April 11, 1961 J. VESAK 2,979,226

CONTAINER CARRIER

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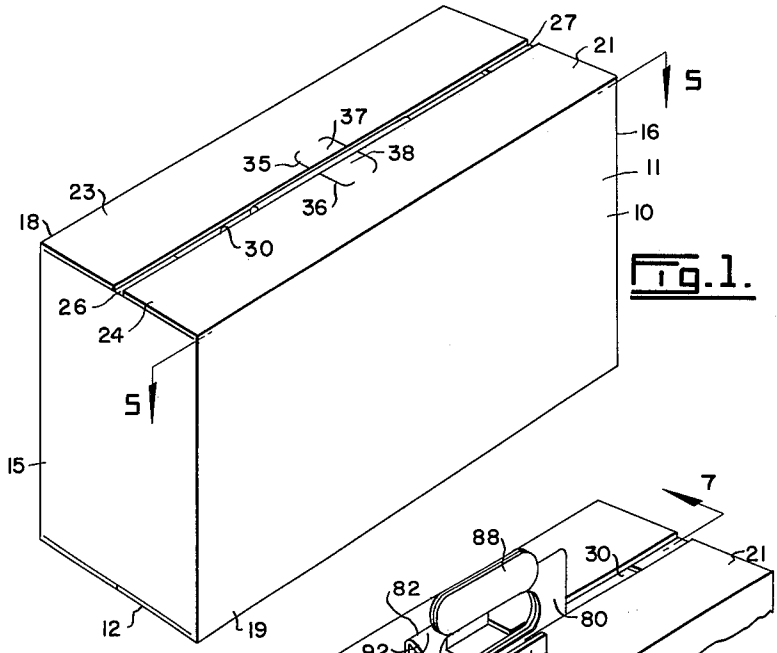


Fig. 1.

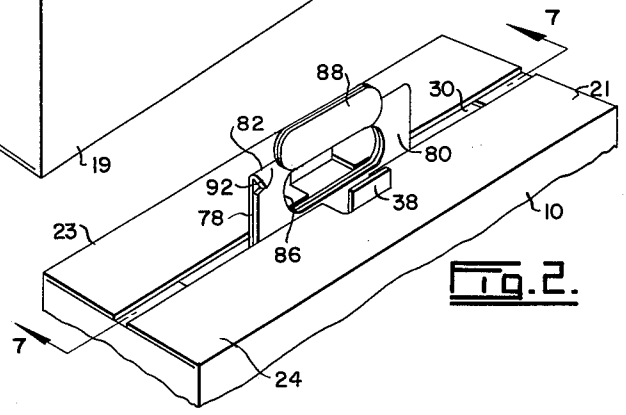


Fig. 2.

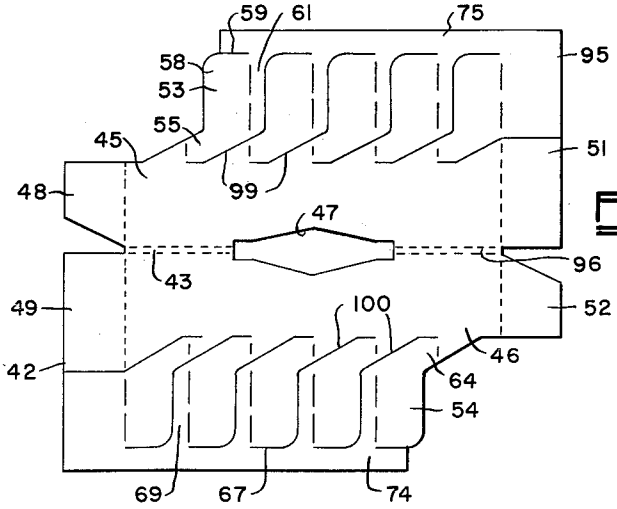


Fig. 3.

