

Feb. 2, 1954

J. K. BRUCE ET AL

2,667,995

COMBINED MERCHANDISING PACKAGE AND ARTICLE CARRIER

Filed May 31, 1950

3 Sheets-Sheet 1

FIG. 1

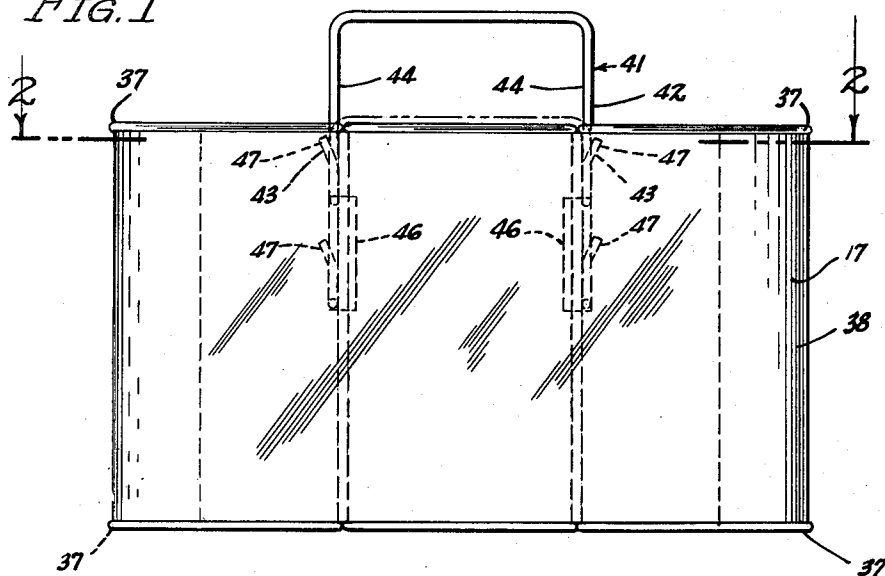


FIG. 2

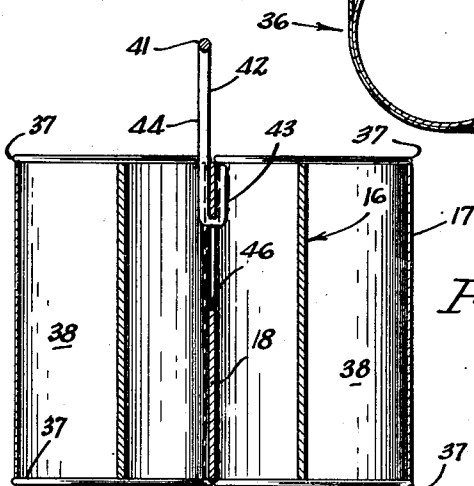
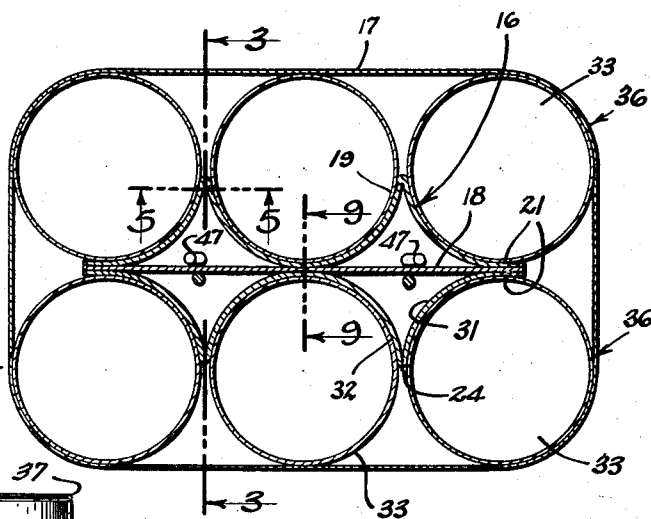


