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DOUBLE WALL SEPARATOR FOR BOTTLE CARRIER

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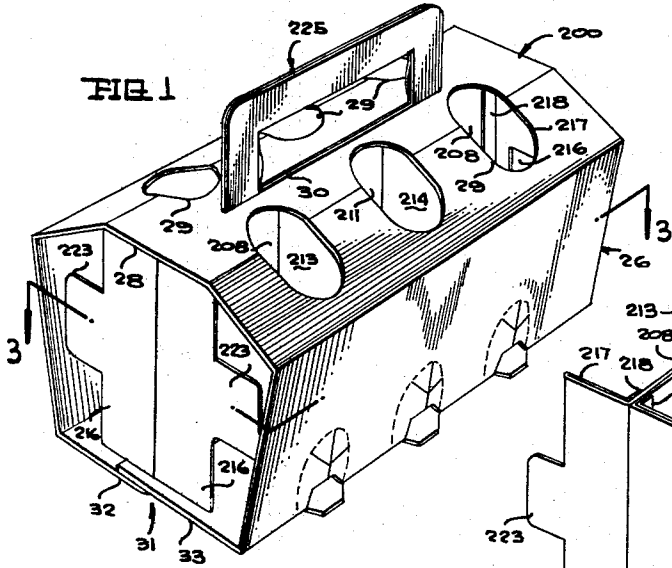


