Jan. 9, 1968 M. J. SINGER ETAL 3,362,577

BEVERAGE CARRIERS

Filed Oct. 17, 1966 4 Sheets-Sheet 1

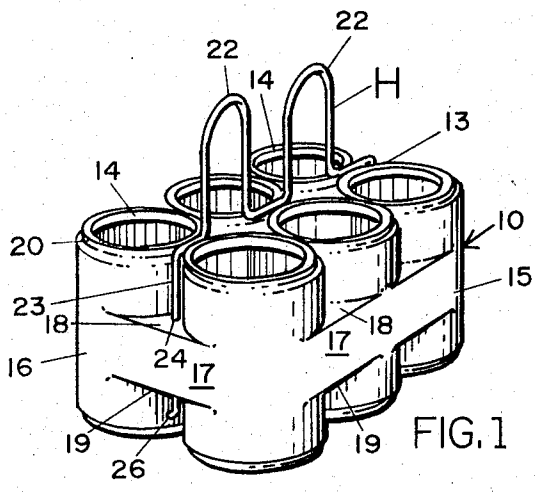


FIG. 1

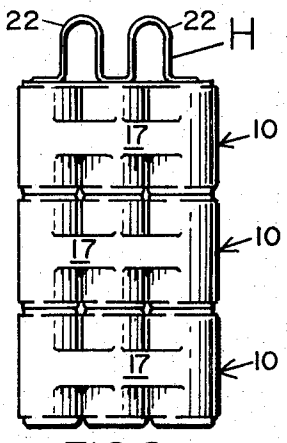


FIG. 2

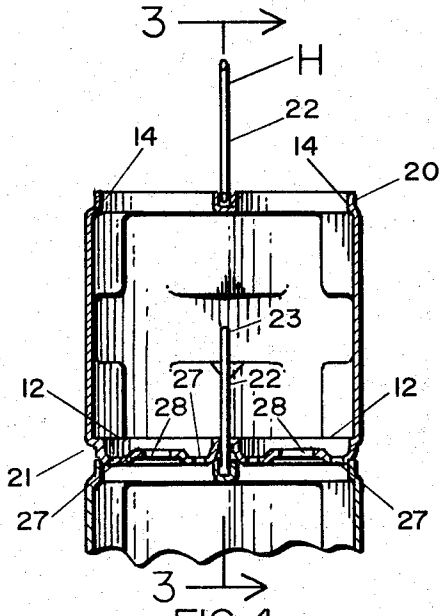


FIG. 4

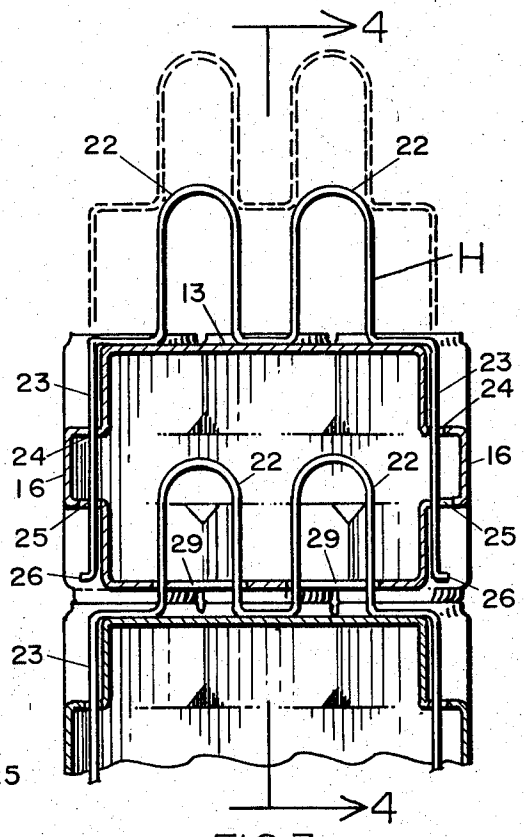


FIG. 3

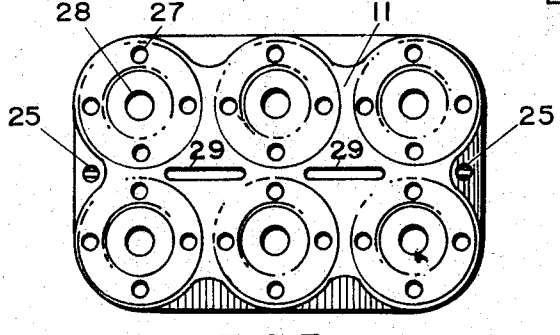


FIG. 5

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BEVERAGE CARRIERS

