April 17, 1945. E. C. POTTER 2,373,851

BOTTLE CARRIER

Filed Jan. 24, 1940 2 Sheets-Sheet 1

Fig. 1

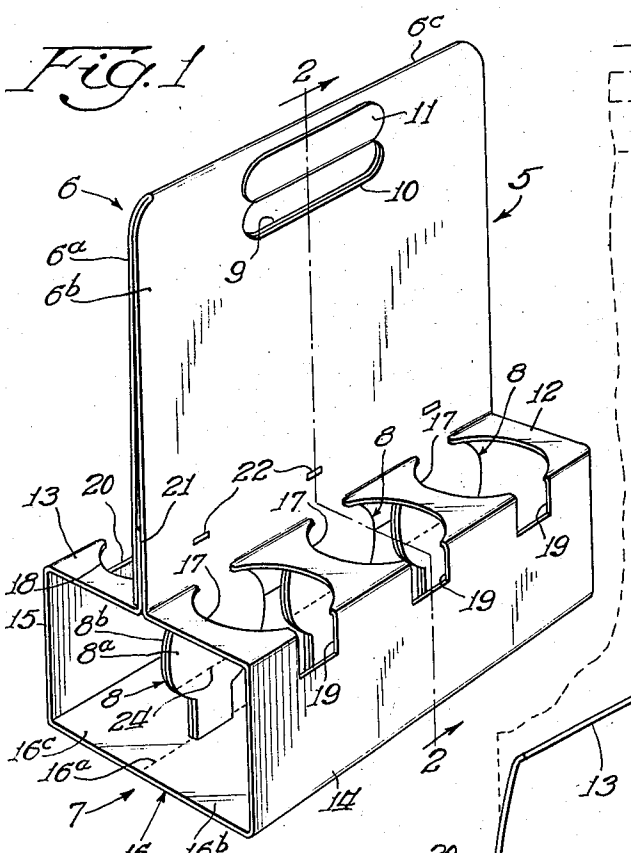


Fig. 2

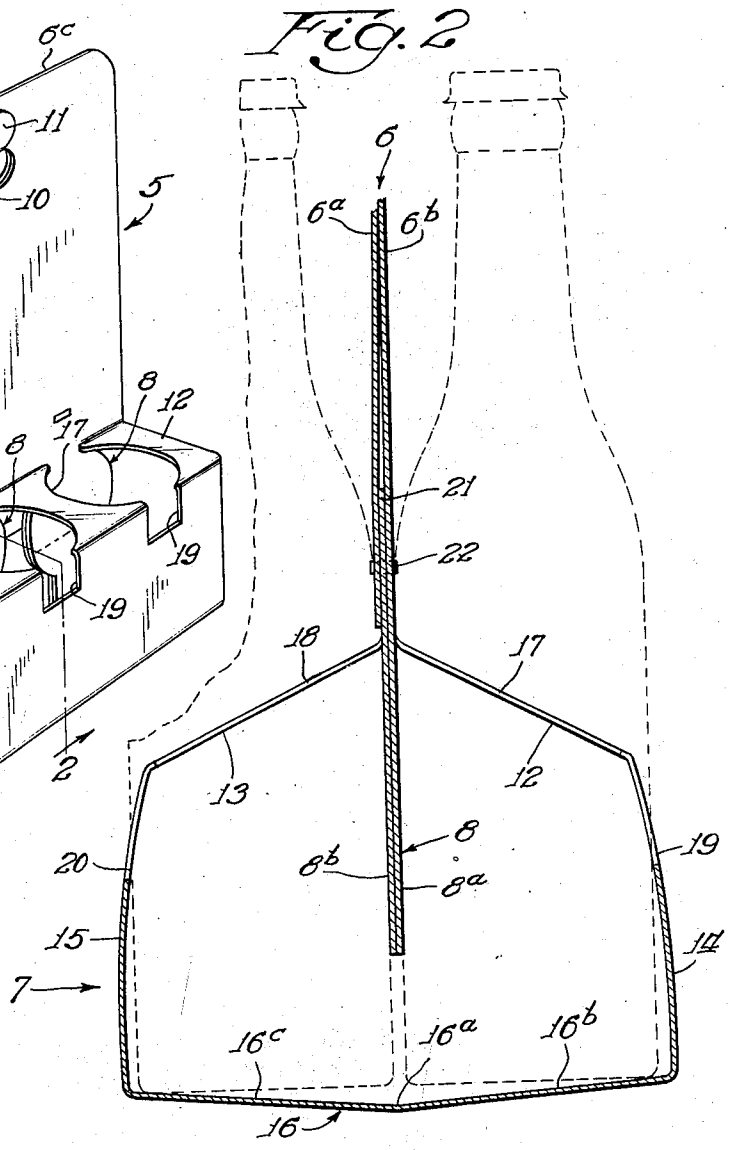
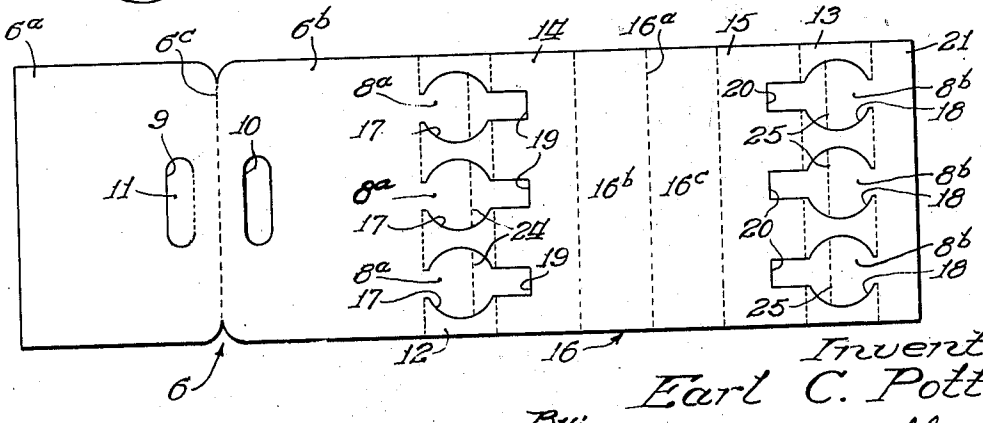


