July 3, 1962 R. E. DE PAUL 3,042,283

BOTTLE CARRIER

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Fig. 3

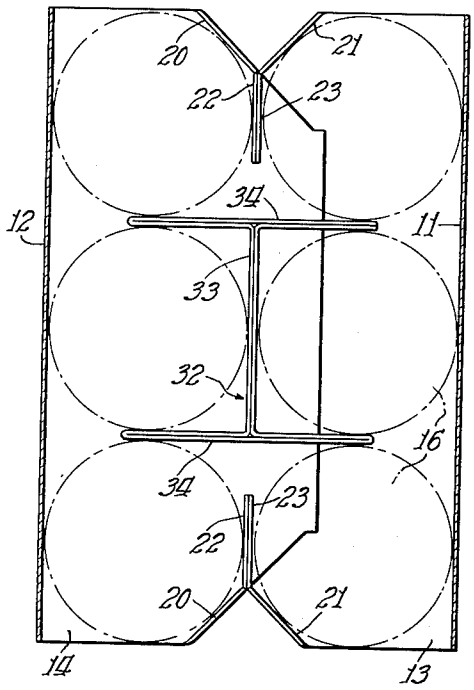


Fig. 1

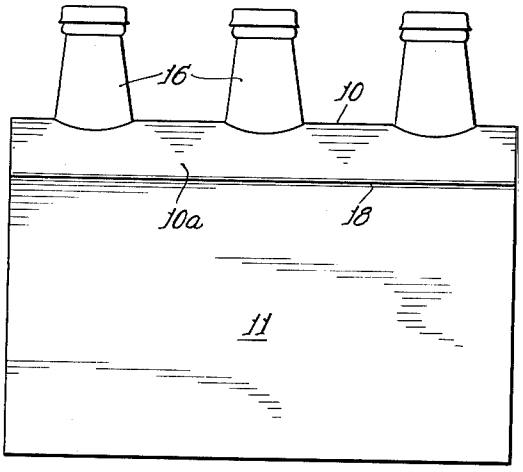


Fig. 2

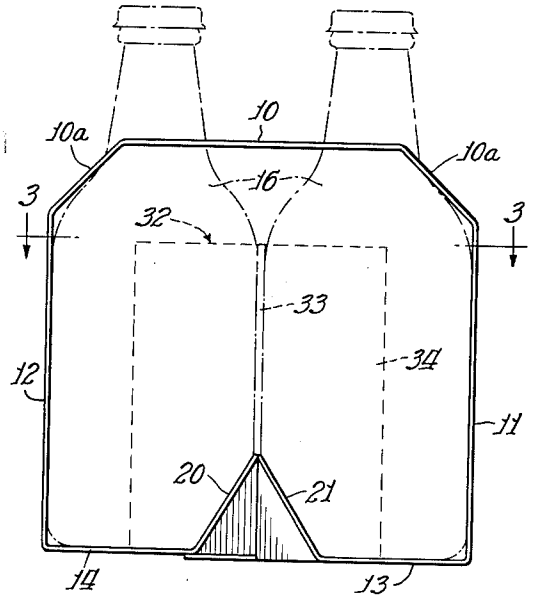
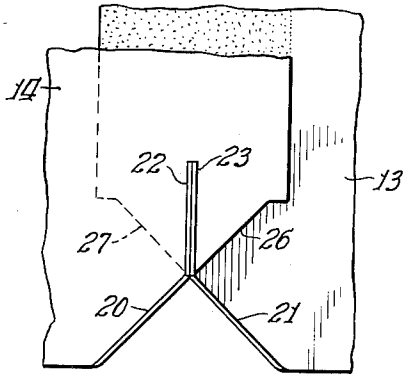


