March 15, 1955 H. A. TOMARIN 2,704,222

CARTON CARRIER

Filed Feb. 5, 1951 2 Sheets-Sheet 1

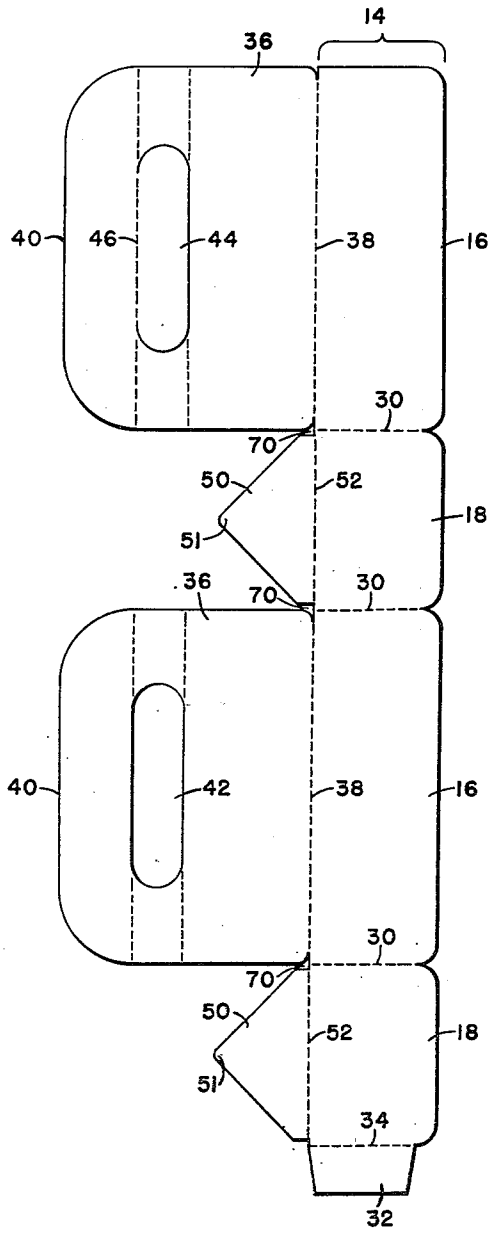


FIG. 1

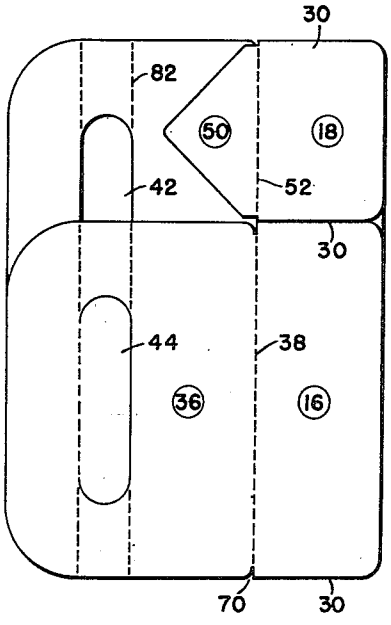


FIG. 2

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CARTON CARRIER

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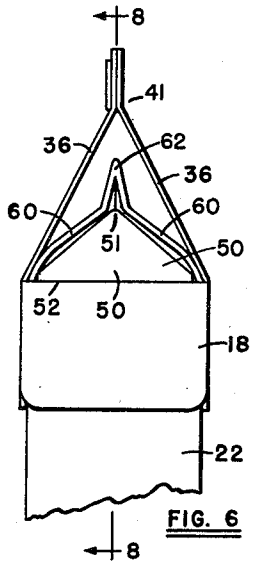


