

[72] Inventor **Melchiorre M. Stramaglia**
Castro Valley, Calif.
 [21] Appl. No. **794,311**
 [22] Filed **Jan. 27, 1969**
 [45] Patented **Apr. 27, 1971**
 [73] Assignee **The Finn Industries, Inc.,**
Chicago, Ill.

[56] **References Cited**
UNITED STATES PATENTS
 2,371,312 3/1945 Potter..... 229/52BC
 2,578,174 12/1951 Crane..... 229/52BC
 3,455,498 7/1969 Gadiel..... 229/41

Primary Examiner—David M. Bockenek
Attorney—Dominik, Knechtel & Godula

[54] **BOTTLE CARRIER**
5 Claims, 26 Drawing Figs.
 [52] U.S. Cl..... **220/113**
 [51] Int. Cl..... **B65d 5/48,**
B65d 25/28
 [50] Field of Search..... **220/113,**
107, 108, 109, 111, 114, 115; 229/52 (BC), 41

ABSTRACT: A bottle carrier which is fabricated from a single blank of sheet material which is cut, scored, folded and glued in a fashion such as to provide a knocked-down bottle carrier which can be easily and quickly automatically erected simply by exerting opposing forces on two of its opposite edges. The bottom of the bottle carrier is self-erecting and pulls a centrally disposed divider into position during the erection thereof.