Fig. 3



Inventor:
Earl C. Potter
By:
EA Wagoneller
Atty.

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Fig. 4

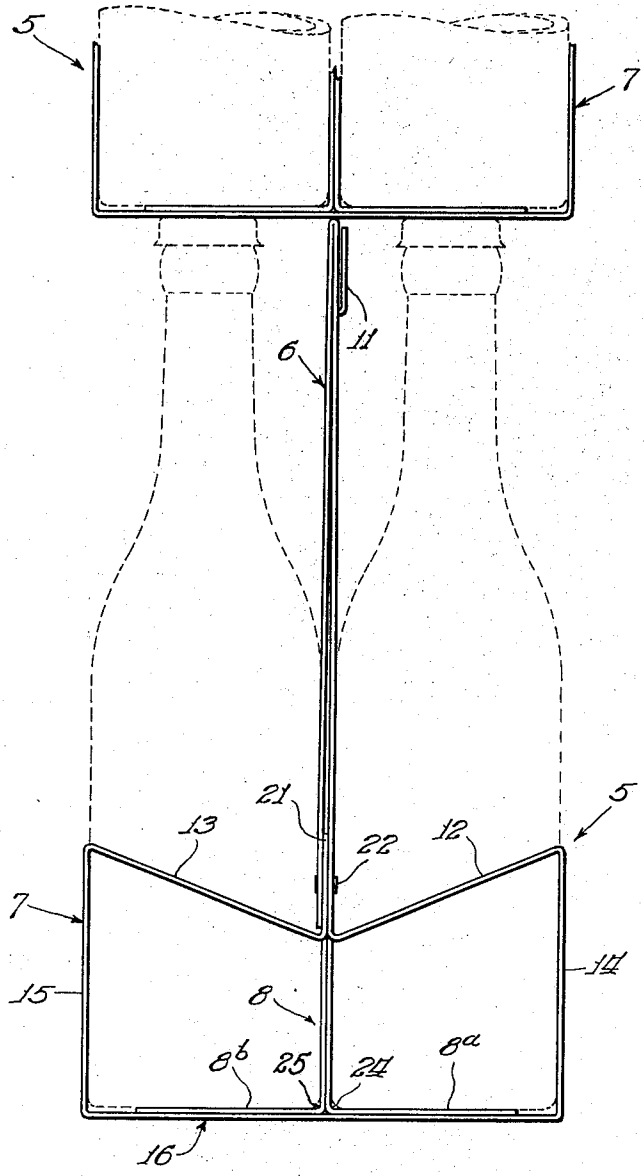
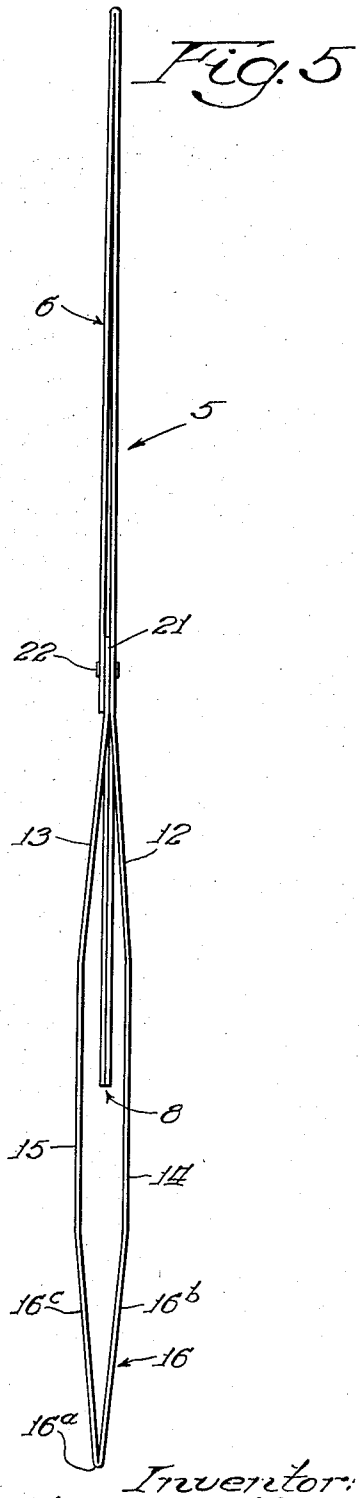


