

Dec. 7, 1954

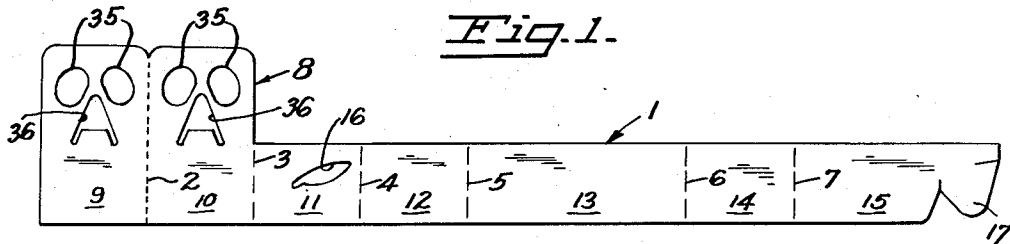
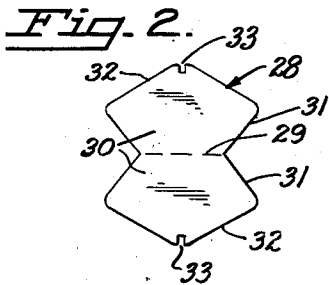
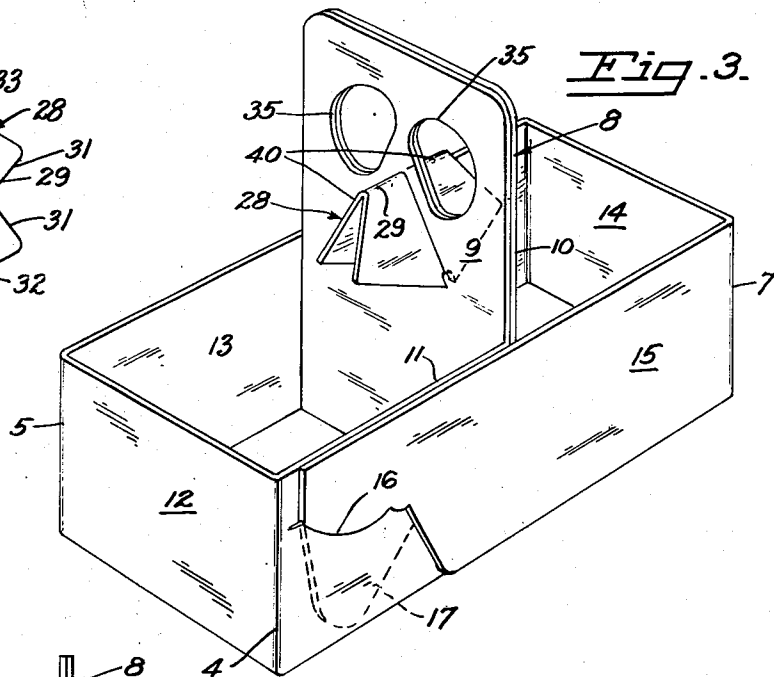
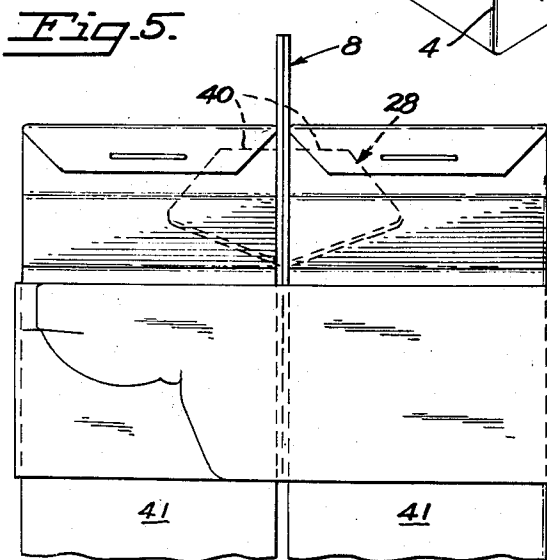
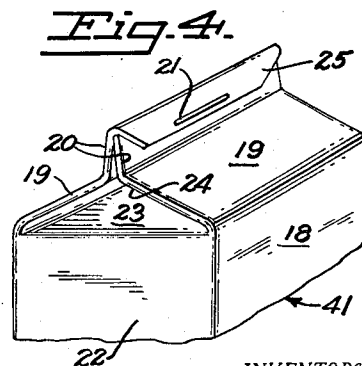
A. CHURCH ET AL