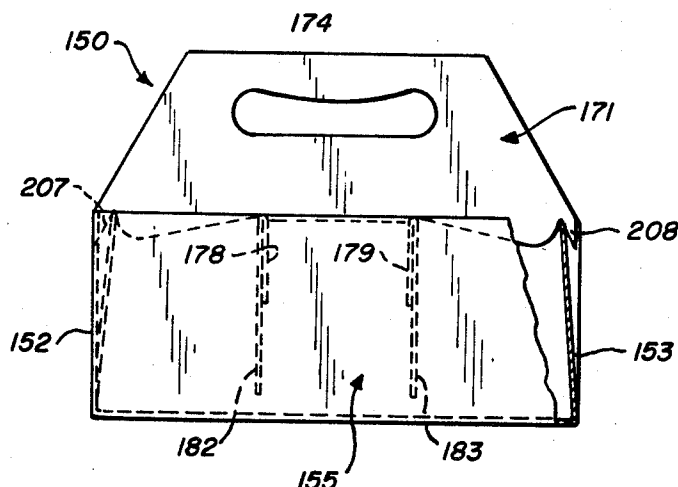


FIG. 1

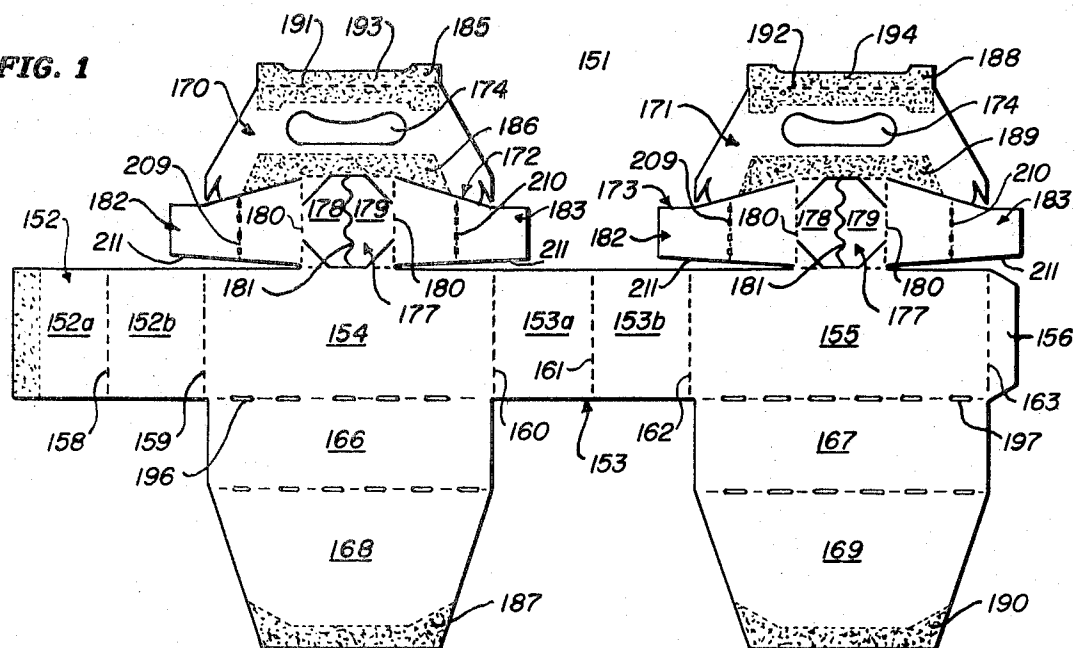


FIG. 2

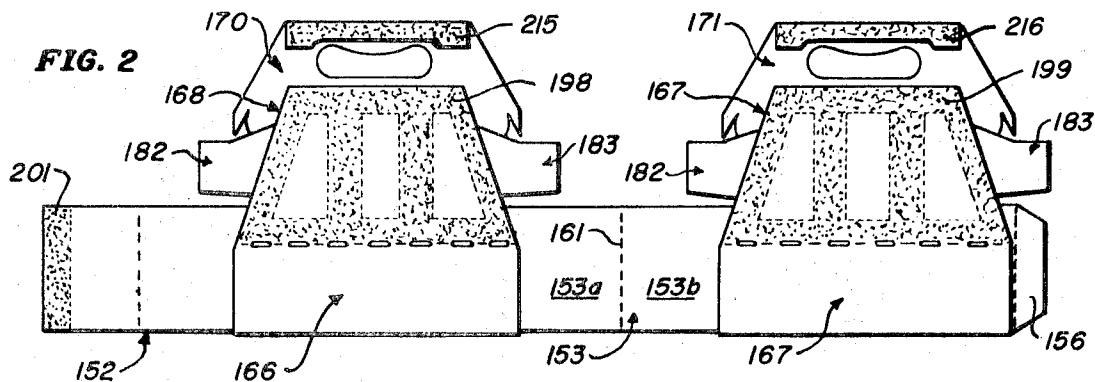


FIG. 3

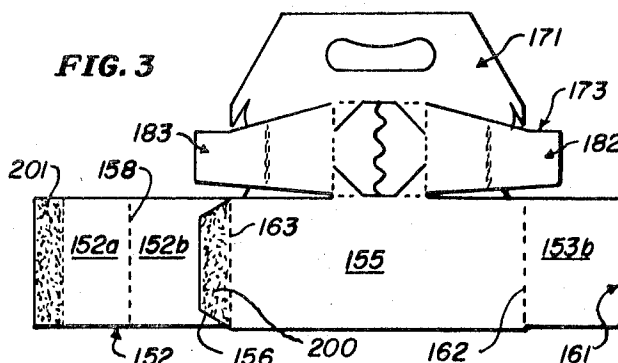
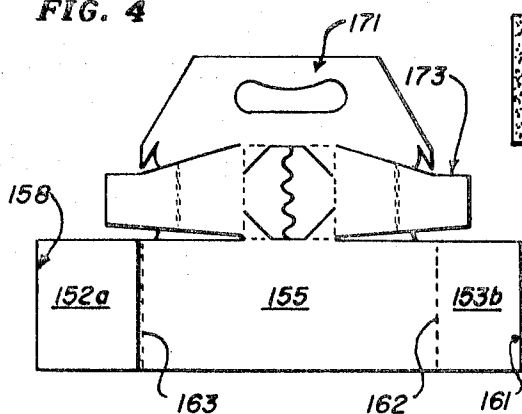


FIG. 4



INVENTOR
Melchiorre M. Stramaglia
BY *Dominik, Knechtel & Godula*
Attys.

FIG. 5

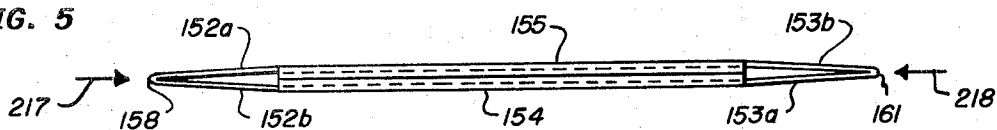


FIG. 6

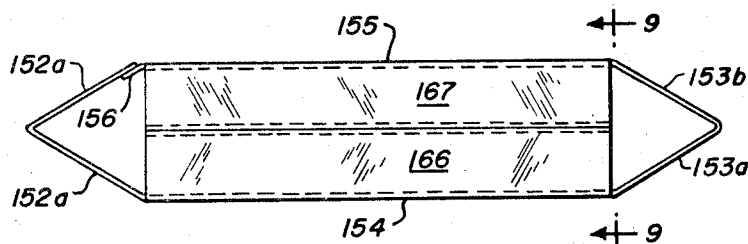


FIG. 7

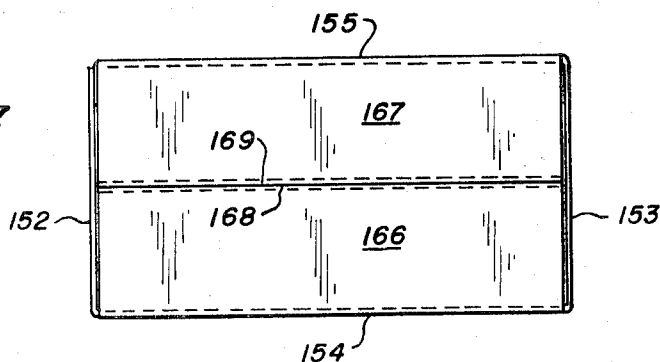


FIG. 9

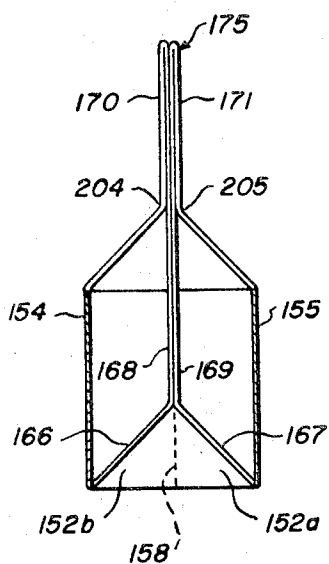
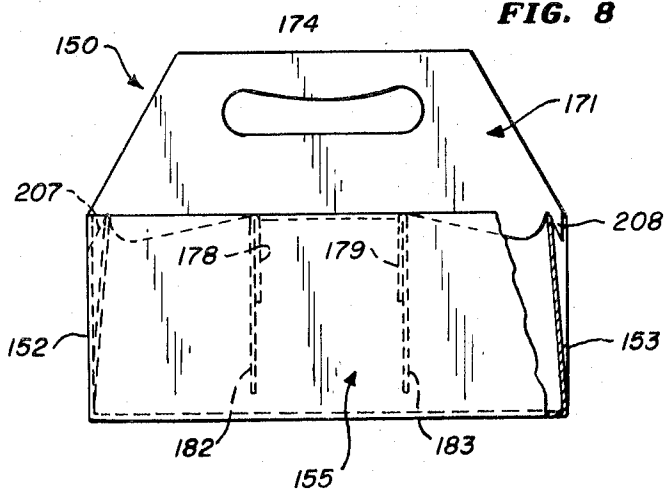


FIG. 8



INVENTOR

Melchiorre M. Stramaglia

BY

Dominik, Knechtel & Godula
Attys.