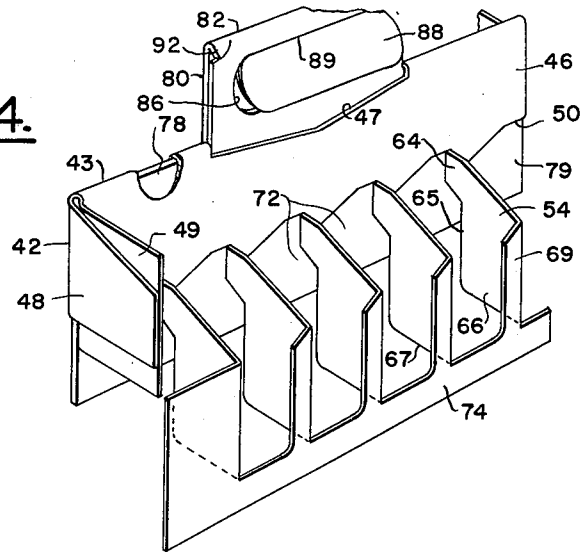
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CONTAINER CARRIER

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Fig. 4.



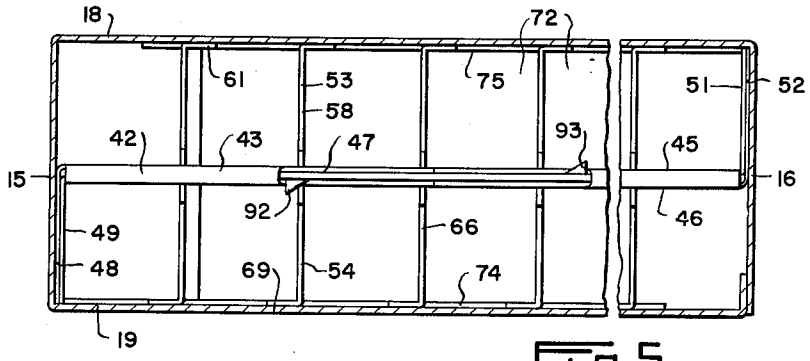


Fig. 5.

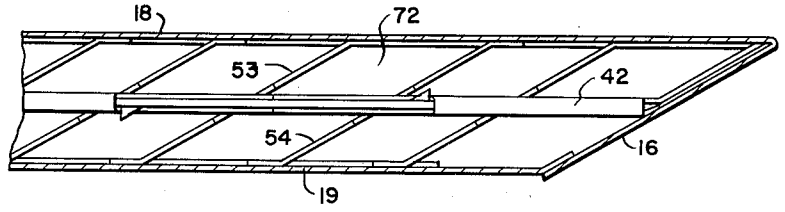


Fig. 6.

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CONTAINER CARRIER

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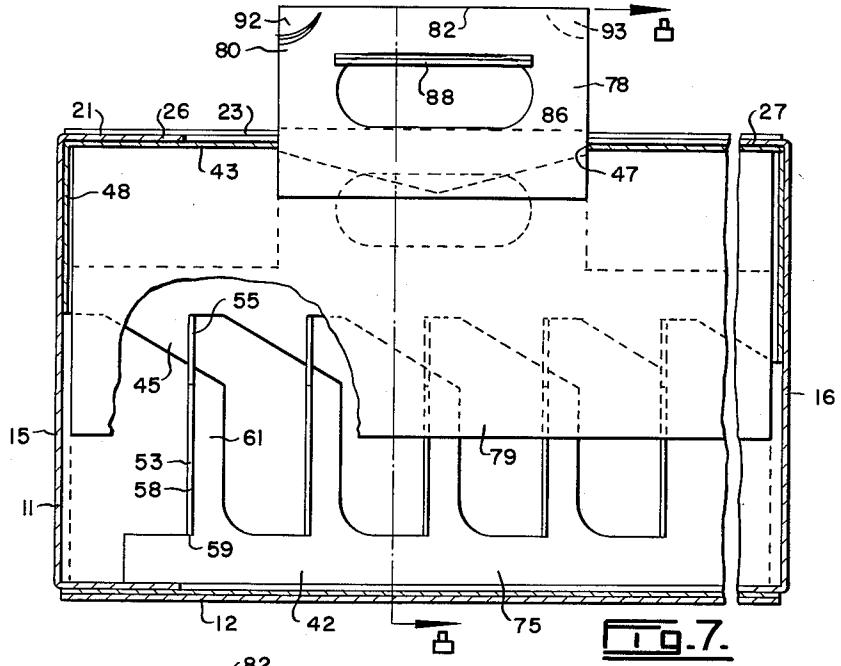


Fig. 7.

