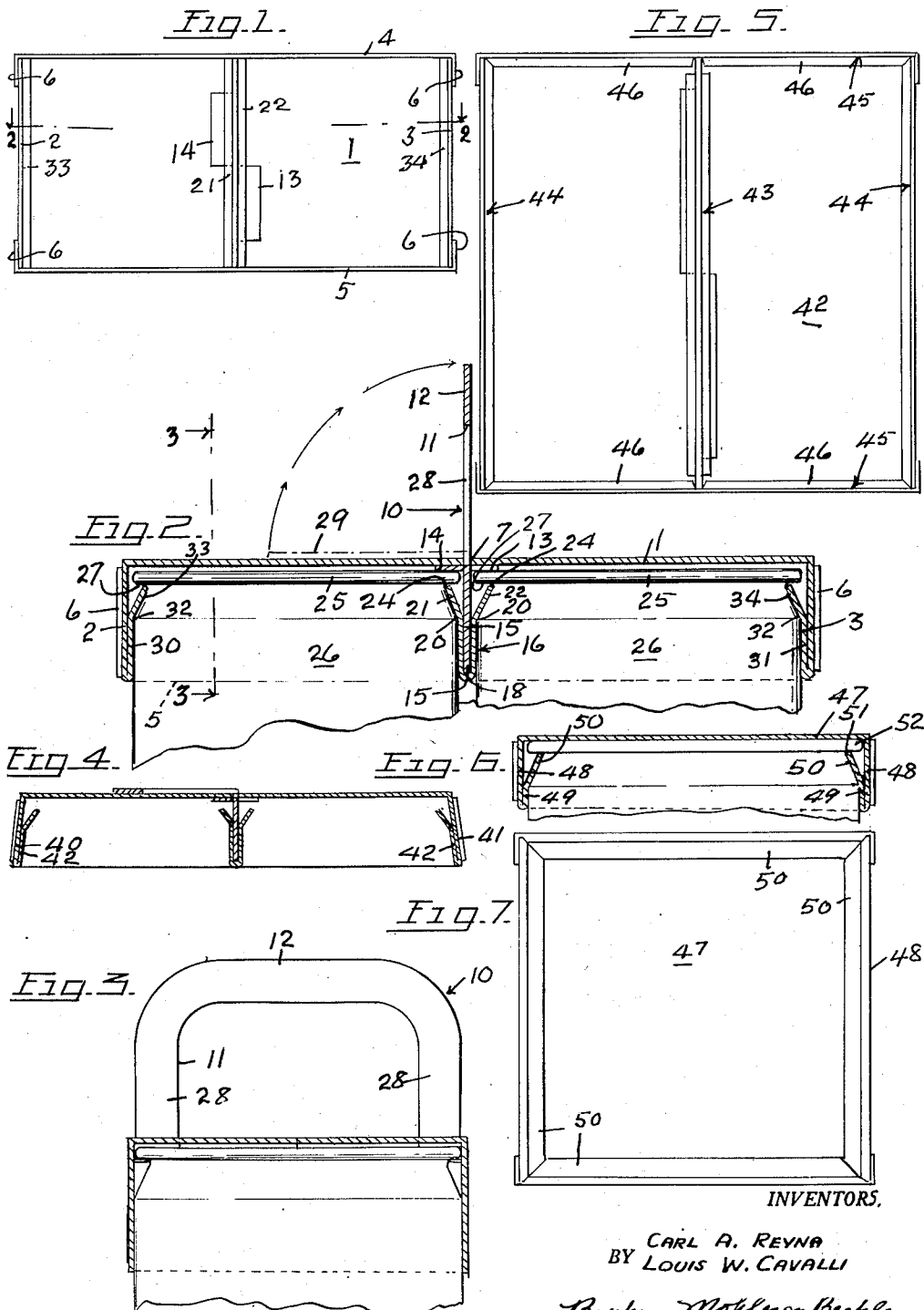


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CARTON CARRIER AND COVER

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CARTON CARRIER AND COVER

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This invention relates to a carrier and cover for milk cartons of the type that are vertically elongated and rectangular with substantially flat, rectangular tops.