FIG. 6

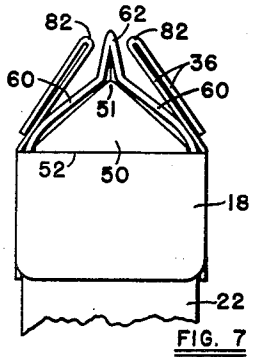


FIG. 7

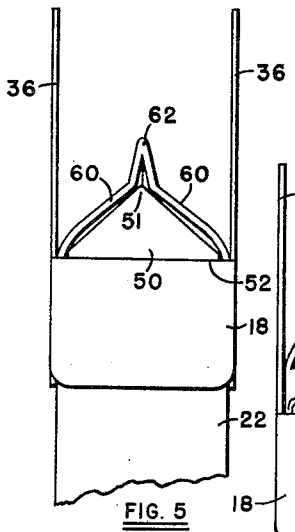


FIG. 5

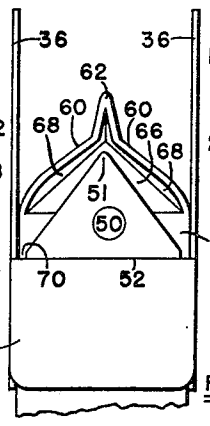


FIG. 4

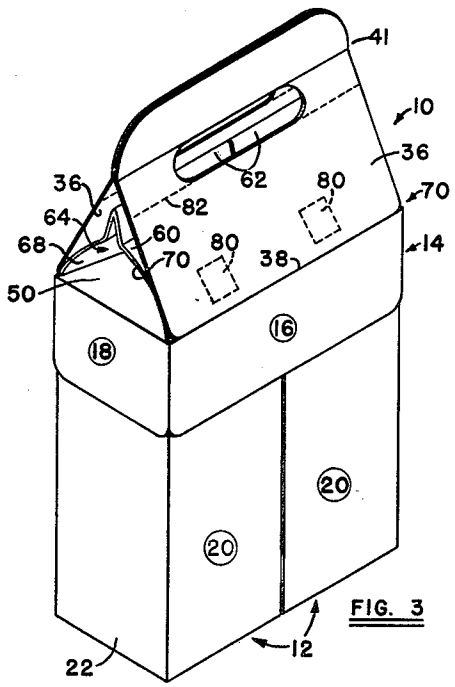


FIG. 3

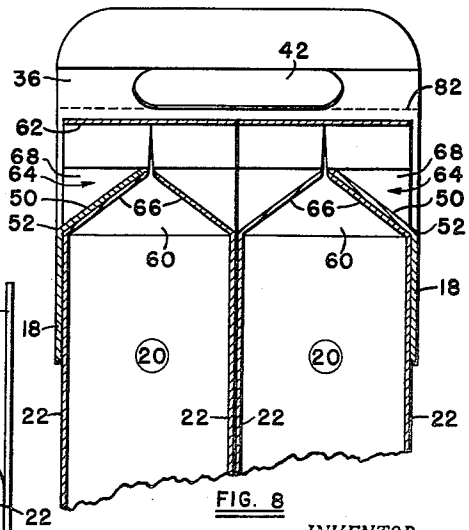


FIG. 8

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2,704,222

CARTON CARRIER

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Application February 5, 1951, Serial No. 209,433

13 Claims. (Cl. 294—87.2)

This invention relates to carriers for so-called single-service containers and particularly to a carrier for securing and suspending a pair of juxtaposed containers from their upper portions, as contrasted from supporting containers from their bottom portions.

An object of the invention is to provide a carrier for a pair of similar, elongated substantially rectangular containers which are securely though releasably fastened together whereby to be collectively dispensed, transported and sold as a single unit.

Another object of the invention is to provide a carrier for securely though releasably engaging a pair of similar, elongated substantially rectangular containers in juxtaposition wherein said carrier is fabricated from inexpensive sheet material, and wherein said carriers may be stored until ready for use in fully collapsed compact condition.

A further object of the invention is to provide a carrier having the hereinabove described characteristics which may be quickly and easily set up and associated with a pair of substantially similar elongated rectangular containers for securing them together in side-by-side relationship, thereby facilitating transportation of the two containers as a single unit.

Still a further object of the invention is to provide a carrier for a pair of similar elongated substantially rectangular containers which includes means formed integral therewith dimensioned to engage parts of the upper portions of said containers for thereby suspending said containers from the carrier.

A further object of the invention is to provide such a carrier wherein the container engaging means are so constructed and arranged that they will exert a compressive force onto the containers for urging them tighter together the greater the load or pull of said containers on said means.