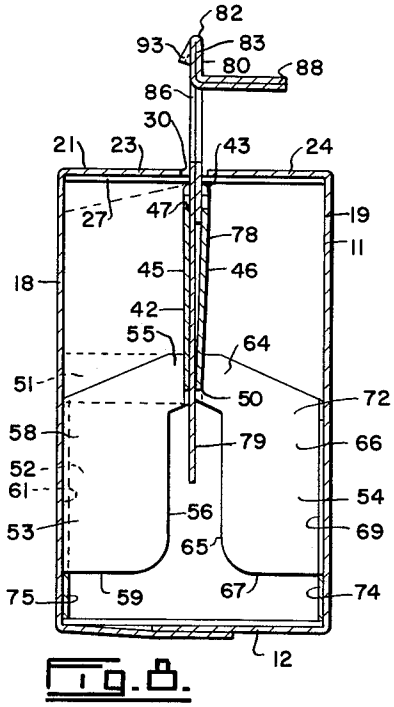


Fig. 8.

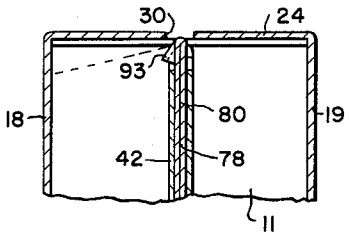


Fig. 9.

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CONTAINER CARRIER

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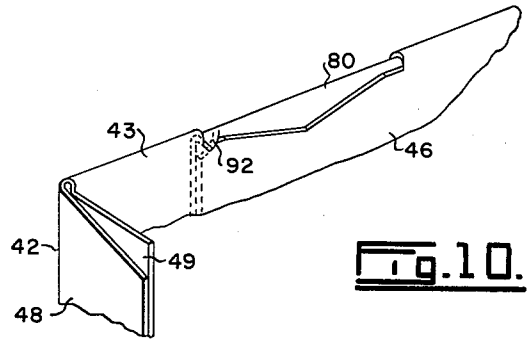


Fig. 10.

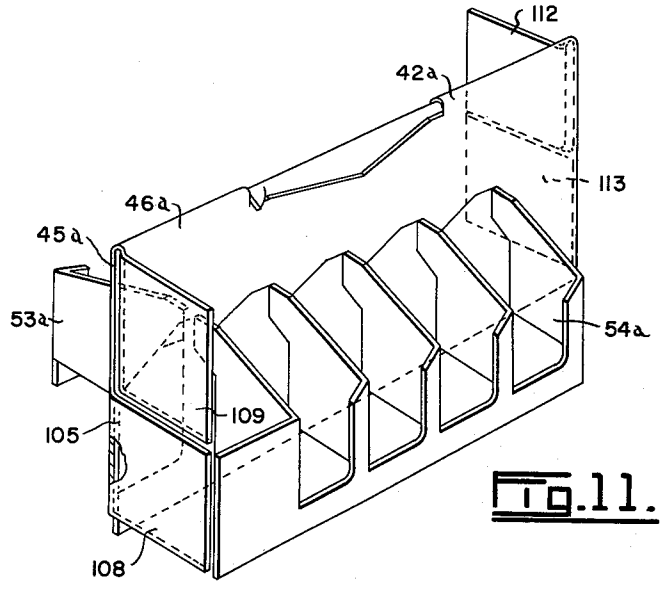


Fig. 11.