FIG. 3

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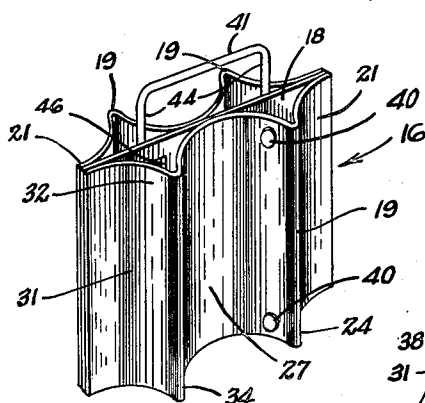


FIG. 4

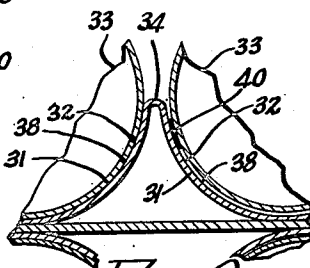


FIG. 6

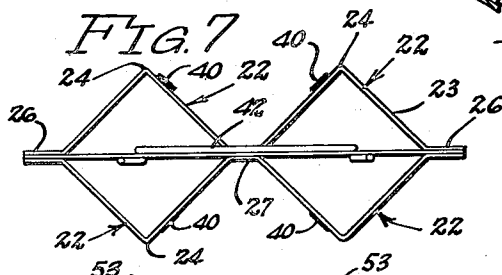


FIG. 7

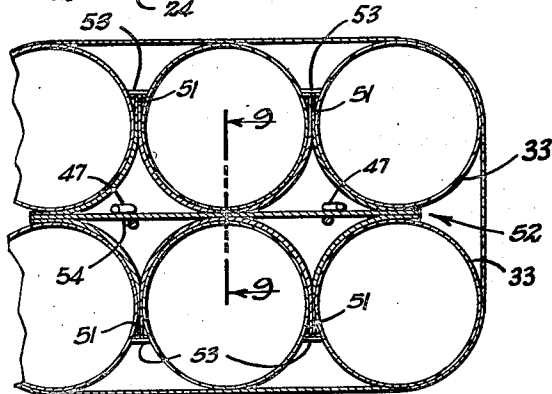


FIG. 8

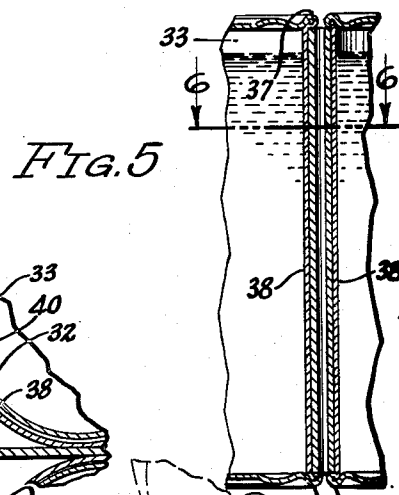


FIG. 5

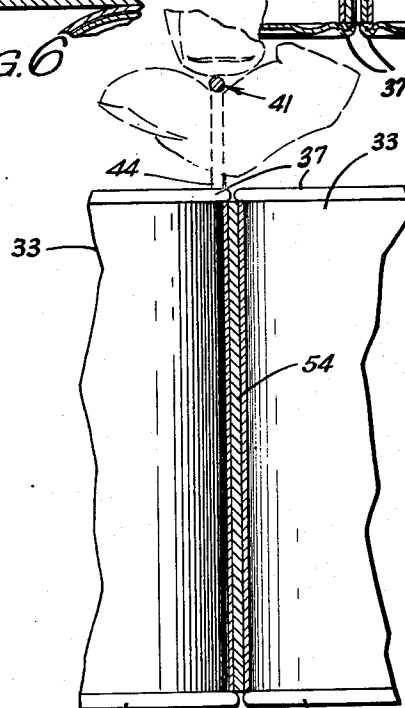


FIG. 9

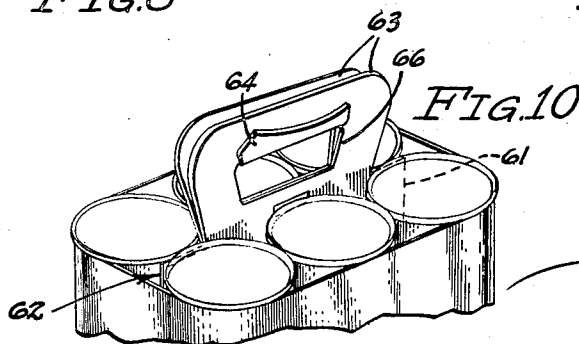


FIG. 10

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3 Sheets-Sheet 3

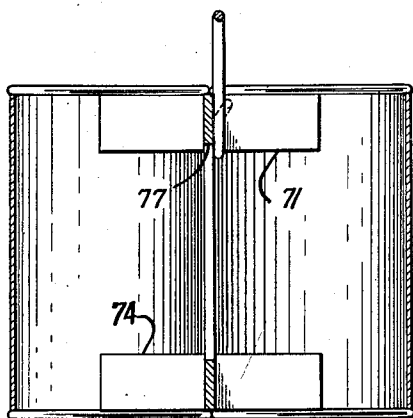
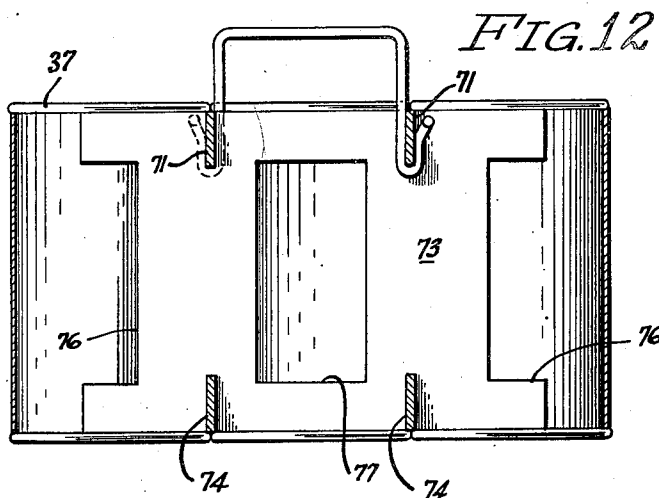
