

Nov. 20, 1962

P. J. WOOD
ARTICLE CARRIER

3,064,871

Filed Aug. 29, 1960

3 Sheets-Sheet 1

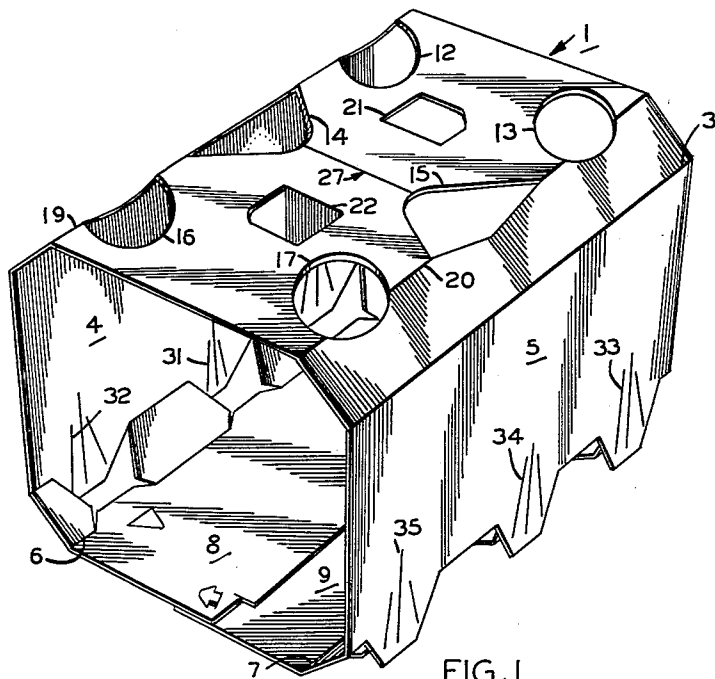


FIG. 1

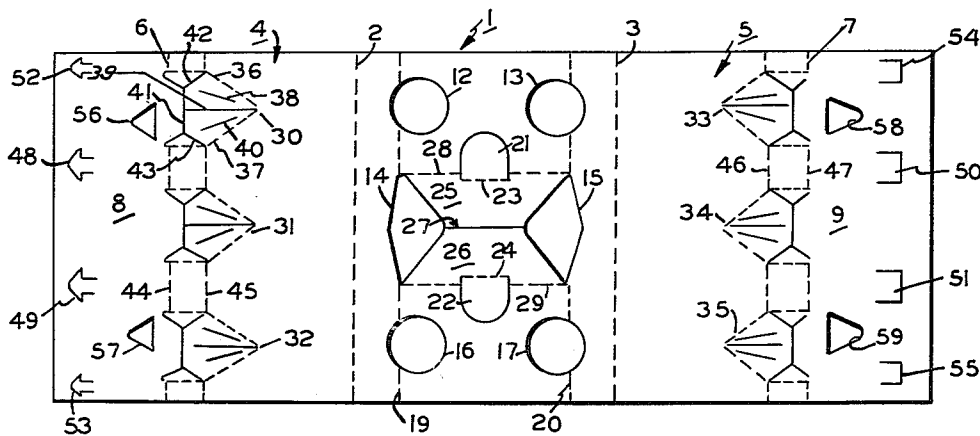


FIG. 2

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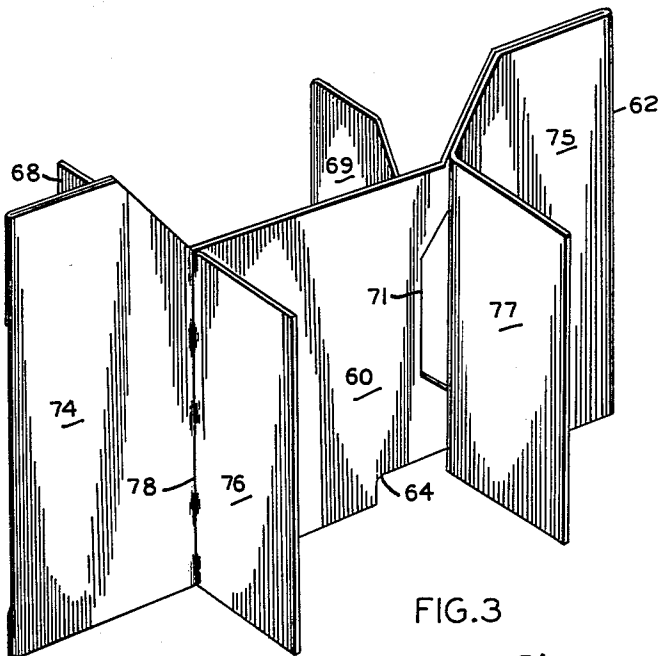


