

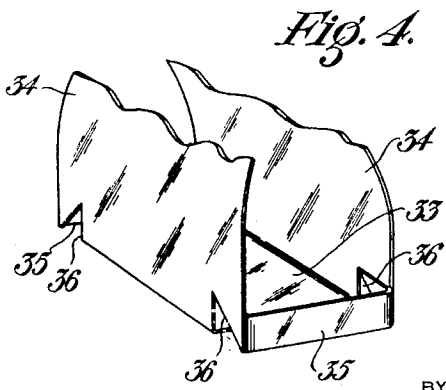
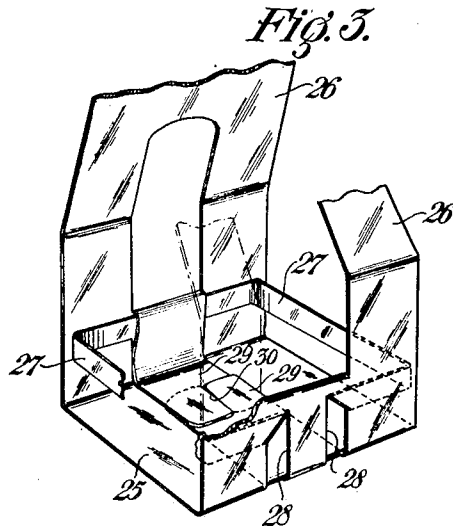
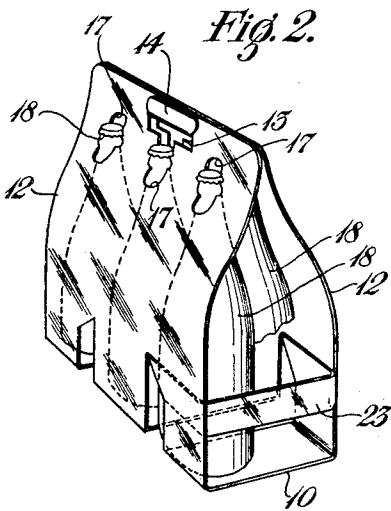
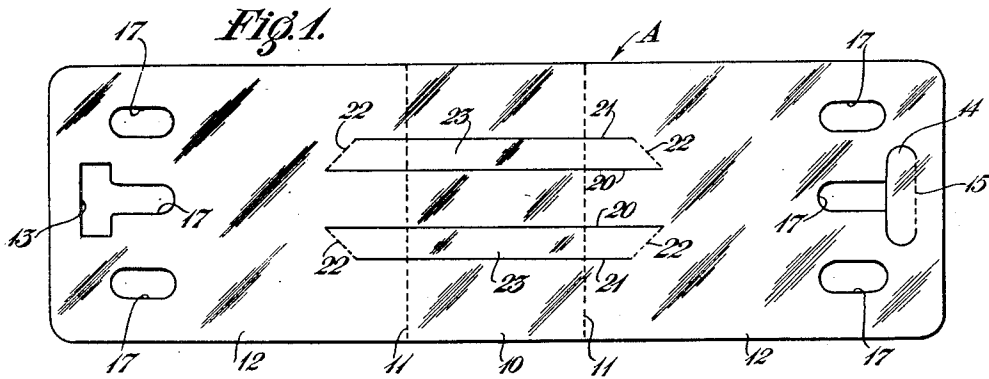
Oct. 24, 1950