FIG. 10

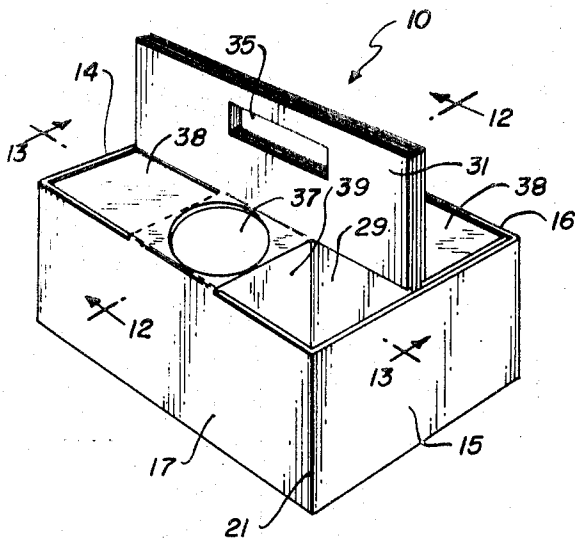


FIG. 12

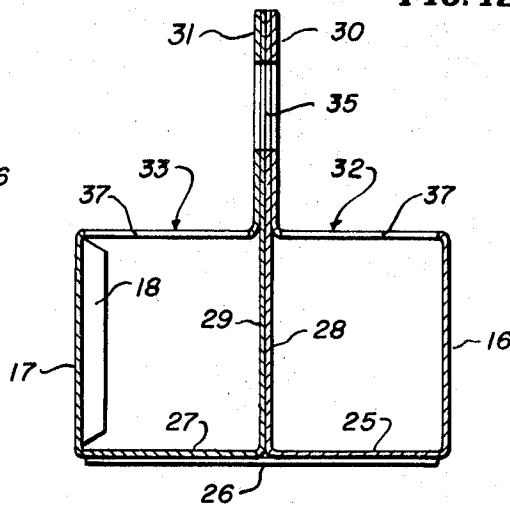


FIG. 11

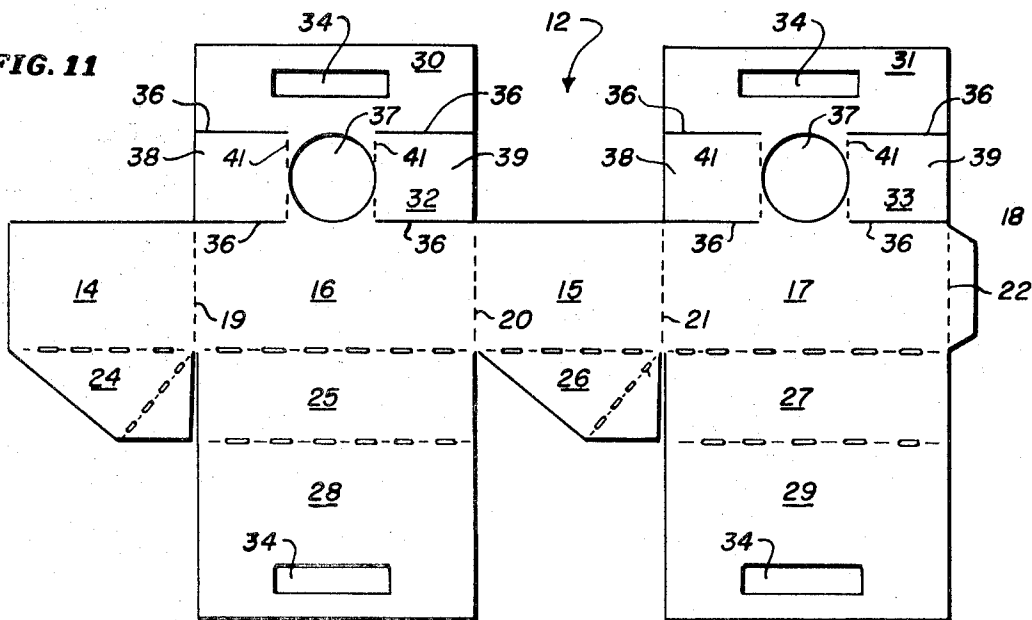
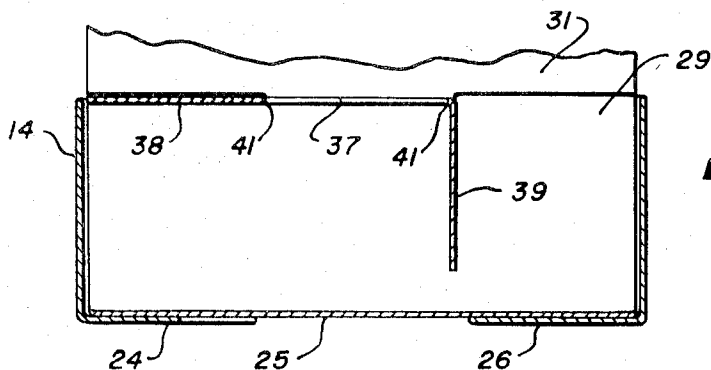


FIG. 13

INVENTOR
Melchiorre M. Stramaglia
BY
Dominik, Knechtel & Godula
Attys.

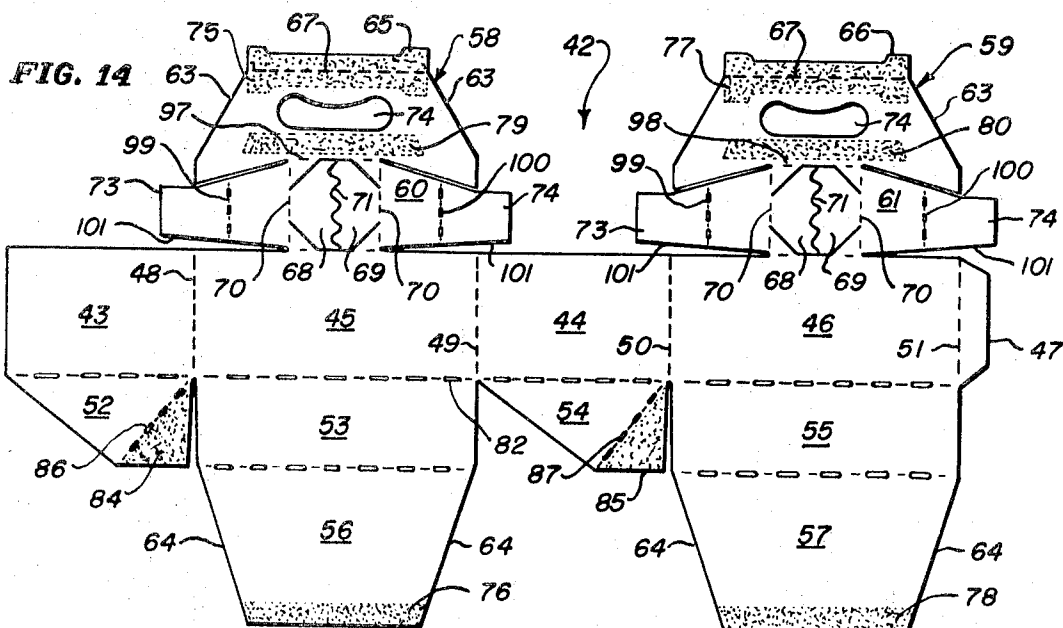
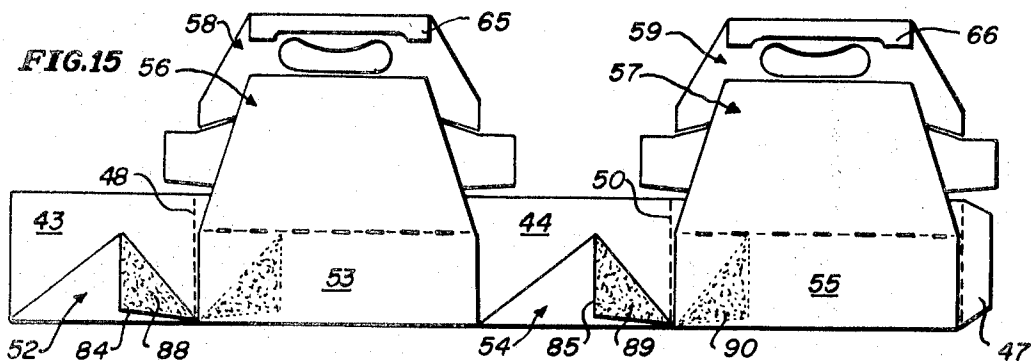
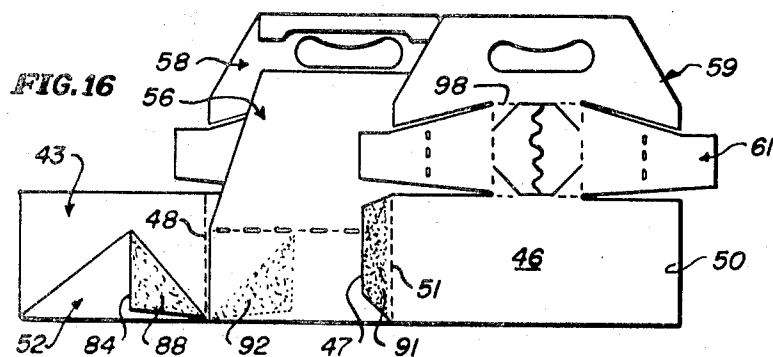
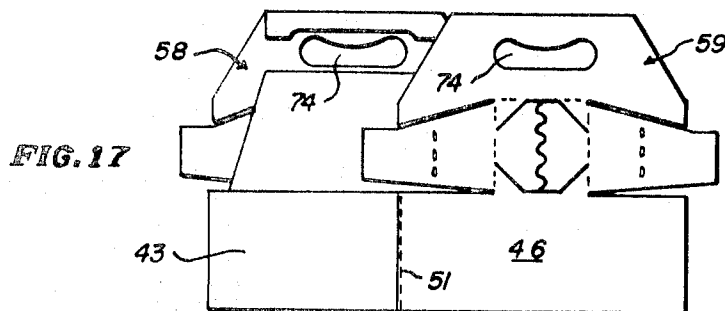
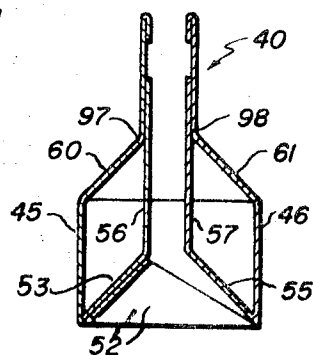