Fig. 5



Inventor:
Earl C. Potter
By: E. A. Wagoneller
Atty.

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UNITED STATES PATENT OFFICE

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BOTTLE CARRIER

Earl C. Potter, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Application January 24, 1940, Serial No. 315,405

8 Claims. (Cl. 224—45)

The present invention relates to article carriers and more particularly to carriers for bottled beverages.

One object of the present invention is to provide a bottle carrier which can be conveniently and economically formed from foldable paperboard or similar sheet material so that it can be collapsed flat after assembly for shipment to the packer and which may be readily brought to expanded condition to receive bottles.

Another object of the present invention is to provide a form of collapsible bottle carrier having a handle portion centrally disposed between separated rows of bottles, such handle portion being arranged to be brought to a position in which its upper edge is disposed below the upper ends of the bottles within the carrier so that similar filled carriers may be readily stacked one upon the other, the handle portion being also readily movable to an upwardly displaced position to expose a finger aperture so that the carrier may be conveniently carried by the hand.

Other objects of the present invention are to provide a sturdy, reliable form of carrier designed to afford a maximum amount of protection to bottles with a minimum amount of stock and one that can be manufactured with a minimum amount of time and effort.

Additional objects and advantages of the present invention will become apparent as the description proceeds.

In the drawings:

Fig. 1 is a perspective view of a form of carrier constructed in accordance with the present invention, illustrating the carrier as it appears without bottles therein but in bottle receiving and carrying condition;

Fig. 2 is a fragmentary sectional view taken substantially along line 2—2 of Fig. 1;

Fig. 3 is a plan view of a preferred form of blank from which the carrier may be constructed;

Fig. 4 is an end elevational view illustrating one manner of utilizing carriers of the present form so that filled carriers are adapted to be stacked one upon the other; and

Fig. 5 is an edge view illustrating the carrier in substantially its collapsed condition.

The present invention provides a bottle carrier of simple, sturdy construction, which is economical to manufacture, which may be collapsed flat for shipment and storage and which may be easily utilized after reception of bottles to enable them to be readily carried by the hand. According to a preferred manner of constructing the present carrier it is formed from a single rectangular blank of foldable sheet material, such as folding carton board, the parts being preferably so arranged as to provide an upstanding handle portion having a row of bottles disposed on each side of the handle portion and held in a bottle retaining portion associated with the lower part of the handle portion.

Referring more particularly to the drawings, the carrier, designated as a whole at 5, comprises an upstanding handle portion 6 and a bottle receiving portion indicated generally at 7. Dividing elements, indicated generally at 8, 8, 8, are arranged to extend into the bottle receiving portion and are secured at the lower edge of the handle 6 so as to lie substantially in the plane of the handle.