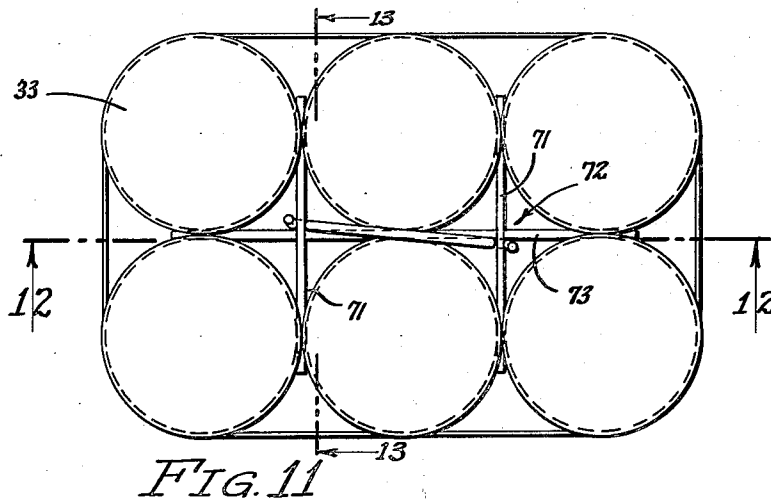


FIG. 13

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COMBINED MERCHANDISING PACKAGE AND
ARTICLE CARRIER

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Application May 31, 1950, Serial No. 165,344

13 Claims. (Cl. 224-45)

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This invention relates to article carriers, and particularly to a container-carrying package characterized by a cooperating relationship between the package and the container, and further by a high degree of merchandising appeal.