Cartons of the above type are now commonly employed in quart sizes and smaller, but usually not in larger sizes due to their material and to the strains imposed by their contents. Other considerations also dictate a restriction to a size not larger than the quart size. However, many persons wish to purchase a half gallon or a gallon of milk, or other beverage that may be in such cartons, at one time, and the present invention makes it convenient to do so in a unitary package.

One of the objects of this invention is the provision of a carrier that will hold a plurality of cartons of the above type together as a unit, and that will also provide a convenient means for carrying said cartons.

In certain localities, the use of milk containers not having protective caps or covers over their sealed tops, is deemed objectionable for sanitary reasons. These objections are particularly directed to such containers as have flat tops on which dust and impurities may rest and collect. The rectangular flat upper ends of milk cartons have the dispensing opening in their said upper ends, at one corner, and a closure seals said opening when the carton is filled. Usually the upper surface of such tops are slightly recessed thereby making them traps for dust and impurities.

One of the objects of the present invention is the provision of a cap or cover adapted to be quickly locked over the top of a container of the type hereinbefore described, and which cover protects the top of one or more of said cartons.

Another object of the invention is the provision of a protective cover for one or more pairs of cartons of the type hereinbefore described and which cover includes means connected therewith for holding said pair or pairs together and for carrying them as a unit.

It should be noted that the upper ends of rectangular cartons of the type herein described, are crimped around their edges providing undersurfaces along their marginal portions. Each such surface is straight along each of the four edges of the upper end of each carton, and one or more of these surfaces is engaged by the carrier of this invention for lifting a pair of said cartons as a unit by a handle connected with the surface engaging member or members.

One of the objects of this invention is the provision of means adapted to engage at least one of said surfaces on each carton of each pair along substantially the full length of such surface inasmuch as such engagement not only prevents accidental tipping of the cartons relative to each other but also provides greater strength in the carton lifting structure where the strain is substantial and the structure must be formed to resist any tendency to distort the member that is adapted to engage said surface.

Other objects and advantages will appear in the description and in the drawings.

Fig. 1 is a reduced bottom plan view of a carrier and holder for a pair of cartons.

Fig. 2 is an enlarged vertical sectional view through the carrier and holder of Fig. 1 in carton lifting and covering position on a pair of milk cartons. The upper ends of said cartons are shown in elevation and the view is taken about along line 2—2 of Fig. 1 insofar as the cover is concerned.

Fig. 3 is a vertical sectional view through the carrier of Fig. 2 at right angles to the view of Fig. 2 and along

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line 3—3 of Fig. 2 except that the carton is shown in elevation.

Fig. 4 is a reduced size vertical sectional view of a slightly modified form of the invention.

Fig. 5 is a reduced size bottom plan view of a cover and carrier for four cartons of the type shown in Fig. 2.

Fig. 6 is a vertical sectional view taken through a cap or cover for a single carton, the upper end of said carton being shown in elevation.

Fig. 7 is a bottom plan view of the cover of Fig. 6.

In detail, referring to the cover and carrier of Figs. 1, 2, the cover portion comprises a flat, rectangular, horizontally disposed and horizontally elongated top 1 having end flanges 2, 3 and side flanges 4, 5 depending from the edges thereof. These flanges are integral extensions of the top 1 and flaps or tabs 6 integral with the side walls at their ends may connect the adjacent pairs of flanges at their adjacent ends. Obviously said tab 6 can be integral with either the side walls or end walls as desired.

Centrally between the ends 4, 5 the top 1 is transversely slotted as at 7 (Fig. 2). Slot 7 preferably extends substantially fully across said top 1 between side walls 2, 3.

A central carrier element in the form of a generally rectangular blank 10 of the same width as the length of slot 7 extends through the latter, the upper end of said blank being formed with an opening 11 (Fig. 3) to provide a cross piece forming a handle 12 for grasping by the hand of a person with the fingers extending through opening 11.