2,696,401

CARTON CARRIER

Filed Oct. 15, 1951

2 Sheets-Sheet 1



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Fig. 6.

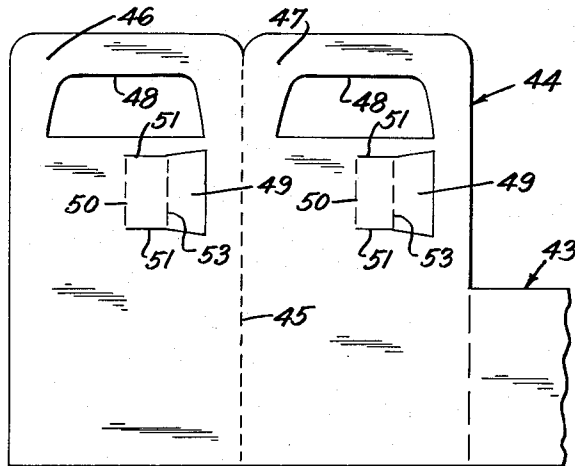


Fig. 7.

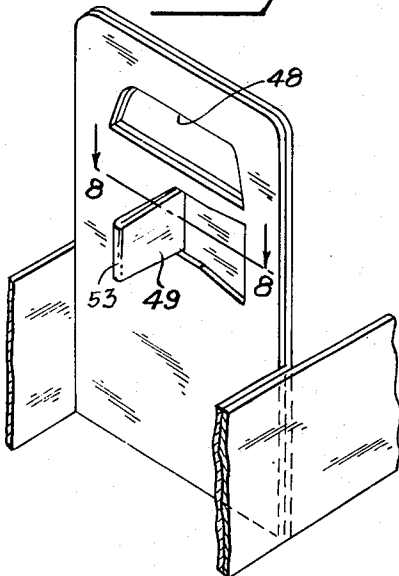


Fig. 8.

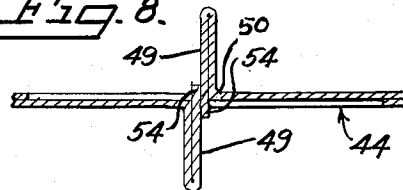


Fig. 10.

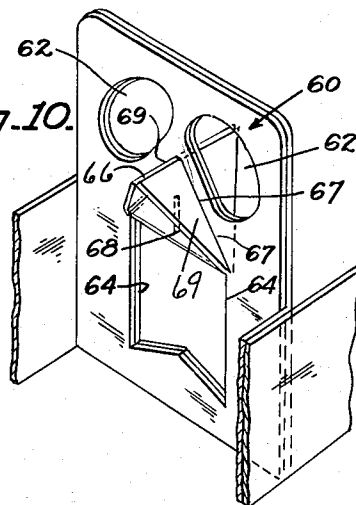
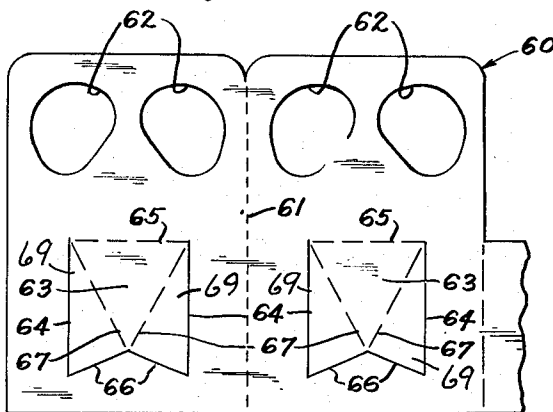


Fig. 9.

