

June 1, 1943.

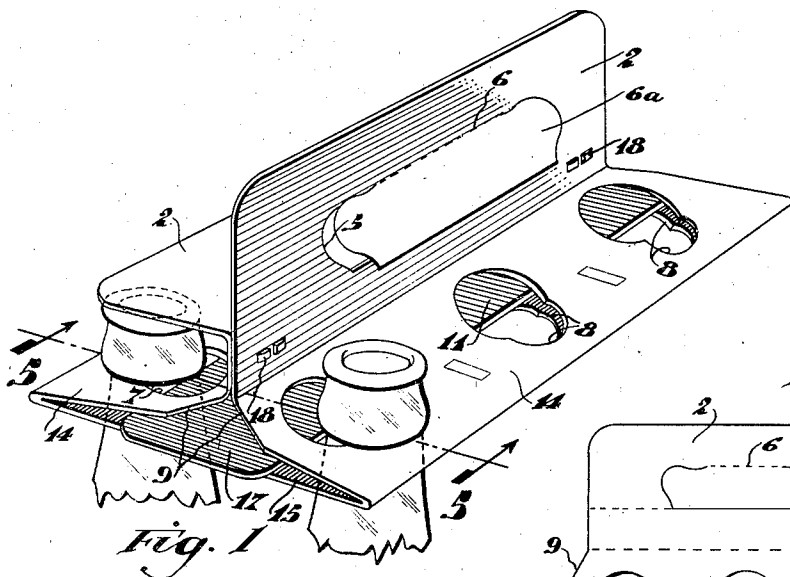
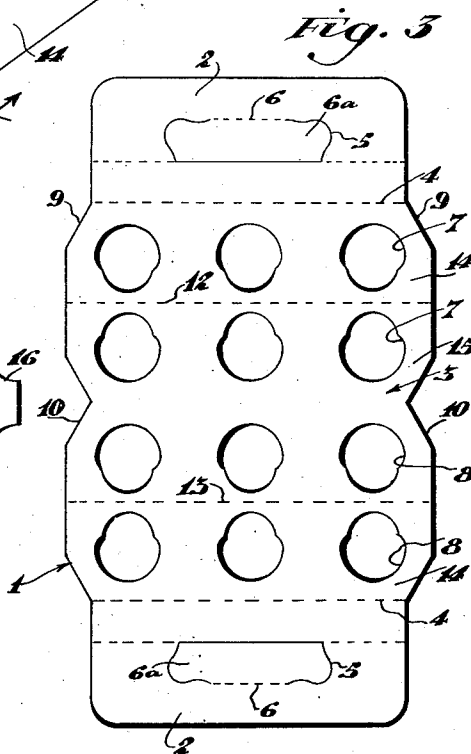
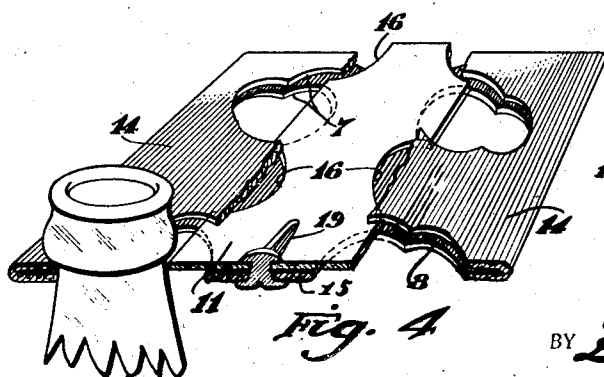
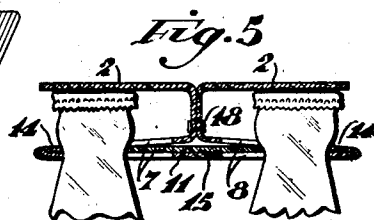
C. H. KRUEA ET AL