The marginal portion along the lower edge of opening 11 may be slit vertically at the ends and center of said opening to provide a pair of ears 13, 14 (Figs. 1, 2) adapted to extend oppositely outwardly of the blank in coplanar relationship at right angles to the plane of the blank.

These ears or tabs are glued or secured in any suitable manner to the underside of the top 1 along slot 7. These ears provide a stop to limit the upward movement of the handle 12 through said slot 7, and to uniformly position and correctly position the carton engaging portion of the structure that is on blank 10 below said ears.

The blank 10 extends downwardly below the top 1 to a point substantially even with the lower edges of the end and side flanges, as at 15, and a horizontally elongated strip 16 centrally folded on itself along a medial line 18 longitudinally thereof receives the lower marginal portion of the part 15. Portion 15 extends between the opposed sides of said strip to the said medial line along which said strip is folded.

The said strip 16 is formed with folding creases longitudinally thereof along lines 20 that are at the same level and the portions 21, 22 above said lines 20 extend divergently outwardly (Fig. 2) terminating in free, parallel, horizontally extending edges 24 spaced below top 1.

The width of the cover, or distance between side flanges 2, 3 is substantially equal to the distance between two of the opposite edges of the square top 25 of a carton 26.

Carton 26 is conventional, the square top 25 being crimped along its edges to provide an undersurface 27 along the marginal portion of each edge. The sides of the carton taper downwardly and outwardly from the innermost portions of said undersurfaces.

The length of the cover 1 is slightly greater than double the width of each carton.

When the cartons are filled with milk, their sides will bulge outwardly slightly. Each edge of the top of the carton is vertically coplanar with the side wall therebelow, when the carton is empty, but when the cartons are filled with milk, their sides will bulge out slightly, and when two filled cartons are placed together in side by side relationship, there will be a crack between the adjacent edges of their tops.

It is in this crack that the blade-like lower portion of the blank 10 (and strip 16 below folding creases 18) is adapted to enter when the cover is placed over a pair of cartons 26 that are in side by side relationship. Upon moving the cover downwardly over such pair of cartons, the portions 21, 22 on blank 10 will slide past the adjacent edges of the tops 25 of said cartons until they clear said edges, and then, being resilient, they will snap outwardly to the position seen in Fig. 2 in which the

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free upper edges 24 of portions 21, 22 of said strips engage the under surfaces of the tops 25 along their adjacent edges.

The side portions 28 of blank 10 defining the lateral sides of opening 11 are preferably formed with longitudinally aligned folding creases even with the upper surface of top 1 so that the handle may fold flat on top of cover 1 to position 29 (Fig. 2). Thereby facilitating the packaging of a supply of the tops for storage or shipment.

From the foregoing structure, it will be seen that the free upper edges 24 of portions 21, 22 will move outwardly to securely engage tops 25 along the undersurfaces 27 where the latter join the sides of the cartons when the handle 12 is lifted to lift the cartons. Also portions 21, 22 will tend to move the upper ends of the cartons apart, but the opposite end flanges 2, 3 will prevent this. The greater the lifting force the tighter the cartons will be held.

In some instances it has been found desirable to extend the end flanges 2, 3 to provide extensions 30, 31 that are folded inwardly against the opposed surfaces of said flanges. Each of these extensions is formed with a folding crease 32 to provide free inwardly and convergently upwardly extending marginal portions 33, 34 that have free upper edges 35 adapted to engage the undersurfaces of the marginal portions of the carton tops 25 where the cover is slipped downwardly over a pair of cartons. These extensions are not absolutely necessary where only a pair of quart size cartons, or smaller, are being carried, but are desirable in the event more than a pair are being carried or if larger cartons than the quart size were to be used.

These portions 33, 34 function, together with the portions 21, 22 to lock the two opposite edges of each carton to the cover.