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CARTON CARRIER

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9 Claims. (Cl. 294—87.2)

This invention relates to a carton carrier adapted for use in carrying a plurality of milk cartons of the gable or roof type as distinguished from cartons having horizontally disposed upper walls at their upper ends.

One of the objects of this invention is the provision of a carrier that securely holds a pair of milk cartons having gable tops together as a unit and that is provided with means for safely carrying such pair.

Another object of the invention is the provision of a carrier for a pair of milk cartons of the type having gable tops or upper ends, and which carrier is economical to make, easy to manipulate and to secure to said cartons, and that does not project from the pair of cartons in a manner that is objectionable, or that interferes with the normal manner of packing a large number of such cartons for shipment or that would tend to cause injury thereto during transportation and delivery of such cartons.

In the marketing of milk, it has been established that a large number of user purchasers buy a half gallon or more of milk at a time, and others would purchase it in larger than quart cartons if such a purchase did not require handling two or more separate cartons. To meet this demand, cartons of the gable top kind have been made in half gallon sizes, and special carriers, such as shown in copending U. S. Letters Patent application, Serial No. 217,820, filed March 27, 1951, by Platt et al., have been provided for securing two of the conventional horizontal top cartons of smaller than half gallon size together. This provision relative to the horizontal or flat top cartons was made because of the impracticability of making such cartons in larger sizes.

It has been discovered, since the marketing of flat top quart sized cartons in pairs secured together by a carrier as disclosed in said application, that many persons prefer to purchase a quantity of milk such as a half gallon, for example, in two quart cartons rather than in a single half gallon container, inasmuch as the milk, in many instances, is not all used immediately and one carton will remain sealed while the other is being used.

Also, many of the smaller dairies are equipped to package milk in the quart size gable top cartons, but are not equipped to package milk in the half gallon cartons, and the expense involved in so equipping their establishments is too great in comparison to the demand to make it profitable. Thus the provision of economical means for securing several cartons, of say quart size together as a unit and which means includes a provision for carrying said cartons, enables said dairies to package milk in larger than quart sizes without incurring the additional expense of adding equipment for making larger sized cartons, and without devoting room to such equipment.

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

In the drawings:

Fig. 1 is a side elevational view of a blank that is adapted to be formed to provide a collar for holding milk cartons together as a unit.

Fig. 2 is an elevational view of an element adapted to be carried by the blank of Fig. 1 to enable carrying the cartons secured together by said collar.

Fig. 3 is a perspective view of the carrier in assembled form, but without the cartons that are to be carried thereby.

Fig. 4 is a fragmentary perspective view of the upper end of a conventional gable-top milk carton showing one of the two laterally directed inverted, generally V-shaped recesses at the upper end of such carton.

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Fig. 5 is a side elevational view of the carrier of Fig. 3 with the upper ends only of a pair of gable-top cartons held in said carrier.

Fig. 6 is a fragmentary elevational view of a blank showing a modification of the invention illustrated in Fig. 1.

Fig. 7 is a fragmentary perspective view of the handle portion of the carrier of Fig. 6.

Fig. 8 is an enlarged fragmentary sectional view taken along line 8—8 of Fig. 7.

Fig. 9 is a fragmentary elevational view of the handle portion of a blank showing a modification of the invention shown in Figs. 1, 6.

Fig. 10 is a fragmentary perspective view of the handle portion of Fig. 9 in assembled relation.

In detail, the blank of Fig. 1 comprises a horizontally elongated strip 1 of cardboard divided by transversely extending parallel folding creases 2, 3, 4, 5, 6 and 7 (starting from the left hand side as seen in Fig. 1) for folding said strip to provide a rectangular collar adapted to enclose the upper ends of a pair of milk cartons that are in side by side engaging relationship.