2,320,440

BOTTLE CARRIER

Filed June 18, 1940

4 Sheets-Sheet 1



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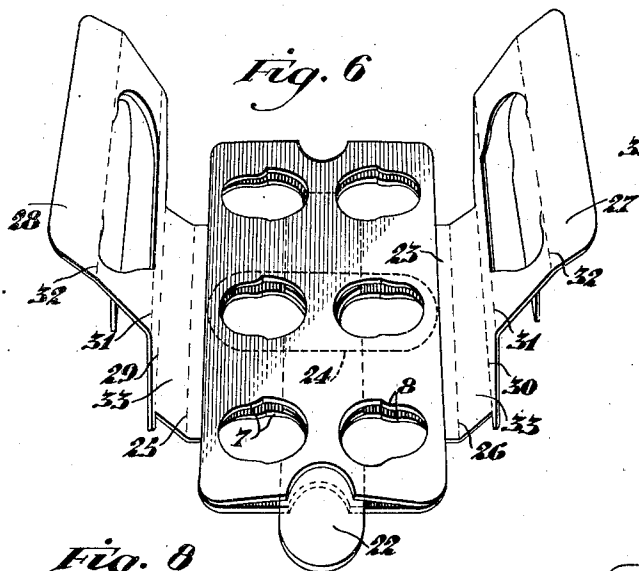
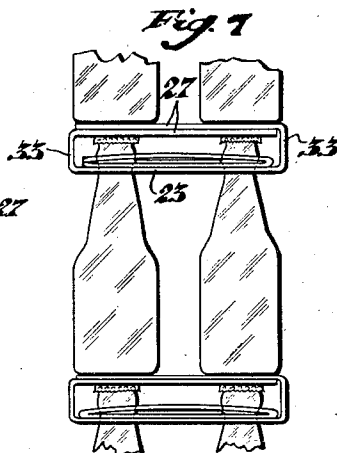
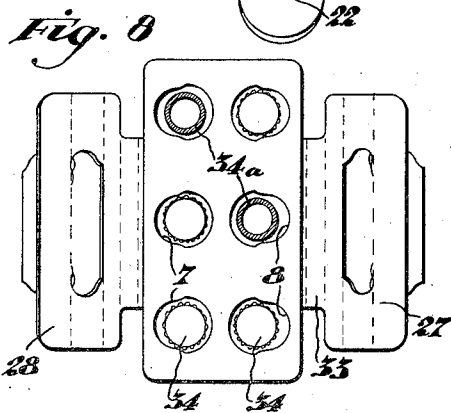
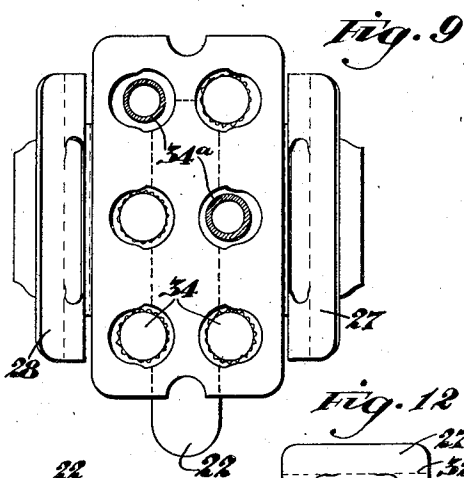
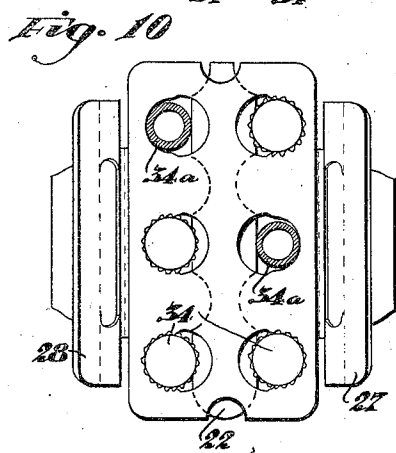
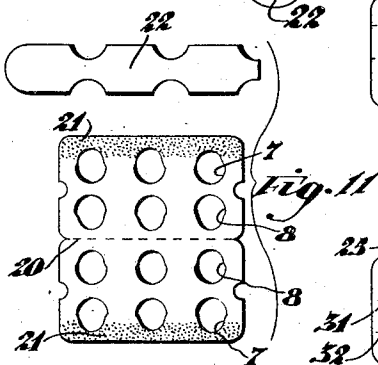
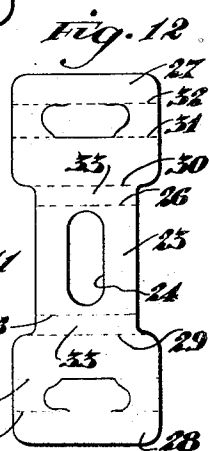
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BOTTLE CARRIER