Another object of the invention is to provide a carrier having the hereinabove described characteristics which includes a hand grip portion for facilitating ease of transportation of the containers engaged by the carrier.

A further object of the invention is to provide a carrier having the hereinabove described characteristics having hand grip panels which are adapted to be disposed over the dispensing flaps provided in the containers thereby precluding unauthorized opening of or tampering with said flaps.

Still another object of the invention is to provide a carrier having hand grip portions which may be conveniently folded for facilitating vertical stacking of a plurality of pairs of similar containers secured together by similar carriers.

Still a further object of the invention is to provide a carrier which may be inexpensively produced using modern mass production techniques.

These and other objects are attained by the means described herein and as disclosed in the accompanying drawings in which:

Fig. 1 is a plan view of a blank from which a carrier of the present invention may be fabricated.

Fig. 2 is a plan view of a carrier assembled from the blank of Fig. 1, said blank being illustrated in the fully collapsed or folded condition in which it may be stored until ready for use.

Fig. 3 is an isometric view of the carrier of Fig. 2 operatively associated with a pair of similar elongated substantially rectangular containers.

Fig. 4 is an end elevation showing the first of a series of steps incident to securing of a carrier to a pair of containers.

Figs. 5 and 6 are views similar to Fig. 4 showing two other steps in the process of securing a pair of containers to my carrier.

Fig. 7 is an elevation of the device of Fig. 4 showing the hand grip panels of the carrier folded downwardly for permitting stacking of a plurality of carrier-container units in vertical relationship.

Fig. 8 is a sectional view taken on line 8—8 of Fig. 6.

With reference now to Fig. 3, the numeral 10 denotes generally a carrier embodying the details of the present invention and the numerals 12 denote generally a pair of similar elongated substantially rectangular containers which are secured in side-by-side relationship by the carrier.

The carrier comprises, broadly speaking, a continuous band 14 which includes a pair of laterally spaced side panels or portions 16 and a pair of laterally spaced end panels or portions 18, wherein the length of each side side 16 is at least twice the width of sides 20 of the individual containers 12, and wherein the length of each end 18 is at least as long as the width dimension of ends 22 of the containers.

The height dimension of band 14 should be of such a dimension as to exert a compressive force onto the containers received therein for maintaining the adjacent panels of the containers in substantial abutting relationship when they are suspended from the carrier, as hereinafter more fully explained. In those instances wherein the vertical length of end panels 22 approximate 7¼ inches, uniformly excellent results are obtained when the band width approximates 2 inches.

As best disclosed in Fig. 1, the carrier may be fabricated from a single sheet of material such as, by way of example, cardboard, wherein alternate side and end panels 16 and 18 are set apart by means of score or fold lines 30. An end or locking flap 32 may be formed integral with endmost end panel 19 from which it is set off by fold or score line 34, it being observed that lock panel 32 could alternately, if desired, be formed integral with the endmost side panel 16.

A hand grip panel 36 is set apart from the upper edge of each of the side panels 16 by a score or fold line 38, wherein the length dimension of the hand grip panels is substantially equal to the overall length of their respective side panel.

The width or height dimension of hand grip panels 36, as measured between score or fold lines 38 and outer edge 40 is of a dimension sufficient to enable panels 36 to be extended upwardly in converging relationship whereby to meet in an apex 41 above and parallel to fold or score lines 38, for a purpose hereinafter more fully described. One of panels 36 may be provided with an elongated hand receptive aperture 42, the other panel with a complementary elongated flap 44 hingedly secured to its respective panel as at 46 for defining a second hand-receptive aperture.

A triangular shaped flap 50 projects outwardly from the upper edge of each of end panels 18 from which they are set off by score or fold lines 52, it being noted that the base of each triangular flap is of a dimension less than the overall width of its respective end portion 18 for a reason hereinafter more fully explained.