The width of strip between crease 3 and the left hand end of said strip is substantially greater than the remainder of the strip across which creases 4 to 7 inclusive extend, and the width of the said remaining strip is uniform except for a tab that is formed on the right hand end portion, as will be described more in detail later on.

The enlarged end portion of strip 1 (left hand end as seen in Fig. 1), is generally designated 8 and folding crease 2 divides said portion into two equal parts 9, 10.

The portion 11 between creases 3, 4 forms half of one side of the collar for the cartons (Fig. 3). Portion 12 between creases 4, 5 forms one end of the collar and the portion 13 between creases 5, 6 forms the full side of the collar that is opposed to portion 11, and portion 14 between creases 6, 7 forms the end of the collar that is opposite to end 12. The right hand end portion 15 of strip 1 to the right of crease 7 forms the side of the collar opposed to portion 13 and overlaps the portion 11.

The portion 11 is about centrally formed with a generally horizontally elongated slot 16 that is adapted to receive a downwardly extending locking tab 17 formed on the terminating free end of portion 15. When the tab 17 is thrust downwardly into slot 16, the collar is locked in collar form against opening.

In Fig. 4, the upper end of a conventional gable-top carton is shown. These cartons are square in horizontal cross sectional contour and two of the opposed sides 18 are extended upwardly as indicated at 19 and the upper marginal portions 20 of said extensions are stapled together by staples 21. The other two opposed sides 22 of the carton are integrally connected with the sides 18 and have upward extensions 23 that are folded inwardly toward each other when the marginal portions 20 are stapled together whereby laterally oppositely outwardly opening generally inverted V-shaped recesses 24 are formed at the uppermost end of the carton. As one marginal portion 20 of one extension 19 is provided with a flap 25 that extends over the outer side of the other of said marginal portions 20, and is stapled to said marginal portions 20, the V-shaped recess 24 terminates at its apex in a relatively sharp inverted V point the sides of which are the marginal portions 20 that are at opposite sides of the pair of staples 21, the latter being fairly near the center of the marginal portions 20.

The laterally oppositely outwardly opening recesses 24 are used for receiving projections that are carried by the strip 1 (when the latter is around the top of a pair of said cartons) so that the collar cannot be slipped upwardly and off the cartons when the collar is on the cartons.

Fig. 2 shows one of the means that may be used to provide said projections. This means comprises a blank or element 28 that is divided by a folding crease 29 into two equal and correspondingly shaped parts 30. The parts 30 are symmetrical at opposite sides of the crease 29.

Edges 31 of each part 30 extend divergently from the ends of crease 29 for the same distance and then convergently as at 32 to apices that are notched out to provide recesses 33. When the parts 30 are folded on themselves along the folding crease 29 their corresponding edges

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are in alignment and the edges of notches 33 are in registration or alignment.

The portion 8 at one end of strip 1 is enlarged by projecting one of the longitudinally extending edges of said strip, while the opposite longitudinally extending edge of said strip along portion 8 is in longitudinal alignment with the remainder of said opposite edge.

Each of the projecting parts of halves 9, 10 is formed with a pair of spaced finger receiving openings 35 so arranged that the openings 35 in part 9 will register with the openings 35 in part 10 when parts 9, 10 are folded on themselves along crease 2.

Below each pair of openings 35 in each of the parts 9, 10 the said extensions of said parts are each formed with a generally A-shaped opening 36 in which the portion above the cross bar of the A is cut out. These openings 36 are in registration when parts 9, 10 are folded on themselves.