The invention provides a combined article carrier and merchandising package which is adapted to unite a plurality of cans or like articles into a conveniently handled and carried package, in such manner that the articles therein form a part of the structure and are exposed to view. Labels, advertising matter, or the like, on the exterior of the articles are effectively displayed without concealment by the package.

A feature of the invention is that a plurality of articles such as cans can be packed with ample security for transporting the articles, and yet occupying no more space than a like number of the articles alone. This feature of the invention, permits the same number of such articles as canned beer to be cased within a shipping case or carton of the type commonly employed to contain case lots of the articles, regardless of whether the articles are cased with or without the carrying package of our invention. Not only does this avoid the necessity of providing special cases to contain the packaged articles, but it also avoids the necessity of providing special handling equipment for off-size packages and cases now frequently used in canneries, breweries, and the like.

The invention contemplates a package comprising a plurality of cylindrical containers arranged in symmetrical group and each having a peripheral bead at an end thereof. A divider extends between juxtaposed ones of the plurality of containers with an edge of the divider engaging a peripheral bead of each of the several containers whereby the containers are supported in co-planar relation by the divider and resilient means encircles the outside circumference of the container group under tension to exert a constrictive force holding the several containers in engagement with the divider.

The invention will be more clearly understood from the following detailed description thereof taken in conjunction with the accompanying drawing in which:

Figure 1 is a side elevation of a package including six cans of the type commonly employed commercially for the preservation of food, beverages, and the like.

Figure 2 is a horizontal, sectional view taken upon the line 2-2 of Figure 1, with the direction of view as indicated.

Figure 3 is a transverse, vertical, sectional

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view, taken upon the line 3-3 of Figure 2, with the direction of view as indicated.

Figure 4 is a perspective view drawn to a reduced scale, of the form of partition member employed in the package illustrated in Figures 1 to 3, inclusive.

Figure 5 is an enlarged vertical section taken on the line 5-5 of Figure 2.

Figure 6 is a horizontal section, taken upon the line 6-6 of Figure 5, with the direction of view as indicated.

Figure 7 is a top plan view of the divider of Figure 4 as it appears before incorporation in the package;

Figure 8 is a partial horizontal section of a modified form of package.

Figure 9 is a partial transverse, vertical sectional view taken on the line 9-9 of Figure 8, with the direction of view as indicated.

Figure 10 is a perspective view of the upper portion of a package provided with a handle of a slightly different type from those illustrated in connection with the previously described modifications.

Figure 11 is a plan view showing a further modified form of package.

Figure 12 is a longitudinal, vertical sectional view taken upon the line 12-12 of Figure 11, with the direction of view as indicated.

Figure 13 is a transverse, vertical sectional view taken upon the line 13-13 of Figure 11, with the direction of view as indicated.

Referring first to Figures 1 to 7, inclusive, it will be observed that the package there shown consists essentially of two parts in addition to the containers themselves, i. e., a central core member or divider indicated in its entirety at 16 and an outer band 17. The band 17 is a tension member encircling the containers forming a part of the package and, by means of the tension to which it is subjected, serving to retain the containers in such association with the divider 16 that the latter provides amply secure support therefor to permit the device to serve as a carrier in spite of the fact that the package contains neither top nor bottom. The entire ends of all the articles contained within the package are thus completely exposed. This feature, combined with the fact that the encircling band 17 may conveniently be of a transparent material, adds substantially to the value of the package of our invention because it leaves the contents of the package substantially completely exposed to view so that the labels, advertising matter, or other material appearing on the surfaces of the articles themselves, are not obscured by the pack-

age, nor is the advertising value thereof diminished.