With reference now to Figs. 3–8, it will be noted that the upper ends of each pair of opposite sides 20 of the containers 12 converge upwardly for defining a pair of substantially rectangular inclined panels 60 which meet in an elongated apex 62 of a length substantially equal to the width of sides 20. The upper portions of the pair of opposite ends 22 converge inwardly and upwardly below and under upwardly converging panels 60 for providing a triangular shaped recess or pocket denoted generally by the numeral 64 located below opposite ends of elongated apex 62. Recesses 64 are defined by a triangular shaped upwardly and inwardly converging panel 66 and inclined top panels 68 and 70 disposed in planes substantially parallel with inclined side panels 60 and apex 62.

Broadly speaking, recesses 64 may be considered as

recesses, recessed portions or pockets in one pair of the opposite sides of a container.

It should be noted that the present invention is neither directed to nor concerned with the particular manner in which the containers are fabricated, the above description being given merely for the purpose of defining those portions of such containers with which portions of my carrier co-operate. Detailed information concerning the structural details of such containers may be obtained from one or more of the following United States patents, to wit: Nos. 2,025,477; 2,079,876; 2,270,617; 2,047,891; 2,087,940; 2,288,914; 2,079,875; 2,218,670; 2,329,797 and 2,263,957.

With particular reference now to Fig. 4, it will be noted that band **14** is constructed and arranged whereby to slidably engage the outer faces of a pair of elongated, substantially rectangular similar containers **12** the apexes **62** of which are disposed in end-to-end relationship with one recess of each container in abutting adjacency and with the other recesses of said containers disposed in opposite directions.

The carrier is slid downwardly over the juxtaposed containers until the apexes **51** of flaps **50** have been disposed below apex **62** whereby apexes **51** may be introduced laterally into recesses **64**.

The carrier may then be shifted upwardly relative to the containers for progressively introducing flaps **50** into their respective recesses, as best disclosed in Fig. 8, it being noted that when fully introduced into their respective recesses flaps **50** will abuttingly engage and overlie inwardly converging panels **66**.

As clearly illustrated in Figs. 5, 6 and 7, the apex of flaps **50** abuttingly engages those portions of upwardly convergent panels **68** and **70** disposed in parallelism with apex **62**.

In this manner I have provided simple, inexpensive yet highly effective means for securely though releasably mounting a pair of containers from a carrier which engages only the upper portions of the containers.

With particular reference now to Fig. 8, it will be observed that flaps **50** will progressively urge the upper portions of their respective containers more tightly together incident to the application of an endwise pull, or load, tending to separate the containers from the carriers.

The application of such a force results in a lowering of flaps **50** about their connection at **52** with their respective end panels **18**, said lowering action causing the apex and inclined sides of flaps **50** to press against corresponding portions of their respective recesses. Such movement of flaps **50** downwardly results in lateral shifting of containers **12** toward one another whereby their adjacent portions will be more tightly compressed together.

Band **14** effectively precludes lateral separation of the lower portions of the containers whereby adjacent ends **22** will be maintained in substantial abutting relationship at all times. This feature is of prime importance in those instances when fluids such as milk is housed within the containers.

With reference now to Figs. 1 and 2, it will be observed that adjacent portions of hand grip panels **36** and flaps **50** are cut away as at **70** for precluding cutting or binding of portions of the carrier with the top-forming panels of the containers, which interference would result in damage to or the application of undesirable stresses on said panels.

With reference now to Fig. 3, the numerals **80** denote generally a dispensing flap provided in one of the converging panels **60** of each container for controlling access to the fluid contents of the containers. The hand grip panels **36** are adapted to overlappingly engage upwardly converging panels **60** in the manner illustrated in Fig. 3, wherein one of said hand grip panels will be disposed over the dispensing flaps **80** for thereby precluding unauthorized opening of or tampering with such flaps.

If desired, the hand grip panels **36** may be folded along score or fold line **82** thereby permitting those portions of said panels beyond line **82** to be folded downwardly as illustrated in Fig. 7 in a plane below apex **62**, whereby a plurality of similar units each comprising a pair of containers **12** interconnected by means of a carrier **10** may be stacked upon one another for purposes of storage.