The handle portion is preferably formed from two thicknesses of material and for this purpose panels 6a and 6b are formed at one end of the blank. See Fig. 3. The panels 6a and 6b are defined from each other by the score line 6c forming the top edge of the carrier. Finger openings 9 and 10 are formed near the top edge. In the present instance the stock is left in the finger opening 9 to provide a flap 11 which can be inserted through opening 10 and folded upwardly, as illustrated in Fig. 1, thus affording protection for the fingers of the person holding the carrier, preventing contact of the fingers with the raw upper edge of opening 10.

The bottle receiving portion 7 is preferably formed with a pair of outwardly extending upper panels 12 and 13 hingedly joined at their outer edges to side panels 14 and 15 which in turn are hingedly connected at their lower edges to a bottom panel 16.

The top panels 12 and 13 are formed with bottle receiving apertures 17, 17, 17 and 18, 18, 18. Each of these apertures, in the present instance, is formed so as to extend somewhat into the side panels 14 and 15 to provide bottle side engaging apertures 19, 19, 19 and 20, 20, 20, in such side panels. See Fig. 2.

The dividing elements 8, 8, 8 are, in the present instance, provided by utilizing the material cut from the apertures 17 and 18. Each dividing element comprises a pair of tab members 8a, 8b, cut respectively from apertures 17 and 18.

The blank preferably includes an attaching flap 21 hingedly connected to the panel 13 by means of which the panel 13 may be joined to the lower part of the handle portion 6. In the present instance, as shown in Fig. 1, the flap 21 is inserted between the two handle portion pan-

els 6a and 6b and the parts are secured together by staples 22, 22.

The bottom panel 16 is preferably formed with a folding line 16a dividing the bottom into foldable sections 16b and 16c and enabling the bottom to be collapsed downwardly, see Fig. 5, thus permitting collapse of the entire bottle retaining portion into a flat condition substantially in the plane of the handle portion.

For the purpose of insuring the maintenance of the dividing elements 8, 8 in their proper operative position, that is, a position in substantially the same plane as the handle portion, the score lines, defining the top panel 12 from the handle panel 6b and defining the top panel 13 from the attaching flap 21, are interrupted along the lines of attachment of such parts with the tab members 8a and 8b. Thus there will not be a tendency for these tabs to become bent when the carrier is being set up. The score lines dividing the top panels from their side panels are also preferably interrupted across the tab elements for a like reason.

The arrangement of parts in the carrier of the present invention is such that the handle portion can be displaced downwardly to cause its upper edge to be disposed below the tops of bottles held in the carrier. For this purpose the apertures in the top panels are formed so as to engage the bottles closely when the panels are somewhat inclined upwardly, meeting the handle portion at an obtuse angle. It is thus possible for the apertured panels to swing downwardly past the horizontal to an angle equal to its original angular distance above the horizontal at which position the bottles are again closely engaged in the apertures. By properly forming the apertures with relation to the diameter of the bottles so as to obtain the desired degree of swing in the apertured panels, the handle portion may be displaced from an elevated position, in which the finger opening is clear of the bottle tops, to a lowered position in which the upper edge of the handle portion is below the bottle tops.

The length of the tab elements 8a, 8b is preferably such that when the top panel elements are in their upwardly inclined position in which the apertures therein closely engage the bottles, the lower ends of the tab elements will engage the inner surface of the bottom panel 16 when such panel is resting upon a plane surface so that the carrier will assume the position illustrated in Fig. 1. With the parts of the carrier in this relationship there will be substantially no relative movement of the handle portion with respect to the bottle receiving portion. The inclined top panels cannot move farther upward because the apertures closely engage the bottles and cannot be moved downward for the reason that the tab elements engage the bottom panel.

As illustrated in Fig. 4, the carrier of the present invention is adapted to receive bottles when the handle portion of the carrier is in lowered position. For this purpose, the tab elements 8a and 8b are preferably provided with fold lines 24, 24 and 25, 25 to permit the lower parts of the tab elements to be folded outwardly so that they can be placed flat upon the bottom panel 16. In this position of the tab elements the apertured top panels 17 and 18 will be moved to their lowermost angular position so as to closely engage the bottles placed in the apertures. The bottles so placed will rest upon the extremities of the tab elements, thus tending to retain the tabs in the positions just described. As the upper portion of the handle portion is disposed below the tops of the bottles it is readily possible to stack filled carriers, one upon the other, as indicated in Fig. 4. That is, the bottom of an overlying carrier will rest upon the tops of the bottles in an underlying carrier.