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4 Sheets-Sheet 2



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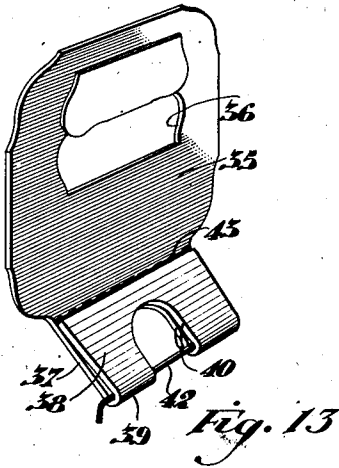
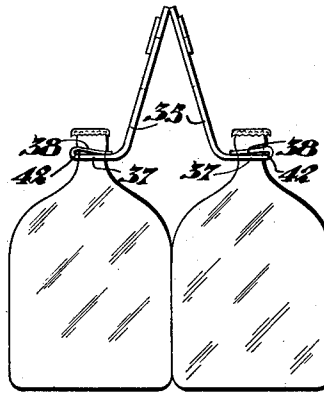
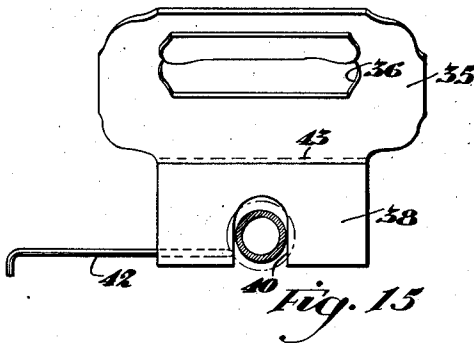
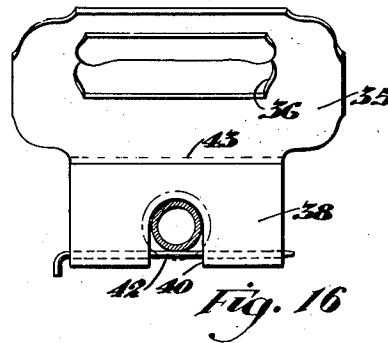
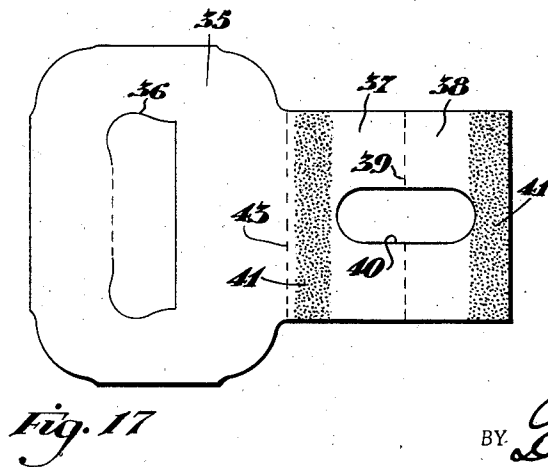
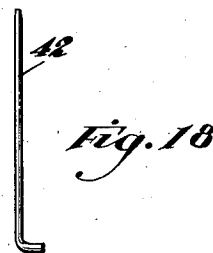
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BOTTLE CARRIER