FIG. 1

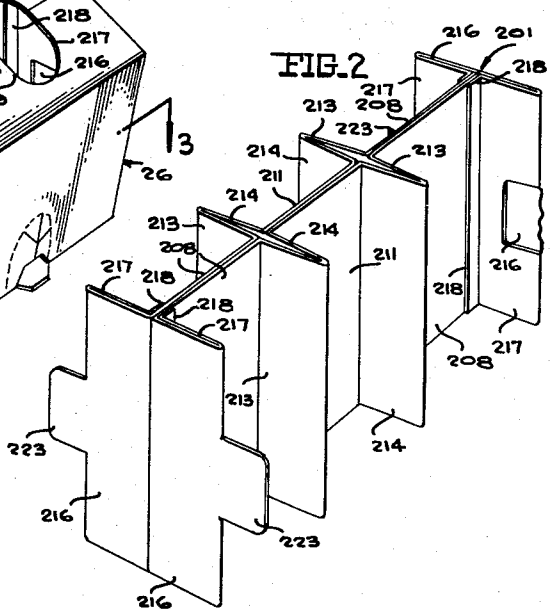


FIG. 2

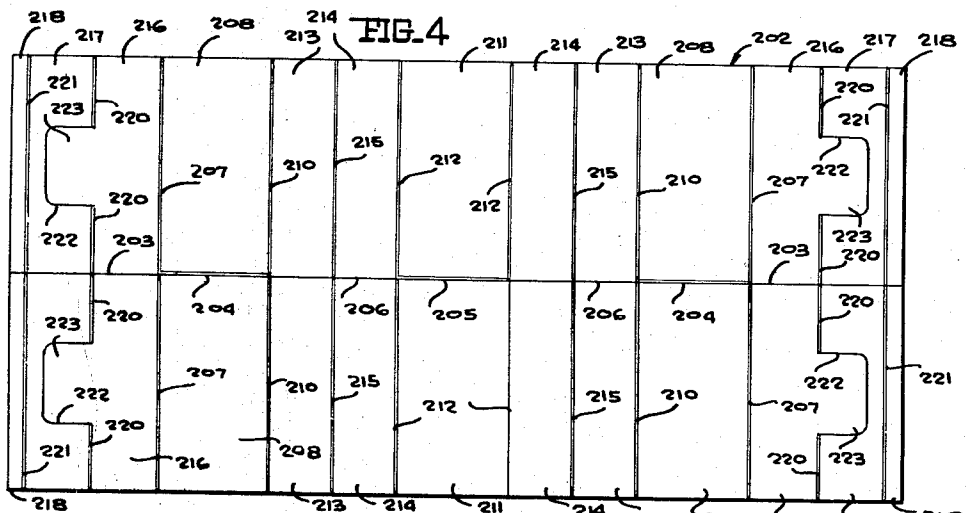


FIG. 4

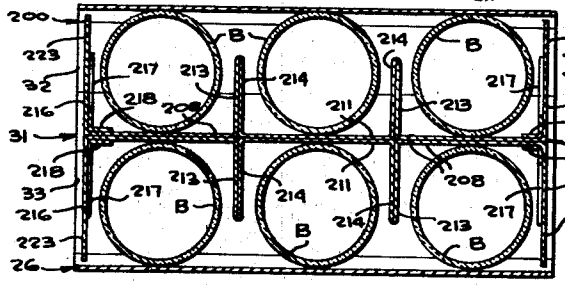


FIG. 3

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**DOUBLE WALL SEPARATOR FOR BOTTLE CARRIER**

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12 Claims. (Cl. 229—15)

This application is a division of Serial No. 31,691, filed May 25, 1960, and now abandoned.

This invention relates in general to new and useful improvements in the bottle carrier art, and more particularly relates to a new and useful bottle separator which may be positioned within a wrap-around bottle carrier for both separating the bottles disposed within the carrier and preventing the accidental removal of the bottles through the ends of the carrier.

A bottle carrier, in order to function properly, must not only properly support the bottles to facilitate the carrying thereof, but must also prevent contact of adjacent bottles so as to prevent damage to the bottles during handling. A basic commercially acceptable type of bottle carrier includes a carton which may be placed around a desired number of bottles and engaged beneath the bottoms thereof with the necks of the bottles passing through suitable openings in the top portion of the carton. The carrier also includes a suitable type of separator for positioning within the carton to prevent the contact of the bottles with each other. In this basic type of carrier arrangement, it is desired that the carrier be placed on the bottles as they move along a conveyor line. It is desirable that the separator be first placed with respect to the bottles, after which the carton of the carrier is wrapped around both the bottles and the separator to form the complete package. It thus will be apparent that it is desirable that the bottle carrier be separate and independent from the carton in its initial state. It is to this type of separator that the present invention relates.

In view of the foregoing, it is an object of the invention to provide a novel bottle separator for use with a wrap-around type carton of a bottle carrier, the bottle separator being readily formed from a one-piece blank which is folded along its longitudinal center line to provide two halves which are identical, and the two halves having projecting portions which project from opposite sides of the central part of the separator in transverse alignment and serve to both separate bottles when combined with the bottles in a bottle carrier, and to prevent the accidental removal of the bottles from the ends of the bottle carrier.

Another object of the invention is to provide a novel bottle separator for use with a wrap-around carton in the formation of a bottle carrier, the separator being readily formed from a single sheet of material and being provided with projecting flanges on opposite sides of the main portion thereof, intermediate ones of the flanges being adapted to be disposed between adjacent bottles to prevent engagement of the bottles, and endmost ones of the flanges being in the form of stops for preventing the accidental movement of the bottles out of the ends of the carton.

Still another object of this invention is to provide a novel bottle separator which is of a double wall construction and which is formed from a single sheet of material, the two walls of the bottle separator being disposed in face-to-face relation and terminating at their ends and end flanges, the end flanges at each of the wall ends acting to prevent the accidental removal of bottles from the ends of a carton of which the separator is associated, and the end flanges being provided with projecting tabs which

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project through slots in the carton to interlock the end flanges with the carton, and a longitudinal fold line of the separator being intermittently struck and portions thereof folded to form intermediate flanges of a double wall construction which are adapted to be positioned between adjacent bottles to separate the same.

With the above, and other objects in view that will hereinafter appear, the nature of the invention will be more fully understood by reference to the following detailed description, the appended claims, and the several views illustrated in the accompanying drawings.

In the drawings:

FIGURE 1 is a perspective view of a bottle carrier incorporating a bottle separator in accordance with this invention.

