

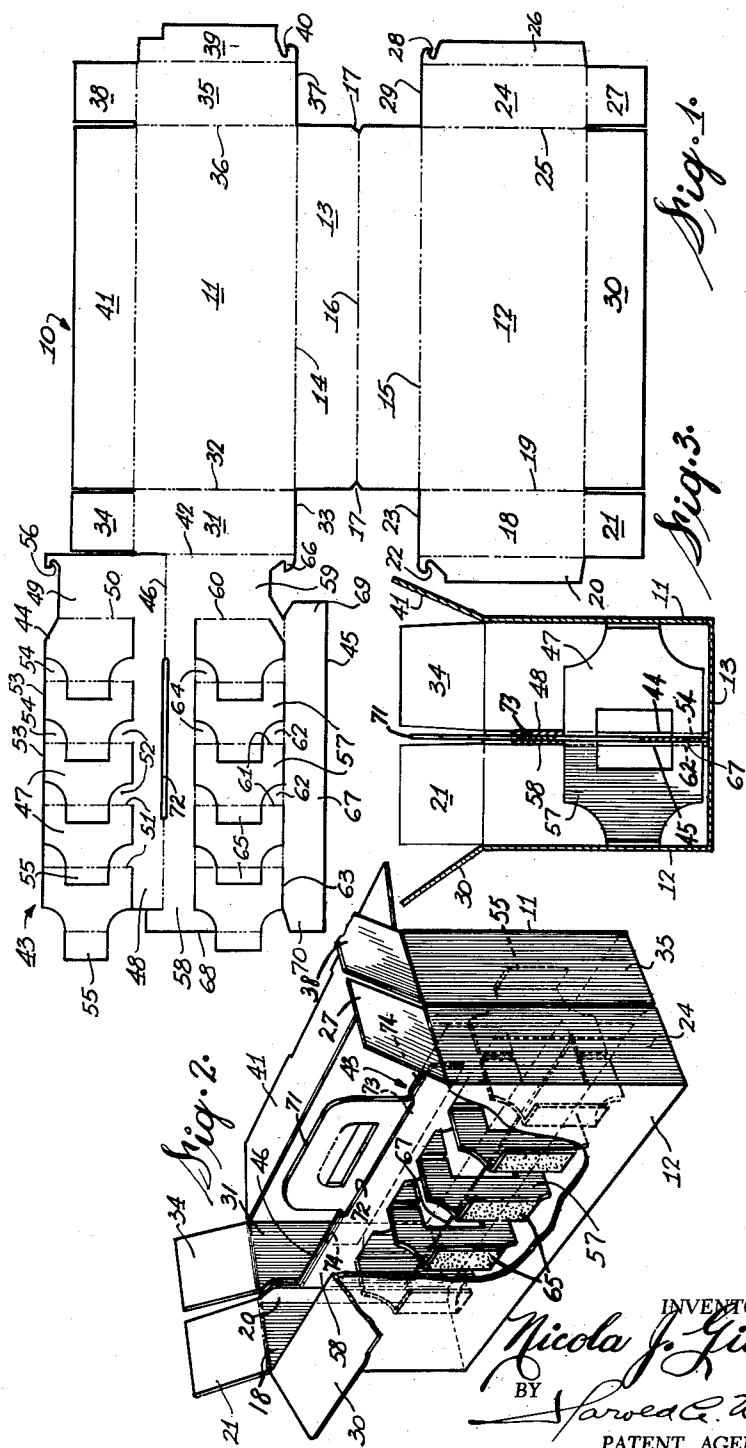
Aug. 3, 1962

N. J. GIOIA
CELLULAR CARTON

3,198,381

Filed Nov. 19, 1962

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

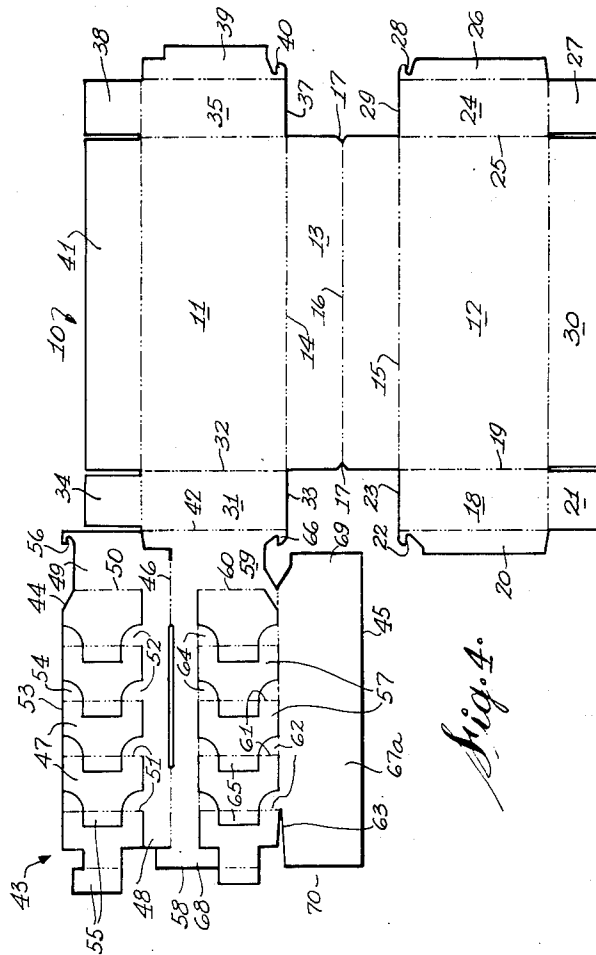


Fig. 4.

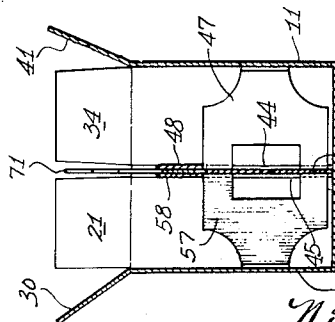


Fig. 5.

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CELLULAR CARTON

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1 Claim. (Cl. 220-115)

This invention relates to cellular cartons. This application is a continuation-in-part of application Serial No. 220,763, filed August 31, 1962, now abandoned.

The use of cellular cartons in the distribution of bottled beverages and the like is extremely widespread. While such a carton must provide adequate protection for its contents and be subject to convenient handling by the purchaser of such contents, it is also highly desirable that it be capable of inexpensive manufacture whereby marketing costs are not too high, and that it be of preformed, collapsible nature for ease of storage and packing.

It is an object of this invention to provide a cellular carton which may be formed from a one-piece blank, which is subject to a convenient forming and assembly procedure, and with which may be readily incorporated, a handle member.

Another object is to provide a cellular carton formed from a one-piece blank and having an interior partition structure of increased strength and of greater article protective nature while not substantially increasing the manufacturing costs thereof.

The invention will be described with reference to the accompanying drawings, in which

FIGURE 1 is a plan view of a blank employed in the formation of a carton in accordance with the invention,

FIGURE 2 is a perspective view of the carton in formed and erected condition,

FIGURE 3 is a transverse sectional view of the carton,

FIGURE 4 is a plan view of a blank employed in the formation of a slightly modified carton, and

FIGURE 5 is a transverse sectional view of a carton formed from the blank of FIGURE 4.

Referring to the drawing, the blank 10 comprises a pair of laterally opposed rectangular side wall panels 11 and 12 connected by an imperforate bottom wall panel 13 along longitudinal fold lines 14 and 15. Bottom wall panel 13 has a longitudinal medial fold line 16 and may be notched at 17 at the terminals of such line.

