Sept. 11, 1945. E. H. LUPTON 2,384,480

BOTTLE CARRIER

Filed July 12, 1941 3 Sheets-Sheet 1

FIG. 1.

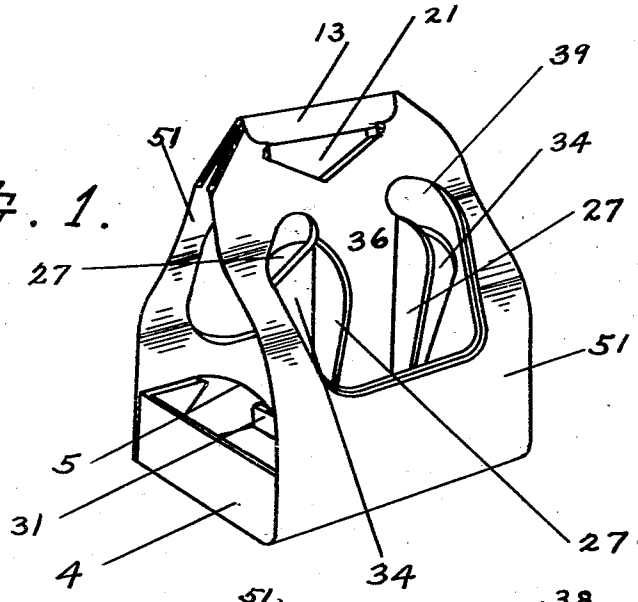
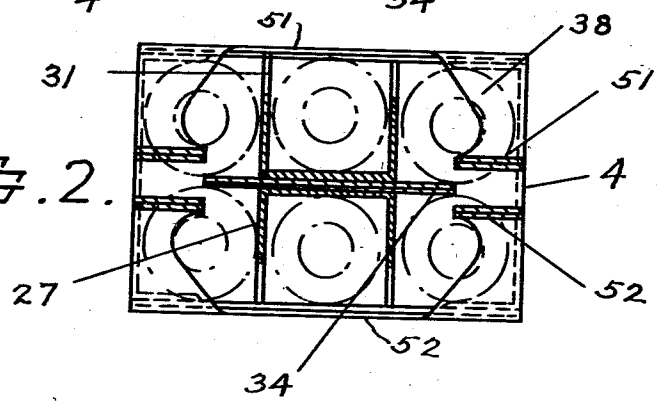


FIG. 2.



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FIG. 3.