FIG.3

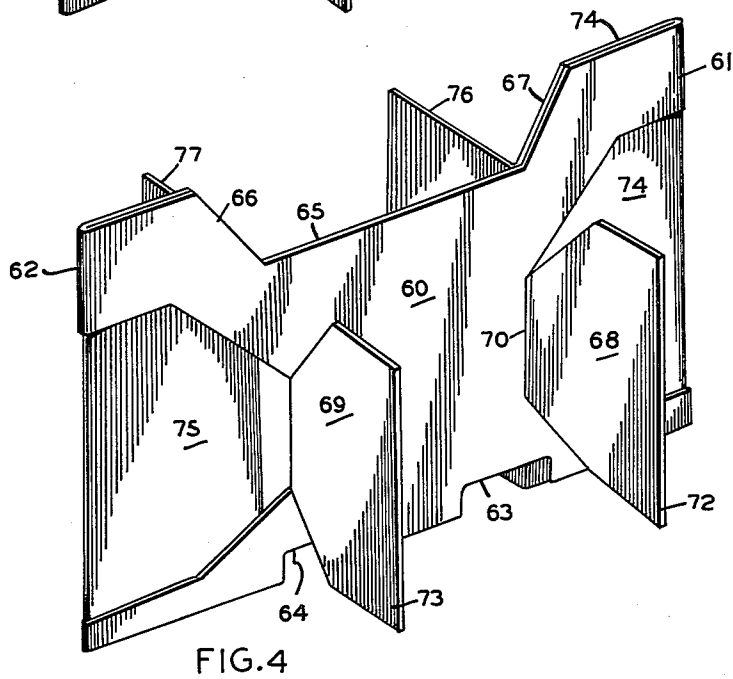


FIG.4

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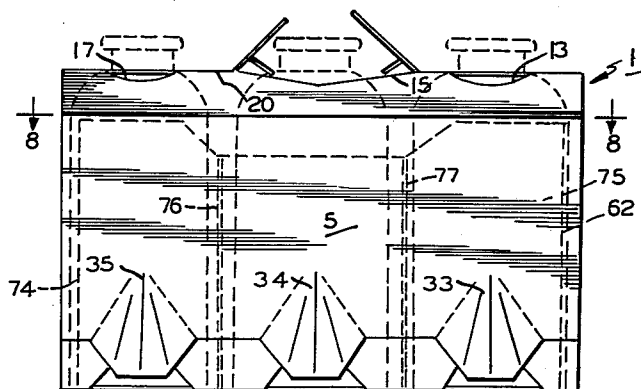