Filed Oct. 17, 1966 4 Sheets-Sheet 2

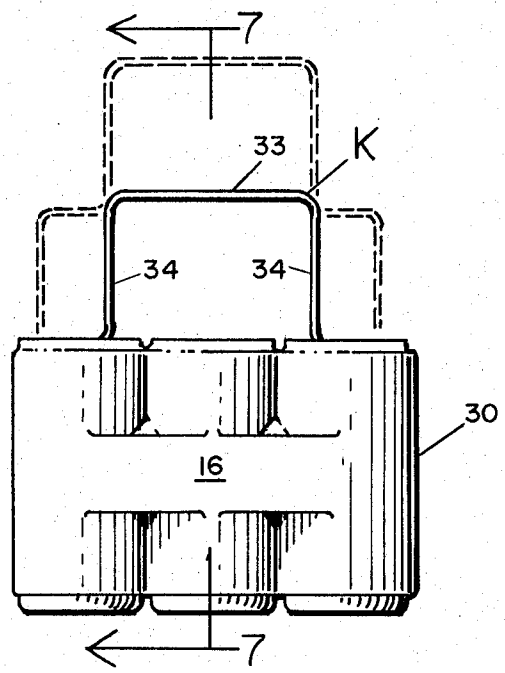


FIG. 6

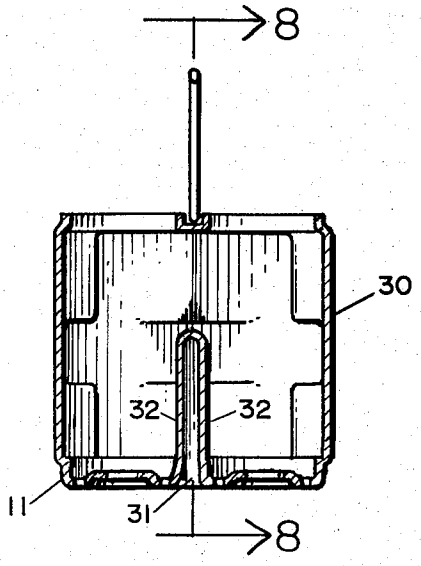


FIG. 7

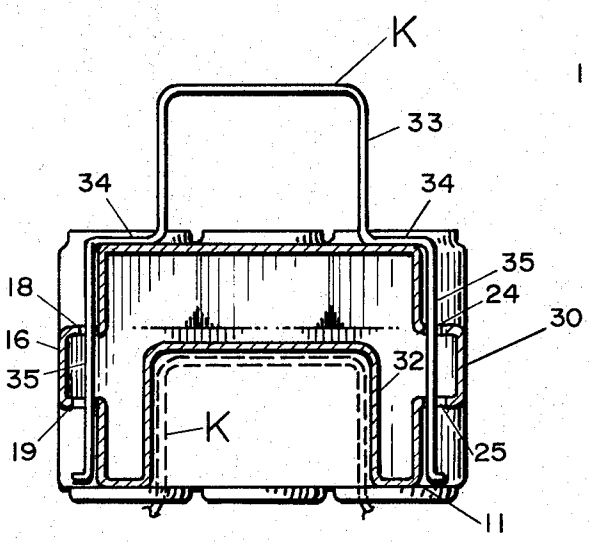


FIG. 8

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BEVERAGE CARRIERS

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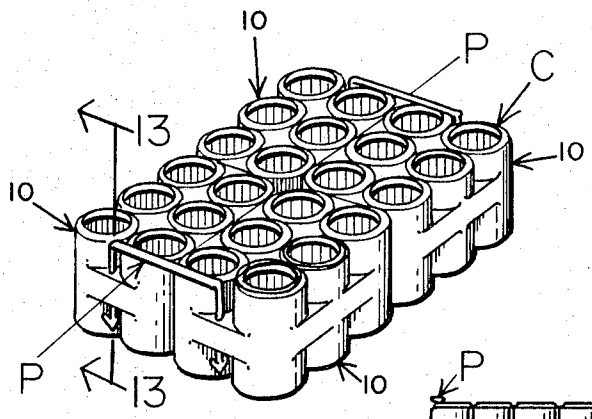