With the carriers in the condition just described the handle portions may be moved to their raised position by the simple application of an upward pull, causing the extremities of the tabs 8a, 8b, to be removed from beneath the bottoms of the bottles and brought to positions between the bottles where the entire tab elements will be arranged substantially in the plane of the handle portion. The finger opening in the handle portion will then be sufficiently above the tops of the bottles to permit ready carrying of the carrier by hand.

From the foregoing it is apparent that the present invention provides a form of carrier which may be entirely prepared at the box factory, shipped in flattened condition to the user, filled with bottles with the handle portions of the carriers in lowered position to permit stacking of the carriers one upon the other either in large shipping cases or upon a floor, and the carrier may be instantly converted from its stacked condition to a condition in which the finger opening of the carrier is brought to operative position above the tops of the bottles. The carrier is then very advantageous for use in retail stores, due to the ready manner in which it can be stacked for storage and display purposes and also due to the ready manner in which it may be converted into an operative carrier, capable of being lifted by the fingers.

While the present description sets forth a preferred embodiment of the invention, numerous changes may be made in the construction without deviating from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A bottle carrier formed of folding sheet material and adapted to hold two parallel rows of bottles comprising a handle portion and a bottle-receiving portion, said handle portion including at least one panel of said material in substantially vertical position between said parallel rows, and said bottle-receiving portion comprising a pair of outwardly and oppositely extending top panels formed with bottle-receiving apertures therein, the inner edges of said top panels being hingedly joined to the lower end of said handle portion, side panels extending downwardly from the outer edges of said top panels and being hingedly connected thereto, a bottom panel having edge portions, hingedly joined to the lower edges of said side panels, and tab elements extending from the lower end of said handle portion downwardly into the bottle-receiving portion to constitute separating means between said rows of bottles, said tab elements terminating short of said bottom panel when said handle portion is in its normal position with its upper end extending above the bottles in said bottle-receiving portion, and having fold lines therein to form folding lower sections adapted to lie flat on said bottom panel and beneath the bottoms of bottles placed in the bottle-receiving portion when said handle portion is downwardly displaced so that its upper end no longer extends above the tops of said

bottles, whereby said handle portion can be retained in its downwardly displaced position to permit stacking of a plurality of said bottle carriers containing bottles in their bottle-receiving portions.

2. A preformed bottle carrier formed of cardboard or like material and adapted to receive bottles of predetermined height, said carrier comprising a bottom wall, side walls, a handle portion and bottle receiving sections extended between the side walls and the handle portion, whereby the handle portion is disposed above said bottom wall and substantially midway between said side walls, each bottle receiving section being hingedly connected at its opposite edges to the side walls and to said handle, whereby the handle may be moved vertically to either a raised or carrying position on the one hand or to a depressed or stacking position on the other, and a bottle separating partition extending downwardly from the handle portion below the bottle receiving sections, said partition having extensions adapted to be bent laterally and to lie flat on the bottom of the wall beneath the bottoms of bottles placed in the holder when the handle portion is depressed, to thereby retain the handle in the depressed position to permit stacking of a plurality of bottle carriers containing bottles.

3. A bottle carrier formed of folding sheet material and adapted to hold two parallel rows of bottles, said carrier comprising a handle portion and a bottle receiving portion including top panels hingedly connected to the handle between the rows of bottles and hingedly connected at their outer edges to the sides of the body portion, whereby the handle may be moved vertically to either a raised or carrying or to a depressed or stacking position, and extension tabs extending from the lower end of the handle portion downwardly within the bottle receiving portion, said tabs having fold lines therein to form folding lower sections adapted to underlie bottles placed in the bottle receiving portion when the handle is in depressed position, thereby retaining the handle in said position to permit stacking of a plurality of filled containers.

4. A bottle carrier formed of folding sheet material comprising a handle portion and a bottle receiving portion, said bottle receiving portion comprising outwardly and oppositely extending top panel portions formed with bottle receiving apertures, the inner edges of the top panel portions being hingedly joined to the handle portion, side panels extending downwardly from the outer edges of the top panel portions and hingedly connected thereto, whereby the handle may be moved vertically to either a raised or carrying position on the one hand or to a depressed or stacking position on the other, and a bottom panel having edge portions hingedly joined to the lower edges of the side panels, and tab elements extending from the lower part of the handle portion downwardly into the bottle receiving portion, said tab elements constituting separating means to form the bottle receiving portion into two compartments, said tab elements having fold lines therein to form folding lower extension flaps arranged and adapted to lie flat on the bottom panel and beneath the bottoms of bottles placed in the bottle receiving portion when the handle is depressed whereby the handle portion is adapted to be retained in its depressed position to permit stacking of a plurality of said bottle carriers containing bottles in their bottle receiving portions.