FIGURE 2 is a perspective view of the bottle separator used in the carrier of FIGURE 1.

FIGURE 3 is a horizontal sectional view taken through the bottle carrier of FIGURE 1, along the line 3—3 and shows the horizontal cross-section of the bottle separator, there also being shown bottles in place and the relationship of such bottles with respect to the bottle carrier.

FIGURE 4 is a plan view of the blank from which the bottle separator of FIGURE 2 is formed.

A bottle carrier illustrated in FIGURE 1 is generally referred to by the reference numeral 200 and is particularly designed for carrying six bottles B. The bottles have been omitted in FIGURE 1 for purposes of clarity, although they are illustrated in section in FIGURE 3. The bottle carrier 200 is formed of two basic components. These include a carton 26, which extends around the lower portions of the bottles B, and a bottle separator which is generally referred to by the numeral 201. The bottle separator 201 is disposed within the carton 26 for separating and retaining the bottles B in position therein, as is best illustrated in FIGURE 3 of the drawing.

The carton 26 is not a part of the invention but cooperates with the bottle separator 201 which in itself is the invention. Accordingly, the carton 26 will not be fully described.

The carton 26 is formed from a single elongated blank which is folded to define an upper portion 28 having two rows of openings 29 formed therein for the reception of necks of bottles B. The upper portion 28 is also provided with an elongated slot 30 through which a handle portion, to be described in detail hereinafter, passes. The carton 26 also includes a bottom portion 31 which is formed by overlapping flaps 32 and 33, the flaps 32 and 33 being suitably secured together. The preferred securing means for the flaps 32 and 33 is a plurality of tabs (not shown), but each of the tabs underlying and being aligned with a pair of bottles so that the bottles serve to hold the tabs in place.

Reference is now made to FIGURE 4, wherein the details of a blank, generally referred to by the numeral 202, from which the bottle separator 201 is formed, are illustrated. The blank 202 is generally rectangular in outline and is formed of a suitable economical material, such as paperboard, plastic and the like.

The blank 202 is divided into two identical halves by a plurality of cut lines and fold lines which are alternated and are in alignment. These include endmost cut lines 203 which terminate at their inner ends in two outer fold lines 204. A central fold line 205 is disposed along the central portion of the blank 202. The fold lines 204 and 205 are separated by cut lines 206.

A pair of transverse fold lines 207 extend from the inner sections of the cut lines 203 and the fold lines 204 and divide the blank halves into end portions and central portions. Disposed immediately inwardly of the fold lines 207 are outer wall portions 208 which are further defined by fold lines 210 which extend transversely

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of the blank 202 from the inner sections of the fold lines 204 and the cut lines 206. A central wall portion 211 extends coextensive with the fold line 205 and is defined by a pair of fold lines 212.

A pair of flanges 213 and 214 is disposed coextensive with each of the cut lines 206. The flanges 213 and 214 of each pair are separated by a transverse fold line 215.

Each end portion of the blank halves is divided by fold lines to include an end flange 216, a return flange 217 and a securing flange 218. The flanges 216 and 217 are separated by a transverse fold line 220, and the flanges 217 and 218 are separated by a transverse fold line 221. The fold line 220 is interrupted by a generally C-shaped cut line 222 which extends partially across the flange 217 and defines a projecting bottle-retaining tab 223 integral with the flange 216.

When the bottle separator 201 is formed from the blank 202 the flange 216 is folded normal to the general plane of the bottle separator, the flange 217 is reversely folded, and the flange 218 is folded parallel to the general plane of the bottle separator and secured to the wall portion 208. The tab 223, being integral with the flange 216, projects outwardly from the flange 216, as is best shown in FIGURE 2. At this time, it is pointed out that, if desired, the tab 223 may be eliminated. Further, if desired, an additional flange may be disposed intermediate the flanges 217 and 218, the flange being disposed diagonally between the flanges 217 and 218 in the formed bottle separator.