FIG. 9

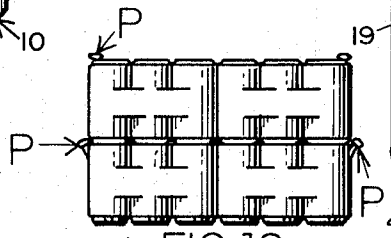


FIG. 12

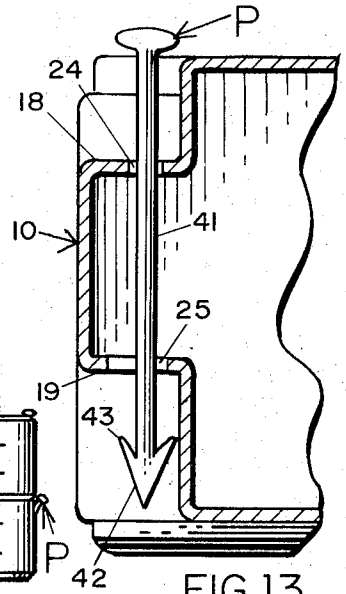


FIG. 13

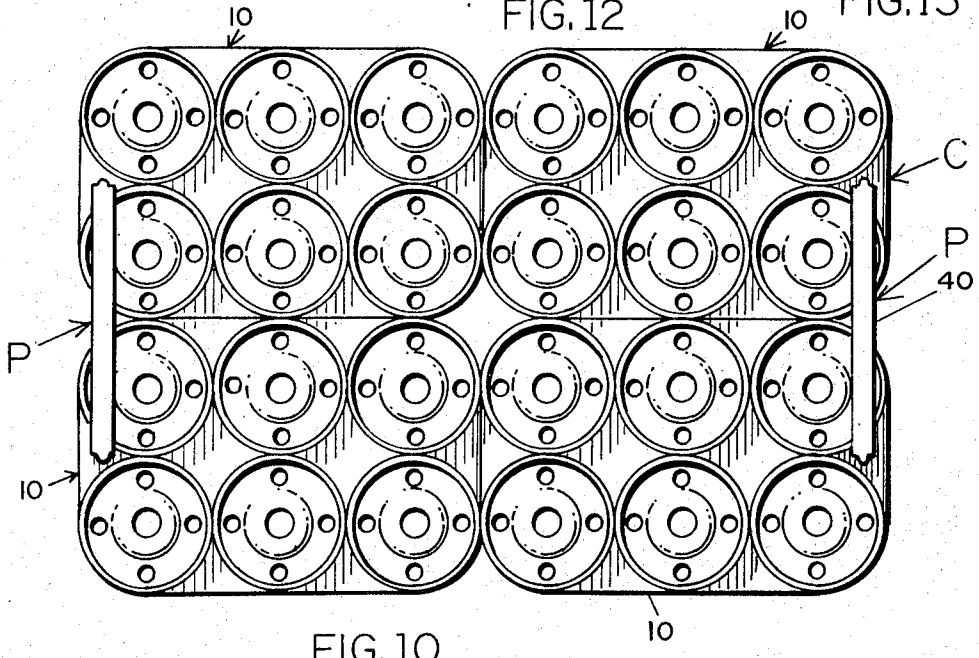


FIG. 10

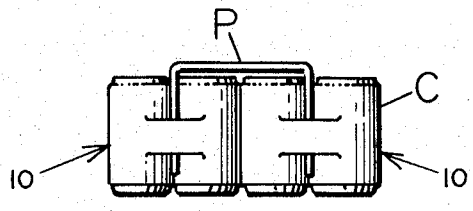


FIG. 11

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BEVERAGE CARRIERS

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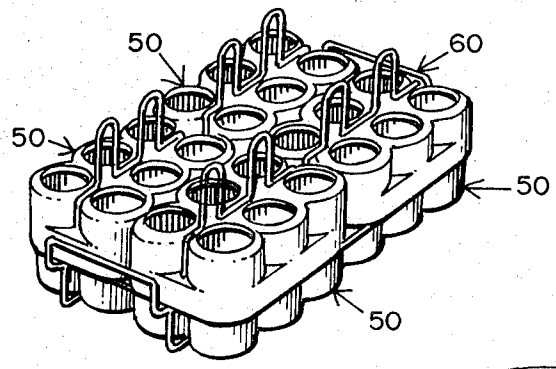