FIG. 18



INVENTOR
Melchior M. Stramaglia
BY
Dominik, Knechtel & Godula
Attys.

FIG. 19

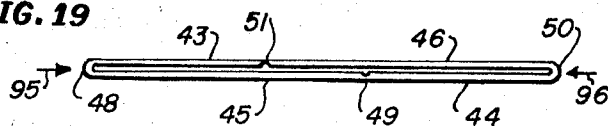


FIG. 20

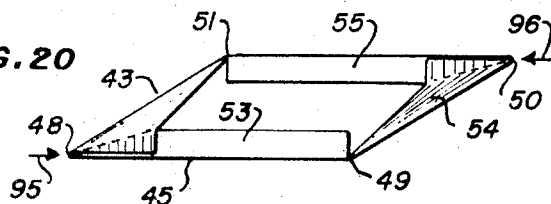


FIG. 21

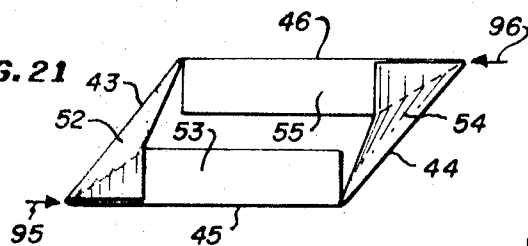


FIG. 22

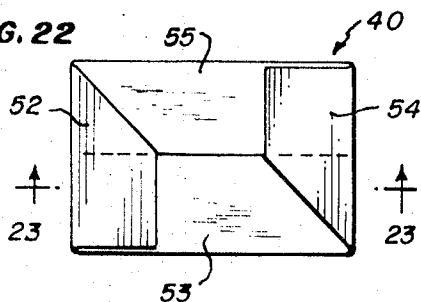


FIG. 23

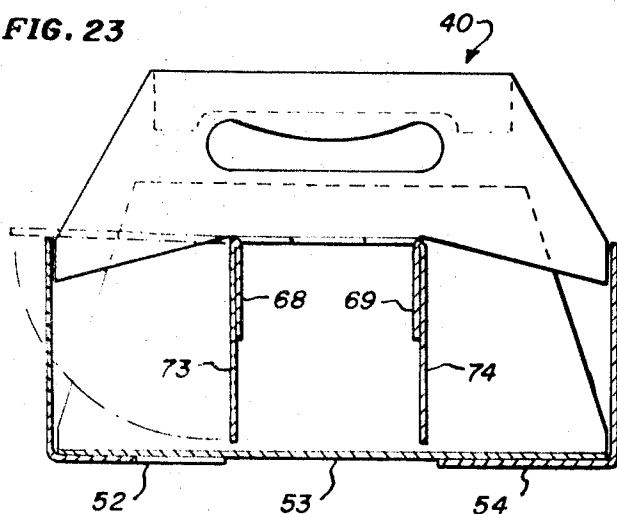


FIG. 24

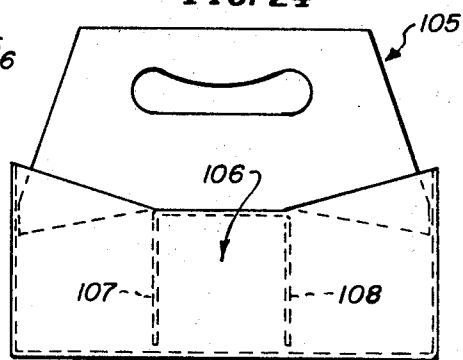


FIG. 25

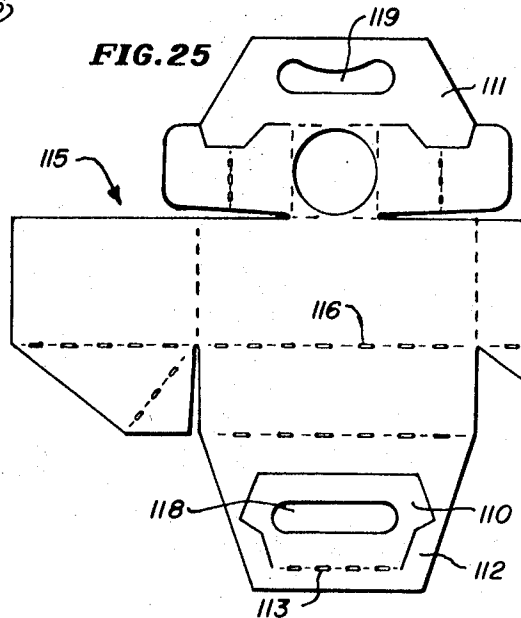
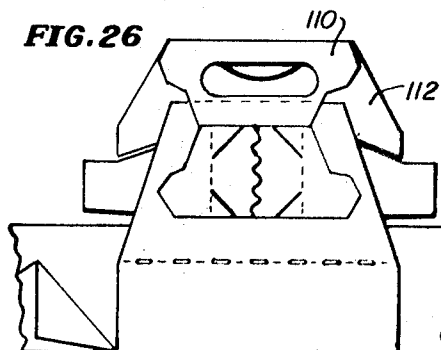