The distance from the apex of each of the A-shaped openings 36 to the lower end of each leg of the A is equal to the distance between the center of crease 29 in element 28 and the bottom of each notch or recess 33. This permits the element 28 to be fitted in the A opening 36 with one of the halves 30 disposed in each leg of the opening. The resiliency of the cardboard material of element 28 permits a side of each notch 33 to snap across the lower closed end of each leg of the A opening 36 so that the said element 28 will be held in said opening in the position seen in Fig. 3 projecting equally from opposite sides of the handle portion 8 in the form of oppositely extending gable-like projections that are generally designated 40 in Fig. 3.

The operation of securing a pair of gable-top cartons together comprises the steps of folding parts 9, 10 on themselves and then inserting the element 28 (when the latter is bent to inverted V-shape along line 29) through the registering A openings 36. The parts 9, 10 are then positioned between a pair of cartons 41 (Fig. 5) with the gable-projections 40 extending into the oppositely opening recesses 24 that are formed by the gable tops of the cartons. The remainder of the strip 1 is then folded along lines 3, 4, 5, 6, and 7 to relatively tightly enclose the cartons 41 and locking tab 17 is thrust through the opening or slot 16 thereby locking the collar about said cartons.

When the collar is in this position it will be seen that the openings 35 are at opposite sides of the apices of the gable top of each of the cartons and two fingers of one hand can readily be thrust through said openings for easily carrying the cartons. The web left between openings 35 greatly strengthens the handle so there is no likelihood of the handle being torn away or injured. The positioning of the finger openings at opposite sides of the A opening 36 and at the opposite sides of the gable tops of the cartons enables the handle portion of the carrier to be sufficiently low to be unobjectionable in handling and in shipping the cartons in large numbers.

Upon lifting the carrier with the fingers through openings 35 the element 28 will engage below the gable tops of the cartons, and as the halves 30 of the element 28 are held in the legs of the A opening against movement toward each other, the gable engaging projections 40 formed by element 28 will positively prevent any substantial upward movement of the carrier relative to the cartons and the cartons cannot possibly fall from the carrier until the carrier is intentionally removed.

Figs. 6 to 10 inclusive show several modified forms of the invention in which the elements that are adapted to engage under the gable tops of the cartons are integral with the blank that forms the collar and handle.

The blank 43 shown in Fig. 6 is identical in every respect with blank 1 of Fig. 1 except for the handle portion that is generally designated 44. A folding crease 45 divides portion 44 into two equal parts, the same as crease 2 in Fig. 1. The parts 46, 47 of blank 43 that project upwardly above the upper edge of the remainder of the blank are each formed with a horizontally elongated hand opening 48 that are in registration with each other when the parts 46, 47 are brought together. Finger openings may be used the same as in Fig. 1 if desired.

Below each hand opening 48 each part 46, 47 is stamped out at one side of a vertical medial line to

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provide a pair of laterally projecting pieces 49 each being integrally connected with the part from which it is stamped along a line that is coincidental with each of said vertical medial lines, and along this line each piece 49 is formed with a folding crease 50.

The upper and lower edges 51 of the pieces 49 extend generally horizontally and slightly divergently relative to each other in the same general direction from the upper and lower ends of the folding crease 50. The free outer end edges of the pieces 49 are vertical.

Each piece 49 is formed with a vertical folding crease 53 that is substantially midway between crease 50 and the free outer end edge of said piece. Crease 53 in each piece 49 may be slightly closer to crease 50 than to said outer edge, so that upon each piece being folded on itself along crease 53, and then swinging the folded pieces to positions at right angles to the main portion 44, there will be a narrow end marginal portion 54 that projects to the opposite side of said portion 44. This folding of the pieces 49 is done before the parts 46, 47 are folded on themselves, and the pieces 49 in said parts 46, 47 are so folded that the folded piece 49 on part 46 will extend through the opening in piece 47 from which the piece 49 in part 47 was cut, and piece 49 on part 47 will extend through the opening in part 46 from which the piece 49 on part 46 was cut. The upper and lower divergently extending edges of the said openings in parts 46, 47 will be disposed at opposite sides of a medial vertical line on the parts 46, 47 when the latter are folded together in opposed relation, hence there are no through openings in the handle portion below the hand openings 48. The marginal portions 54 (Fig. 8) will be in overlapping engaging relationship, so that the folded pieces 49 will not unfold.