FIG. 6

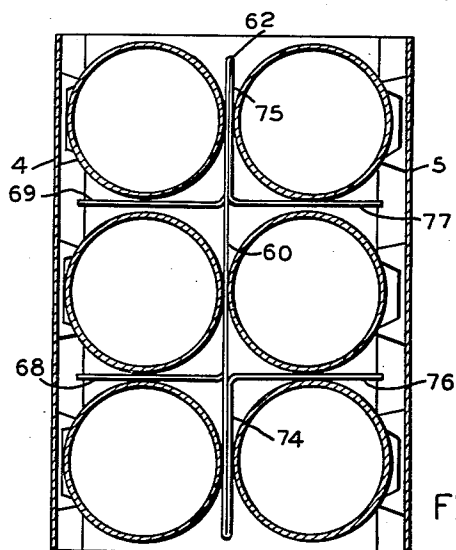


FIG. 8

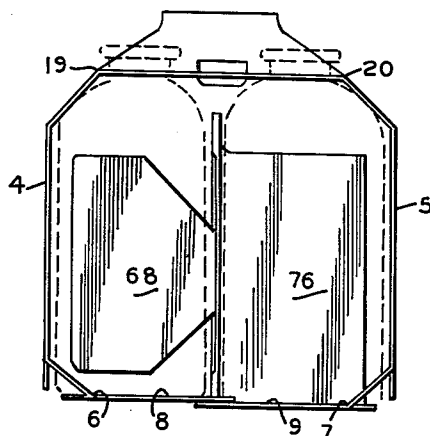


FIG. 7

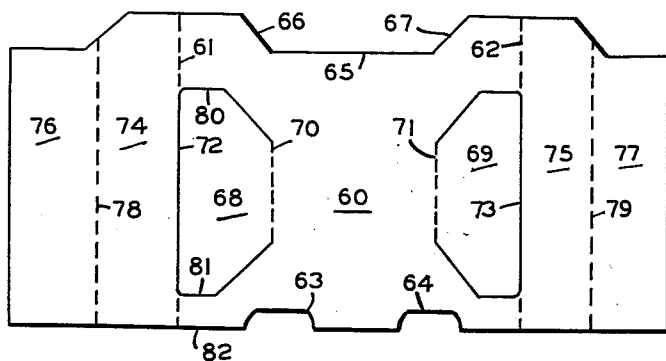


FIG. 5

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3,064,871

ARTICLE CARRIER

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2 Claims. (Cl. 229—15)

This invention relates to article carriers and more particularly to carriers which are especially adapted for use in connection with bottles such as soft drink and beer bottles.

In can carriers of the type disclosed and claimed in United States Patent Number 2,786,572, issued March 26, 1957, it is the practice to secure the can wrapper tightly about a group of cans and in so doing to form a substantially rigid unitary package. This practice is sometimes followed in packaging bottles although there is obviously a practical limit of compressional stress which may safely be imparted to bottles made of ordinary glass. If the packaged goods are to be shipped in interstate commerce it is required that cushioning material interposed between adjacent bottles meet certain minimum standards as to configuration, thickness and the like.

A principal object of this invention is to provide an improved carrier primarily for use in packaging glass bottles which does not impart a substantial compressional stress to the packaged bottles and which is adapted to afford maximum protection for the bottles against accidental breakage.

Another object of this invention is the provision of a cushioning insert for bottle carriers which affords adequate protection for bottles packaged as a group against collision with each other and which is particularly well adapted for efficient insertion by automatic machine methods.

Still another object of this invention is to provide a cushioning insert for use in connection with multiple packaging of bottled goods which is made of a single paperboard blank and which is foldable so as to afford the required thickness of cushioning material between all adjacent bottle surfaces but which does not result in unnecessary double thicknesses of the cushioning panels.

A carrier constructed according to the invention in one form utilizes a cushioning insert comprising a medial cushioning panel, a pair of first transverse cushioning panels struck out of the medial panel and foldable out of the plane thereof into transverse positions about a bottle on one side of the medial panel, a pair of auxiliary cushioning panel foldably joined to the ends of the medial panel and normally in face contacting relation to the ends of the medial panel and forming cushions between the two end bottles on opposite sides of the medial panel at each end of the carrier and a second pair of transverse cushioning panels respectively joined to the auxiliary cushioning panels and respectively constituting cushions between the middle bottle and each end bottle on the side of the medial panel which is opposite to the side on which the first transverse cushioning panels are disposed.

For a better understanding of the invention reference may be had to the following detailed description taken in conjunction with the accompanying drawings in which FIG. 1 is a perspective view of a bottle carrier wrapper of the type to which the invention is applicable and from which both the bottles and the insert have been removed; FIG. 2 is a plan view of a blank preferably of paperboard from which the wrapper of FIG. 1 is formed; FIG. 3 is a perspective view of an insert constructed according to the invention; FIG. 4 is a perspective view similar to FIG. 3 but showing the insert from the opposite side from that depicted in FIG. 3; FIG. 5 is a plan view of a blank preferably of paperboard material from which the insert depicted in FIGS. 3 and 4 is formed; FIG. 6 is a side view

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of a package formed according to the invention and showing the glass bottles in dotted lines; FIG. 7 is an end view of the package depicted in FIG. 6 and in which FIG. 8 is a plan view of the arrangement depicted in FIG. 6 and taken along the line designated 8—8 in FIG. 6.