FIG. 26



INVENTOR

Melchiorre M. Stramaglia

BY

Dominik, Knechtel & Godula
Attys.

BOTTLE CARRIER

This invention relates to improved bottle carriers which are fabricated from a single blank of sheet material in a fashion such that they can be shipped and/or stored in a knocked-down or flat-folded configuration and thereafter easily and automatically erected.

An object of the invention is to provide improved bottle carriers having solid outer walls or panels, thereby providing better printing surfaces for advertising material and the like.

Another object is to provide improved bottle carriers constructed in a fashion such as to provide full bottle separation.

Still another object is to provide improved bottle carriers having a bottom wall which is more rigid than those on most similar types of bottle carriers.

A still further object is to provide improved bottle carriers which are constructed and folded in a fashion such that they can be easily formed or erected in a bottling or glass plant, either automatically or by hand.

Another object is to provide improved bottle carriers formed from a single blank of sheet material, with a substantially irreducible amount of waste material.

Still another object is to provide improved bottle carriers which can be more easily glued than theretofore generally possible with most similar types of bottle carriers.

A still further object is to provide improved bottle carriers having a handle which is generally more rigid than the handles on similar types of bottle carriers.

A still further object is to provide improved bottle carriers which are adapted to be used in conjunction with existing machines for forming, for erecting and for filling them, with little or no modification to said machines.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The above objectives are accomplished with a bottle carrier which is fabricated from a single blank of sheet material which is cut, scored, folded and glued in a fashion such as to provide a knocked-down bottle carrier which can be easily and quickly automatically erected simply by exerting opposing forces on two of its opposite edges. The bottom of the bottle carrier is self erecting and pulls a centrally disposed divider into position during the erection thereof. This divider not only separates the bottles on the opposite sides thereof, but supports the bottom and has a handle grip formed in it, at its top edge. Individual bottle dividers are provided on each of the opposite sides of the center divider and are automatically positioned by means of the bottles as the latter are placed in the bottle carrier.

The invention accordingly comprises an article of manufacture possessing the features, properties, and the relation of elements which will be exemplified in the article hereinafter described, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

FIG. 1 is a top plan view of a blank of sheet material from which a bottle carrier exemplary of a first embodiment of the invention is formed;

FIGS. 2-4 are top plan views illustrating the manner in which the blank of FIG. 1 is folded to form a bottle carrier;

FIGS. 5-7 are bottom views of the folded blank illustrating the manner in which the bottom of the bottle carrier is formed;

FIG. 8 is a side plan view of the erected bottle carrier;

FIG. 9 is a sectional view taken along lines 9-9 of FIG. 6;

FIG. 10 is a perspective view of a bottle carrier exemplary of another embodiment of the invention;

FIG. 11 is a top plan view of the blank of sheet material from which the bottle carrier of FIG. 10 is formed;

FIG. 12 is a sectional view taken along lines 12-12 of FIG. 10;

FIG. 13 is a partial sectional view taken along lines 13-13 of FIG. 10;

FIG. 14 is a top plan view of a blank of sheet material used to form still another bottle carrier exemplary of the invention;

FIGS. 15-17 are views of the blank of sheet material of FIG. 14, illustrating the manner in which it is folded to form the bottle carrier shown in FIG. 23;

FIG. 18 is a sectional view taken substantially transversely through the bottle carrier as it is being erected, to illustrate the manner in which the panels and dividers thereof are pulled into place;

FIGS. 19-22 are bottom views of the bottle carrier illustrating the manner in which the bottom of the bottle carrier is formed;

FIG. 23 is a sectional view of the bottle carrier formed from the blank of sheet material of FIG. 14, taken along lines 23-23 of FIG. 22;

FIG. 24 is a side plan view of still another bottle carrier exemplary of the invention;

FIG. 25 is a partial top plan view of a blank of sheet material illustrating an alternate construction for providing additional handle support; and

FIG. 26 is a view illustrating the manner in which the blank of sheet material of FIG. 25 is folded.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings, in FIGS. 1-9 thereof, there is shown a bottle carrier 150 (FIG. 8), exemplary of a preferred embodiment of the present invention, which is formed from the single blank of sheet material 151 shown in FIG. 1. This blank 151 is cut and scored in a fashion such as to form end panels 152 and 153 including end panel sections 152a, 152b and 153a, 153b, respectively, side panels 154 and 155, and a small glue flap 156 which, when folded along score lines 158-163, form the outer rectangular-shaped sidewalls of the bottle carrier 150. The glue flap 156 has adhesive applied to it on the side opposite that shown in FIG. 1, and is adhesively affixed to the end panel 152a so that it lies interiorly of the bottle carrier 150. With this construction, the sidewalls (the end panels 152 and 153 and the side panels 154 and 155) of the bottle carrier 150 are in the form of solid panels and are not interrupted with glue lines and the like. Accordingly, the solid panels provide better printing surfaces for vignettes, as well as the advertising material which normally is applied to these bottle carriers, when compared to most presently available similar types of bottle carriers. In addition to providing better printing surfaces, these panels can be more easily printed, and there is less likelihood of the design and the decorativeness of the vignettes and the like being distorted or otherwise disfigured when the bottle carrier is formed.

The blank 151 further is cut and scored to provide a self-forming bottom including bottom panels 166 and 167, a centrally disposed divider including divider panels 168 and 169, and a pair of panels which, when the bottle carrier is erected, form handle portions 170 and 171 and individual bottle separator panels 172 and 173. As can be best seen in FIG. 9, the divider panels 168 and 169 are abutted together face-to-face centrally of the bottle carrier 150 and the upper portions thereof are sandwiched between the handle portions 170 and 171, when the bottle carrier is erected. The upper portions of the divider panels 168 and 169 are adhesively affixed to the handle portions 170 and 171, respectively, and further are adhesively or otherwise secured to one another, so as to provide a strong, rigid handle. The divider panels 168 and 169 have hand openings 174 in them which are positioned so that they align with one another when the bottle carrier is erected, so as to form a single hand opening 175, as can be seen in FIG. 8.