An end wall panel 18 extends from one end of panel 12 along fold line 19 and is provided with a panel joining flap 20 and a top closure flap 21. Flap 20 is provided with a recessed shoulder 22 adjacent bottom edge 23 of panel 18.

An end wall panel 24 extends from the other end of panel 12 along fold line 25 and is provided with a panel joining flap 26 and a top closure flap 27. Flap 26 is also provided with a recessed shoulder 28 adjacent bottom edge 29 of panel 24.

Panel 12 is provided with a top closure flap 30.

An end wall panel 31 extends from one end of panel 11 along fold line 32 in laterally opposed relation to end wall panel 18. Panel 31 has a bottom edge 33 and a top closure flap 34.

An end wall panel 35 extends from the other end of panel 11 along fold line 36 in laterally opposed relation to end wall panel 24. Panel 35 has a bottom edge 37, a top closure flap 38, and a panel joining flap 39. Flap 39 has a recessed shoulder 40 adjacent bottom edge 37.

Panel 11 is provided with a top closure flap 41.

Extending from end wall panel 31 and connected thereto by fold line 42 is a partition forming panel 43 having two laterally opposed sections 44 and 45 joined by a longitudinally extending fold line 46. It will be observed that fold line 46 extends from a point on panel 31 which

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is closely adjacent top closure panel 34 and relatively remote from bottom edge 33.

Panel section 44 has partially severed therefrom a plurality of transverse partition members 47, a top longitudinal partition strip 48 extending from end to end thereof, and an end portion 49 depending from strip 48. As shown, an end partition member 47 is foldably connected to portion 49 along fold line 50. Each of the other partition members 47 is foldably connected along fold line 51 to a tab 52 depending from strip 48. Each partition member 47 is otherwise unconnected to any portion of section 44, i.e., the aligned bottom edge 53 of such members are not connected to the panel section. Each partition member 47 has a tab 54 foldably connected to the lower portion of the member and a tab 55 foldably connected to a medial portion of the member. Portion 49 is provided with a recessed shoulder 56 on its lower edge.