With reference to FIGS. 1 and 2, the wrapper there disclosed is generally similar to the wrapper disclosed and claimed in the aforementioned Patent 2,786,572. The arrangement of FIGS. 1 and 2 differs from the arrangement disclosed in the above patent in that the arrangement of FIGS. 1 and 2 is for use in conjunction with bottles rather than cans. In FIGS. 1 and 2 the numeral 1 generally designates a top panel which extends between fold lines 2 and 3 and the numerals 4 and 5 generally designate side panels. Side panel 4 comprises that portion of the paperboard blank which extends between fold line 2 and the fold line designated by the numeral 6. Side panel 5 extends from fold line 3 to the fold line designated by the numeral 7. The bottom portion of the wrapper depicted in FIGS. 1 and 2 is made up of two panels designated by the numerals 8 and 9. Of course bottom panel 8 extends from fold line 6 to the adjacent end of the blank while bottom panel 9 extends from fold line 7 to the other end of the blank.

For receiving the necks of bottles wrapped by the wrapper in FIGS. 1 and 2 a plurality of openings 12, 13, 14, 15, 16, and 17 are formed in the top 1 of the wrapper. Also formed along the top 1 of the wrapper are a pair of fold lines 19 and 20. These fold lines 19 and 20 simply condition the wrapper to conform to the shoulder portion of the bottles as shown in FIG. 7. Hand gripping tabs 21 and 22 are also formed in the top of the blank and are respectively foldable along fold lines 23 and 24 to form apertures for receiving the fingers of the user of the carrier.

Any tendency to draw the fold lines 23 and 24 in a direction toward each other due to carrying of the carrier is accommodated by the flaps 25 and 26 which are separated by a slit line 27 and which are respectively foldably joined to the main portion of the top of the carrier along fold lines 28 and 29.

For the purpose of receiving the lower rim portions of the bottles a plurality of bottle receiving portions 30—32 are formed along the lower part of sidewall 5 while similar constructions 33—35 are formed in the bottom portion of side wall 4. These formations 30—35 are all identical and as is apparent from the drawings they simply constitute scored lines 36 and 37 and slit line 38—43 as indicated in connection with portion 30 on FIG. 2. The angularly disposed part of the side walls 4 and 5 which is adjacent to the bulges 30—35 is defined by inner score lines 44 and 45 and similar inner score lines 46 and 47 define an angularly disposed panel connecting the bottom panel 9 with side panel 5 and technically forming a part of the sidewall 5. It will be understood that inner score lines 44 and 47 coincide with outer score lines 6 and 7 respectively.

For the purpose of securing the wrapper ends 8 and 9 together a plurality of inner locking tabs 48 and 49 are inserted within the openings defined by the retaining tabs 50 and 51 respectively. Similarly the small outer locking tabs 52 and 53 are respectively inserted within the openings defined by the retaining tabs 54 and 55 substantially as disclosed in the above mention Patent 2,786,572.

For the purpose of drawing the bottom panels 8 and 9 together into their locking relationship, a pair of apertures 56 and 57 are formed within the bottom panel 8 and similarly a pair of apertures 58 and 59 are formed in bottom panel 9. Machine elements move into openings 56—59 and cause the bottom panels 7 and 8 to be drawn toward each other. Thereafter the locking tabs 48, 49, 52 and 53 are inserted into the apertures defined by re-

taining tabs 50, 51, 54 and 55 respectively in order to secure the bottom panels 8 and 9 together.

In order to protect adjacent bottles against breakage due to collision with each other and in accordance with this invention a blank preferably of paperboard is formed as shown in FIG. 5. With reference to that figure, the numeral 60 generally designates a main medial cushioning panel which extends from the fold line 61 on the left to the fold line 62 on the right. Medial cushioning panel 60 is provided with a pair of notches 63 and 64 in order to allow the machine elements which engage the apertures 56, 57, 58 and 59 to clear the medial cushioning partition 60.

For the purpose of affording handgripping room in the top portion of the wrapper, the top part of the medial cushioning panel 60 is cut away as indicated by the edge lines 65, 66 and 67.

In order to afford cushioning action for the bottles disposed on one side of the medial cushioning panel 60 a pair of transverse cushioning panels 68 and 69 are struck out of the medial panel 60 and are foldably joined thereto along the fold lines 70 and 71 respectively. It will be observed from FIG. 5 that the end portion 72 of transverse cushioning panel 68 coincides with the end 61 of the medial panel and that the end 73 of transverse partitioning panel 69 coincides with end 62 of the medial cushioning partition 60.