The individual bottle separator panels 172 and 173 are horizontally disposed when the bottle carrier 150 is erected, and each of them has formed therein a centrally disposed bottle receiving opening 177 which is normally covered by two small divider flaps 178 and 179 which can be folded along score lines 180, to depend vertically downwardly into the bottle carrier, as can be best seen in FIG. 8. The edges 181 of these divider flaps 178 and 179 also advantageously are cut in a sinusoidal fashion to provide additional lengths of board

material between the bottles placed in the bottle carriers. The openings 177 each also are flanked by a pair of foldable divider flaps 182 and 183 which are automatically folded along the score lines 180 so as to depend vertically downwardly within the bottle carrier 150, as can be best seen in FIG. 8, when bottles are placed in the bottle carrier. It can therefore be seen that all of the bottles placed in the bottle carrier 150 are substantially completely separated from one another, by means of the centrally disposed divider formed by the divider panels 168, 169 and the divider flaps 182 and 183.

It also may be noted that bottles placed in the bottle carrier 150 seat on the bottom panels 166 and 167, and the weight of these bottles help to fully erect or form the bottom. When the filled bottle carrier is picked up by the handle portions 170 and 171, the divider panels 168 and 169 being adhesively affixed to these handle portions support the bottom panels 166 and 167. This fact, as well as the fact that the bottom panels are integral with the side panels 154, 155 and the divider panels 168, 169, substantially, if not completely, eliminates the possibility of the bottom tearing out of the bottle carrier as a result of a glue seam parting. The double handle strengthens the bottle carrier and, in addition, is fairly rigid so as to provide a secure feeling to anyone carrying the bottle carrier.

The blank 151 is folded in the manner described below, to form the bottle carrier 150. Adhesive first is applied to the blank 151, at glue areas 185—190, and it is then folded along the score lines 191 and 192 to affix the strengthening flaps 193 and 194 in overlapping relationship on the handle portions 170 and 171. Thereafter, or simultaneously with the above-described folding operation, the blank 151 is folded along the score lines 196 and 197 so that the bottom panels 166 and 167 and the divider panels 168 and 169 overlay the side panels 154, 155, the individual separator panels 172, 173 and a portion of the handle portions 170 and 171, as shown in FIG. 2.

Next, adhesive is applied to the glue areas 198, 199, 215 and 216, and then the blank 151 is folded over along the score line 161, as illustrated in FIG. 3, so that the divider panels 168 and 169 are adhesively affixed together. Prior to making the above-described fold, adhesive preferably is applied to the back side of the glue flap 156, as indicated by the dotted area 200 in FIG. 3. Alternatively, however, this adhesive can be applied after the fold is made. Adhesive also is applied to the glue area 201 on the end panel section 152a. The final fold then is made along score lines 158, to fold the end panel section 152a in overlapping relationship on the end panel section 152b and the glue flap 156. With this fold, the glue flap 156 is affixed to the inside of the end panel section 152a, as shown in FIG. 4.

The bottle carrier 150 now is completely formed and, as can be seen in FIG. 4, is in a knocked-down configuration so that it can be easily shipped and/or stored. It may be noted that the bottle carrier is formed from the blank 151 with a minimum number of folds. Also, the blank 151 can be automatically folded and glued, as well as being erected in the manner hereinafter described, on most existing apparatus for forming bottle carriers, with little or no modification to this apparatus.

To erect the bottle carrier 150, opposing forces, as indicated by the arrows 217 and 218 in FIGS. 5—7, are exerted against the two opposite edges of the folded blank 151. As these forces are applied, the opposite side panels 154 and 155 are forced to spread apart, in the manner illustrated in FIG. 6. As these side panels spread apart, the bottom panels 166 and 167 are caused to unfold, downwardly into bottom-closing positions, as illustrated in FIGS. 6, 7 and 9, 13. As these bottom panels 166 and 167 are forced into their bottom-closing positions, they pull the divider panels 168 and 169 into position, vertically disposed centrally of the bottle carrier, as can be best seen in FIG. 9. It may further be noted that the individual separator panels 172 and 173 are folded along the score lines 204 and 205 and are pulled into their horizontally disposed positions, on each of the opposite sides of the divider panels 168 and 169, as the latter panels are pulled into position.

It may be noted that the handle portions 170 and 171 each have a pair of locking notches 207 and 208 formed therein which are aligned when these handle portions are overlapped. These locking notches 207 and 208 are adapted to frictionally receive the top edge of the end panel 152 and 153 therein, respectively, to maintain the bottle carrier erect, until a bottle, or bottles, is placed in it. Once the bottles are placed within it, which can be done automatically or manually, the bottles forcibly urge the bottom panels 166 and 167 downwardly, which action tends to keep the top edges of the end panels 152 and 153 engaged within the locking notches 207 and 208, and the bottle carrier erect.

When the bottoms of the bottles engage the small divider flaps 178 and 179, the latter are forced to fold along the score lines 180 so that they depend downwardly within the bottle carrier, as can be best seen in FIG. 8. Likewise, the divider flaps 182 and 183 are forced downward into the bottle carrier, to separate the bottles. These divider flaps 182 and 183 advantageously are scored along score lines 209 and 210 to permit them to be more easily forced into position. If these divider flaps are not scored, they may not drop into position, since the outer ends thereof overlap the edges of the end panels. The longer length, however, is desirable to provide a greater amount of material between adjacent bottles. The edges 211 of these divider flaps 182 and 183 also are preferably angularly cut, as can be best seen in FIG. 1, to provide a clearance to prevent them from snagging on the edge of the glue flap 156, as they are being forced into the interior of the bottle carrier.

In FIGS. 10—13, there is shown a bottle carrier 10, exemplary of another embodiment of the invention, which is formed from the single blank of sheet material 12 shown in FIG. 11. This blank 12 is cut and scored in a fashion such as to form end panels 14 and 15, side panels 16 and 17, and a small glue flap 18 which, when folded along score lines 19—22, form the outer rectangular-shaped sidewalls of the bottle carrier 10. The glue flap 18 has adhesive applied to it on the side opposite that shown in FIG. 11, and is adhesively affixed to the end panel 14 so that it lies interiorly of the bottle carrier 10. It can be seen that this construction is like that of the bottle carrier 150 so that the sidewalls of the bottle carrier 10 also are in the form of solid panels and are not interrupted with glue lines and the like. Accordingly, with this bottle carrier also, better printing surfaces for vignettes, as well as the advertising material which normally is applied to these bottle carriers are provided.