Filed June 18, 1940

4 Sheets-Sheet 3



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BOTTLE CARRIER

Filed June 18, 1940

4 Sheets-Sheet 4

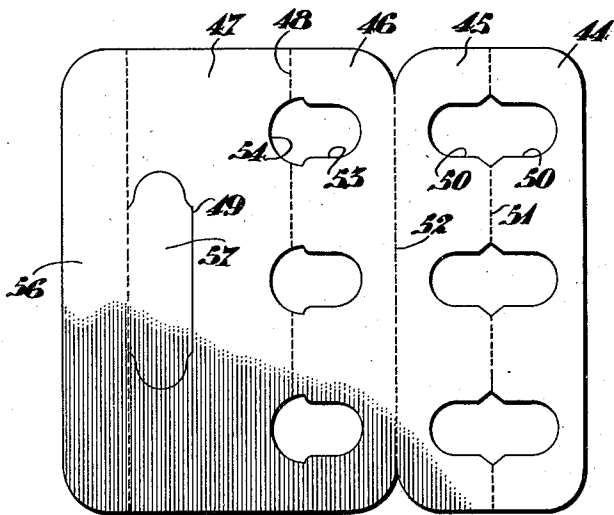


Fig. 19



Fig. 20

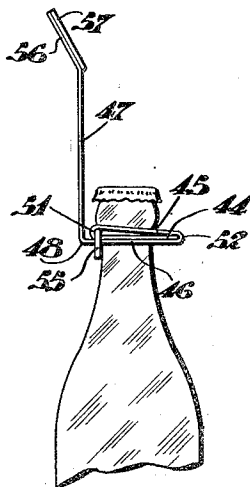


Fig. 22

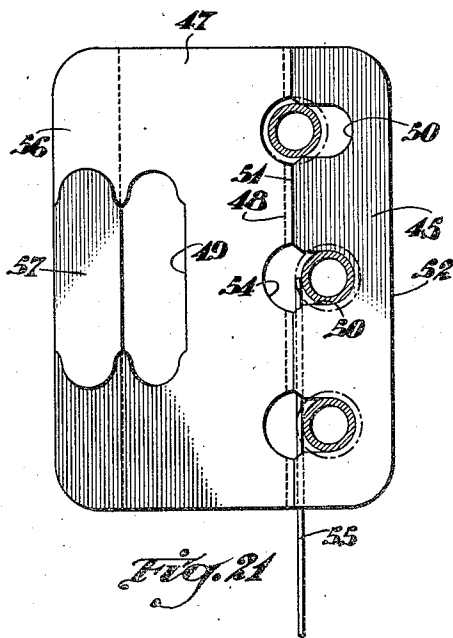


Fig. 21

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UNITED STATES PATENT OFFICE

2,320,440

BOTTLE CARRIER

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Application June 18, 1940, Serial No. 341,177

10 Claims. (Cl. 224—45)

This invention relates to paperboard carriers which are adapted to be used for carrying bottles, for instance, for transporting bottles of pop purchased at a store. It is intended that the carriers be made, inexpensively, of paperboard or the like, in order that they may be thrown away after they have served their purpose. It is also intended, however, that the paperboard which is utilized be sufficiently strong to support the bottles, whether one or a number of them are being carried.

The primary object of the invention has been to provide a simple device of this kind which is more suitable than those which heretofore have been proposed, as well as less expensive. A further object has been to provide such a carrier capable of receiving one or a plurality of bottles, for instance, half a dozen.

Briefly, the carrier of the invention is made up of a foldable blank. This preferably is formed of paperboard though, in some instances, sheet metal portions may be used. Sections of this blank are adapted to be folded together to form a handle, and sections extending laterally from the handle-forming flaps constitute a rack from which the necks of the bottles are suspended. The rack portion or portions of the carrier are disposed at opposite sides of the handle and the necks of the bottles fit within apertures provided in the lateral extensions. In other words, the bottles depend from the rack and are supported by their bulbous heads.

Cooperating with the apertures in the racks is a slidable keeper; this member functions as a lock which, during the normal usage of the device, prevents the heads of the bottles from escaping through the apertures. The keeper, in the preferred embodiment, is movable to constrict the area of each aperture to a size approximating that of the neck of the bottle only and is also movable to another position, as during loading or unloading of the device, in which the full area of each aperture is unrestricted. The keeper, like the racks, is made of paperboard, or other suitable material.

The rack portions, in the preferred structure, are constituted by overfolded flaps of paper which, in turn, have endwise portions bent upwardly to form the handle while the keeper is slidable within the folds of the rack intermediate the rows of apertures therein. When the device is loaded with bottles, the weight of them resting against the upper folds of the racks prevents unfolding of the carrier.

The carriers of the invention are adapted par-

ticularly to be stacked one upon another; this feature is very desirable to storekeepers wanting to load the carriers with bottles, then display the unitary assemblies which are ready for purchase. For this purpose the handle flaps, which normally reside adjacent one another, are adapted, for instance, by scoring, to be bent outwardly away from one another and to overlie the bottle tops, thus forming a platform for supporting the bottoms of the bottles of another unit.