For the purpose of providing cushioning action at the openings caused by striking transverse partitioning panels 68 and 69 from panel 60, a pair of auxiliary cushioning panels 74 and 75 are respectively foldably joined to the ends of medial partitioning panel along the fold lines 61 and 62 respectively. Thus with auxiliary cushioning panel 74 folded in parallel face contacting relation to the end of the medial cushioning panel 60, the auxiliary panel 74 at least partially covers the opening formed when the transverse panel 68 is struck out. Similarly the auxiliary cushioning panel 75 at least partially covers the opening formed when the transverse panel 69 is struck out of the medial panel 60. For the purpose of affording cushioning action between the bottles on the side of main medial cushioning panel 60 which is opposite from that toward which the transverse panels 68 and 69 extend, a second pair of transverse cushioning panels 76 and 77 are respectively joined to the auxiliary panels 74 and 75 along fold lines 78 and 79.

From the description of the blank as depicted in FIG. 5 and from the perspective views of FIGS. 3 and 4, the particular manner in which the various panels are folded to form the insert for the wrapper depicted in FIGS. 1 and 2 is apparent.

While this invention is not limited to any particular angular disposition of the various panels with respect to each other, it is obvious that paperboard can be used most efficiently if the transverse panels are not folded at right angles to the main medial panel 60. Stated otherwise, the width of the transverse panel 68 between the fold line 70 and the slit line 72 may be less than the diameter of the bottles. It is only necessary for this particular panel to be somewhat wider than one-half the diameter of the bottles and in similar fashion the width of the second transverse partitions 76 and 77 need be but slightly greater than one-half the diameter of the bottles. As is apparent from FIGS. 3 and 4, the width of auxiliary panels 74 and 75 is not quite as great as the width of the transverse panels 68 and 69. The panels 76 and 77 may be arranged so that their angular dispositions relative to

panel 60 are less than right angles and in this way an economy in the use of board is effected.

It will be understood that the height of the transverse panel 68 as measured between the top edge 80 and the bottom edge 81 is slightly greater than the vertical straight portion of the side wall of the bottles. For this reason the portion of the medial partition between the lines 81 and 82 does not engage the bottle due to the inwardly tapering bottom portion of the bottle and in this way the auxiliary panel 74 does a thorough and efficient cushioning job between bottles on opposite sides of the medial partitioning cushion 60. Transverse panel 69 is similarly constructed.

While I have shown and described particular embodiments of the invention, I do not wish to be limited thereto and intend in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A bottle carrier partitioning insert adapted to cushion bottles arranged in two rows of at least two bottles each, said insert comprising a main medial cushioning panel, a first transverse cushioning panel struck out of said main medial panel and foldably joined thereto along a fold line spaced from and generally parallel to one end of said main medial panel, an auxiliary cushioning panel foldably joined to said main medial panel along said one end thereof, and a second transverse cushioning panel foldably joined to said auxiliary cushioning panels along an edge thereof opposite the edge which is joined to said main medial panel, said auxiliary cushioning panel normally being in substantially parallel face contacting relation to said medial panel and said first and second transverse panels being normally angularly disposed with respect to said main and auxiliary panels.

2. A bottle carrier partitioning insert adapted to cushion bottles arranged in two rows of at least two bottles each, said insert comprising a main medial cushioning panel, a first transverse cushioning panel struck out of said main medial panel and foldably joined thereto along a fold line spaced from and generally parallel to one end of said main medial panel, the end of said first transverse panel coinciding with said one end of said main panel before said first transverse panel is folded along the fold line, an auxiliary cushioning panel foldably joined to said main medial panel along coincidental fold lines above and below said first transverse panel at said one end of said medial panel, and a second transverse cushioning panel foldably joined to said auxiliary cushioning panel along an edge thereof opposite the edge which is joined to said main medial panel, said auxiliary cushioning panel normally being in substantially parallel face contacting relation to said medial panel and said first and second transverse panels being normally angularly disposed with respect to said main and auxiliary panels.

References Cited in the file of this patent

UNITED STATES PATENTS

60	2,330,671	Boh	Sept. 28, 1943
	2,596,205	Buttery	May 13, 1952
	2,830,726	Foster	Apr. 15, 1958
	2,864,212	Bruce	Dec. 16, 1958
	2,877,894	Forrer	Mar. 17, 1959
65	2,939,623	Piccardi	June 7, 1960
	2,950,854	Ganz	Aug. 30, 1960