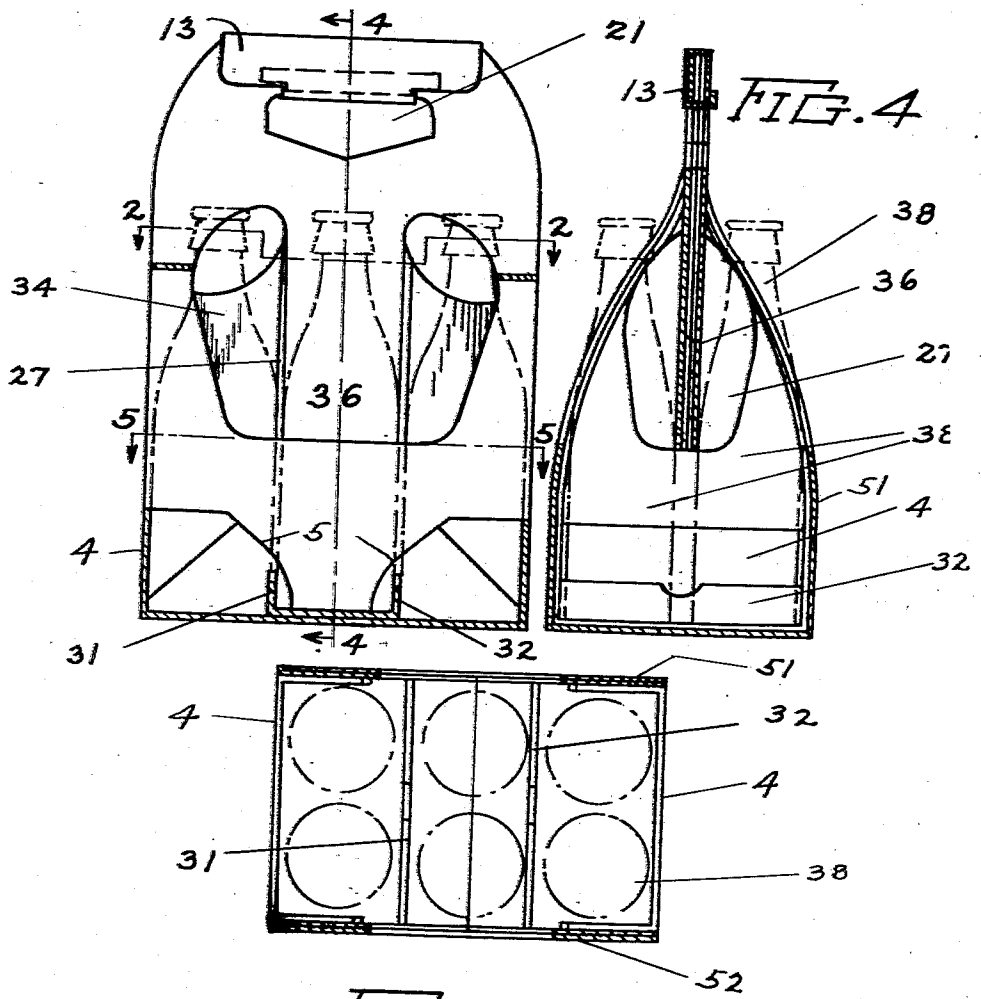


FIG. 4.

FIG. 5.

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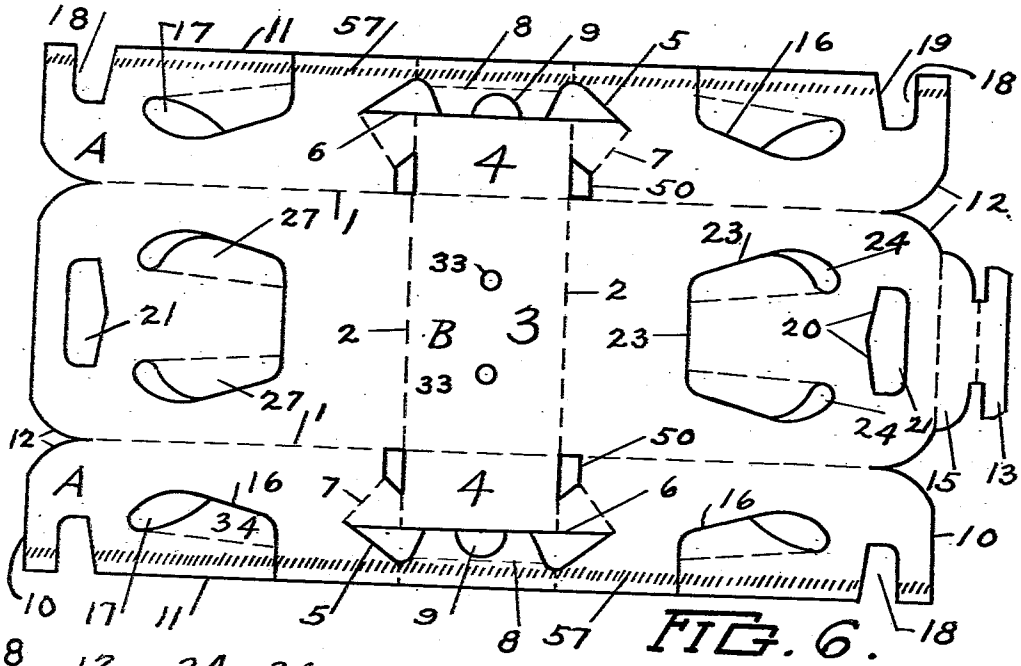


FIG. 6.