Carrier **10** may be removed from a pair of containers in response to an intentional, deliberate act for shifting or sliding band **1** downwardly for withdrawing flaps **50** from their respective recesses. After the flaps have thus been disengaged, the carrier may be lifted upwardly over the tops of the containers. By reason of the inexpensive cost of my carrier, they may, if desired, be removed from a pair of containers by tearing same therefrom.

In the preferred embodiment of the invention the vertical height of apex **51** from its base, as defined by score or fold line **52**, is of a dimension slightly in excess of the height dimension of panel **66** of an end recess **64**. Uniformly satisfactory results have been obtained when the height of flaps **50** has exceeded the height of panel **66** by a dimension approximating ⅛ inch. Such construction will result in the apex **51** of flaps **50** positively and firmly engaging the inner apex of the triangular shaped recess **64** prior to engagement of its inclined side edges with corresponding portions of panels **68** and **70**, thereby insuring a positive locking engagement of panels **50** with their respective recesses.

This preferred construction likewise more firmly urges the tops of a pair of juxtaposed containers together in such a manner as to positively preclude the downward shifting of flaps **50** into a horizontal plane without destroying the carrier.

In the preferred embodiment of the invention the angle included between the sides of flaps **50** approximates a right angle, excellent results having been obtained when this angle is between 80 degrees and 90 degrees.

It should be understood that various changes and modifications may be made in the structural details of the device, within the scope of the appended claims, without departing from the spirit of the invention.

What is claimed is:

1. A bottomless carrier for substantially rectangular containers having a recessed portion in a side near the top, said carrier comprising hand grip portions and a container circumscribing band depending therefrom, said band including side and end walls wherein the side walls are integral with and depend from the hand grip portions, and a flap projecting upwardly from each end wall dimensioned to be received within the recessed portions of said containers.

2. A carrier for a pair of similar substantially rectangular containers of the type characterized by recessed portions in one pair of their opposite sides, said carrier comprising a continuous band dimensioned to receive and circumscribingly engage a pair of said containers, flaps projecting from opposite sides of said band dimensioned to engage one of the recessed portions of each container housed within said band, and a hand grip extending upwardly from each of two other opposite sides of said band.

3. A carrier for a pair of similar substantially rectangular containers the top of each of which is defined by portions of a pair of opposite sides which converge upwardly to form an elongated apex of a length substantially equal to the width of said sides and portions of the other pair of opposite sides which converge upwardly below the first mentioned upwardly converging pair of sides for providing a pair of recesses, said carrier comprising a band dimensioned to circumscribingly engage and secure a pair of containers in juxtaposition with their elongated apexes in end-to-end alignment, flaps projecting from opposite sides of said band dimensioned to engage the upwardly convergent portions of the sides which define the outermost recesses of said juxtaposed containers, and a hand grip panel extending upwardly from each of two other opposite sides of said band.

4. A carrier for a pair of similar substantially rectangular containers the top of each of which is defined by portions of a pair of opposite sides which converge upwardly to form an elongated apex of a length substantially equal to the width of said sides and portions of the other pair of opposite sides which converge upwardly below the first mentioned upwardly converging pair of sides for providing a pair of laterally spaced, triangular shaped recesses, located one below each opposite end of the elongated apex, said carrier comprising a band dimensioned to circumscribingly engage and secure a pair of containers in juxtaposition with their elongated apexes in end-to-end alignment, a pair of triangular shaped flaps projecting one from the top edge of each opposite end of said band, said flaps dimensioned

to be received within the outermost triangular shaped recesses of said juxtaposed containers, and a hand grip panel extending upwardly from each of two other opposite sides of said band.

5. A carrier for a pair of similar substantially rectangular containers the top of each of which is defined by portions of a pair of opposite sides which converge upwardly to form an elongated apex of a length substantially equal to the width of said sides and portions of the other pair of opposite sides which converge upwardly below the first mentioned upwardly converging pair of sides for providing a pair of laterally spaced, triangular shaped recesses, located one below each opposite end of the elongated apex, said carrier comprising a band dimensioned to circumscribingly engage and secure a pair of containers in juxtaposition with their elongated apexes in end-to-end alignment, a pair of triangular shaped flaps projecting one from the top edge of each opposite end of said band, said flaps dimensioned to be received within the outermost recesses of said juxtaposed containers, and a hand grip panel extending upwardly from each of two other opposite sides of said band, said hand grip panels converging upwardly over those portions of the sides of the containers which converge upwardly to form said elongated apexes to an apex in substantial vertical alignment with said apexes.