It is obvious that the pieces 49 need not be so folded that marginal portions 54 are in overlapping relationship, since the halves of each of said pieces can be stapled together to keep them from unfolding.

In use, the handle portion 44 is folded on itself after the pieces 49 have been respectively folded on themselves as above described, and said handle portion is then disposed between a pair of cartons with the oppositely outwardly projecting pieces 49 extending into recesses 24 of said cartons. The remainder of the blank is then folded around the cartons in the same manner as blank 1. Pieces 29 will prevent the carrier from slipping off the cartons when the latter are lifted by lifting the carrier by means of the handle portion 44.

In Fig. 9 the handle portion 60 is formed with a medial vertical crease 61, and registering pairs of finger openings 62 are provided that are the same as openings 35 in Fig. 1.

Centrally below each pair of openings 62 a piece 63 is cut out along vertical, spaced, parallel lines 64, each piece being integrally connected with each half of the handle portion at its upper end, and such connection is defined by a horizontal folding crease 65. Each piece 63 terminates at its lower end in a swallow tail defined by edges 66 that extend convergently upwardly from the lower ends of the edges along lines 64. From the point of intersection of the pair of edges 66 extend a pair of folding creases 67. These creases extend divergently upwardly to the ends of each folding crease 65.

In securing the carrier to a pair of gable top cartons the handle portion 60 is first folded on itself along crease 61 and then pieces 63 are swung oppositely outwardly relative to each other, and upwardly, about each crease 64 until the pieces 63 are against the main body of the handle portion and a staple 68 (Fig. 10) extending through said pieces 63 at a point between each pair of creases 68 and through the folded handle portion secures said handle portion folded and secures said pieces 63 against the handle portion.

The triangular sections 69 outwardly of each pair of divergent creases 67 are adapted to be folded downwardly to meeting relation of the divergently extending edges 66 of pieces 63, and when the staple 68 secures said pieces to the handle portion the said sections 69 form oppositely outwardly projecting gables with edges 66 along the apex of each projection. These gable projections are adapted to be received in the adjacent oppositely opening recesses 24 of the gable top pair of cartons to be carried by the carrier. The remainder of

the blank 60 is the same as the corresponding part of strip 1.

The form of invention shown in Figs. 1 to 5 is preferred, but in each instance it will be noted that the handle portion extends between the pair of cartons to be secured together, and the handle portion also carries projections that are adapted to fit into the space below the apices of the gable tops of said cartons. In Figs. 4, 5 it will be seen that there is no chance of the projections 40 collapsing, hence the carrier is rigid with the cartons when it is in position on them. While the carriers of Figs. 7, 10 are safe, there is a tendency for more looseness.

We claim:

1. A carton carrier for a pair of rectangular vertically elongated gable-top cartons comprising a rectangular cardboard collar adapted to extend around such pair for holding them together, a flat cardboard handle adapted to extend between said pair and between two opposed sides of said collar when the latter is around said pair of cartons, oppositely outwardly extending projections on said handle positioned to extend below the gable-tops of said cartons when said handle is between the latter.

2. A carton carrier for a pair of rectangular vertically elongated gable-top cartons comprising a rectangular cardboard collar adapted to extend around such pair for holding them together, a flat cardboard handle adapted to extend between said pair and between two opposed sides of said collar when the latter is around said pair of cartons, oppositely outwardly extending projections on said handle positioned to extend below the gable-tops of said cartons when said handle is between the latter, said projections having divergently downwardly extending sides adapted to generally correspond to the divergently downwardly extending sides of said gable-tops.