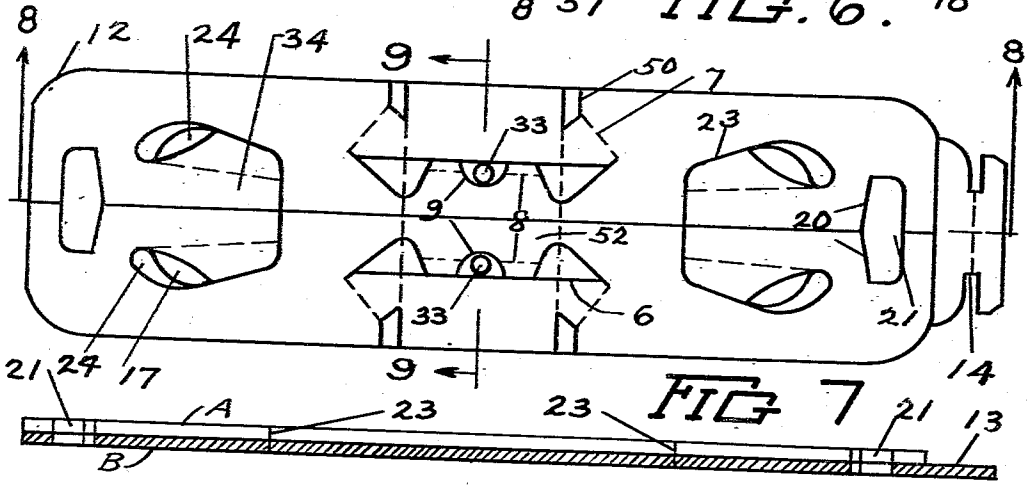


FIG 7

FIG. 8.

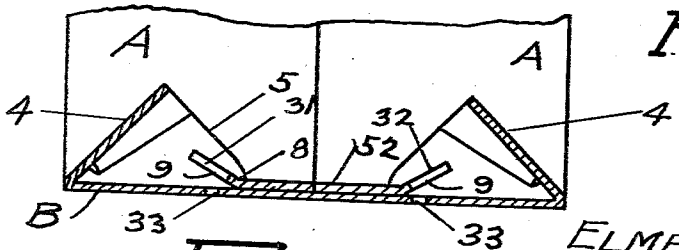


FIG. 9.

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Patented Sept. 11, 1945

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UNITED STATES PATENT OFFICE

2,384,480

BOTTLE CARRIER

Elmer H. Lupton, Ilchester, Md., assignor to The Bartgis Bros. Company, a corporation of Maryland

Application July 12, 1941, Serial No. 402,062

1 Claim. (Cl. 224—45)

This application is a continuation-in-part of my copending application, Serial No. 354,750, filed August 29, 1940, and issued June 13, 1944, as Patent No. 2,351,528.

This invention refers to manual carrying devices and more particularly to those pertaining to containers for carrying bottles especially of a beverage nature in an open package or carrier. It has among its objects to provide a container of this type made of card-board or analogous material, formed to support and hold from one to six or more conventional beverage bottles. Also to have the containers or carriers made from blanks of material suitably creased and cut to form open packages with handles formed with interlocks, and such that the walls formed will properly embrace and segregate the bottles placed therein. Another object is to have the formed containers or carriers of plural thicknesses to strengthen the package and otherwise provide for the incidental functions of the device. A further object is to arrange the parts of the blanks in shapes, punched holes and outlines that will not interfere with one another in such a way as to make their production difficult and less satisfactory. Still another object is to arrange the cuts of the blanks such that those that overlap may be manipulated more easily by reason of their novel accessibility and be otherwise suitable for the bending or forming arrangements necessary to develop the package or carrier in its usable form. A still further object is to provide for the features above noted, without adding to the cost of production appreciably, while the strength and effectiveness of the device is retained.

Other objects will become apparent as the invention is more fully set forth.

In the manufacture of packages, carriers or bags for carrying beverage bottles of the conventional type, difficulties are experienced ordinarily in the production, by reason of the tendency of some parts to catch on others of adjacent blanks and disturb the uniformity and stability of the piles and the speed with which they may be cut and formed. This invention overcomes this difficulty in a very simple manner that is none the less effective. It allows the blanks to be slid over each other without danger of their parts being caught on one another or cause tears and other injuries tending to spoil them and render the product less valuable. This is done by making the hand hole cut on an angular direction suitably predetermined. When the blanks are doubled and packed together, difficulty is universally experienced by their sticking together and involving more time and effort to separate them for use. This is accomplished in this invention by modifying the symmetry of cutting sufficiently to permit a suitable accessibility of alternate parts that will facilitate folding or unfolding of the blanks and the other functions in the assembly of the packages, carriers or bags. Another valuable feature that this invention provides is, in the arrangement of outlets for draining. This arrangement prevents the packages being damaged by normal sweating of the bottles or slight rains, while at the same time providing a means for pushing the bottles out of the bag if they become stuck therein. At the same time, the manner of punching the blank cooperates to produce the functions desired, and at the same time increase the flexibility of the material for the purpose of bending same more accurately and easily.