Panel section 45 has a plurality of transverse partition members 57 partially severed therefrom, a top longitudinal partition strip 58 extending from end to end thereof, and an end portion 59 depending from strip 58. End partition member 57 is foldably connected to portion 59 along fold line 60. Each of the other partition members 57 is foldably connected along fold line 61 to a tab 62 depending from strip 58. Each partition member 57 is also otherwise unconnected to any portion of section 45, the aligned bottom edges 63 of such members being unconnected to the panel section.

Each partition member 57 has a tab 64 foldably connected to the lower portion of the member and a tab 65 foldably connected to a medial portion of the member. Portion 59 is provided with a recessed shoulder 66 on its lower edge.

A bottom longitudinal partition strip 67 is foldably connected to tabs 64. Strip 67 may be provided with a planar end tab 68.

In the assembled carton, the panel sections 44 and 45 are doubled upon each other along fold line 46 with strip 67 disposed therebetween. Bottom tabs 54 and 62 of the transverse partitions 47 and 57 are adhesively secured to opposite side surfaces of strip 67, and tabs 55 and 65 are adhesively secured to respective side walls 11 and 12.

End wall flaps 26 and 39 are pasted together to form one end wall of the carton composed of panels 24 and 35.

End wall flap 20 is adhesively secured to the end edge area of panel section portion 49, which is adhesively secured to the abutting edge area of portion 59, thus forming the other end wall composed of panels 18 and 31.

End tab 68 of strip 67 is pasted to end tab 39.

The end area 69 of strip 67 is pasted between panel sections 44 and 45. The other end area 70 of strip 67 is pasted to end tab 39.

It will be observed that shoulders 28 and 40, in the assembled carton, are in superimposed relation to form a composite shoulder. Likewise, shoulders 22, 56 and 66 are superimposed to form a composite shoulder. These composite shoulders are employed in conventional manner to enter notches 17 to lock the carton in erected condition.

A handle member 71 may be associated with the carton, such handle member having a hand hole section arranged to project through a slot 72 along fold line 46, and a section 73 disposed between panel sections 44 and 45. Section 73 has shoulders 74 engageable with the fold line connection between the panel sections. It will be apparent that the handle may be retracted entirely within the carton or withdrawn into carrying position as shown in FIGURE 2.

It will be apparent that strip 67 provides a most effective support for the bottom tabs of the transverse partitions as well as constituting the lower section of the lon-

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gitudinal partition of the carton. It is conveniently associated with panel section 45 and, therefore, contributes to the ease of assembly of the carton. Moreover, its particular association with panel section 45 lends itself to economical production of the blank from the base sheet material with substantially little wastage of material.

Referring to FIGURES 4 and 5, the blank shown is substantially identical with that illustrated in FIGURE 1, with the exception that the strip 67 is replaced with a strip 67a similarly positioned by having a substantially greater width. Thus, while strip 67 has a width terminating above bottom tabs 54 and 62 and below tabs 52 and 64, strip 67a has a width terminating slightly above tabs 52 and 64 which are, therefore, adhesively secured to strip 67a. Thus, a closely integrated interior partition structure is provided which possesses great strength as well as improved article protection.

As shown, strip 67a has a width (or height, as applied to the complete carton) which is at least half the carton height (somewhat more than half in the modification shown), there is no possibility of bottles in transversely opposed cells coming into contact with each other following placing in such cells.

I claim:

A carton comprising a one-piece blank having laterally opposed side wall panels, a bottom wall panel joining said side wall panels, an end wall panel portion extending from each end of each said side wall panel, each pair of said end wall panel portions being secured together to form an end wall, a partition-forming panel extending inte-

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grally from one of said end wall panel portions, said partition-forming panel having two panel sections foldably connected along a longitudinally extending fold line and doubled upon each other along said fold line for forming a folded top edge for the partition of the carton, a plurality of transverse partition members partially severed from each said panel section, each said partition member having a foldable connection with one of said panel sections, each said panel section having a top strip portion extending from end to end thereof, and a partition strip foldably connected to one of said panel sections along a longitudinally extending fold line parallel to said first fold line and disposed between said panel sections thereby forming a folded bottom edge for the partition, said partition strip extending from end to end of said carton, said partition strip fold line being engageable with said bottom wall panel, each said partition member having a tab secured to one of said side walls and a tab secured to said partition strip adjacent the bottom wall panel, said partition strip having end sections each adhesively secured between said end wall panel portions of a pair thereof.

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