FIG. 15

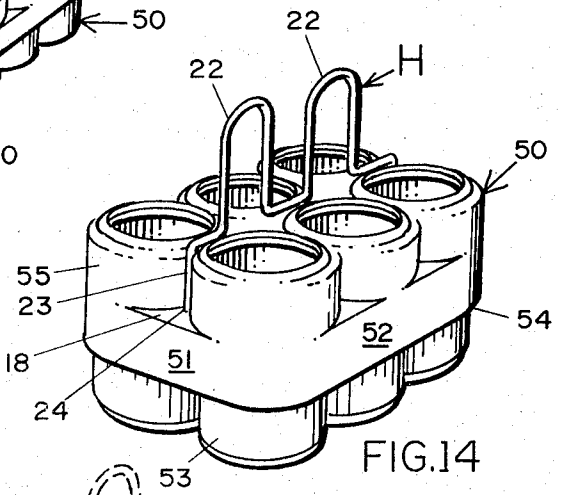


FIG. 14

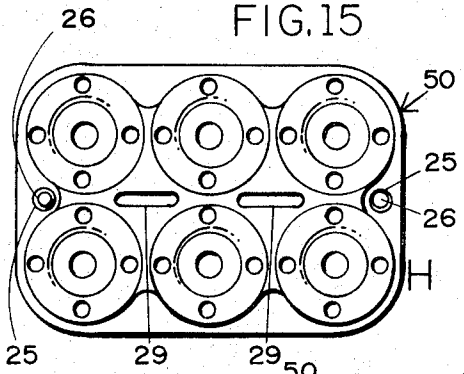


FIG. 16

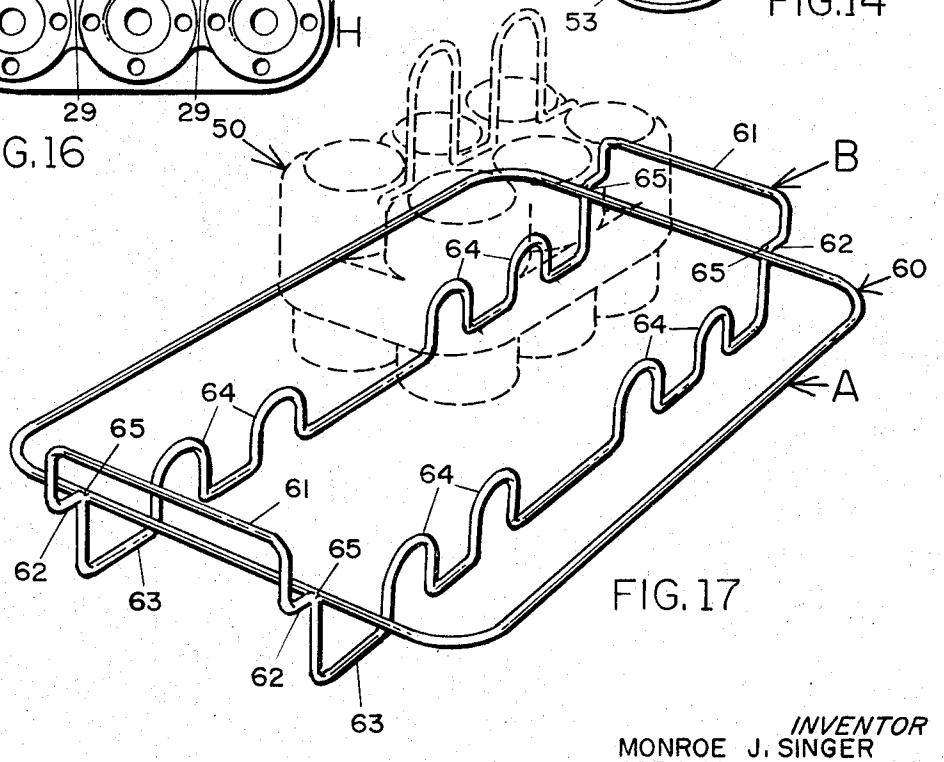


FIG. 17

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3,362,577

BEVERAGE CARRIERS

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Filed Oct. 17, 1966, Ser. No. 587,117
4 Claims. (Cl. 220—104)

This invention relates to carriers and is more particularly directed to carriers or receptacles for carrying bottles and the like.