Fig. 4



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BOTTLE CARRIER

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Fig. 6

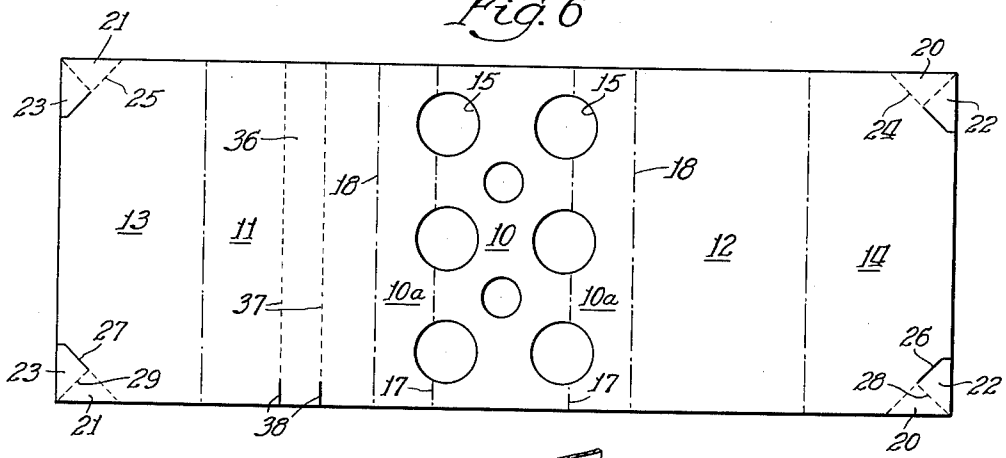


Fig. 5

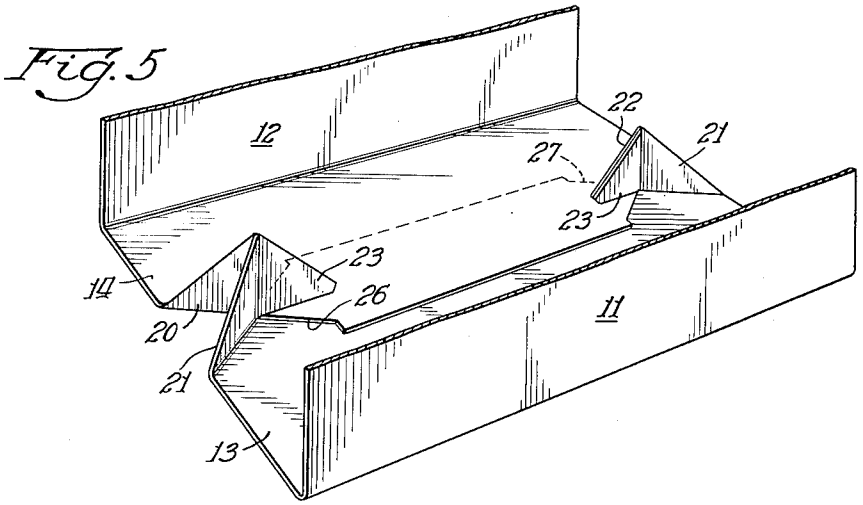
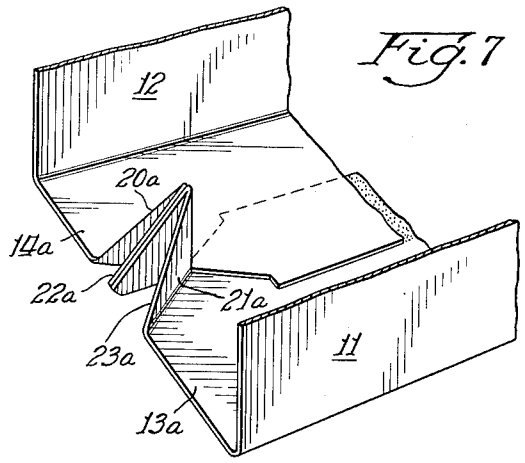


Fig. 7



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3,042,283

BOTTLE CARRIER

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Filed May 31, 1960, Ser. No. 32,736
2 Claims. (Cl. 229—40)

The present invention relates to paperboard cartons, and more particularly to cartons of open end, wrap-around style designed to carry two rows of bottles.

An important object of the invention is to provide an improved open end carrier for bottles, having retaining means at one or both open ends which will tend to prevent accidental disengagement of the bottles from the carrier.

A further object is to provide a carrier of the type referred to having a central, upstanding retaining member at one or both ends of the carrier which has combined therewith an effective bottle separating or partition element, whereby adjacent bottles at the open end of the carrier are held from outward movement and also held out of contact with each other by the retaining member.

A further object is to provide an alternate manner of forming the retaining member to achieve a relatively high degree of rigidity in such member to enable it to keep its shape even when the filled carrier is subjected to rough handling.

Additional objects and advantages of the present invention will become apparent as the description proceeds.