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2,979,226

CONTAINER CARRIER

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Filed Aug. 12, 1957, Ser. No. 677,560

4 Claims. (Cl. 220—105)

This invention relates to a carrier for containers, such as bottles, cans and the like.

Many carriers have been designed in the past for bottles and the like, and having handle arrangements by means of which the carriers may be carried while in closed or sealed condition. However, with most of the prior carriers, the carrying handle becomes inoperative once the carrier or carton is opened. Some attempt has been made to carry such cartons through the transverse partitions thereof when the carrier is open. As the side walls of the carton are comparatively long, this results in said walls tending to bow inwardly. This action is not desirable, and it leads to a tendency of the glue connecting the transverse partitions to the side walls giving way.

The present carrier has a handle arrangement including a handle which may be utilized to carry the carrier when the latter is either closed or open. The above-noted defects are eliminated by a longitudinal partition within the carton which is secured at its ends to the end walls of the carrier casing. As these walls are very short in the direction transversely of the carrier, there is little likelihood of them bowing inwardly. In addition to this, the longitudinal partition is connected to the end walls at the top of the casing so that when the latter is sealed closed, the top thereof braces the end walls to eliminate any possibility of said walls bowing inwardly. The weight of the carrier and its load is taken through the end walls of the casing, the longitudinal partition, and the handle since said partition includes means for limiting the upward movement of said handle when it is moved to its outer position. Furthermore, the upper edge of the longitudinal partition is preferably immediately below and in engagement with the casing top when the latter is closed so that said top tends to take some of the weight at this time. As the carton is usually closed when it is carried from the store to its destination, that is the time it has its full load and when it is necessary to reduce the possibility of the handle pulling out to an absolute minimum. Once the carrier is opened, the reinforcing action of the casing top is lost, but the load is usually less at this time, and the carrier is not usually carried any distance or for any length of time, and is not subject to the same abuse that it might be on the street.

The cell forming unit of the present carrier is such that when in the casing, the latter and said unit may be folded or collapsed into a flat bundle for shipping and storing. In order to erect the carrier, it is only necessary to swing the carrier casing from its flat to its open position, at which time it is in the form of a rectangular casing. The bottom is formed by folding end and side flaps over in the usual manner, as is the casing top. The transverse dividers of the cell forming unit and the longitudinal partition thereof are such that the dividers help to retain the partition in its central longitudinal position relative to the carrier casing throughout the length thereof. Suitable means is provided for connecting the ends of the longitudinal partition to the adjacent end walls of the casing so that the load at

all times is taken through said end walls regardless of whether the casing is open or closed.

A container carrier according to the present invention comprises a casing having side and end walls, a bottom and a top, a vertical partition extending longitudinally of the casing centrally thereof, means connecting the ends of the longitudinal partition to the adjacent end walls of the casing firmly to retain said partition in position, spaced vertical lateral dividers extending from the partition to the side walls forming therewith a plurality of container-receiving cells, a handle connected to the longitudinal partition and movable vertically relative thereto, and means on the partition for limiting the upward movement of the handle, said handle being movable from an inner position completely within the casing to an outer position projecting above the casing top where it may be grasped for carrying purposes, said upward movement of the handle being stopped by the limiting means on the partition.

An example of this invention is illustrated in the accompanying drawings, in which,

Figure 1 is a perspective view of the carrier in closed or sealed position, with the handle completely therein,

Figure 2 is a perspective view of the top of the closed carrier with the handle projecting from the top thereof in the carrying position,

Figure 3 is a flat lay-out of the material forming the longitudinal partition and transverse dividers of the carrier,

Figure 4 is a perspective view of one form of longitudinal partition and transverse divider arrangement in the erected position but with the carrier casing omitted, said arrangement also including the handle in its upper position,

Figure 5 is a cross section taken on the line 5—5 of Figure 1, showing the carrier in its erected position,

Figure 6 is a view similar to Figure 5, but showing the carrier part way between its flat and erected position,

Figure 7 is a vertical section taken on the line 7—7 of Figure 2, with the handle in its upper or carrying position,

Figure 8 is a cross section taken through the carrier taken substantially on the line 8—8 of Figure 7,

Figure 9 is a fragmentary sectional view similar to Figure 8, but with the handle in its lower position within the carrier,

Figure 10 is a fragmentary perspective view similar to Figure 4 with the handle in the lower position thereof, and

Figure 11 is a perspective view similar to Figure 4 of an alternative form of longitudinal and transverse divider arrangement, but with the handle in its lower position.