3. A carton carrier for a pair of rectangular vertically elongated gable-top cartons comprising a rectangular cardboard collar adapted to extend around such pair for holding them together, a flat cardboard handle adapted to extend between said pair and between two opposed sides of said collar when the latter is around said pair of cartons, oppositely outwardly extending projections on said handle positioned to extend below the gable-tops of said cartons when said handle is between the latter, said projections being disposed centrally between the said opposed sides and a pair of finger openings formed in said handle respectively at opposite sides of said projections and above the level of said collar.

4. A carton carrier for a pair of rectangular, gable-top cartons comprising a rectangular collar adapted to extend around said cartons when the latter are in engaging side by side relationship for holding said cartons together, a flat handle secured to said collar extending between two opposed sides of the latter and adapted to extend between said pair of cartons when said collar is around the latter, a pair of substantially inverted V-shaped projections projecting oppositely outwardly of opposite sides of said handle for engagement under the gable-tops of said pair of cartons.

5. A carton carrier for a pair of rectangular, gable-top cartons comprising a rectangular collar adapted to extend around said cartons when the latter are in engaging side by side relationship for holding said cartons together, a flat handle secured to said collar extending between two opposed sides of the latter and adapted to extend between said pair of cartons when said collar is around the latter, a pair of substantially inverted V-shaped projections projecting oppositely outwardly of opposite sides of said handle for engagement under the gable-tops of said pair of cartons, said handle being a pair of layers of cardboard in opposed engaging relationship and formed with a registering pair of openings, and said projections being the opposite ends of an element extending through said registering openings.

6. A carton carrier for a pair of rectangular gable-top cartons comprising a rectangular collar adapted to extend around said cartons when the latter are in engaging side by side relationship for holding said cartons together, a flat handle integrally formed on said collar extending between two opposed sides of the latter and adapted to extend between said pair of cartons when the collar is around the latter, said handle including a portion adapted to extend above the level of said collar, a substantially A-shaped opening formed in said portion and a substantially inverted V-shaped element extending through said opening and projecting from opposite sides of said portion for extending below the gable-tops of said cartons, and finger openings formed in said portion at opposite sides of a line extending centrally through said opening.

7. A carton carrier for a pair of rectangular gable-top cartons comprising a rectangular collar adapted to extend around said cartons when the latter are in engaging side by side relationship for holding said cartons together, a flat handle integrally formed on said collar extending between two opposed sides of the latter and adapted to extend between said pair of cartons when the collar is around the latter, said handle including a portion adapted to extend above the level of said collar, a substantially A-shaped opening formed in said portion and a substantially inverted V-shaped element extending through said opening and projecting from opposite sides of said portion for extending below the gable-tops of said cartons, and finger openings formed in said portion at opposite sides of a line extending centrally through said opening, said handle being a cardboard extension of said collar folded on itself to provide a double layer of cardboard, and inter-engaging means respectively on said extension and said element for holding the double layer of cardboard together and for positioning said element in said opening with equal portions of said element projecting from said opposite sides of said handle.

8. A carton carrier for a plurality of rectangular vertically elongated gable-top cartons comprising a rectangular cardboard collar adapted to extend around such cartons for holding them together, a flat cardboard handle positioned between certain of said cartons and between two opposed sides of said collar when the latter is around said cartons, oppositely outwardly extending projections on said handle positioned to extend below and under the gable-tops of said cartons when said handle is between the latter.

9. A carton carrier for a plurality of rectangular vertically elongated gable-top cartons comprising a rectangular cardboard collar adapted to extend around such cartons for holding them together, a flat cardboard handle positioned between certain of said cartons and between two opposed sides of said collar when the latter is around said pair of cartons, oppositely outwardly extending projections on said handle positioned to extend below and under the gable-tops of said cartons when said handle is between the latter, said projections being disposed centrally between the said opposed sides and a pair of finger openings formed in said handle respectively at opposite sides of said projections and above the level of said collar.

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