In certain installations, it has been found desirable to have the two opposed end flanges slanted oppositely outwardly and downwardly from the cover. In Fig. 4, said end flanges are indicated at 40, 41, and the extensions 42 thereon that correspond to extensions 30, 31 are inclined similar to said flanges. If desired, the side walls that correspond with side walls 2, 3 may also be inclined outwardly and downwardly.

In this form of the invention, the junctures between the flanges and top are positioned so that the tops 25 of the cartons will fit within the cover the same as where the flanges are straight when the covers are moved downwardly against said tops. But the lower edges of the flanges will be more widely spaced from each other than in the form shown in Figs. 1, 2. By this structure the covers are more readily and easily positioned on the cartons where the cartons may not be as uniformly spaced apart as would be required for the cover of Figs. 1, 2.

In positioning the covers on the cartons manually, it has been found that by engaging one of the pair of cartons with one of the flanges 4, 5 while the other flange is elevated, and then swinging the other flange downwardly with the blade-like strip 16 entering the space between the pair of cartons, the cover may be quickly positioned and locked onto a pair of cartons.

To remove the cover from the cartons, it is only necessary to swing the lower ends of the pair of cartons apart and the cover will become detached from its locking position on their upper ends.

Except for the differences above mentioned between the covers of Fig. 2 and Fig. 4, they are the same. It may be pointed out that it is not always necessary with the invention of Fig. 4 to have the side flanges slanted outwardly. In machine capping, this is desirable however inasmuch as the tops will automatically correctly position the tops of adjacent cartons should they be slightly out of proper alignment or spacing.

Where four cartons are to be carried, substantially the same structure is used as in Figs. 1 to 3 except that the top 42 is substantially square and the central carton engaging member 43 is double the width of blank 10. The end walls 44 are twice the length of end walls 4, 5 and the side walls 45 are provided with marginal portions 46 on extensions that have the same structure as extensions 30, 31. The marginal portions 46 correspond in structure and function with the marginal portions 33, 34 on ends 2, 3, except that they are on side walls 45.

It will be seen that the cover of Fig. 5 will extend over four cartons, there being a pair along each side of the

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central member 43, instead of only one. Also three of the undersurfaces along the marginal portions of the tops of each carton will be engaged by the carrier, instead of only two. This will insure against any of the four cartons accidentally slipping from the carrier.

In Figs. 6, 7 a single cover is shown for a single carton. This cover 47 is perfectly square with a depending flange 48 along each edge, and an extension 49 is on each flange doubled against it on the inner side in exactly the same manner as extensions 30, 31 in Fig. 2. Each extension includes a resilient marginal portion 50 having a free upper edge 51 adapted to engage the undersurface of each marginal portion 52 of the carton.

The cover for each carton is easily and quickly slipped over the top of the carton and may be easily torn therefrom.

It is pertinent to note that where the carrier structure is employed it is highly desirable that the edges 24 of the marginal portions 21, 22 engage the undersurfaces of the adjacent portions of tops 25 of the cartons 26 substantially from end to end thereof.

It is to be noted that with the present structure practically the entire load or weight of the cartons is taken by the handle and not by the cover. The cover keeps the tops of the cartons clean and holds the cartons together.

The fact that the lifting of the cartons is done from their upper ends avoids the necessity for a base under the cartons. The avoidance of such base is desirable both from the standpoint of economy of material and to eliminate the possibility of the carrier becoming wet and weakened.

We claim:

1. In a carton carrier for substantially rectangular cartons having flat rectangular tops crimped along their edges to provide marginal portions with undersurfaces outside the cartons; a handle adapted to be grasped by the hand of a person, a pair of divergently outwardly and upwardly extending members directly secured to and directly carried by said handle having free, horizontally extending parallel upper edges adapted to engage said surfaces along the adjacent edges of the tops of a pair of such cartons disposed in side by side relationship with said handle extending substantially above said free upper edges and in a plane parallel with said free upper edges and bisecting the space between them, and means connected with said handle for holding such pair of cartons against movement away from each other at their upper ends when they are in said side by side relationship with said free upper edges in engagement with said undersurfaces.