Referring to the drawings, **10** is a container carrier comprising a casing **11** having a bottom **12**, end walls **14** and **16**, sidewalls **18** and **19**, and a top **21**. This top includes side flaps **23** and **24** hingedly connected to side walls **18** and **19**, respectively. It also includes end flaps **26** and **27** integrally connected respectively with the end walls **15** and **16**. When the top is closed, as shown in Figure 1, side flaps **23** and **24** are folded inwardly over inwardly-folded end flaps **26** and **27** in the usual manner. These flaps are secured together by suitable fastening means, such as glue or staples. The casing bottom **12** comprises a similar side and end flap arrangement to that of top **21**, as is customary with casings or cartons of this type. The side and end walls, and bottom and top flaps are formed from a single piece of material, such as cardboard, corrugated cardboard and the like.

When the top flaps **23** and **24** are folded inwardly, they are spaced a little apart to form a slot **30** in the casing top. If desired, these flaps may be scored along lines **35** and **36** to form respectively tabs **37** and **38** at the flap edges. These flaps may be raised as shown in Figure 2

in order to form limited access to the interior of the carrier without opening the top thereof.

A longitudinal partition **42** is located within casing **11** and extends longitudinally and centrally thereof, as clearly shown in Figures 5 and 6. This partition is preferably formed of a single piece of material folded over at **43** to form an upper edge and sides **45** and **46** for the partition. A slot **47** is formed in the folded-over edge **43** centrally thereof.

Suitable means is provided for connecting the end of the longitudinal partition to the adjacent end walls **15** and **16** of the casing. It is preferable to provide at least one flap at each end of the partition for this purpose. In this example, flaps **48** and **49** are connected to the sides **45** and **46** at one end of the partition, and flaps **51** and **52** are respectively connected to said sides at the opposite ends of the partition. These flaps are connected to the casing end walls in any convenient manner, such as by means of glue or staples. It is, however, preferable, to use glue. In this case, it will be noted that either flap **48** or flap **49** is narrower than the other, and in this example, the former is narrower than the latter, see Figure 4, so that glue applied to the outer faces of said flaps can secure both of them directly to end wall **15**. Flaps **51** and **52** are made in the same manner. This flap arrangement securely fixes the ends of partition **42** to the casing end walls.

By referring to Figures 7 and 8, it will be noted that the upper edge **43** of the longitudinal partition is immediately below casing top **21** when the latter is closed. It is preferable to have the partition edge bearing against the closed top at this time in order that said top acts as a reinforcement for the partition. Furthermore, the lower edge **50** of the partition is preferably spaced above the casing bottom **12**, see Figure 8, although this is not absolutely necessary.

A plurality of spaced dividers **53** and **54** are located on opposite sides of partition **42** and extend between the latter and the side walls **18** and **19** of the casing. These transverse dividers may be connected only to the casing walls or only to the partition, but it is preferable to connect them to both, as shown.

Each transverse divider **53** has a neck **55** at the upper end of its inner edge **56**. This neck is connected to partition side **45**. The main portion **58** of this divider extends downwardly from said neck to a lower edge **59**. This edge may be at the casing bottom **12**, but it may be spaced a little above said bottom, as clearly shown in Figure 8. Each divider **53** has a flap **61** on its outer end bent relative thereto, said flap being connected to the adjacent side wall **18** by glue or the like.