In the drawings—

FIG. 1 is a side elevational view of the carrier loaded with bottles;

FIG. 2 is an end view showing the upstanding retaining member in position to engage the lower portions of adjacent bottles;

FIG. 3 is a horizontal, sectional view taken along line 3—3 of FIG. 2, to show the retaining members and a separate center partition, and showing inwardly extending parts on the retaining members serving as supplemental partition elements;

FIG. 4 is an enlarged, fragmentary, detail view to show how the two end portions of the wrap-around carrier are brought together and how the corner portions are joined to form the retaining member;

FIG. 5 is a fragmentary, perspective view with the upper portions of the carrier broken away to show the retaining members and their inwardly extended partition forming elements;

FIG. 6 is a reduced scale plan view of the carrier blank, showing the manner of slitting and creasing the blank at the corners to provide the retaining members; and

FIG. 7 is a fragmentary, perspective view of one lower end portion of a modified form of retaining member having the same basic structure as that shown in FIG. 5, but with the partition forming parts folded outward and secured together to form a retaining member having greater strength to resist deformation.

The carton of the present invention, as herein disclosed, is formed from an elongated, rectangular blank of folding paperboard. The blank provides a top panel which may have openings to admit the necks of bottles. At the lateral edges of the top panel are sloping corner portions to conform to the shoulders of the bottles. The sloping corner portions connect with side walls which carry rectangular bottom sections on their lower edges. The bottom sections are secured in overlapping relation to form a composite bottom panel. The two center bottles of each of the rows are separated by the center panel of a partition member having transverse end panels to

separate the two center bottles from the adjacent bottles at the ends of the rows.

At each of the open ends of the carton an upstanding retaining member is provided to prevent outward displacement of the end bottles. These retaining members comprise triangular flaps formed by folding upward the adjacent corner portions of the bottom forming panels. These flaps carry connecting portions which may be brought into face-to-face relation and secured together to hold the retaining flaps in permanent raised position. The connecting portions extend centrally inward a sufficient distance to act as separating partions for the respective pairs of bottles at the ends of the rows. Thus, by the use of the separate partition member and the connecting portions of the retaining members, all bottles in the carrier are kept out of direct contact with each other.

In the alternative form of the invention the retaining member connecting portions are folded outwardly and secured together to provide increased rigidity for the retaining members. In the use of this form the partition member would be formed with end portions to keep the outer pairs of bottles out of contact with each other.

Referring more particularly to the drawings, the blank from which the carrier may be made is shown in FIG. 6. This blank is cut from foldable paperboard, to have an elongated rectangular shape, and is die cut and crease scored to provide a central or top panel **10**, side wall panels **11** and **12** and two rectangular bottom sections **13** and **14** designed to be joined in overlapping relation to form a composite bottom panel. The carton or carrier as shown is constructed to hold bottles and, while the invention is particularly suitable for bottles, it is also contemplated that the invention may be employed to advantage for carrying filled cylindrical cans as well as other cylindrical articles, with or without a reduced size neck portion typical of bottles.

The top panel **10** is die cut to provide two rows of openings **15**, **15** through which the necks of bottles **16**, **16** may extend. See FIG. 1. The top **10** includes two sloping panels **10***a*, **10***a* defined from the main portion **10** by fold lines **17**, **17** and from the side wall panels by fold lines **18**, **18**. These portions **10***a* generally conform to the slope of the rounded shoulders of the bottles.

The bottom sections **12** and **13** are secured in overlapping relation preferably by means of adhesive applied to one or the other bottom sections. Means are provided on the ends of the composite bottom for retaining bottles from accidental displacement from the open ends of the carrier. For this purpose the adjacent corner areas of the companion bottom sections are cut and creased to provide upwardly foldable retaining portions or flaps **20**, **20** and **21**, **21** and swingable portions or flaps **22**, **22** and **23**, **23** on the respective flaps **20** and **21**. These are provided as shown in FIG. 6 by forming diagonal creases **24** and **25** in the respective sections **13** and **14** and by forming diagonal slits **26** and **27** aligned with the respective creases **24** and **25**. Additional creases **28** and **29** are impressed in the respective sections **13** and **14** extending from the corner of the section inwardly to the point of juncture between the aligned creases and slits. By this construction the flaps **22**, **22** and flaps **23**, **23** are carried by and free to swing on the respective flaps **20** and **21**.

By folding the retaining flaps **20** and **21** upwardly, as best shown in FIG. 5, after the carton is in place around the bottles and by bringing the flaps **22** and **23** into face-to-face relation and securing them, as by means of adhesive, the retaining flaps will be held in upwardly directed bottle-retaining condition.

Additionally, by properly proportioning one or both of the flaps **22** and **23** so that they will extend inwardly

and axially of the carrier in positions parallel to the side walls, a separating or partitioning means is provided which will keep the bottles at the ends of the rows from contact with each other. See FIG. 3. Accordingly, by use of this construction the partition member, indicated as a whole at **32**, need only provide a central panel **33** and end panels **34**, **34** to separate the two middle bottles from each other and from the end bottles.