The core 16 is of a highly inexpensive nature, being adapted for quantity production by automatic machinery or otherwise, and is made of any suitable inexpensive sheet material, such as so-called "chipboard." It comprises a central sheet or vane 18 and preferably a plurality of transversely extending vanes, there being two such transverse vanes 19 in those packages which are designed to accommodate six cans or similar articles. In this modification, the transverse vanes 19 on each side of the longitudinal vane 18 are conveniently provided by a single sheet 21 of material preferably similar to that of which the longitudinal vane 18 is made. Instead of being left flat, however, as is the central vane 18, the strip 21 is formed with outwardly extending ridges or crests 22 as is shown in Figure 7, the sides 23 of these crests being left flat when the core is first assembled (see Figure 7), and the sides 23 of each ridge 22 meeting each other in a relative sharp angle 24 of substantially 90 degrees. Each strip 21 intermediate its edges 22 and at its opposite ends is secured as by glue or other suitable bonding agent to the central vane 18. In the case of a package that contains six cans, each strip 21 will be bonded to the central vane 18 at each of its ends 26 and at its central portion 27 between the two ridges 22.

Although when first produced, the ridges 22 of the core 16 are characterized by the flat sides 23 hereinabove mentioned and illustrated in Figure 7, they are deformed by the cans or other articles embodied in the package to conform to the configuration of the side walls of the cans. Thereafter, the core 16 will be possessed of an appearance similar to that indicated in Figure 4 wherein each strip 21 will be characterized by longitudinally extending corrugations 31, the sides 32 of which are rounded and substantially complementary to the outer surface of the cans 33. The outer portions of the sides 32 of each two adjacent corrugations merge toward each other to a rounded crest 34; and this crest 34 and the portions 32 of the side walls immediately thereadjacent serve as a vane or partition between cans in one of the two rows 36 of cans 33, there being one such row 36 on each side of the central, or longitudinally extending vane 18.

Inasmuch as all portions thus far described of the core 16 are of relatively thin cardboard, or, as stated, the so-called "chipboard," the thickness of any portion of the core disposed between any two adjacent cans 33 is not greater than twice the distance that the beads or rims 37 at the ends of the cans 33 extend laterally beyond the cans' side walls 38; and inasmuch as the height of the core 16 is substantially equal to the distance between the inner faces of the beads or ridges 37, interposition of the core 16 between the cans does not cause them to be separated by any distance greater than that occasioned by engagement of their beads 37. This is one of the important advantages of the invention in that the package is no larger than the several containers incorporated therein.

Inasmuch as it is desired to arrange the cans 33 within each of the units or packages, in the same arrangement as that employed when loose cans are arranged within cases, i. e., extending in straight rows considered both longitudinally and transversely, the two strips 21 on opposite sides of the central vane 18 are arranged with their crests 24 opposite each other and with their val-

leys 27 opposite each other, with the result that when the cans 33 are arranged in suitable engagement with the core, the cans 33 will be arranged in two rows 36, one row being on each side of the central vane 18. Moreover, one can 33 of each of the two rows 36 will be directly opposite a can in the other row, as clearly shown in Figure 2.

Means are provided for retaining the cans against lateral movement away from the core 16 so as to assure that a portion of the upper bead or rim 37 of each can lies above and within the vertical plane of a portion of one of the vanes 19, the purpose being to make it possible to rely upon engagement between the vane 19 and the rims 37 to support the weight of the cans, thereby avoiding the necessity of providing a top or bottom for the container. As hereinabove indicated, this retaining means takes the form of an encircling band 17 of a resilient material which may be transparent, opaque, or translucent, depending upon the requirements of the individual case, and which may be colored or otherwise decorated. Sheet plastic has been found ideally suited for this purpose inasmuch as certain forms thereof are possessed of a high degree of resiliency. Because of its resiliency the tension band is adapted for installation by automatic machinery in which it may be stretched sufficiently to pass over the cans which previously have been grouped upon the core 16. After release of the band by the automatic machinery, the band will then contract sufficiently to press the cans firmly into such engagement with the core 16 that they will be adequately supported thereby in the manner hereinabove indicated.