Each divider **54** has a neck **64** at the upper end of its inner edge **65** which is connected to the side **46** of partition **42**. The main body **66** of this divider extends downwardly from the neck to a lower edge **67** spaced a little above casing bottom **12**. Each divider **54** has a flap **69** on its outer end bent over and secured to casing wall **19** by glue or other means. With this arrangement, the transverse dividers extend upwardly from near the bottom of the casing to the bottom of the longitudinal partition which is substantially midway up the casing.

As the transverse dividers are connected to the side walls of the casing and to the sides of the longitudinal partition, they tend to brace said partition against lateral movement. They combine with said partition and the casing walls to form a plurality of cells **72** for receiving containers, such as bottles. The transverse dividers keep the bottles separated from each other throughout a substantial portion of the height thereof. As the bottles usually taper inwardly towards the tops thereof, they cannot come into contact with each other while in the casing.

By referring to Figure 4, it will be seen that the flaps **69** of dividers **54** are interconnected by a connecting strip **74**. This strip keeps the outer ends of the dividers in their proper spaced relationship, and it is also connected to the side wall **19** of the casing by glue or other means so that it helps to make a secure connection between the dividers and the wall. Flaps **61** of dividers **53** are interconnected by a connecting piece **75**.

A handle **78** is slidably mounted relative to longitudinal partition **42** in any desired manner. In this example, the handle has a main body portion **79** slidably fitting between the sides **45** and **46** of the partition and extending longitudinally of the carton. A projection **80** extends upwardly from the body portion and through slot **47** in the upper edge of the partition. This projection is integrally connected to the body portion and is formed by folding the material forming same over at **82** so that said projection is made up of a double thickness of material, as clearly indicated at **83** in Figure 8. A hand hole **86** is formed in projection **80**, said hand hole extending through both thicknesses of the projection. Flaps **88** cut out to form the hand hole may be left attached to the projection at the upper edges **89** thereof for strengthening purposes.

It is desirable to provide the handle projection **80** with tabs **92** and **93** at opposite ends of the top thereof and projecting from its opposite faces. These tabs projecting downwardly as well as outwardly so that they do not interfere with the upward movement of handle **78**, but they do prevent the upper end of the handle from dropping down inside the longitudinal partition **42** by engaging the upper edge of said partition, see Figures 9 and 10.

Projection **80** of handle **78** is long enough to extend through partition slot **47** when the handle body portion **79** is down to the casing bottom **12**. At this time, the handle body portion constitutes a wall of the cells **72**. Furthermore, the handle projection is completely within the casing so that the latter may be closed and sealed, as in Figure 1. The handle may be drawn upwardly by means of projection **80** until the upper edge of the body portion thereof engages the folded over edge **43** of the longitudinal partition. This limits the upper or outer movement of the handle. As seen in Figures 7 and 8, the projection **80** extends above the carton top at this time so that the hand hole **86** is fully exposed.

Figure 3 illustrates how the longitudinal partition **42** and transverse dividers **53** and **54** may be formed from a single piece of material. This piece of material or blank **95** is folded longitudinally centrally thereof at **96** to form the folded over edge **43** of the partition. Slot **47** is cut out along this edge. It will be noted that this slot is comparatively wide so that its edges are below partition edge **43**, see Figure 4, which permits the upper part of projection **80** to be grasped when the handle is in its inner or lower position. Flaps **48**, **49**, **51** and **52** are formed at the ends of partition sides **45** and **46**. A plurality of diagonal slits **99** are cut in side **45** in order to form dividers **53**. Similarly, a plurality of diagonal slits **100** are cut in side **46** to form dividers **54**. Connecting pieces **75** and **74** are formed along the outer (lower) edges of dividers **53** and **54**, respectively.

When the carrier casing and cell-forming unit are erected, as shown in Figures 4 to 6, end flaps **69** of dividers **54** extend in one direction while end flaps **61** of dividers **53** extend in the opposite direction. In addition to this, flaps **48—49** and **51—52** extend transversely of the carrier casing in opposite directions from the longitudinal partition **42**. This makes it possible to collapse the container into a flat bundle, said carrier being shown partly collapsed in Figure 6.