6. A carrier for a pair of elongate substantially rectangular containers of the type which include slanting top portions having recesses in opposite sides thereof, said carrier comprising a continuous band dimensioned to slidably engage the outer sides of a pair of similar containers for securing them in side-by-side contacting relationship with their respective recessed portions in axial alignment, a pair of flaps secured to, carried by and projecting from the upper edge of said band dimensioned to be inserted into and be received within those recesses in the outermost sides of said juxtaposed containers incident to upward movement of said band along said containers for securely though releasably anchoring said carrier to said containers, and hand grip panels extending upwardly from those portions of the band between the outermost sides of the circumscribed containers.

7. A bottomless carrier for a container comprising a continuous band including alternate side and end panels, hand grip panels hinged one to the upper edge of each side panel, and container supporting flaps hinged one to the upper edge of each end panel.

8. A bottomless carrier for a container comprising a continuous band including alternate side and end panels, hand grip panels hinged one to the upper edge of each side panel, and triangular container supporting flaps hinged along their bases one to the upper edge of each end panel.

9. A bottomless carrier for containers comprising a continuous band including alternate side and end panels, hand grip panels hinged one to the upper edge of each side panel, and triangular container supporting flaps hinged along their bases one to the upper edge of each end panel, wherein the angle included between the sides of said flaps approximates a right angle.

10. A bottomless carrier for a pair of similar elongate substantially rectangular containers of the type which include slanting top portions having recesses in opposite sides thereof, said carrier comprising a continuous band including side and end panels dimensioned to slidably engage the outer sides of a pair of similar containers disposed in side-by-side relationship, flaps projecting one from the upper edge of each end panel receivable in a recess adjacent an end panel for suspendably securing said containers to said band against accidental or unintentional displacement therefrom, said flaps tapered to progressively urge the tops of said containers more tightly together incident to the application of increased loads thereto.

11. A carrier of the type described in claim 10, wherein a pair of hand grip panels extend upwardly one from the top edge of each side panel.

12. A carrier for a pair of elongate, similar substantially rectangular containers the top of each of which is defined by portions of a pair of opposite sides which converge upwardly and meet in an elongated apex of a length substantially equal to the width of said sides, and portions of the other pair of opposite sides which converge upwardly below said portions of the first pair of sides for providing a pair of laterally spaced recesses located one below each opposite end of the elongated apex, said carrier comprising a continuous, substantially rectangularly shaped band dimensioned to circumscribingly engage and secure said containers in a side-by-side abutting relationship with the elongated apexes in end-to-end alignment so that two recesses are adjacent and two outer recesses open in opposite directions, the height of said containers being greater than the height of the sides and ends of said band, each of the two opposite ends of said band being disposed immediately below one of said two outer recesses, a flap hingedly connected along the entire upper edge of each of said two opposite ends of the band, the side edges of each of said flaps converging upwardly, both of said flaps being inclined inwardly so that the edges of each of said flaps engage complementary portions of one of said outer recesses, and a hand grip panel hingedly connected along the entire upper edge of each of the two opposite sides of said band, each hand grip panel being provided with a hand receptive opening and inclined inwardly and upwardly to a position of engagement with the other hand grip panel, and each foldable outwardly along a horizontal line below said hand receptive opening to a position remote from the other panel and below the apexes of the containers.

13. A carrier for a pair of similar, substantially rectangular containers of the type which include slanting top portions having recesses in opposite sides thereof, said carrier comprising a continuous band dimensioned to slidably engage the outer sides of a pair of similar containers disposed in side-by-side relationship, a flap projecting from the upper edge of each of the opposite sides of said band receivable in one of the recesses of each container housed within said band, wherein the height dimension of said flaps is at least as great as the height dimension of the recesses in said containers.

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