In order to facilitate handling the package as a unitary item, we find it expedient to provide a collapsible handle 41 which may conveniently be provided by an inverted U-shaped piece of wire 42 having a hook 43 on the lower end of each leg 44. Each of these hooks 43 is engaged through a vertically extending slot 46 in the central longitudinally extending vane 18. These two slots 46 are symmetrically arranged upon opposite sides of the central portion of the vane 18 and are disposed within the spaces between cans as is most clearly indicated in Figure 2. Since the slots 46 are vertically elongated, the handle 41 can optionally be adjusted to its extended position, as illustrated in full lines in Figures 1 and 3; or it can be retracted to that position indicated in broken lines in Figure 1 wherein the cross bar of the handle is disposed closely adjacent the tops of the cans 33. The extreme end portions 47 of the hooks 43 preferably are deflected outwards slightly as indicated in Figures 1 and 2 so as to prevent accidental displacement of the handle from the slots 46 when the handle is in its retracted position.

Referring now to Figures 8 and 9, a slightly modified form of construction is provided wherein each of the outer ends of the transversely extending vanes 51 of the core portion 52 is provided with a flange 53, the lateral edges of which are adapted to engage the sides of the cans along the lines spaced outward slightly beyond the portion of each two adjacent cans which most closely approach each other. These flanges 53 therefore serve as beads providing additional security against separation of the cans by moving laterally outwards away from the central vane 54 of the core 52 and thereby provides even further assurance that the cans will remain in that position wherein they are assured of support by

engagement of the upper edges of the vanes with the under surfaces of the beads 37 at the tops of the cans.

Figure 10 illustrates a slightly modified form of handle construction which may conveniently be provided as an upward extension of the central vane or partition 61 of the core 62 or as one or more tabs 63 constructed of relatively heavy kraft paper and easily bonded adjacent their lower edges to the upper edge of the vane 62. One of these tabs 63 is provided with a tongue 64 adapted to be deflected through an opening 66 in the other tab 63 when the tabs 63 are in their erect or operating position. This tongue 64 will then serve to interconnect the two tabs 63 and provides a more comfortable handle by the avoidance of the sharp edge of the paper at that portion of the handle engaged by the fingers. When it is not desired to use the handle for carrying the package, it may be folded down upon the top of the cans, as indicated in broken lines in Figure 10.

Figures 11, 12, and 13 illustrate a still further modified form of construction wherein the transversely extending vanes 71 of the divider 72 are provided by single thicknesses of chipboard strips seated within slots in the longitudinally extending vanes 73 and extending on both sides thereof so that each strip 71 offers support to two cans 33 on each side of the central vane 73. In the case of a package intended to contain six cans 33, we prefer that two such transversely extending strips 71 be provided adjacent the upper edge of the longitudinal vane 73 and two more strips 74 similarly associated with the lower edge of the longitudinal vane 73. The upper strips 71 are adapted to engage the under edges of the upper beads of the cans 33 whereas the lower strips 74 are adapted to engage the upper surfaces of the lower beads as is clearly illustrated in Figure 12. In other particulars, this modification of our carrier is similar to that described hereinabove in connection with Figures 1 to 7, inclusive. A detail of construction which adds to the economy with which the modification of Figures 11 to 13, inclusive, can be produced results from the fact that the four strips 71 and 74 of which the transverse vanes are formed can be struck from a sheet of chipboard corresponding in size to the final longitudinal vane 73, leaving a recess or notch 76 in each end of the longitudinal vane 73, each of these notches 76 corresponding in size to one of the strips 71 or 74. This procedure will also leave an opening 77 in the center of the longitudinal vane 73, this opening 77 corresponding in size to two of the transverse strips 71, 74. Inasmuch as the notches 76 and opening 77 are shorter than the height of the vane 73, their presence will not interfere in any manner with the vane's efficacy in offering support to the cans 33 contained within the package.