The present carriers for bottled beverages and the like are not so compartmented that the bottles do not touch each other, and when some of the bottles have been removed from the carrier the remainder of them are apt to be loosened in their compartment and slide into the adjacent compartments, thereby srtiking other bottles and and become broken. Also, the conventional carriers cannot be piled on each other in a compact manner and they cannot become interlocked to permit high piles of these carriers being possible without the danger of the piles of carriers of toppling over. Most carriers have fixed handles the extend above the carrier only a short distance and are most inconvenient to handle as insufficient space is provided for one to grip the handles when bottles that extend above the carrier are placed therein. Since most beverage carriers are not reusable the cost of such carriers becomes relatively high.

Therefore, it is a primary object of the present invention to provide a reusable beverage carrier which is so compartmented that the bottles contained therein cannot touch adjacent bottles even when certain of the compartments are empty or no matter how a person is carrying the carrier.

Another object of the present invention is to provide reusable beverage carriers with a handle which slides upwardly away from the top surface of the carrier to permit a person to grasp the handle above the tops of the bottles contained in the carrier without obstruction and which also interlocks with the adjacent upper carrier to permit building a high pile of the carriers without the danger of the carriers toppling over.

A further object of the present invention is to provide reusable beverage carriers that will nest when empty so that a minmium of space is used to store these carriers and may be joined or cemented together to form larger carrying trays or carriers.

A still further object of the present invention is to provide reusable beverage carriers produced by the economical method of blow molding utilizing linear polyethylene plastic which are light in weight, yet structurally rigid and strong, impervious to water and detergents, may be steam cleaned and are economical in cost as they are preformed, preshaped and an assemblying operation thereby avoided.

With these and other objects in view, the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

FIGURE 1 is a perspective view of a six compartment carrier unit constructed in accordance with our invention.

FIGURE 2 is a side elevational view of a nest of three carriers forming a tier of interlocked units.

FIGURE 3 is a transverse cross sectional view taken along 3—3 of FIGURE 4.

FIGURE 4 is a longitudinal cross sectional view taken along the line 4—4 of FIGURE 3.

FIGURE 5 is a bottom plan view.

FIGURE 6 is a side elevational view of an alternate construction of our beverage carrier.

FIGURE 7 is a cross sectional view taken along the line 7—7 of FIGURE 6.

FIGURE 8 is a cross sectional view taken along the line 8—8 of FIGURE 7.

FIGURE 9 is a perspective view of a further alternate beverage carrier constructed by combining four of our beverage carrier units.

FIGURE 10 is a top plan view.

FIGURE 11 is a side elevation.

FIGURE 12 is a side elevation illustrating the manner of nesting the units.

FIGURE 13 is a detailed cross sectional view taken along the line 13—13 of FIGURE 9.

FIGURE 14 is a perspective view of a still further alternate construction of our beverage carrier unit.

FIGURE 15 is a perspective view of a metallic crate housing four beverage carrier units.

FIGURE 16 is a bottom plan view.

FIGURE 17 is a perspective view of the metallic crate with a carrier unit shown in position thereon by dotted lines.

Referring to the drawings and in particular to FIGURES 1–5 inclusive, wherein like numerals are used to designate similar parts throughout the several views, the numeral **10** refers to a beverage carrier unit. The carrier **10** that is made of plastic material preferably of linear polyethylene is manufactured as a complete unit by the blow molding process to which a handle H is then added.

The carrier **10** consists of a bottom wall **11** in which there are two rows of circular hollow portions or concavities **12** which receive the bottom portion of the beverage bottles or containers carried by the carrier **10**. An upper wall **13** is provided with circular openings **14** thruogh which the beverage bottles extend, the openings **14** being in axial alignment with the concavities **12**.

Joining the upper and lower walls **13** and **12** respectively are side and end walls **15** and **16** that are largely contoured or rounded to follow the circular openings **14** and concavities **12** thereby forming rigid compartments for each of the beverage bottles received by the carrier **10**.