2. In a carton carrier for substantially rectangular cartons having flat rectangular tops crimped along their edges to provide marginal portions with under surfaces outside the cartons; a handle adapted to be grasped by the hand of a person, a pair of divergently outwardly and upwardly extending members directly secured to and directly carried by said handle having free, horizontally extending parallel upper edges adapted to engage said surfaces along the adjacent edges of the tops of a pair of such cartons disposed in side by side relationship with said handle extending substantially above said free upper edges and in a plane parallel with said free upper edges and bisecting the space between them, and a cover adapted to extend over the top of such pair of cartons having depending flanges along two opposite edges thereof adapted to extend over the oppositely outwardly facing sides of said pair of cartons for holding said cartons against movement away from each other at their upper ends when they are in said side by side relationship with said free upper edges in engagement with said under surfaces.

3. In a carton carrier for substantially rectangular cartons having flat rectangular tops crimped along their edges to provide marginal portions with under surfaces outside the cartons; a handle adapted to be grasped by the hand of a person, a pair of divergently outwardly and upwardly extending members directly secured to and directly carried by said handle having free, horizontally extending parallel upper edges adapted to engage said surfaces along the adjacent edges of the tops of a pair of such cartons disposed in side by side relationship with said handle extending substantially above said free upper edges and in a plane parallel with said free upper edges and bisecting the space between them, and means connected with said handle for holding such pair

of cartons against movement away from each other at their upper ends when they are in said side by side relationship with said free upper edges in engagement with said upper surfaces, said means being a horizontal strip extending around the upper end portions of said cartons.

4. In a carton carrier for substantially rectangular cartons having flat rectangular tops crimped along their edges to provide marginal portions with under surfaces outside the cartons; a handle adapted to be grasped by the hand of a person, a pair of divergently outwardly and upwardly extending members directly secured to and directly carried by said handle having free, horizontally extending parallel upper edges adapted to engage said surfaces along the adjacent edges of the tops of a pair of such cartons disposed in side by side relationship with said handle extending substantially above said free upper edges and in a plane parallel with said free upper edges and bisecting the space between them, and means connected with said handle for holding such pair of cartons against movement away from each other at their upper ends when they are in said side by side relationship with said free upper edges in engagement with said upper surfaces, said means being a horizontal strip extending around the upper end portions of said cartons, and means on said strip positioned to engage the under surfaces of said top that are opposite those adapted to be engaged by said free upper edges of said members.

5. A carton carrier for a pair of vertically disposed rectangular cartons positioned in side by side relationship and having laterally directed flanges around their upper ends, comprising; an oblong horizontally disposed collar adapted to extend around said upper ends for holding them together, a flat sided handle centrally between the ends of said collar extending between the longer sides of the latter and projecting above the plane of said collar with the upwardly projecting portion formed with an opening for the fingers of a hand oppositely outwardly and upwardly extending projections extending from the opposite flat sides of said handle on the portion of said handle that is between said longer sides adapted to engage below the adjacent flanges of said upper ends for securing said handle against upward removal from said upper ends and to enable lifting said pair of cartons by said handle.

6. A carton carrier for a pair of vertically disposed rectangular cartons that are disposed in side by side relationship and that have laterally directed flanges around their upper ends, comprising; an oblong horizontally disposed, flat sided collar formed from a strip of cardboard with its flat sides vertical and adapted to extend around said upper ends with the flat inner sides of the collar against the flat sides of said pair of cartons for holding them together, a flat sided handle centrally between the ends of said collar a portion of which is within said collar extending between the longer sides of the latter and the remainder projecting above said collar and formed with a hand opening, a pair of oppositely outwardly and upwardly projecting flat members swingably connected with said portion at their lower edges for movement from positions flat against the opposite sides of said handle to said positions extending outwardly and upwardly relative to said portion with the upper edges of said members positioned for engaging below the adjacent flanges of said pair of cartons when said portion is enclosed by said collar and is between said pair.