We claim:

1. A can package comprising cans having bottom and top annular beads projecting outwardly beyond their side walls, a divider comprising a longitudinally extending vane disposed between rows of said cans and a strip secured to each side of said vane, each of said strips having vertically extending corrugations therein and being secured to said vane at the bottom of the valley portions of said corrugations, each of said valley portions being substantially complementary to a portion of the side wall of one of said cans and the crests of said corrugations presenting transverse vanes between cans of one of said rows and

supportingly engaging the bottom and top beads of the respective containers, and a band of resilient material encircling said cans and vanes, said band being under tension whereby said cans are maintained in co-planar bead to bead engagement with their said beads over upper and lower edges of the divider.

2. A bottomless and topless container package comprising a plurality of parallel rows of cylindrical containers having end peripheral beads arranged in a co-planar rectangular group, a divider comprising articulated longitudinal and transverse divider members arranged in 90° relation to one another respectively, and positioned respectively between said rows and between the constituent containers of each row and between and engaging the end beads of each container, and a continuous perimetral package wall encircling the container group under tension to hold the containers in snug bead to bead engagement with each other, thereby to maintain the divider members in said 90° relation, the wall being in frictional binding relation to the rounded sides of corner containers of said rectangular group.

3. A bottomless and topless container package comprising a plurality of parallel rows of cylindrical containers arranged in a rectangular group, each container having an annular outwardly projecting peripheral bead at each end thereof, a divider comprising intersecting longitudinal and transverse divider members positioned respectively between said rows and between the constituent containers of each row with upper and lower edges of the divider being confined between and engaging both peripheral beads of each container, and a continuous perimetral package wall distinct and separate from that of said divider, the wall encircling said containers under tension to hold the containers in snug bead to bead engagement with each other, the wall being in frictional binding relation with side surfaces of corner containers of said group with the container end beads outwardly overhanging the wall.

4. A bottomless and topless container package comprising a plurality of parallel rows of cylindrical containers arranged in a co-planar rectangular group, each container having an annular outwardly projecting peripheral bead at each end thereof, a divider comprising intersecting longitudinal and transverse divider members positioned respectively between said rows and between the constituent containers of each row, the divider being confined between and engaging against both peripheral beads of each container between juxtaposed containers of the group to support the containers in co-planar relation, and a separate continuous perimetral package wall of resilient material encircling the container group under tension to hold the same in snug bead to bead engagement with each other, the wall being in frictional binding relation to side surfaces of corner containers of said group with container beads outwardly overhanging the wall.

5. A package in accordance with claim 4 in which a suspending handle is provided on said divider to suspend the package, said wall holding the peripheral beads of said containers in said vertically supported relation to the divider members whereby the containers are vertically suspended independently of the wall.

6. A bottomless and topless container package comprising a plurality of parallel rows of cylindrical containers arranged in a co-planar rectangular group, each container having an an-

nular outwardly projecting peripheral bead at each end thereof; a divider comprising intersecting longitudinal and transverse divider members positioned respectively between said rows and between the constituent containers of each row; the upper and lower edges of the divider being confined between and engaging the upper and lower beads respectively of each container and the termini of said divider members being disposed inwardly of the outermost container surfaces, and a continuous perimetral package wall of resilient material distinct and separate from that of said divider encircling the container group under tension to hold the containers in snug bead to bead engagement with each other, thereby to maintain the divider members in said transverse relation, the wall being in frictional binding relation to side surfaces of corner containers of said group and being out of engagement with the divider members.