When the carrier **10** is to be used, the containers or bottles are inserted in cells **72** with handle **78** in its inner or lower position. The top flaps **23—24**, **26—27** are folded inwardly and secured in the usual manner. At this time, there are no projections from the carton to get in the way during storage or shipping.

When it is desired to carry the carrier, flaps **37** and

38 are folded upwardly, at which time it is possible to insert the thumb and finger into the casing 11 to grip the upper portion of handle projection 80 at slot 47 in the longitudinal partition 42. The handle may now be drawn upwardly until the hand hole 86 is completely out of the casing. At this time, the handle body 79 engages the upper folded-over edge 43 of the partition to limit the outward movement of the handle. As the partition is secured to the end wall 15 and 16 of the casing, said partition prevents further outward movement of the handle. As previously stated, it is preferable to have the partition edge in engagement with the closed top 21 of the casing so that said top tends to brace the partition when the carrier is under full load and at times when it is most likely to be subjected to some abuse.

After the cover flaps are raised to open the casing, the latter may still be carried by means of the handle since the weight is transferred through the carton end walls to the partition flaps and to the partition, whence it is transferred to the handle through the folded over edge 43 of the partition which constitutes means for limiting the outward movement of the handle. As previously stated, the transverse dividers may be connected only to the longitudinal partition or the side walls of the casing. In this case, they would not brace the partition against lateral movement, but they would merely act as spacers between the bottles in the casing.

Figure 11 illustrates an alternative form of partition and divider arrangement 105 that is quite similar to that illustrated in Figure 4. The arrangement 105 includes a longitudinal partition 42*a* with transverse dividers 53*a* and 54*a*. The longitudinal partition includes folded-over sides 45*a* and 46*a*. End flaps 108 and 109 are connected to the ends of side walls 45*a* and 46*a*, respectively. It will be noted that flap 108 is bent over in the same direction and is located beneath flap 109. These flaps are secured to an end wall of casing 11 of the carrier by means of glue, staples, or the like. Similarly, flaps 112 and 113 are connected to the opposite ends of side walls 45*a* and 46*a*, respectively. These flaps extend outwardly from the longitudinal partition in a direction opposite to that of flaps 108 and 109. Flaps 112 and 113 are to be secured to an end wall of the carrier casing by glue, staples, or other means.

The arrangement of flaps 108—109 and 112—113 in Figure 11 provide a very firm fastening for the longitudinal partition 42*a* to the end walls of the carrier casing. They also help to stabilize said longitudinal partition. In other words, these flaps reinforce the longitudinal partition, and in addition to this, they tend to reinforce the entire carrier.

What I claim as my invention is:

1. A container carrier comprising a casing having side and end walls formed of a single strip of material formed into a rectangle, a bottom and an operable top connected to edges of said strip of material, said top when closed having a longitudinal slot therein centrally thereof, a vertical partition fitted in the casing extending longitudinally and centrally from end to end thereof, said partition having an upper edge located immediately below and bearing against the casing top when the latter is closed, stop means on the partition along the upper edge thereof, flaps connected to the ends of said partition and having portions extending parallel to an adjacent end wall of the casing, said flap portions being connected to said end walls by suitable securing means, spaced vertical lateral dividers extending from the partition to the side walls forming therewith a plurality of container-receiving cells, a unitary handle at and movable vertically relative to the longitudinal partition and aligned with the casing top slot, said handle being completely within the casing when the top thereof is closed and in line with and near the casing top slot and being of such size as to be able to move through said top slot, and means on the handle for engaging the partition stop means to limit upward movement of the handle, said handle being movable from within the casing through the top slot to an outer position projecting above the casing top where it may be grasped for carrying purposes, said upward movement of the handle being stopped by the partition stop means and the closed casing top bracing the longitudinal partition under load when the casing is being carried by the handle, said partition taking the full load when the casing top is open.