In the construction indicated in the drawings as a form of this invention:

Figure 1 is a view in perspective of a bottle carrying package, bag or carrier, embodying this invention;

Figure 2 is a horizontal sectional view taken on line 2—2 of Figure 3;

Figure 3 is a front elevation of the package or carrier with one panel broken away and the bottom panel shown in central longitudinal section, bottles being indicated in dotted lines;

Figure 4 is a sectional elevation taken on line 4—4 of Figure 3;

Figure 5 is a sectional plan view on line 5—5 of Figure 3;

Figure 6 is a plan view of the blank from which the package or carrier is made;

Figure 7 is a plan view of the blank looking at the bottom inner face after the package or carrier has been formed with the pieces folded on the bottom in their proper positions;

Figure 8 is a sectional elevation of the package or carrier taken on line 8—8 of Figure 7; and

Figure 9 is a sectional elevation taken on line 9—9 of Figure 7, showing a portion of one of the sides of the bag or carrier and also parts associated with the bottom panel, partly raised.

Similar reference characters refer to similar parts throughout the drawings.

In the drawings, reference is made primarily to Figure 6, since it portrays the blank from which the package or carrier is folded from, and developed. The dotted lines indicate the creases made and the lines of separation of the sections that go to make up the carrier. The outer lon-

gitudinal sections A border on the central section B on opposite sides and are symmetrical with each other. They are folded over on to the central section so as to meet in the middle as indicated in Figure 7. When so folded, the secondary intermediate blank formed, is ready for the final folding on the dotted lines indicated in Figure 7.

In Figure 6, the longitudinal creases are marked 1, and the transverse creases in the middle of the central portion B of the blank are marked 2. The latter border the so-called bottom portion 3 on two sides as indicated and then extend across the outer sections A and encompass end section 4. The bottom portion 3 has a suitable number of spaced holes 33 for draining purposes. The end sections 4 are folded from the material into its desired shape by having a longitudinal cut 6 extending over as shown with cut-out openings 5 of curvilinear form adjacent thereto at its end portions, and a middle semi-circular opening 9. The latter is arranged to align with the holes 33 to prevent liquid from collecting. Creases 7 branch at acute angles from the cut and terminate in right-angle shaped holes or openings 50 at the crossing points of lines 1 and 2. A crease line 8 is disposed between and at right angles to lines 2. The outside border lines give it a substantially rectangular outline with V-like cut-outs 12, apexed at the ends of the crease lines 1. The extending portion 13 in a quasi-T like form from one border 10, with its slot 14, and rounded shoulder 15 serves as an interlock which is to be described. Disposed a short distance from the lines 10 and extending in from the border lines 11 are symmetrical cuts 16, having an obtuse angle form terminating in elliptical openings 17 angularly disposed thereto, as indicated in the outer sections A. Hand hole slots 18 are cut inwardly from the borders 11 adjacent to the corner portions where same meet the lines 10. These slots have an outline extending inwardly at right angles, curved approximately 90° and then drifting back at 19 to the border line slantingly, to match with the lines 20 converging together in the hand holes 21. Dotted lines indicate the bending direction of the material to form a bendable portion.

In the central section B hand hole openings 21 are adapted to align with the slots 18 when the outer flaps A are brought over to join at the central section, and have an unobstructed through opening as indicated in Figure 7. The cuts 23 and the holes 24 in the central portion serve to align with the line cuts 16 and openings 17 as indicated in Figure 7. The bendable portions 27 are provided as indicated by the dotted lines and the holes 17 somewhat limit the size of the unobstructed opening underneath it, as indicated in Figure 7.

When the whole blank is first bent on the various creased lines it forms the outline shown in Figure 7. The outer sections A rest flat on the central section B and meet together at the middle line. The various dotted lines in this figure indicate the line of bending. After the primary bending and forming of the overlapped blank, the material is bent up at right angles at the dotted transverse lines, to form the sides 51 and 52 of the carrier and the handle portion as indicated in Figure 1. At the same time, each end 4 takes up its bent form and develops a box-like structure to prevent the bottles when carried from falling through. Partitions 31 and 32 are formed along creased lines 8. These serve as short partitions to separate the bottles from each other in sets longitudinally, as indicated in Figure 5, when raised to a vertical position.

One side of the carrier has its wall provided with the projection, having a T-like outline 13 of such size as to permit it to be inserted into the openings 21 when the walls are brought together and overlapped as shown in Figure 1. This locks the two sides together at the top and also provides a handle. Then portions 27 are bent to form upper partitions for the bottles to be inserted. One set of these partitions 27 keep each pair of bottles separated, and another set 34 keep the bottles in each row separated, by the pad provided by these partitions.