Various modifications of the general principles upon which the invention is predicated and further advantages of the construction are described in the specification which follows, and in the drawings. Various other modifications to which the invention is susceptible will be understood by those skilled in the art, from the foregoing description of the principles of the structure and the detailed description of preferred embodiments which the drawings illustrate.

In the drawings:

Figure 1 is a perspective view showing the device assembled, equipped with bottles and ready for use.

Figure 2 is a plan view of the keeper.

Figure 3 is a plan view of the unfolded blank from which the carrier is constructed.

Figure 4 is a fragmentary perspective view showing the relationship of a bottle head and neck to an aperture and to the keeper.

Figure 5 is a sectional view taken on the line 5—5 of Figure 1.

Figure 6 is a perspective view showing a modified form of apparatus, partially assembled.

Figure 7 is an elevation showing the manner in which the modified form, Figure 6, is utilized for stacking purposes.

Figure 8 is a plan view of the modified form, Figure 6, showing the relationship of the bottle necks and heads to the rack apertures.

Figure 9 is a view similar to Figure 8, showing the keeper in the open position.

Figure 10 is a view similar to Figures 8 and 9, but illustrates the keeper in the closed position.

The two illustrations bracketed in Figure 11 are plan views of the keeper and rack blanks of a carrier of the type illustrated generally in Figure 6.

Figure 12 is a plan view of the handle blank for a carrier of the type shown in Figure 6.

Figure 13 illustrates another type of carrier adapted for carrying single bottles, for instance, half-gallon beer jugs.

Figure 14 is a view illustrating the manner in

which a pair of jugs are carried by units of the type shown in Figure 13.

Figure 15 is a plan view showing the relationship of the bottle neck to the keeper.

Figure 16 is a view similar to Figure 15, showing the keeper in closed position.

Figure 17 is a view of the blank from which the carrier shown in Figure 13 is assembled.

Figure 18 is a plan view of the keeper.

Figure 19 is an illustration of a blank adapted for carrying a series of bottles in a row.

Figure 20 is a view showing the keeper for this modification.

Figure 21 is a plan view showing the loading of the carrier.

Figure 22 is a fragmentary end view showing the carrier loaded and ready for use.

The paperboard blank from which the device is assembled is indicated generally at 1 and is of generally rectangular outline, as shown in Figure 3. At the marginal endwise portions of this blank the handle flaps 2-2 are provided. These flaps join the central body portion 3 of the blank along score lines 4-4, one at each end. Each handle flap is cut along a line 5 delineating a hand hold aperture; the score lines are not continuous, but the flaps which they outline are bendable outwardly along score lines 6-6. Through this arrangement the flaps are free to be folded backwardly and reside adjacent the surfaces of the handle flaps so as to give a greater handle area and thus prevent the hands from being cut or chafed. In Figure 1, the portion 6a within the score line is shown being bent away from the fiberboard surrounding the hand hold aperture.

The central body portion of the blank is of somewhat greater width than the handle portions 2-2 at either end of it and the body section contains cooperating rows of apertures 7-7 adjacent one handle flap, and 8-8 adjacent the other. These are spaced substantially equal distances on opposite sides of central dividing lines. The increase in width from the handle flaps to the body portion is gradual along the lines 9, and notches 10 are cut in the side edges of the blank for the purpose (when the members are in folded assembly) of providing access to the keeper 11 which is positioned intermediate the adjacent innermost rows of apertures 7 and 8.

Score lines 12 and 13 extend across the blank intermediate the rows of apertures 7-7 and 8-8 respectively. Thus, with the handle flaps bent back the sections designated 14 are foldable over the central portion of the body designated 15 and, by this folding, the handle flaps are brought adjacent one another to extend laterally from the central part of the body section which forms the racks for the bottles.

Keeper 11 of the structure is sufficiently wide, when positioned intermediate the innermost rows of apertures 7 and 8, to extend across the apertures and thereby to restrict the open area of them. But the keeper also is provided with notches 16 which complement the aperture configurations, and these notches, when in alignment with the neck holes, prevent the keeper from restricting their area. The notches 16 are spaced apart in accordance with the rack openings 7 and 8 and, since it is desirable to have the ends of the keeper substantially flush with the edges of the body portion when it is in locking position, the handle portion 17 of it extends substantially beyond the last notch 16 while the

other end of it resides at a point midway of the respective endwise notches cooperating with the outermost apertures at the far edge of the blank.