H. Z. GRAY  
BOTTLE CARRIER

2,527,478

Filed March 4, 1940

2 Sheets-Sheet 1



BY

INVENTOR  
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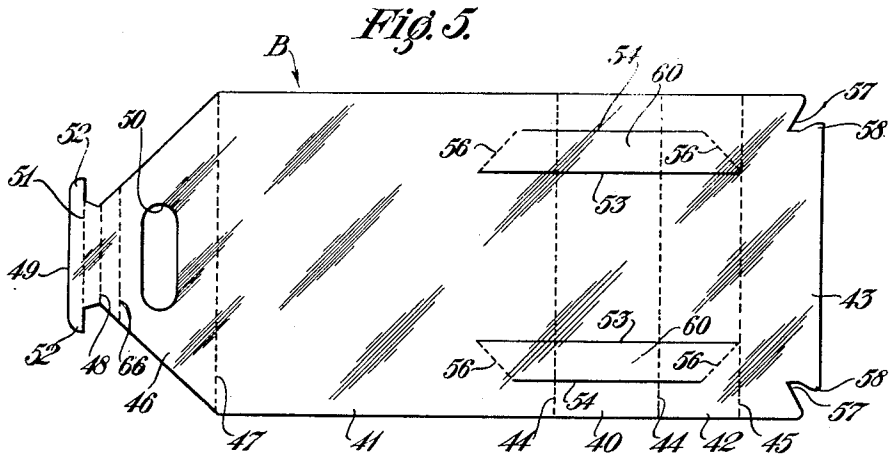
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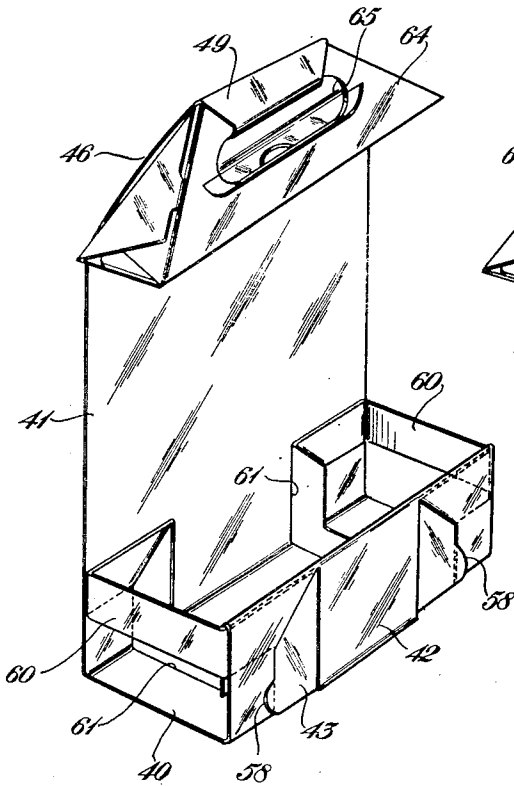
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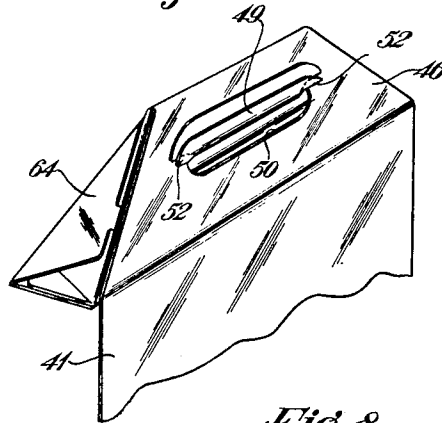
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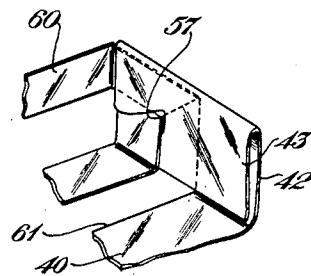
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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# UNITED STATES PATENT OFFICE

2,527,478

## BOTTLE CARRIER

Harry Z. Gray, Lebanon, Ohio

Application March 4, 1940, Serial No. 322,129

4 Claims. (Cl. 224-45)

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This invention relates to bottle carriers such as are made of folded cardboard, boxboard or the like, and more especially it relates to carriers for beverage bottles and the like wherein the bottles are supported from their bottoms, including means engaging the necks of the bottles to steady them and to prevent rattling.

The chief objects of the invention are to provide a carrier of the character mentioned that may be manufactured, stored, and shipped in flat, knockdown form yet which readily may be folded to shape for use; to provide a carrier of the character mentioned that includes bottom, sides, and end members, and a hand-grip arrangement at the top of the carrier that secures the opposite sides to each other; to provide a carrier of the character mentioned with simple means for engaging the necks of the bottles to steady the same; and to provide a carrier of the character mentioned that may be made from the minimum amount of material, the production of which entails the minimum of waste material. Another object is to provide a carrier that readily may be used in combination with a carrier that supports bottles solely by engagement with the necks thereof. Other objects will be manifest as the description proceeds.

Of the accompanying drawings:

Figure 1 is a plan view of a blank of which one embodiment of the invention is composed;

Figure 2 is a perspective view of the bottle carrier after it has been folded to service condition, and a plurality of bottles therein;

Figure 3 is a fragmentary perspective view of another embodiment of the invention;

Figure 4 is a fragmentary perspective view of still another embodiment of the invention;

Figure 5 is a plan view of a blank of which another embodiment of the invention is composed, which embodiment is arranged for attachment to a bottle carrier that supports bottles solely by engagement with the necks thereof;

Figure 6 is a perspective view of the bottle carrier folded to service condition and assembled with a carrier that engages the necks of bottles;

Figure 7 is a fragmentary perspective view of a portion of the structure shown in Fig. 6, as viewed from the opposite side thereof; and

Figure 8 is a fragmentary perspective view of the interior of the bottom portion of this carrier.