5. A bottle carrier formed of folding sheet material and adapted to hold two parallel rows of bottles comprising a handle portion and a bottle-receiving portion, said handle portion including a panel comprising connected layers of said material in substantially vertical position between said parallel rows, and said bottle-receiving portion comprising a pair of outwardly and oppositely extending top panels formed with bottle-receiving apertures therein, the inner edges of said top panels being hingedly joined to the lower end of said handle portion, side panels extending downwardly from the outer edges of said top panels and being hingedly connected thereto, a bottom panel having edge portions hingedly joined to the lower edges of said side panels, and tab elements formed from the material cut out from the bottle-receiving apertures and extending from the lower end of said handle portion downwardly into the bottle-receiving portion to constitute separating means between said rows of bottles, said tab elements terminating short of said bottom panel when said handle portion is in its normal position with its upper end extending above the bottles in said bottle-receiving portion, and having fold lines therein to form folding lower sections adapted to lie flat on said bottom panel and beneath the bottoms of bottles placed in the bottle-receiving portion when said handle portion is downwardly displaced so that its upper end no longer extends above the tops of said bottles, whereby said handle portion can be retained in its downwardly displaced position to permit stacking of a plurality of said bottle carriers containing bottles in their bottle-receiving portions.

6. A bottle carrier formed of folding sheet material and adapted to hold two parallel rows of bottles comprising a handle portion and a bottle-receiving portion, said bottle-receiving portion comprising a pair of outwardly and oppositely extending top panels formed with bottle-receiving apertures therein; said handle portion being in substantially vertical position between said parallel rows and including a panel hingedly connected to one of the top panels and an attaching flap hingedly connected to the other panel, side panels extending downwardly from the outer edges of said top panels and being hingedly connected thereto, a bottom panel having edge portions hingedly joined to the lower edges of said side panels, and tab elements formed from the material cut from the bottle-receiving apertures and extending from the lower end of said handle portion downwardly into the bottle-receiving portion to constitute separating means between said rows of bottles, said tab elements terminating short of said bottom panel when said handle portion is in its normal position with its upper end extending above the bottles in said bottle-receiving portion, and having fold lines therein to form folding lower sections adapted to lie flat on said bottom panel and beneath the bottoms of bottles placed in the bottle-receiving portion when said handle portion is downwardly displaced so that its upper end no longer extends above the tops of said bottles, whereby said handle portion can be retained in its downwardly displaced position to permit stacking of a plurality of said bottle carriers containing bottles in their bottle-receiving portions.

7. A bottle carrier comprising a body portion and a vertically adjustable handle portion movable to stacking and carrying positions, said

body portion including sides, a pair of swingable top panels hinged at their opposite edges to the handle and to the sides of the body portion respectively, said handle portion having a downwardly projecting portion adapted to depend within the body portion between rows of bottles placed therein, said projecting portion including laterally extending flaps at the lower edges thereof adapted to underlie the bottles, and serving to hold the handle in stacking position.

8. A bottle carrier formed of folding sheet material comprising a handle portion and a bottle receiving portion, said bottle receiving portion comprising outwardly and oppositely extending top panel portions formed with bottle receiving apertures, the inner edges of the top panel portions being hingedly joined to the handle portion, side panels extending downwardly from the outer edges of the top panel portions and hingedly connected thereto, whereby the handle may be moved vertically to either a raised or carrying position or to a depressed or stacking position, said side panels being formed with spaced slots comprising extensions of the bottle receiving apertures on the top panel, and a bottom panel having edge portions hingedly joined to the lower edges of the side panels, and tab elements extending from the lower part of the handle portion downwardly into the bottle receiving portion and formed from the material cut out from the bottle receiving apertures, said tab elements constituting separating means to form the bottle receiving portion into two compartments, said tab elements having fold lines therein to form folding extension flaps adapted to lie flat on the bottom panel and beneath the bottoms of bottles placed in the bottle receiving portion when the handle is depressed whereby the handle portion is adapted to be retained in its depressed position to permit stacking of a plurality of said carriers containing bottles in their bottle receiving portions.

EARL C. POTTER.