7. A bottomless and topless container package comprising a plurality of parallel rows of cylindrical containers arranged in a co-planar rectangular group, each container having an annular outwardly projecting peripheral bead at each end, a divider comprising intersecting longitudinal and transverse divider members positioned respectively between said rows and between the constituent containers of each row and being confined between and engaging both peripheral beads of each container, the termini of said divider members being disposed inwardly of the outermost container surfaces, at least a part of transverse divider members having openings therein between upper and lower edges, a continuous perimetral package wall of resilient material encircling the container group under tension to hold the container in snug bead to bead engagement with each other, the wall being in frictional binding relation to side surfaces of corner containers of said group, and a handle having a central member lying astraddle the longitudinal divider member and spaced depending legs extending downwardly adjacent spaced ones of said transverse divider members, each leg having a hooked portion extending into said opening in the respective spaced transverse divider members and adapted to engage at the opening defining edge of the respective transverse divider member as the central member is raised upwardly from the top of the package.

8. A package in accordance with claim 4 wherein the divider members do not exceed in thickness the spacing between juxtaposed ones of said containers as determined by peripheral engagement of the container beads.

9. A package in accordance with claim 4 wherein the resilient material forming the perimetral wall does not exceed in thickness the outward projection of the container beads.

10. A bottomless and topless container package for cylindrical containers of the type having annular outwardly extending beads surrounding the top and bottom thereof, which comprises a plurality of rows of containers arranged in a rectangular group and in co-planar bead abutting relation, a divider comprising intersecting longitudinal and transverse divider members positioned respectively between the rows and between the constituent containers of each row and residing entirely in the spaces normally developed by bead to bead abutment of adjoining containers, the divider having upper and lower respectively co-planar edges engaging the container beads at each point of bead to bead abutment of

adjoining containers whereby the containers are supported vertically by the divider and in said co-planar relation, and a continuous perimetral package wall of resilient material encircling the container group under tension to hold the containers in bead to bead engagement with each other; the wall being in frictional engagement with the side curvilinear surface of each of the corner containers of said rectangular group.

11. A package in accordance with claim 10 wherein the transverse divider members comprises pairs of strips, each pair residing in aligned slots in the upper and lower edges of the longitudinal divider member, the pairs of strips being retained in said slots by confinement, on opposite sides of the longitudinal divider member, between top and bottom beads respectively of the associated containers.

12. A portable bottomless and topless container package comprising a plurality of round sided beaded containers arranged in a co-planar group, a divider comprising longitudinal and transverse members positioned between constituent containers of said group, handle means associated with the divider for suspending the package from above, the divider having upper and lower edges confined between and engaging opposite end beads of each container, and a separate continuous perimetral package wall of resilient material encircling the container group under tension to hold the containers in snug bead to bead engagement with each other and about the divider, the wall being in frictional binding relation to the rounded sides of at least part of the containers.

13. A portable bottomless and topless container package comprising a plurality of round sided beaded containers arranged in a co-planar group, a divider comprising longitudinal and transverse members positioned between constituent containers of the group, handle means associated with the divider for suspending the package from above, the divider engaging against and being confined between opposite end beads of each constituent container, and a continuous perimetral package wall of resilient material encircling the container group under tension and lying entirely between opposite end beads of the containers to hold the containers in snug bead to bead engagement with each other and about the divider, the divider terminating inwardly of and being spaced from the package wall.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
Re. 19,525	Juffa	Apr. 9, 1935
D. 162,515	Burge	Mar. 20, 1951
187,094	Brear	Feb. 6, 1877
1,860,586	McIlhenney	May 31, 1932
1,938,214	Boeye	Dec. 5, 1933
1,941,041	McKee	Dec. 26, 1933
1,955,851	Heller	Apr. 24, 1934
1,990,675	Sinz et al.	Feb. 12, 1935
1,995,906	Stoddard	Mar. 26, 1935
2,253,273	Haycock	Aug. 19, 1941
2,377,520	Robinson et al.	June 5, 1945
2,425,140	Allen	Aug. 5, 1947
2,532,446	Hall	Dec. 5, 1950

FOREIGN PATENTS

Number	Country	Date
4,895	Great Britain	Feb. 26, 1913