The rack apertures may be circular openings, or better still, of bottle neck width at one side and of bottle head or cap width at the other; in other words, of generally circular but keyhole-like formation. Apertures 7-7 and 8-8 are arranged on opposite sides of the fold lines 12 and 13 so that the corresponding areas of them are brought into alignment when the flap portions 14 are folded over the body section 15. The general assembly of the structure is shown in Figure 1 with the keeper in locking position, that is, with the edges of the keeper restricting the apertures. Under such conditions the bottle necks reside within the narrower parts of the apertures and the keeper is of such width, relative to the spacing apart of the rows of apertures, that it is capable of holding them there when in locking position. Therefore, the bottles are supported by their heads when the keeper is operated.

For convenience in using the carrier the staples 18 may be inserted through the adjacent handle flaps to hold them together permanently. Bottle carriers of this general type made of paperboard of relatively substantial weight or with keepers of sheet metal may be used over and over again, particularly when fastened with staples.

By folding the handle flaps 2 downwardly as shown in Figure 5, so that the flaps rest upon the surfaces of the bottle caps, a platform is provided to hold another assembly of bottles.

The movement of the keeper may be limited and prevented from being withdrawn from the assembly if it is desired to use the carrier for a number of trips. As shown in Figure 4 the keeper may be slotted longitudinally as at 19 and a rivet passed through the slot and bent over the lower face of the body section 15. The rivet, in this construction, prevents the keeper from being moved beyond the confines of the slot.

A modified form of carrier illustrated in Figure 6 is generally the same as the structure which has been described, but, in this modification, the rack portion of the device is separable from the handle. As shown in Figure 11, the rack portion comprises a blank containing rows of apertures 7 and 8 at one side of a medial line 20, and corresponding rows of apertures 8 and 7 at the other side of the medial line. The blank is foldable along the line 20 so as to bring the respective rows of apertures 7 and 8 in alignment and adhesive 21 is provided for fastening together the folded layers of material. The keeper 22 for this unit is substantially the same in structure and purpose as the keeper previously described, and operates slidably within the folds of the blank as best shown in Figure 6. However, the rack assembly of this modified form of apparatus is carried within a foldable satchel shown in Figure 12. The latter is of elongated form and comprises a body section 23 with a longitudinal slot 24 cut in it for clearance of the central apertures of the rows 7 and 8, for instance, as shown by the dotted line in Figure 6. Endwise portions are foldable from the body portion 23 along the lines 25 and 26 and handle forming extensions 27 and 28 (which are somewhat wider than the body portion 23) are foldable along the lines 29 and 30. The handle portions are provided with hand hold apertures as previously described and with score lines 31 and 32 adapted to be arranged by folding for the formation of a handle for the satchel unit.

In the assembly, the rack portion rests upon the body support 23 of the handle unit. The portions intermediate the fold lines 25—29 and 26—30 constitutes side members 33 (Figure 7) for extending the handle flaps 27 and 28 above the base 23 of the satchel, a distance approximating that of the height of the head of a bottle, in order that the handle portions may overlap one another and still form a table over the bottle caps.

The general purpose of the irregular or key-hole-like configuration of the rack apertures is illustrated in Figures 8, 9 and 10. Thus, in Figure 8, capped bottles which are about to be inserted through the apertures are indicated at 34 and the relative diameters of the necks of these bottles are indicated in cross section at 34a. The narrowest dimension across any part of the aperture is sufficiently great, when the keeper is in the open position, to permit the cap to pass through the aperture.

Likewise, with the keeper in open position and the notches in the edges of it aligned with the apertures, the heads of the bottles still may pass therethrough as shown in Figure 9. When the keeper is moved to closed position the notches first abut the bottle necks and, in a cam-like action, urge them out of the path of the keeper and back into the portions of the apertures which are of reduced dimension, as shown in Figure 10. Now, the bulbous heads of the bottles are too large to pass through the apertures and they are therefore locked firmly in position with the weight of them supported by the rack. Since the keeper resides at least one layer of paperboard below the rack, it is not subjected to the bottle weight, and consequently is in no serious danger of being torn or damaged to such an extent that the bottle might fall from the carrier.