The modified form of the invention, illustrated in FIG. 7 is preferably made from a blank cut and creased in the manner shown in FIG. 6, thus providing bottom sections **13***a* and **14***a* with flaps **20***a* and **21***a* foldable upwardly to serve as the bottle retaining member. Flaps **22***a* and **23***a*, which are carried by the respective flaps **20***a* and **21***a*, will be folded outwardly and arranged in face-to-face relation. By securing these flaps **22***a* and **23***a* in such relation the retaining flaps will be maintained firmly in upright position. This construction provides a somewhat more rigid structure than in the first described form. In the use of this form of the invention a separate inner partition member will preferably be provided which contains parts extending between the bottles at the ends of the rows.

If desired, a tear-cut strip **36** may be provided in one of the side walls, herein shown as being formed in side wall **11**. The strip **36** is defined by two lines of weakness **37**, **37** formed by cut scoring or by lines of separated short slits. Short cuts **38**, **38** may be formed extending inwardly from a marginal edge of wall **11**. These cuts provide a short, free tab portion which may be grasped easily to facilitate tearing out the strip **36**.

In the use of the carrier, the bottle group may be supported in upright position on a thin metal blade. The carrier blank is moved down with the top panel in registration with the bottle tops so that the necks will project through the openings **15**. The side walls are folded down against the sides of the bottles, with the bottom sections projecting downward, adhesive may be applied to the edge portion of one section, and the bottom sections are then moved to lapping relation. The supporting blade will then be removed and suitable operating devices may then be employed to displace the retaining members upwardly and into the positions illustrated. After the adhesive has set, the filled carrier is ready for delivery to sales outlets.

From the foregoing it is apparent that the present invention provides an improved form of open end wrap-around carrier, particularly adapted for the safe packaging of bottles. By folding the hinged flaps **22** and **23** inwardly and securing them in face-to-face relation, an effective retaining member for the bottles is provided. Further, when the inwardly folded flaps are made of sufficient length, they can function as partition elements and thus enable economies to be achieved due to the fact that the inner, separate partition will not require so much material. When increased marginal rigidity is desired the hinged flaps may be folded outwardly and secured in face-to-face relation between the retaining flaps.

While the present description sets forth certain preferred embodiments of the invention, various changes may be made in the construction without departing from

the spirit of the invention, and it is therefore desired that the present embodiment be considered as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. An open end carrier for bottles, such carrier being formed from foldable paperboard and comprising a pair of side wall panels, a rectangular bottom wall section hingedly carried by each side wall panel on its lower edge, means for connecting the two bottom sections in lapped relation to form a composite bottom panel, a centrally located, upstanding retaining member for an open end of the carrier, said retaining member being provided from triangular portions, each formed from adjacent corner areas of the connected bottom sections, such triangular portions being foldable upwardly of the bottom along diagonal fold lines, the inwardly disposed part of each triangular portion being severed from its bottom section to allow it to swing relatively to the attached part, whereby the two inwardly disposed parts may be arranged in face-to-face contact, extending normal to the bottom wall and inwardly of the carrier, and means for securing the two parts in such face-to-face contact to hold the retaining member in upstanding condition, the inwardly disposed part on the exterior lapping wall section extending over and in edge contact with the upper surface of the inner lapping section.

2. An open end carrier for bottles, such carrier being formed from foldable paperboard and comprising a pair of side wall panels, a rectangular bottom wall section hingedly carried by each side wall panel on its lower edge, means for connecting the two bottom sections in lapped relation to form a composite bottom panel, a centrally located, upstanding retaining member for an open end of the carrier, said retaining member being provided from triangular portions, each formed from adjacent corner areas of the connected bottom sections, such triangular portions being foldable upwardly of the bottom along fold lines extending diagonally of the axis of the carrier through its open ends, the inwardly disposed part of each triangular portion being severed from its bottom section to allow it to swing relatively to the attached part, whereby the two inwardly disposed parts may be arranged in face-to-face contact, extending normal to the bottom wall and inwardly of the carrier in parallel relation to the side wall panels to hold the retaining member in upstanding condition, said parts being of a length to extend inwardly a sufficient distance to serve as a partition element to separate bottles enclosed in the carrier adjacent the retaining member, the inwardly disposed part on the exterior lapping wall section extending over and in edge contact with the upper surface of the inner lapping section.

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