At the mid portion of the side and end walls, the walls are flat as at **17** with web portions **18** and **19** joining the upper and lower edges of the flat wall portions **17** with the rounded side and end walls **15** and **16**, respectively. This construction adds to the strength and rigidity of the carrier **10** as does a peripheral flange **20** which extends upwardly of the openings **14**. The side walls of the concavities **12** are inset as at **21** a slight amount to permit nesting of the carriers **10** one upon the other with the concavities **12** of an upper carrier **10** fitted into and received by the openings **14** of the lower carrier **10**.

To permit the tiered carriers **10** to become interlocked, there is provided a pair of slots **29** in the bottom wall **11** which receives a pair of joined loop portions **22** of the handle H. The handle H is provided with arm portions **23** that join the loop portions **22** and extend downwardly alongside the end walls **16** and are received by openings **24** and **25** in the web portions **18**, **19**. The ends of the arm portions **23** are bent outwardly as at **26** to prevent the arm portions **23** which are slidable along the openings **24** and **25** from sliding through the upper opening **24**. However, since the lower opening **25** is enlarged sufficiently to permit the end portion **26** to slide there-

through when the handle H is grasped at the loop portion 22, the handle H will slide upwardly away from the upper wall 13 to the dotted line position as shown by FIGURE 3. If bottles of beverage are contained in the carrier 10, the tops of the bottles will not interfere with a person's hand grasping the handle H. Also, to prevent water from accumulating in the carriers 10, the bottom wall 11 is provided with openings 27 and 28 at the position of the concavities 12.

It can be readily noted from the above discussion taken with FIGURES 1–5 of the accompanying drawings, that the carriers 10 provide compartments that completely separate the bottles that may be contained therein so that there is no danger of the bottles engaging or striking each other even upon removal of some of the bottles from the carrier 10. Since the carriers 10 can be interlocked when stacked for storage thereof, space is saved by piling as high a tier as desired without danger of the tier of carriers 10 falling over. The slidable handles H permit handling the carriers filled with bottles with ample space above the tops of the bottles to permit grasping the handle H readily and with ease and comfort.

Referring now to FIGURES 6–8 inclusive where an alternate construction of my carriers are shown, a carrier 30 having a different handle K is shown. The carrier 30 is exactly identical to the construction of the carrier 10 except for a single slot 31 at the lower wall 11. The slot 31 extends across the bottom wall 11 and is of sufficient length to receive the handle K. At the edges of the slot 31 at the lower wall 11, there is a pair of upwardly extending flanges 32 which join at the top to form a recess for the handle K of an adjoining carrier 30. The handle K which consists of a single loop wide enough to receive a person's hand is comprised of a loop portion 33 with a horizontal portion 34 connected to the ends of the loop portion 33 and downwardly extending arm portions 35 passing through openings 24 and 25 in the upper and lower web portions 18 and 19 respectively. The bent end portion 36 of the handle K is capable of passing through the enlarged opening 25 when the handle K is slid upwardly, but cannot pass beyond the web portion 18 nor through the opening 24.

When the carriers 30 are stacked in tiers, the handle K of the lower carrier 30 is received by the slot 31 of the upper carrier 30 thereby interlocking the carriers 30 together in the same manner as the carriers 10 are stacked and interlocked. However, the carrier 30 is carried with greater ease than the carrier 10 inasmuch as only the fingers can be used in grasping the handle H of the carrier 10 while the entire hand may be used to grasp the handle K of the carrier 30.

Using the carriers 10 or 30 as a unit, the carriers 10 or 30 may be combined together in any number or combination to form enlarged carriers or crate C for carrying a large number of bottles of beverages. As best shown by FIGURES 9–13 inclusive, there is shown a large crate formed by cementing four carriers 10 together. The carriers 10 may be secured together by fusing the plastic to weld together the carriers 10, by fastening them by use of metallic fasteners or by cementing them together by use of an adhesive. In this enlarged carrier C a plastic handle P is used consisting of a horizontal gripping portion 40 having vertically disposed arm portions 41 terminating in a V-shaped end portiin 42. The end portion 42 is provided with ears 43 which pass freely through the opening 25 but cannot pass upwardly beyond the opening 24. In assemblying the handle P onto the crate C end portions 42 are forced through the openings 24, the ears 43 collapsing together and squeezing through the opening 24. When the handle P is pulled upwardly for use, the end portion 42 will engage the web 18 at the opening 24 and the ears 43 will flatten outwardly thereby preventing the end portion 42 from passing through the opening 24.