The blank 12 further is cut and scored to provide a self-forming bottom including bottom panels 24—27, a centrally disposed divider including divider panels 28 and 29, and a pair of panels which, when the bottle carrier is erected, form handle portions 30 and 31 and individual bottle separator panels 32 and 33. As can be best seen in FIGS. 10 and 12, the divider panels 28 and 29 are abutted together face-to-face centrally of the bottle carrier 10 and the upper portions thereof are sandwiched between the handle portions 30 and 31, when the bottle carrier is erected. The upper portions of the divider panels 28 and 29 are adhesively affixed to the handle portions 30 and 31, respectively. Normally, these divider panels 28 and 29 are not adhesively or otherwise secured to one another, however, they may be secured together, in some suitable fashion, at a brewery or glass plant where the bottle carrier is erected, to increase the rigidity of the handle. The divider panels 28, 29 and the handle portions 30, 31 each have hand openings 34 in them which are positioned so that they all are aligned with one another when the bottle carrier is erected, so as to form a single hand opening 35, as can be seen in FIGS. 10 and 12.

The individual bottle separator panels 32 and 33 are horizontally disposed when the bottle carrier 10 is erected, and each of them has a centrally disposed bottle receiving opening 37 formed in it which is flanked by a pair of foldable divider flaps 38 and 39 which are formed by cut lines 36 and score lines 41. These foldable divider flaps 38 and 39 are automatically folded along the score lines 41 so as to depend verti-

cally downwardly within the bottle carrier 10, as can be best seen in FIG. 13, when bottles are placed in the bottle carrier. It can therefore be seen that all of the bottles placed in the bottle carrier 10 are substantially completely separated from one another, by means of the centrally disposed divider formed by the divider panels 28, 29 and the divider flaps 38 and 39.

It also may be noted that bottles placed in the bottle carrier 10 seat on the bottom panels 25 and 27, and the weight of these bottles help to fully erect or form the self-forming bottom. When the filled bottle carrier is picked up by the handle portions 30 and 31, the divider panels 28 and 29 being adhesively affixed to these handle portions support the bottom panels 25 and 27. This fact, as well as the fact that the bottom panels are integral with the side panels 16, 17 and the divider panels 28, 29, substantially, if not completely, eliminates the possibility of the bottom tearing out of the bottle carrier as a result of a glue seam parting. The double handle strengthens the bottle carrier and, in addition, is fairly rigid so as to provide a secure feeling to anyone carrying the bottle carrier.

Still another bottle carrier 40 which is generally like the bottle carrier 10 is illustrated in FIGS. 14—23. This bottle carrier provides some additional advantages not provided by the carrier 10, and in addition with it, the amount of material required to fabricate it can be reduced.

The bottle carrier 40 is formed from the single blank of sheet material 42 which is shown in FIG. 14 and which is cut, scored, folded and glued in a fashion such as to form end panels 43, 44, side panels 45, 46, and a small glue flap 47, which when folded along score lines 48—51, form the solid outer rectangular-shaped sidewalls of the bottle carrier. The blank 42 like the blank 12 further is cut and scored to provide a self-forming bottom including bottom panels 52—55, a centrally disposed divider including divider panels 56 and 57, and a pair of panels which, when the bottle carrier is erected, form handle portions 58, 59 and individual bottle separator panels 60, 61. The principal distinctions between the blanks 12 and 42 are in the shape of the divider panels 56, 57, the handle portions 58, 59 and the bottle separator panels 60, 61 which, in the case of the blank 42, are cut so that the blanks cut from a larger sheet of material are reversible and nest with one another to permit them to be cut with a substantially irreducible amount of waste material. It is therefore apparent that substantial savings in the cost of materials used to fabricate the bottle carriers 40 are provided. Other improvements and savings will be apparent from the description which follows.

More specifically, the handle portions 58, 59 have side edges 63 which are cut at an angle such as to permit the handle portions on another blank 42 to be nested with them, to reduce the amount of waste material which results from cutting the blanks from a larger sheet of material. The side edges 64 of the divider panels 56, 57 also are cut at an angle, for the same reason. In addition, the length of the divider panels is shortened so that the top portions thereof do not completely overlap the handle portions 58 and 59, as can be seen in FIG. 15. Cutting the edges 64 in this fashion and shortening the length of the divider panels not only reduces the amount of material used in the bottle carriers, but it improves the decorative appearance of the bottle carriers so that they are more attractive. To compensate for the lack of overlapping material, the handle portions 58, 59 are provided with small strengthening flaps 65, 66 which are folded over along the score lines 67 and adhesively affixed to the handle portions. These flaps 65, 66 strengthen the handle portions and provide a more rigid feeling to the bottle carrier while the latter is being carried.

The individual bottle separator panels 60, 61 are cut and scored in generally the same fashion as the separator panels 172 and 173 of the bottle carrier 150. In particular, it can be seen that these panels are cut to provide two small divider flaps 68, 69 which can be folded along score lines 70, to depend vertically downwardly into the bottle carrier, as can be best seen in FIG. 23. The edges 71 of these divider flaps 68, 69

also are cut in a sinusoidal fashion and the length of the foldable divider flaps 73 and 74 flanking the divider flaps 68, 69 is lengthened so that these divider flaps likewise provide substantially more separation between the bottles in the bottle carrier.

The blank 42 is folded in the manner described below, to form the bottle carrier 40. The blank 12 is formed in a fashion similar to that used in forming the bottle carrier 10. Adhesive first is applied to the blank 42, at glue areas 75—78. Adhesive also can be applied at glue areas 79 and 80 instead of or in addition to the glue areas 76 and 78, however, the adhesive preferably is applied only to the glue areas 76 and 78. After applying the adhesive, the blank 42 is folded along the score lines 67 to affix the strengthening flaps 65 and 66 in overlapping relationship on the handle portions 58 and 59. Thereafter, or simultaneously with the above-described folding operation, the blank 42 is folded along the score line 82 which extends across the entire width of the blank, so that the bottom panels 52—55 and the divider panels 56 and 57 overlay the side panels 45, 46, the individual separator panels 60, 61 and a portion of the handle portions 58 and 59, as shown in FIG. 15. As this fold is being made, the triangular-shaped tug tabs 84 and 85 are folded back along the score lines 86 and 87 to overlay the bottom panels 52 and 54. Adhesive then is applied to the tug tabs 84 and 85, as indicated by the dotted areas 88 and 89.