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Referring now to Fig. 1 of the drawings, there is shown a blank A of which the carrier shown in Fig. 2 is constructed, said blank preferably being of heavy cardboard material. In profile the blank A is a symmetrical rectangle, the corners thereof being rounded as shown. Because of their symmetrical shape, blanks A may be cut from larger sheets of material without such waste of material as occurs when blanks of irregular shape are employed. When the blank subsequently is folded to service shape, the medial transverse region 10 of the blank becomes the bottom of the carrier, said region being defined by transverse, parallel, spaced-apart creases indicated by the broken lines 11, 11. The regions 12, 12 of the blank, at each side of medial region 10 thereof, become the sides of the carrier when the blank is folded, which sides extend upwardly from the base 10 and are secured together at their upper ends. For securing the sides 12 together at the top of the carrier, one side is centrally formed with a rectangular aperture 13 and the other side is centrally incised to form a tab or flap 14 that is unsevered along the margin thereof that is adjacent the margin of the side, said tab being creased at 15 along its unsevered portion for subsequent folding at this point. The flap 14 has the shape of a laterally flattened ellipse that is somewhat longer than the aperture 13. When the blank A is folded to service condition and the sides of the carrier are brought together in face to face relation, as shown in Fig. 2, the tab 14 may be flexed along the crease 15 and forced laterally through the aperture, the rounded end portions of the tab flexing sufficiently to enable the tab to pass through the aperture, said end portions thereafter extending beyond the ends of the aperture and preventing the tab from pulling back through the aperture during normal use. The aperture 13 and the aperture formed in the other sidewall from where the tab is flexed are of sufficient length to admit the human hand, thereby providing a hand-grip by means of which the carrier may be carried, the flat surface of the tab 15 being engaged by the fingers with the result that discomfort is obviated.

Each end portion of the blank A is formed with three, short, longitudinally extending slots 17, 17 that are suitably spaced apart from each other. The middle slot 17 at one end of the

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blank opens into the aperture 13, and the middle slot at the other end of the blank opens into the space formed by the removal of the tab 14. When the carrier is folded to service condition, as shown in Fig. 2, and bottles 18 are mounted therein, the necks of said bottles will extend through the slots 17 with the result that lateral displacement of the bottles is prevented and rattling of the bottles is obviated.

As shown in Fig. 1, the medial region of the blank A is formed with two pairs of longitudinally disposed incisions 20, 21 of which the incisions 20 are longer than incisions 21 and are disposed adjacent each other. The incisions 20, 21 extend transversely across the medial region 10 of the blank and into the portions 12 at each side thereof for a suitable distance as presently will be explained. Both ends of each incision 20 project beyond the adjacent ends of its companion incision 21 at distance equal to the space between the incisions 20, 21, and there is an oblique crease 22 extending from the end of each incision 20 to the adjacent end of its companion incision 21. The strips of material disposed between each pair of incisions are designated 23.

When the blank A is folded from the flat condition shown in Fig. 1 to the service condition shown in Fig. 2, the strips of material 23 are flexed upwardly along the creases 22, as the sides 12 are bent toward each other, and also reversely bent along the creases 11 that traverse the strips, so that when the carrier is completely folded said strips will extend along the inner walls of the carrier toward the respective ends thereof and also extend across said open ends. The strips 23 thus constitute narrow end walls for the carrier, which end walls assist in preventing displacement of the bottles 18 endwise of the carrier. In the folded carrier, of course, there are two slots that extend across the bottom 10 of the carrier and part way up the sidewalls 12 thereof, but said slots may be of such narrow width and so disposed with relation to the bottles 18 in the carrier as not to be objectionable. The height to which said slots extend in the sidewalls of the carrier determines the height of the strips 23 above the bottom of the carrier, and this distance may be arbitrarily fixed to suit the conditions of service and size or type of bottle for which the carrier is designed.

From the foregoing it will be evident that the invention provides an improved carrier that is simple in construction, of relatively low cost to manufacture, and which achieves the several advantages set out in the foregoing statement of objects.