The blank from which a single bottle carrier, or jug carrier, is assembled is shown best in Figure 17 and it comprises a handle portion 35 having a handle aperture cut and folded, as previously described, and indicated at 36.

The rack for the carrier is comprised of adjoining members 37 and 38 which are foldable in overlapping relationship along a line 39. A rack slot 40 extends across these members laterally to the fold line 39 and this slot constitutes a notch within which the bottle neck is received when the flaps 37 and 38 are in the overfolded position. The width of the slot 40 approximates the diameter of the neck of a bottle and the total length of the slot is such that when the flaps 37 are folded together its greatest depth from the fold edge approximates the diameter of a bottle neck.

Sections 37 and 38 may be held in folded position by adhesive 41, by staples or other appropriate means, and at the fold edge a keeper 42 is slidably inserted. This keeper extends as a latch across the slot aperture so that when the neck of a bottle is inserted within the aperture and the keeper moved to closed position, as shown in Figures 15 and 16, the weight of the bottle is carried upon the bulbous head which is supported against the surface of the upper part of the rack member.

The rack adjoins the handle portion 35 along fold line 43. When not in use the device is of substantially flat formation and a number of them can be stacked upon one another. The devices of the type shown in Figure 13 may be used in oppositely posed pairs as shown in Figure 14. In such cases the bodies of the jugs rest against one another so as to maintain separation of the handle portions, that is, necks are pre-

vented from being brought together by the weight of the contents of the jugs.

The unit shown in Figure 19 is made of a single paperboard blank but the paperboard is folded for reenforcement so that a series of bottles in a single row can be supported. The blank is of rectangular outline and is comprised of portions 44, 45 and 46 which adjoin one another along score lines. A handle flap 47 adjoins the portion 46 along a score line 48 and includes a hand hole aperture 49 as previously described.

Communicating apertures 50 are disposed upon opposite sides of the score line 51 in the adjoining portions 44 and 45. When the flap 44 is overfolded on the flap 45 the portions of the apertures on the opposite sides of the score line fall into alignment and enable this double thickness flap now to be overfolded upon the portion 46 along the score line 52. The portion 46 also contains apertures 53. These are of the type previously described in connection with the other modifications and they are portioned so as to be aligned with the openings in the overfolded flaps 44 and 45 when the three are in folded assembly.

This arrangement provides a triple thickness of material to support the weight of the bottles. Each of the apertures 53 in the portion 46 contains an enlarged portion, as indicated at 54, which provides the necessary clearance for the passage of the head of the bottle; the remaining portions of the aperture are dimensioned to receive the necks of the bottles but not the heads. Therefore, when the flaps 44, 45 and 46 are overfolded, as shown in Figure 21, the bottle heads may be passed through the apertures and then moved backwardly in the recesses so that the heads prevent the bottles from being withdrawn.

Keeper 55 is disposed to lock the bottles in position and resides intermediate the flaps 44 and 45 along the score line 51 as shown in Figure 22.

The handle flap 47 extends upwardly from the portion 46 in the normal usage of the device and terminates in an overfold portion 56 which forms a grip cooperating with the hand hole aperture 49. The flap 57 of the hand hole aperture is folded back along the portion 56 for reenforcement of the grip.

Being made of inexpensive material the carriers may be manufactured at low cost, and, in fact, may be given away with a purchase of bottled goods. In this case advertising matter can be printed upon the flap and rack surfaces for further merchandising benefit from their use.

Having described our invention, we claim:

1. A bottle carrier formed from a single sheet of paperboard or the like folded to provide a horizontal base of double thickness and a handhold portion of similar thickness upstanding therefrom and extending lengthwise of the base, the base having bottle-neck apertures constituted by openings in alignment in the double thickness on either side of said handhold portion, and paperboard means positioned between the folds of the base and slidable lengthwise thereof for limiting the size of the bottle-neck apertures.

2. A bottle carrier formed from a single sheet of paperboard or the like folded to provide a horizontal base of double thickness and a handhold portion upstanding therefrom, the base having a plurality of bottle-neck openings constituted by apertures in alignment in the double thickness and a member positioned between the folds of the base and slidable lengthwise thereof for simultaneously limiting the size of all of the bottle neck apertures.

