly by pushing inwardly along the bellows-fold line 59 so as to fold the spout structure back into the overlapping condition shown in FIGS. 2 and 4. Preferably the area of the folded structure is such as

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substantially to close the opening in the top of the carton. If necessary, the corner of the folded structure at the end of the bellows-fold line 59 can be cut away as shown at 60 in order to enable the folded structure to fit snugly within the opening at the top of the carton. It will be seen that in this folded condition, the end section 56 forms the upper layer of the folded structure with the locking slit 58 exposed at the top of the carton. Thus when the cover flap, i.e., the end extension 53, is folded back downwardly, it covers the bellows-folded pouring spout structure and closes the opening in the top of the carton. In such reclosing operations, the end tab 52 is preferably inserted in the locking slit 58 so as to secure the parts in locked condition. As indicated in FIG. 5, the bellows-folded parts of the end flap 43 tend to sag downwardly from the upper corner of the carton or at least can easily be pushed downwardly when the tab 52 is inserted in the slit 58.

This novel easy opening and reclosure structure provides for easy opening which may be accomplished without the use of any instrument but the fingers and further provides for a substantially moistureproof reclosure of the carton and one which will positively prevent loss of the contents thereof. Further, due to the fact that two thicknesses of end flap 43, one thickness of section 56 and one thickness of outer flap 53 are provided over the opening in the carton end, a highly improved moistureproof reclosure is evolved which is of considerable mechanical strength and which will maintain the carton in fully closed position until it is desired to reopen it.

The invention disclosed herein is susceptible of numerous additional embodiments without departing from the spirit thereof. The dimensions of the carton may be changed at will and the disposition of the opening structure may be varied without departure from the spirit of the invention.

Attention is directed to the appended claims for a definition of the scope of this invention.

What is claimed is:

1. In a carton, a carton forming blank having side and end wall panels, extensions on said panels forming top closing flaps for said carton, said top closing flaps including side closing flaps and end closing flaps, one of said side closing flaps including an end section defined therein by a fold line extending across said flap and by a weakened line connecting said end section with said side wall panel, an opposed side flap and an end flap made integral and foldably connected with each other, said opposed side flap being provided with an end section opposite said first end section and defined therein by a weakened line, said integral end flap being provided with a diagonal bellows fold line from the corner of the carton to the outer free corner of said end flap whereby said integral side and end flaps may be folded downwardly under said first side flap, said opposed side flap and end section and said first named side flap and end section extending substantially across the top of the carton in superposed overlapping relation and being secured together substantially throughout the entire area of the top of the carton, the end section of said opposed side flap having a locking slit disposed parallel to but spaced from the top edge of said end wall panel when the end

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section is folded down into the plane of the carton top, the free edge of the end section of the first named side flap being cut back to form a tab projecting coextensively with the end of the carton and lying flat on the top of said folded-down end section covering said slit, said weakened lines providing means whereby said carton may be opened by grasping the tab and pulling up the upper end section and folding it back on the hinge provided by said first named fold line and then by pulling up the lower end section to form a pouring spout at one of its corners, said lower end section and integral bellows-folded end flap being refoldable downwardly under said upper end section and said tab being insertable in said slit to maintain them in reclosed position.

2. In a carton as defined in claim 1, the free edge of the end section of said opposed side flap and the two free edges of the bellows-folded end flap registering in superposed relation, and said free edges of the end section and of the upper bellows fold having registering finger recesses above the margin of the lower bellows fold for pulling up said pouring spout structure.

3. A carton-forming blank having side and end wall panels and extensions of said panels forming top closing flaps, one side closing flap including an end section at one end thereof which is defined by a fold line extending across said one side flap and a weakened line foldably connecting said end section with its associated side wall panel, the opposed side flap and one end flap being made integral and foldably connected together, said opposed side flap having a second end section which underlies said first end section when the carton is closed and is defined by a weakened line extending across said opposed side flap, said end sections having equal dimensions in a direction which is parallel to said side wall panels when the carton is closed and said dimensions being less than the width of said end panel and said integral end flap, said integral end flap having a diagonal bellows-fold line extending from that corner which is joined to said side flap and to said end panel outwardly toward its outer free corner, said outer free corner being cut away transversely to said fold line whereby said bellows-folded end flap lies within the area of said end sections when the top flaps of the carton are closed, the width of said first end section being less than that of the opposed end section in a direction which is parallel to said side wall panels when the carton is closed, but said first end section having a closing tab, the combined width of said first end section and its closing tab being equal to the width of said opposed end section, said second end section having a tab-receiving slit located substantially parallel to but beyond the end of said first end section and being covered by said closing tab when the carton is closed.

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