Referring now to the embodiment of the invention shown in Fig. 3 of the drawings, there is shown a bottle carrier that includes every element and feature of the carrier previously described, and in addition comprises means for covering and obscuring the slots in the base and sidewalls from which the end-strips are taken. As shown, the carrier comprises a base 25, sidewalls 26, 26 extending upwardly therefrom to be secured together at their tops by fastening means (not shown) that is identical with the means employed for this purpose in the embodiment shown in Fig. 2, and integral straps 27, 27 extending across the ends of the carrier above the base thereof, the base and sidewalls including a pair of slots 28, 28 that originally were occupied by the respective straps 27 in the blank from which the carrier was folded. Each sidewall 26

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is centrally incised on three sides of a generally rectangular area to provide identical flaps 29, 29 that are connected to the sidewall structures along fold-lines located just above the upper ends of the slots 28. If desired, the blank from which the carrier is made may be creased to facilitate the folding of the flaps 29. The width of each flap 29 is at least as great as the distance between the outer margins of the slots 28, and the free end portion of each flap preferably is centrally slit, as shown at 30.

After this carrier is folded to shape to provide the end straps 27, the flaps 29 are folded inwardly and transversely bent so that they overlie the slots 28 in each sidewall of the carrier and in the base thereof. The slits 30 in the free ends of the respective flaps 29 divide said ends into two tabs, and in the assembling or setting up of the carrier one of said tabs of each flap is placed under the confronting tab of the other flap, and one is placed over the tab confronting it, thus providing a mechanical interlock that retains the flaps 29 in proper position. The arrangement provides an interlock of the flap ends that causes the flaps to retain their desired position in the bottom of the carrier.

The embodiment of the invention shown in Fig. 4 comprises a base 33, sidewalls 34, 34 extending upwardly therefrom, and straps 35, 35 extending across the open ends of the carrier. The top of the carrier (not shown) may be of any known or desired construction, but preferably is the same as that shown in Fig. 2. The straps 35 differ from the similar straps of other embodiments of the invention in that they are taken from the respective ends of base portion 33, instead of from regions spaced inwardly of said ends, and span the open ends of the carrier at the bottom thereof. The primary difference between this embodiment and those previously described is that the base 33 is not transversely slotted, but is somewhat shorter than the width of the sidewalls 34. Furthermore, the sidewalls are not slotted as in previously described carriers, but merely have triangular notches 36, 36 at each of their lower corners adjoining the base 33. The distance from each end of the base 33 to the adjacent strap 35 is such that only a minor portion of the bases of bottles in the carrier will project beyond the ends of said base.

The embodiment of the invention shown in Figs. 5 to 8 of the drawings comprises the salient features of the embodiments previously described, but it is designed primarily as a display to be used in combination with other bottle carrier structures such as support the bottles solely by engagement with the necks thereof, for example, the bottle carrier of my copending application for Letters Patent, Serial No. 305,491, filed November 21, 1939, now Patent No. 2,298,209, granted October 6, 1942.

Referring now to Fig. 5 of the drawings there is shown a paper blank of which the carrier is constructed, said blank being designated as a whole by the letter B. In profile, the blank B is substantially of rectangular shape, with one end portion tapered for a purpose presently to be explained. When the blank B is eventually folded to service form it comprises a base portion 40, a tall side 41, and a low side 42, the latter being of double thickness by reason of a flap 43 that is folded thereonto, the tall side 41 and the low side 42 being on opposite sides of the base 40, and the flap 43 being contiguous with low side 42. In the blank, the base 40 is defined

by parallel, spaced-apart creases or weakened lines 44, 44, the low side of the carrier is defined by creases 44, 45, and the flap 43 being defined by the crease 45 and the adjacent end-margin of the blank, said flap being substantially the same width as the low side wall 42. The tapered portion of the blank B is contiguous with the tall side 41, remote from the base 40, and is designated 46, said tapered portion being defined on its long side by a crease 47 that separates it from tall side 41, and by a crease 48 along its short side that separates it from a terminal flap 49. In the tapered portion 46 is a transversely extending hand-hole 50 having the shape of a round end slot. The flap 49, which constitutes that portion of the blank that extends from crease 48 to the end of the blank, is provided with a substantially medial crease 51 that is parallel to crease 48, that portion of the flap between crease 51 and the end of the blank being of greater extent transversely of the blank than that portion of the flap between creases 48, 51, thus providing lateral tabs or ears 52, 52 on the flap. There also is a crease 66 in tapered portion 46, which crease is located between opening 50 and crease 48, parallel to the latter.