Next, that portion of the blank 42 to the right of the score line 50 is folded over atop the portion to the left of the score line 50, as shown in FIG. 16. In doing so, the tug tab 85 is adhesively affixed to the bottom panel 55, generally in the area indicated by the dotted area 90 in FIG. 15. Prior to making the above-described fold, adhesive preferably is applied to the back side of the glue flap 47, as indicated by the dotted area 91 in FIG. 16. Alternatively, however, this adhesive can be applied after the fold is made. The final fold is along score line 48, to fold the end panel 43 and the bottom panel 52 in overlapping relationship and to affix the glue flap 47 to the inside of the end panel 43, as shown in FIG. 17. With this fold, the tug tab 84 is adhesively affixed to the bottom panel 53, generally in the area indicated by the dotted area 92, in FIG. 16. The bottle carrier 40 now is completely formed and, as can be seen in FIG. 17, is in a knocked-down configuration.

To erect the bottle carrier 40, opposing forces, as indicated by the arrows 95 and 96 in FIGS. 19—22, are exerted against the two opposite edges of the folded blank 42. As these forces are applied, the opposite side panels 45 and 46 are forced to spread apart, in the manner illustrated in FIG. 20. As these side panels spread apart, the bottom panels 52 and 54 are caused to unfold, downwardly and, in doing so, the tug tabs 84 and 85 pull the bottom panels 53 and 55 into bottom-closing positions, as illustrated in FIGS. 21 and 22. As these bottom panels 53 and 55 are being pulled into their bottom-closing positions, the divider panels 56 and 57 also are pulled into position, vertically disposed centrally of the bottle carrier, as can be best seen in FIG. 18. It may further be noted that the individual separator panels 60 and 61 are folded along the score lines 97 and 98 and are pulled into their horizontally disposed positions, on each of the opposite sides of the divider panels 56 and 57, as the latter panels are pulled into position. In this respect, the construction of the bottle carrier 40 is unique in that it not only has a self-forming bottom, but the latter further functions to erect the dividers within the bottle carrier. The self-forming bottom strengthens the bottle carrier and increases the speed at which the bottle carriers can be erected.

Once the bottle carrier 40 is erected, bottles can be placed within it, automatically or manually. As the bottoms of the bottles engage the small divider flaps 68 and 69, the latter are forced to fold along the score lines 70, so that they depend downwardly within the bottle carrier, as can be best seen in FIG. 23. Likewise, the divider flaps 73 and 74 are forced downward into the bottle carrier, to separate the bottles. These divider flaps 73 and 74 are scored along score lines 99

and 100 to permit them to be more easily forced into position. The edges 101 of these divider flaps 73 and 74 also are preferably angularly cut, as can be best seen in FIG. 14, to provide a clearance to prevent them from snagging on the edge of the glue flap 47, as they are being forced into the interior of the bottle carrier.

In FIG. 24, there is illustrated still another bottle carrier 105 which is generally like and is formed in the same general fashion as the bottle carriers 10 and 40. However, it may be noted that the center cell 106 thereof, on each of the opposite sides of the center divider, is lowered so as to provide a tapering profile appearance. This tapered appearance is provided by, for example, angularly cutting the edges 101 of the divider flaps 73 and 74 of the blank 42 so that these edges extend into the side panels 45 and 46, instead of away from them. In this case also, the divider flaps 107 and 108 are shortened in length so that they extend substantially to the bottom wall 109.

In FIGS. 25 and 26, there is illustrated an alternate construction for reenforcing the handle portions of a bottle carrier. In this case, a handle reenforcement flap 110 substantially corresponding to the outline of the handle portion 111 is cut in the divider portion 112 and is adapted to be folded along a score line 113. This handle reenforcement flap 110 is folded along the score line 113, as the blank 115 is folded along the score line 116 in the manner described above, so that it can be adhesively affixed to the handle portion 111, as illustrated in FIG. 26. The hand opening 118 in the handle reenforcement flap 110 is positioned so that it aligns with a substantially similar hand opening 119 in the handle portion 111.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above article without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

Now that the invention has been described, what is claimed as new and desired to be secured by Letters Patent is:

I claim:

1. A flat-foldable bottle carrier having four outer walls, two of said walls having at one end thereof bottom closure flaps which fold downwardly into a bottom for said bottle carrier as said walls are separated after being folded flat; said two walls

having at the other end thereof carrier panels which are formed to provide a vertically disposed handle portion and a horizontally-disposed bottle receiving portion for receiving and carrying bottles; a longitudinal divider disposed centrally within said bottle carrier formed of a pair of divider panels, each of said divider panels being integrally affixed to one of said bottom closure flaps along one end thereof and to one of said carrier panels, said divider panels further being substantially coextensive in area with one of said carrier panels and overlaying said panel, said divider panels also overlaying one another and being fixedly secured together, whereby said divider panels and said carrier panels are automatically forcibly urged into position by said bottom closure flaps as the latter fold downwardly into said bottom for said bottle carrier as said walls are separated after being folded flat.

2. The flat-foldable bottle carrier of claim 1, wherein said four outer walls comprise two sidewalls and two end walls, said two end walls being folded in half along a score line thereon and the end edges thereof being fixedly secured to the end edges of said two sidewalls, respectively, with said end walls exposed when said bottle carrier is folded flat, said bottom closure flaps being integrally affixed to said sidewalls along one edge thereof and sandwiched between said sidewalls in face-to-face relationship when said bottle carrier is folded flat, said bottom closure flaps being forcibly urged downwardly into bottom-forming position as said outer walls are separated after being folded flat by exerting opposing forces against the score lines on said two end walls, respectively.

3. The flat-foldable bottle carrier of claim 2, wherein said carrier panels having locking notches therein which are adapted to frictionally and lockingly receive the top edges of said end walls therein for holding said bottle carrier erect.

4. The flat-foldable bottle carrier of claim 1, wherein said horizontally-disposed bottle receiving portion of each of said carrier panels is formed to provide a centrally positioned cell for receiving and carrying a bottle, said cell being flanked by a pair of flaps which are foldable vertically downwardly into said bottle carrier to form outboard cells on each of the opposite sides of said center cell, flaps forming separators between bottles in said outboard cells and said center cell, whereby all of said bottles in said bottle carrier are substantially completely separated from one another.

5. The flat-foldable bottle carrier of claim 4, wherein said center cell normally is closed by a pair of foldable flaps which are folded vertically downwardly within said bottle carrier to provide additional separation between a bottle in said center cell and bottles in said outboard cells.

50

55

60

65

70

75