The bottle separator 201 has the wall portions 208 and 211 in coplanar relation with the wall portions of the two halves in face-to-face engagement. The pairs of flanges 213 are reversely folded on themselves and extend transversely to the wall portions 208 and 211, the wall portion 211 being disposed closely adjacent its respective wall portion 208. Thus, the folded flanges 213, 214 project outwardly from the wall portions to define bottle separators.

As is best illustrated in FIGURE 3 of the drawing, in the completed package, individual bottles B are spaced apart by the folded flanges 213, 214 in a longitudinal direction, and by the wall portions 208, 211 in a transverse direction. The flanges 216, 217 and 218 combine to define stop means at the ends of the bottle carrier to prevent the accidental movement of the bottles B out of the ends of the carton 26.

When the package of FIGURE 3 is formed, the bottles B are supplied in two rows in spaced relation. The bottle separator 201 is positioned with respect to six of the bottles in the manner illustrated in FIGURE 3. This may be automatically accomplished. The carton 26 is then moved down over the bottles B, with the necks of the bottles extending through the openings 29 in the upper portion of the carton 26. The carton 26 is then folded down around the lower portions of the bottles B and the flaps 32 and 33 are passed beneath the bottles to form the bottom wall 31 of the carton 26. The flaps 32 and 33 are suitably connected together, such as by interconnected tabs (not shown).

It is to be noted that the bottle separator 201 is not formed with a handle. Accordingly, a separate handle 225 of any desired design is carried by the carton 26. The handle 225 projects upwardly through the slot 30 in the top portion of the carton 26.

From the foregoing, it will be seen that novel and advantageous provision has been made for carrying out the desired end. However, attention is directed to the fact that other variations may be made in the example bottle separator disclosed herein without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. A separator for use in a bottle carrier for separating individual bottles disposed therein, said separator being formed from a single sheet of material folded along a lon-

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gitudinal fold line to define two upstanding walls each having adjacent inner surfaces and remote outer surfaces, said walls terminating at opposite ends thereof in outwardly directed end flanges disposed in alignment and normal to the planes of said walls, said end flanges defining end bottle stops, each of said end flanges being folded upon itself and terminating in a flange, and means securing each flange to an outer surface of an associated one of said walls whereby swinging of said end flanges endwise beyond the ends of said walls is restrained.

2. A separator for use in a bottle carrier for separating individual bottles disposed therein, said separator being formed from a single sheet of material folded along a longitudinal fold line to define two upstanding walls, said walls terminating at opposite ends thereof in outwardly directed end flanges disposed generally in alignment and normal to the planes of said walls, said end flanges defining end bottle stops, each of said end flanges being folded upon itself and terminating in a flange, means securing each flange to an associated one of the two upstanding walls at an end thereof, each of said end flanges terminating at a fold line remote from said walls, and a tab struck from a portion of said end flanges projecting beyond said last-mentioned fold lines.

3. A separator for use in a bottle carrier for separating individual bottles disposed therein, said separator being formed from a single sheet folded to define two upstanding walls each having adjacent inner surfaces and remote outer surfaces, said walls terminating at opposite ends thereof in outwardly directed end flanges disposed generally in alignment and normal to the planes of said walls, said end flanges defining end bottle stops, intermediate flanges formed from said walls and folded outwardly from the planes thereof to form intermediate bottle spacers disposed generally normal to the plane of said walls, each of said end flanges being folded upon itself and terminating in a flange secured to an associated one of said outer surfaces of said walls whereby swinging of said end flanges endwise beyond the ends of said walls is restrained.

4. The separator of claim 3 wherein each of said intermediate bottle spacers is formed of two flanges from an adjoining one of said walls and folded outwardly therefrom with said two flanges being disposed in opposed face-to-face relation and terminating remote from said walls in flange-joining fold lines.

5. The separator of claim 4 wherein said walls are connected together along a lower fold line interrupted by spaced longitudinally extending cut lines.