7. A carton carrier for a pair of vertically disposed rectangular cartons that are disposed in side by side relationship and that have laterally directed flanges around their upper ends, comprising; an oblong horizontally disposed, flat sided collar formed from a strip of cardboard with its flat sides vertical and adapted to extend around said upper ends with the flat inner sides of the collar against the flat sides of said pair of cartons for holding them together, a flat sided handle centrally between the ends of said collar a portion of which is within said collar extending between the longer sides of the latter and the remainder projecting above said collar and formed with a hand opening, a pair of oppositely outwardly and upwardly projecting flat members swingably connected with said portion at their lower edges for movement from positions flat against the opposite sides of said handle to said positions extending outwardly and upwardly relative to said portion with the upper edges of said members positioned for engaging below the adjacent flanges of said pair of cartons when said portion

is enclosed by said collar and is between said pair of said cartons, said members being of semi-resilient material and being movable to said oppositely outwardly and upwardly projecting position from said handle under the inherent resiliency of said material.

8. A carton carrier for a pair of vertically disposed rectangular cartons that are disposed in side by side relationship and that have laterally directed flanges around their upper ends, comprising; an oblong horizontally disposed, flat sided collar formed from a strip of cardboard with its flat sides vertical and adapted to extend around said upper ends with the flat inner sides of the collar against the flat sides of said pair of cartons for holding them together, a flat sided handle centrally between the ends of said collar a portion of which is within said collar extending between the longer sides of the latter and the remainder projecting above said collar and formed with a hand opening, a pair of oppositely outwardly and upwardly projecting flat members swingably connected directly with said portion at their lower edges for movement from positions flat against the opposite sides of said handle to said positions extending outwardly and upwardly relative to said portion with the upper edges of said members positioned for engaging below the adjacent flanges of said pair of cartons when said handle is enclosed by said collar and is positioned with said portion between said pair, said handle being connected with each of said longer sides along opposite edges of said handle.

9. In combination with a pair of upright, rectangular cartons of corresponding shape and size in side by side substantially engaging relationship and having oppositely laterally directed parallel flanges at the upper ends of their adjacent sides, a flat sided handle having a lower flat sided portion disposed between the upper ends of said pair of cartons and between said flanges and in a vertical plane substantially parallel with the planes of said adjacent sides and having an upper portion projecting upwardly from said flanges for grasping by the hand, a pair of flat members at opposite sides of said lower portion projecting divergently upwardly relative to each other, said members having a yieldable connection along their lower edges with said lower portion yieldably urging their upper edges oppositely outwardly from vertical positions of said members enabling downward passage of said members between and past said flanges to said divergently extending positions with the upper edges of said flanges below said flanges for engagement with the undersides of the latter, and a flat sided oblong collar relatively closely surrounding said pair of cartons at their upper ends with the flat sides of said collar engaging the flat sides of said pair of cartons for holding the upper ends of said cartons against separation and against movement of said flanges laterally from above said upper edges of said members.

10. In combination with a pair of upright, rectangular cartons of corresponding shape and size in side by side substantially engaging relationship and having oppositely laterally directed parallel flanges at the upper ends of their adjacent sides, a flat sided handle having a lower flat sided portion disposed between the upper ends of said pair of cartons and between said flanges and in a vertical plane substantially parallel with the planes of said adjacent sides and having an upper portion projecting upwardly from said flanges for grasping by the hand, a pair of flat members at opposite sides of said lower portion projecting divergently upwardly relative to each other, said members having a yieldable connection along their lower edges with said lower portion yieldably urging their upper edges oppositely outwardly from vertical positions of said members enabling downward passage of said members between and past said flanges to said divergently extending positions with the upper edges of said flanges below said flanges for engagement with the undersides of the latter, and a flat sided oblong collar relatively closely surrounding said pair of cartons at their upper ends with the flat sides of said collar engaging the flat sides of said pair of cartons for holding the upper ends of said cartons against separation and against movement of said flanges laterally from above said upper edges of said members, said lower portion of said handle and said members being positioned substantially within said collar and the upper edges of said members being at about the level of the upper edges of said collar when in engagement with the undersides of said flanges.