When the carrier is completely folded as indicated in Figure 1, it develops the following features. The bottom supporting pieces on which the bottles rest is drained by holes 33. The overlapping of the outer sections on to the middle section reinforces the side walls of the carrier with double thickness material. The box-like section serves to retain the bottles within the carrier at the ends and at the same time stiffen the structure, as well as brace it against movement inwardly or outwardly. The short partitions 31 and 32 offer considerable resistance to movement of the bottles when same are in position and serve as pads in between to prevent the bottles cracking one another.

The bottles are inserted from the outside against the middle cut tongue-like portions 36 with the side flaps 27 of the tongue bent at right angles to separate them. This leaves the upper portions of the bottles 38 disclosed and extending through the openings 39, which are made when the flaps 27 are bent to form middle partitions for the carrier. The butt ends of the bottles rest on the bottom portion 3, and are kept within the carrier by the walls 31 and 32 formed when the blank is completely assembled, as indicated in Figure 1. The ends 4 prevent the end bottles from sliding out sidewise, and in turn keep the middle bottles in place.

When the upper portions of the walls are brought together, they form a double wall reinforced additionally by a bent portion 18 on one side and the portion 13 on the other. This provides a handle piece with sextuplet thickness locked together by the T-shaped piece.

The hand holes 21 in the walls 51 and 52 are made double thick with the bottom borders 28 converged to enlarge that portion of the holes 21. This enables the user's hand to be inserted more readily in the hole and will be more convenient to carry and takes care of the increased thickness of the hand towards the middle. These converging parts overcome the catching of the blanks when moved across each other. Holes in blanks of this nature which have straight bottom lines catch on one another during punching and gluing operations and greatly interfere with production, which this invention avoids.

The varied openings brought about by the alignment of 17 and 24 bring the portions 27 accessible for manipulation when the assembler has to bend them back for the insertion of bottles. Prior to this invention the holes 17 and 24 were the same, and double thickness of material had to be picked open by his fingers. When one portion in each case projects it enables him to push same back with his thumb in a very easy manner. When that is out of the way the remaining flap can be readily handled and bent to suit.

The portions of the blank developed by the cutting of the openings 5 serve to make the for-

mation of the box-like structure easy to manipulate when the box is formed.

The general assembly of the blank into its completed form makes it easy to receive and make available the bottles to be used with it; keeps them from undue movements, when the carrier is completely full or partially. Prevents the bottles from coming out vertically unless pulled out by the operator. Eliminates rattling between bottles. It also provides a blank that can be assembled with promptness and otherwise assist in the desired functions of a carrier of this type.

Glue or similar adhesive means 57 is placed on the edge portions indicated to permit the blank foldings in the primary bending to be stuck together and increase the strength of the carrier. This glue also enables the carrier to retain its shape and remain a blank in a developed condition, and yet permit the blanks to be piled on one another conveniently. If pins are used, same can project through the drain holes in the bottom portion and keep them in proper alignment, when piled on one another in lots. The parts glued together solidifies the construction.

While but one general form of the invention is shown in the drawings, it is not desired to limit this application to this particular form or in any other way otherwise than limited by the scope thereof, as it is appreciated that other forms could be made that would use the same principles and come within the scope of the appended claim.

Having thus described the invention, what is claimed is:

A container of cardboard or the like for carrying plural rows of bottles formed from a single quasi-rectangular sheet of material scored longitudinally along lines spaced from side edges of the sheet to provide an intermediate portion and side portions folded inwardly flat upon the intermediate portion and together therewith forming an elongated quasi-rectangular blank having inner and outer plies, said blank having its intermediate portion scored transversely along lines spaced from each other and having its end portions folded upwardly along the transverse lines of scoring to form a body having a flat bottom and side walls converging upwardly, upper end portions of said side walls being disposed in face to face engagement with each other and formed with registering openings forming a finger passage and a handle bar across the top of the finger passage, a flap at the upper end of one side wall wrapped about the handle bar to reinforce the handle bar and hold upper portions of the walls together, said side walls being cut to form side openings for receiving rows of bottles and a partition extending downwardly from the contacting upper portions of the walls, outer plies of the partition having side portions bent outwardly to form spacers for extending between bottles of the rows of bottles, the inwardly folded side portions of the sheet being cut transversely of the bottom to form flaps having portions extending upwardly along lower ends of the side walls, said flaps having their outer side edges and their ends integrally connected with the bottom and the side walls respectively and being folded upwardly and outwardly to form short end walls extending across ends of the bottom and braced at their ends by extensions integral with inner plies of the side walls, and portions of the inner ply of the bottom inwardly of the flaps being free from the side walls and bent upwardly to form spacers for engaging between bottoms of bottles resting upon the bottom of the carrier.

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