6. A separator for use in a bottle carrier for separating individual bottles disposed therein, said separator being formed from a single sheet folded to define two upstanding walls, said walls terminating at opposite ends thereof in outwardly directed end flanges disposed generally in alignment and normal to the planes of said walls, said end flanges defining end bottle stops, intermediate flanges formed from said walls and folded outwardly from the planes thereof to form intermediate bottle spacers disposed generally normal to the plane of said walls, each of said end flanges being folded upon itself and terminating in a flange secured to an associated one of said walls whereby swinging of said end flanges endwise beyond the ends of said walls is restrained, said end flange terminating at a fold line remote from said walls, and a tab struck from a portion of said end flanges projecting beyond said last-mentioned fold lines.

7. A separator for use in a bottle carrier for separating individual bottles disposed therein, said separator being formed from a single sheet folded to define two upstanding walls, said walls terminating at opposite ends thereof in outwardly directed end flanges disposed generally in alignment and normal to the planes of said walls, said end flanges defining end bottle stops, intermediate flanges formed from said walls and folded outwardly from the planes thereof to form intermediate bottle spacers dis-

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posed generally normal to the plane of said walls, each of said end flanges being folded upon itself and terminating in a flange secured to an associated one of said walls whereby swinging of said end flanges endwise beyond the ends of said walls is restrained, each end flange having flange portions in opposed face-to-face relation terminating at a fold line remote from said walls, said end flanges each terminating in a tab remote from said fold line joining said flange portions, each of said tabs being struck from the material of one of said flange portions and lying in a plane common to another of said flange portions.

8. The separator of claim 7 wherein each end flange includes first and second opposed flange portions terminating at said fold line, said first flange portions being longitudinally outermost relative to said bottle spacers, said second flange portion being longitudinal innermost with respect to said bottle spacers, and each said flange secured to said wall being joined by a fold line to a respective one of each of said second flange portions.

9. The separator of claim 7 wherein each first flange portion includes a tab coplanar therewith formed from the material of an associated second flange portion.

10. A blank for forming a separator for use in a bottle carrier for separating and retaining bottles therein, said blank being in the form of a generally rectangular sheet having a central fold line dividing the sheet into two identical halves, each of said halves including a wall portion having at least a single bottle spacer forming flange portion therefrom, each said bottle spacer forming flange portion being defined by three longitudinally spaced fold lines parallel to each other and extending from a longitudinal edge of said blank to said central fold line, a cut line extending between the outermost of said three fold lines along said central fold line, each of said halves further including a plurality of transverse fold lines dividing said halves into end flange forming portions, and each end flange forming portion including a cut line defining a projecting bottle-retaining tab.

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11. A blank for forming a separator for use in a bottle carrier for separating and retaining bottles therein, said blank being in the form of a generally rectangular sheet having a central fold line dividing the sheet into two identical halves, each of said halves including a wall portion having at least a single bottle spacer forming flange portion therefrom, each said bottle spacer forming flange portions being defined by three longitudinally spaced fold lines parallel to each other and extending from a longitudinal edge of said blank to said central fold line, a cut-line extending between the outermost of said three fold lines along said central fold line, each of said halves further including a plurality of transverse fold lines dividing each half into end flange forming portions, each end flange forming portion including aligned fold lines extending from said longitudinal edge and said central fold line respectively toward said central fold line and said longitudinal edge but terminating remote therefrom and from each other, and a cut line joining said aligned fold lines defining a projecting bottle-retaining tab.

12. The blank of claim 11 including a transverse fold line between each transverse edge and said aligned fold lines and cut line to define an end securing flange.

#### References Cited by the Examiner

##### UNITED STATES PATENTS

979,373	12/1910	Brasseur	217—23
2,072,371	3/1937	Kaplan	229—31
2,330,699	9/1943	Flamm.	
2,334,425	11/1943	Lowey	229—31
2,537,615	1/1951	Arneson	229—52
2,731,170	1/1956	Bergstein	220—113
2,914,236	11/1959	Shapiro	229—34

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