2. A container carrier having a casing comprising side and end walls and a bottom; an interior assembly fixed to said casing defining adjacent rows of article receiving compartments; said interior assembly including a unitary member constituted by a pair of integral complementary primary panel portions connected together along a common upper edge and extending along the entire longitudinal axis of the carton to form a longitudinal partition; a plurality of lateral dividers partitioning each of said adjacent rows into a plurality of adjacent article receiving compartments; each of said lateral dividers being integrally connected, at the inner end thereof, with said longitudinal partition; the upper edge of each of said lateral dividers extending outwardly and downwardly from the longitudinal partition, a portion of the lower edge of each of said lateral dividers extending outwardly and downwardly from the longitudinal partition and the remaining portion of said lower edge being adjacent to and extending parallel with said bottom so as to afford protection to the lower portions of articles in adjacent compartments of the same row, said portions of the lower edge of each of said lateral dividers being integrally connected by a vertical edge spaced from and parallel to said longitudinal partition; and means for securing the outer end of each of said lateral dividers to an adjacent side wall of the carton.

3. A one-piece blank adapted to form a unitary member constituting an interior assembly defining adjacent longitudinal rows of article receiving compartments within a container carrier having a casing comprising side and end walls and a bottom; said blank being cut and scored to provide a pair of complementary primary panels integrally connected together along at least one common score line and adapted, on folding along the latter, to form a longitudinal partition extending along the entire longitudinal axis of the carton; each of said primary panels being cut and scored to provide a plurality of secondary panels, a plurality of auxiliary panels, and an ancillary panel, each of said auxiliary panels spacing apart a pair of said secondary panels; each of said secondary panels being adapted, on folding of the blank, to extend at right angles to said longitudinal partition so as to form a lateral divider, said lateral dividers partitioning each of said adjacent rows into a plurality of adjacent article receiving compartments and each being integrally connected at its inner end to said longitudinal partition; each of said auxiliary panels being adapted, on folding of said blank, to extend at right angles to each of said lateral dividers and to be integral with the latter at the outer end thereof to form a hingeable tab adapted to be secured to an adjacent side wall of the carton; each of said ancillary panels being adapted, on folding of the blank, to extend at right angles to said lateral dividers and to be integral with the lower end of each said hingeable tabs and being adapted to be secured to an adjacent side wall of the carton; each of said primary panels being so cut and scored that, on folding of the blank, the upper edge of each of said lateral dividers extends outwardly and downwardly from the longitudinal partition whilst a portion of the lower edge of each of said lateral dividers extends outwardly and downwardly from the longitudinal partition and the remaining portion of said lower edge is adjacent to and extends parallel with said bottom of the carton so as to afford protection to the lower portions of articles in adjacent compartments of the same row, said portions

of the lower edge of each of said lateral dividers being integrally connected by a vertical edge spaced from and parallel to said longitudinal partition.

4. A container carrier comprising, a casing having side and end walls formed of a single strip of material formed into a rectangle; a bottom and an operable top connected to edges of said strip of material, said top when closed having a longitudinal slot therein centrally thereof; a vertical partition fitted in the casing extending longitudinally and centrally from end to end thereof, said partition having an upper edge located immediately below and bearing against the casing top when the latter is closed; stop means on the partition along the upper edge thereof; spaced vertical lateral dividers extending from the partition to the side walls forming therewith a plurality of container-receiving cells; a unitary handle at and movable vertically relative to the longitudinal partition and aligned with the casing top slot, said handle being completely within the casing when the top thereof is closed and in line with and near the casing top slot and being of such size as to be able to move through said top slot; means on the handle for engaging the partition stop means to limit upward movement of the handle; said handle being movable from within the casing through the top slot to an outer position projecting above the casing top where it may be grasped for carrying purposes, said upward movement of the handle being stopped by the partition stop means and the closed casing top bracing the longitudinal partition under load when the casing is being carried by the handle, said partition taking the full load when the casing top is open; and tabs at opposite ends of the top of said handle, said tabs being positioned and adapted to engage the upper edge of said partition whereby the downward movement of said handle, relative to said partition is limited.

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