Like other embodiments of the invention, the blank B is formed with two pairs of parallel, longitudinally extending incisions 53, 54 of which the incisions 53 are longer than incisions 54 and are disposed adjacent each other. Incisions 53 extend transversely across the base portion 40 and low side 42 of the blank, terminating at the crease 45. Incisions 53 also extend into the tall side 41 a distance equal to its penetration of low side 42. Incisions 54 are shorter at each end than incisions 53 by an amount equal to the distance between the incisions 53, 54 of each pair of incisions. There is an oblique crease 55 extending from each end of each incision 53 to the adjacent end of its companion incision 54.

The terminal flap 43 of the blank has its two exposed corners formed with respective notches or reentrants 57 that extend into the flap, in the direction of the width of the blank, to a depth equal to the distance of the incisions 54 from the adjacent margins of the blank, said notches being so shaped as to provide respective laterally projecting tongues 58 as shown.

When the carrier is folded to service shape, it is bent along the creases 44 so that the low side 42 and tall side 41 extend upwardly from the base 40. The material between both pairs of incisions 53, 54 is bent along the creases 56 and the creases 44, 44, in the manner employed in the previously described embodiments of the invention, to provide straps 60, 60 that extend across the respective ends of the carrier, as shown in Figs. 6 and 8, the removal of said straps leaving slots 61, 61 that extend across the bottom 40 of the carrier and a short distance up each of the sides 42, 42 thereof. After the blank has been folded as described, the flap 43 is folded inwardly along the crease 45 until it lies along the low wall 42 of the carrier, and overlies and obscures the slots 61 in the latter. The flap 43 is retained in this position by means of the tongues 58, which tongues are passed through the respective slots 61 and are disposed on the outer face of low wall 42 at the margins of slots 61, as is best shown in Fig. 6. Thus the flap 43 overlies those portions of straps 60 that extend along the inner face of low wall 42, and

holds the said parts together so that the low wall 42 maintains an erect position.

The tall front wall 41 of the carrier extends upwardly from the base 40 and at its upper end is attached to a bottle carrier that is designated as a whole by the numeral 64. The latter is adapted to support bottles solely by engagement with the neck portions thereof, and is the carrier shown in my patent aforementioned. The carrier 64 is triangular in transverse section, and has hand-grip openings, such as the opening 65, in opposite sides thereof. The carrier of this invention readily is secured to the carrier 64 by bending the tapered end portion of the blank B at creases 47, 66 so that the tapered portion 46 of the blank may be positioned upon a sloped side-wall of the carrier 64, and the tab 49 folded over the top and onto the other sidewall of the said carrier. With the two carriers so arranged, the hand-grip opening 50 of blank B will be substantially in registry with one of the openings 65 of the carrier 64. The tab 49 of blank B may then be passed through the two openings 65 of carrier 64 and through opening 50 of carrier portion 46, and locked in place by means of the ears 52 on opposite ends of the tab, as is best shown in Fig. 7.

This carrier is designed primarily as a display for the bottled goods, the advertising matter being printed on the tall sidewall 41. The latter usually is of such length that when the bottles are being carried, said bottles are supported solely by their necks from the carrier 64, the bottoms of the bottles being thereby lifted into spaced relation to the base 40 of the carrier of this invention. When the carrier is at rest on a shelf or counter, the bottles will rest on the said base portion 40, and the carrier 64 will rest on the necks of the bottles in the usual manner.

Other modification may be resorted to without departing from the spirit of the invention, or the scope thereof as defined by the appended claims.

What is claimed is:

1. A carrier consisting of a one-piece blank of material cut and folded into a receptacle comprising a substantially flat base portion, side members extending upwardly from opposite lateral margins thereof, said carrier being formed with slots extending across said base and part way up each side member, straps consisting of material removed from said slots extending across the respective open ends of the carrier, and attached thereto overlying and concealing said slots.

2. A carrier consisting of a one-piece blank of material cut and folded into a receptacle comprising a substantially flat base portion, side members extending upwardly from opposite lateral margins thereof, said carrier being formed with slots extending across said base and part way up each side member, straps consisting of material removed from said slots extending across the respective open ends of the carrier, and flaps struck out from the side members above the slots therein and folded downwardly into the carrier so as to overlie the slots in the side members and the base portion.

3. A carrier as defined in claim 2 in which the end portions of the flaps overlap each other in the bottom of the carrier and are mechanically interlocked with each other.

4. A carrier as defined in claim 2 in which the opposing end portions of the flaps overlap in the bottom of the carrier and are centrally slit longi-

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tudinally of the flaps to provide two tabs on each, one tab on each flap overlying the opposing tab of the other flap to provide a mechanical interlock of the flaps.

HARRY Z. GRAY.

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