11. In combination with a pair of upright, rectangular cartons of corresponding shape and size in side by side substantially engaging relationship and having oppositely laterally directed parallel flanges at the upper ends of their adjacent sides, a flat sided handle having a lower flat sided portion disposed between the upper ends of said pair of cartons and between said flanges and in a vertical plane substantially parallel with the planes of said adjacent sides and having an upper portion projecting upwardly from said flanges for grasping by the hand, a pair of flat members at opposite sides of said lower portion projecting divergently upwardly relative to each other, said members having a yieldable connection along their lower edges with said lower portion yieldingly urging their upper edges oppositely outwardly from vertical positions of said members enabling downward passage of said members between and past said flanges to said divergently extending positions with the upper edges of said flanges below said flanges for engagement with the undersides of the latter, and a flat sided oblong collar relatively closely surrounding said pair of cartons at their upper ends with the flat sides of said collar engaging the flat sides of said pair of cartons for holding the upper ends of said cartons against separation and against movement of said flanges laterally from above said upper edges of said members, said lower portion being secured at its opposite lateral edges to the longer sides of said collar at points substantially midway between the ends of said longer sides.

12. A carton carrier for a pair of vertically disposed rectangular cartons positioned in side by side relationship and having laterally directed flanges around their upper ends comprising; a handle having a member depending therefrom provided with a pair of outwardly extending projections adjacent to the lower end thereof adapted to extend below the adjacent flanges of such pair with the portion of said handle directly above said projections of restricted thickness for passing between said adjacent edges, the oppositely outwardly facing sides of said pair extending convergently downwardly to facilitate thrusting said projections downwardly past said flanges, strips extending from said handle to points at the opposite outer sides of such pair of cartons and below the said flanges at said opposite outer sides for holding said pair of cartons together with the said projections below the adjacent flanges of said pair of cartons.

13. A carrier for containers having peripheral projections, comprising in combination, an overcap member telescoping over the tops of two juxtaposed containers, said overcap member having pairs of oppositely disposed depending wall sections, said wall sections surrounding and confining two juxtaposed containers adjacent their peripheral projections, a pair of wall sections being provided with inwardly extending carrier lugs formed integral with said wall sections for engagement with said peripheral projections on the outer sides of said containers, and

an auxiliary member disposed intermediate said containers and being provided with lugs extending toward said first mentioned lugs for engagement with the peripheral projections on the inner sides of said containers, said outer and inner lugs locking said containers together for carrying said containers as a unitary package.

14. A container unit including, in combination, a plurality of separate housing elements each of said elements being shaped to provide a recess adapted to receive a portion of a handle member, a handle member positioned between the housing elements said member having secured thereto a plurality of housing elements supporting portions nested within the aforementioned recesses, and an endless band keeper member sleeved over said elements and operable to detachably secure the handle member to the housing elements and to bind the housing elements together to thereby provide, by the whole, a unit capable of being transported from place to place.

15. A container unit including, in combination, a plurality of separate housing elements fashioned at their top to provide housing means cooperating with other elements of the unit, a handle member positioned between the housing elements and having portions thereof nested within portions of the aforementioned housing means, and a keeper member operative to bind the housing elements together and to retain the handle member in place.

16. A container unit including, in combination, a plurality of separate housing elements each element being fashioned at its top with a recessed member to provide means cooperating with another element of the unit, a handle member positioned between the housing and having tab portions fitting within the several recesses provided by the recessed members, and a keeper member contactable with the housing elements and operative to bind said elements together and to retain the handle member in place.

17. A multi-part container unit comprising, when assembled, a plurality of separate housing elements each element being fashioned at its top to provide a rim member V-shaped in cross section, a handle member positioned between and in disconnected engagement with the housing elements said member having laterally extending portions in contact with the several aforementioned rim members, and a keeper member relatively tightly encircling the housing elements and serving to bind the housing elements together with the handle tightly fitted therebetween.

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