As best shown by FIGURE 12, the crates C will stack one upon the other in the same manner as described hereinabove in connection with the carriers 10 and 30. In this instance, however, the handles P are first slid downwardly and then flexed outwardly to permit the bottom of the upper crate C to be received by the opening of the lower crates C.

Referring now to FIGURES 14 to 16 inclusive, there is shown an alternate construction 50 of our carriers 10 and 30 previously described as well as a novel crate 60 as shown by FIGURE 15 or temporarily as indicated by FIGURE 16.

The beverage carrier unit 50 is identical in construction with the beverage carrier unit 10 shown and described hereinabove except that side and end walls 51 and 52 respectively extend beyond the rounded side walls 53 at the bottom portion of the units 50 thereby forming an abutment or shoulder 54 that extends completely about the four sides of the beverage carrier 50. At the upper portion of the units 50, the rounded side walls 55 are larger diametered than those of the lower side walls 53 and are therefore coplanar with the side and end walls 51 and 52 at the position of the rounded carriers of the unit 50. Web portions 18 at the ends of the unit 50 are provided with bores 24 for receiving handle members 23 of handles H in the same manner as described hereinabove in connection with the units 10. Also slots 29 are formed in the bottom wall 11 for receiving loop portions 22 of the handle H when nesting the beverage carrier unit 50 in the same manner as shown and described in FIGURES 1–5 inclusive.

The crate 60 which houses four beverage carrier units 50 consists of two members A and B each formed of a wire shaped accordingly, welded at their ends and then welded together. The wire member A is formed into a rectangular shape so dimensioned that when the four carriers are positioned thereon as shown by FIGURE 15, the shoulders 54 will rest on the wire member A and thereby support the beverage carrier units 50 at their periphery.

The wire member B consists of handle portions 61 formed at each end of the crate 60 with an off-set portion 62 joining the handle portion 61 and the base member 63. The off-set portion 62 positions the handle portion 61 in spaced relation to the beverage carrier units 50 to permit a person to grasp the handle portions 61. The base members 63 are provided with loop portions 64 that are identical in shape and size with the loop portions 22 of the handles H. The loop portions 64 are received by the slots 29 formed in the bottom wall of the beverage carrier units 50. The members A and B are welded together as at 65 where the off-set portions 62 engage the member A to form a single unit.

The crate 60 will receive a support in a secure manner four beverage carrier units 50 as best shown by FIGURE 15. If it is desired that the beverage carrier units are to remain permanently in the crate 60, the handles H will not be used and the combined crate 60 and units 50 will appear as shown by FIGURE 15. However, if the crate 60 is to be used only as a convenient temporary carrier for the units 50, then the handles H will be mounted in position on the units 50 prior to the units 50 being placed in the crate 60. Then when it is desired to remove a beverage carrier unit 50 from the crate 60, the loops 22 of the handle H are grasped and the unit 50 is lifted out of the crate 60.

Having disclosed our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. A beverage carrier comprising an upper wall, a lower wall in spaced relation to said upper wall, said upper wall having a plurality of openings for receiving bottled beverages, a plurality of concavities mounted in said lower wall, each of said concavities being in alignment with said openings for containing the lower portion of said bottled beverages, side and end walls

joining said upper and lower walls, said side and end walls being contoured commensurate with the shape of said bottled beverages adjacent said upper and lower walls, a flat portion at substantially the mid-portion of said side and end walls, a web portion joining upper and lower edges of said flat portion and said contoured portions, said web portions having a pair of aligned openings and handle means having arm portions received by said aligned openings slidably positioned on said beverage carrier.

2. The structure as recited by claim 1 wherein said openings of said upper wall and said concavities of said lower wall form a plurality of rows of compartments for said bottled beverages and said lower wall is provided with a slotted portion between said rows of compartments for receiving said handle of an adjacent beverage carrier.

3. The structure as recited by claim 2 taken in combination with flange portions extending upwardly of said lower wall adjacent said slotted portion, said flange portions forming a chamber for said handle of an adjacent beverage carrier.

4. The structure as recited by claim 1 taken in combination with a plurality of beverage carriers of identical structure as said first named beverage carrier, all of said beverage carriers being fastened together to form a crate and said handle means being positioned at end portions of said crate.

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