3. A bottle carrier, comprising a paperboard blank having a central section having apertures in spaced rows and adapted to receive the heads of bottles, and endwise portions folded over the central portion and then upwardly to provide co-operating handle members the areas of said endwise portions which overlie the central portion having apertures therein which are in alignment with the apertures in the central portion and a keeper slidably located intermediate the central portion and the said apertured areas of said endwise portions which overlie the central portion, the keeper being sufficiently wide relative to the spacing of the rows of aligned apertures to operate against the necks of the bottles and hold them within the apertures so that the bottles are supported from their bulbous heads when the carrier is lifted.

4. A bottle carrier, comprising a paperboard body portion constituted by overfolded layers having pairs of openings therein, in registry, and adapted to receive the necks of the bottles, a paperboard handle folded from said body portion, and means slidably mounted intermediate the overfolded layers of said body, the said means being adapted to engage the neck below the bulbous portion thereof for wedging the bottle in position against axial displacement.

5. A bottle carrier, comprising a pair of paperboard members which are marginally interconnected, a plurality of apertures extending through the paperboard members, each aperture comprising a portion adapted to permit the passage of the bulbous head of a bottle and a restricted portion in communication therewith adapted to receive the neck of a bottle but not the bulbous head, and wedging means slidably mounted intermediate said members for forcing the bottle necks into the restricted portions of the apertures so that they are supported from the bulbous heads when the carrier is lifted.

6. A bottle carrier, comprising a paperboard blank comprising a central section and endwise portions which are foldable over the central portion and also foldable to extend centrally therefrom and provide conjointly a handhold for the carrier, the central portion and the endwise portions which overlap it being provided with rows of apertures located on either side of the handhold for the reception of the heads of bottles and communicating with apertures of restricted size for the reception of the necks of bottles but not the bulbous heads thereof, and keeper means slidably mounted within the overfolded portions and intermediate the rows of apertures for wedging the necks of bottles into the restricted apertures, whereby the bottles are suspended from their bulbous heads when the carrier is lifted.

7. A bottle carrier, comprising a paperboard blank comprising a central section and endwise portions which are foldable over the central por-

tion and also foldable to extend centrally therefrom and provide conjointly a handhold for the carrier, the central portion and the endwise portions which overlap it being provided with rows of apertures located on either side of the handhold for the reception of the heads of bottles and communicating with apertures of restricted size for the reception of the necks of bottles but not the bulbous heads thereof, and keeper means slidably mounted within the overfolded portions and intermediate the rows of apertures for wedging the necks of bottles into the restricted apertures, whereby the bottles are suspended from their bulbous heads when the carrier is lifted, the keeper being sufficiently wide so that its edges normally extend across portions of the apertures and said keeper being provided with notches in its edges which are registrable with the apertures, so that the apertures are cleared upon sliding movement of the keeper.

8. A bottle carrier, comprising a paperboard blank having endwise portions adapted to be folded to overlie a body portion therebetween and to extend centrally from the body portion and provide a handhold for the carrier, the body portion and the portions overlaying it having apertures therethrough in registry on opposite sides of the handhold, and keeper means slidably located intermediate the body portion and the overlaying portions, the keeper means providing edges for exerting a wedging action against the necks of the bottles located within the apertures, whereby the bottles are suspended from their bulbous heads when the carrier is lifted.

9. A bottle carrier, comprising a paperboard blank cut and scored to provide a central portion having endwise flaps foldable thereover, the endwise flaps also being foldable upwardly and away from the body portion to provide handholds, the central portion and the folded paperboard adjacent to it when the carrier is assembled being provided with apertures in alignment in which bottle necks are adapted to be racked, and slidable means located intermediate the said central portion and flaps folded over it, for wedging the bottle necks in the racks, whereby they are supported by the double layers at the central portion of the carrier from their bulbous heads when the carrier is lifted.

10. A bottle carrier formed from a single sheet of paperboard or the like folded to provide a horizontal base of double thickness and a handhold portion extending therefrom, the base having a bottle-neck opening constituted by apertures in alignment in the double thickness and a member positioned between the folds of the base and slidable lengthwise thereof for limiting the size of the bottle-neck aperture.

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