May 11, 1965 N. H. MOORE 3,182,794

CAN CARRIER

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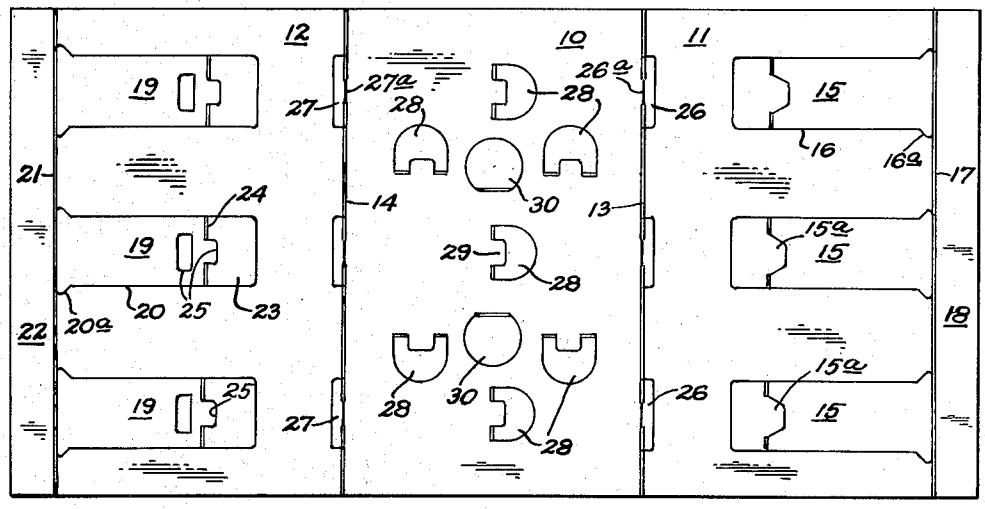


Fig. 1.

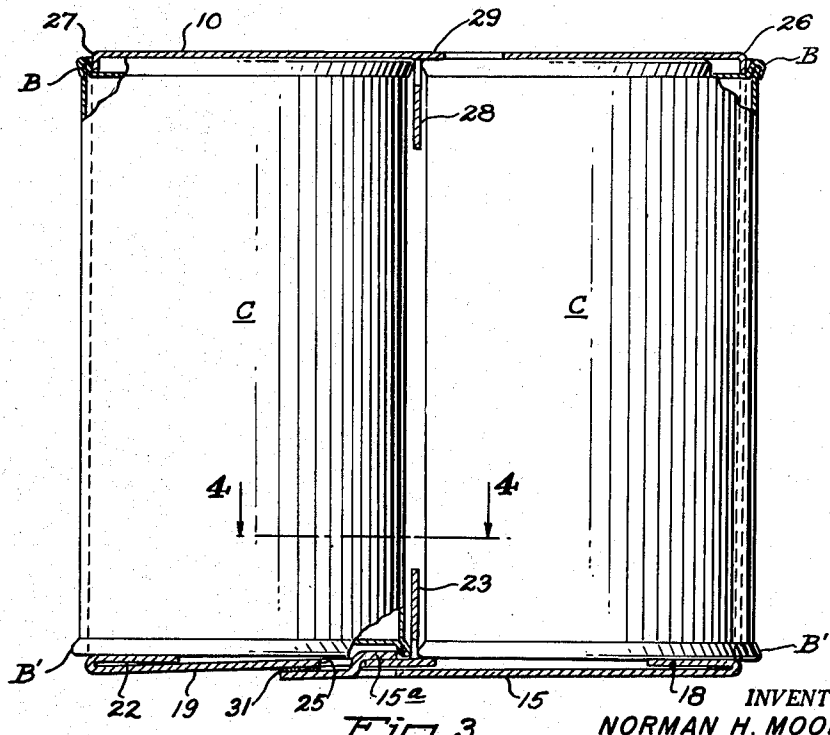


Fig. 3.

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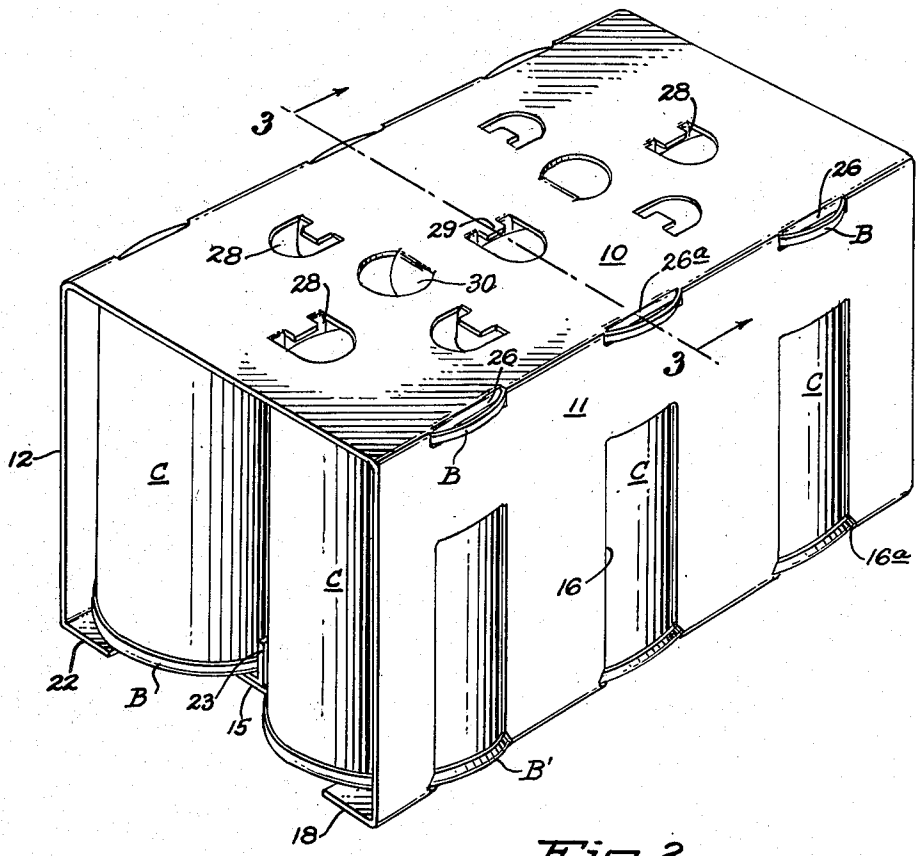


Fig. 2.

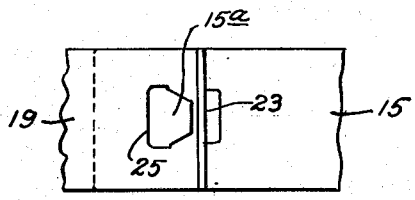


Fig. 4.

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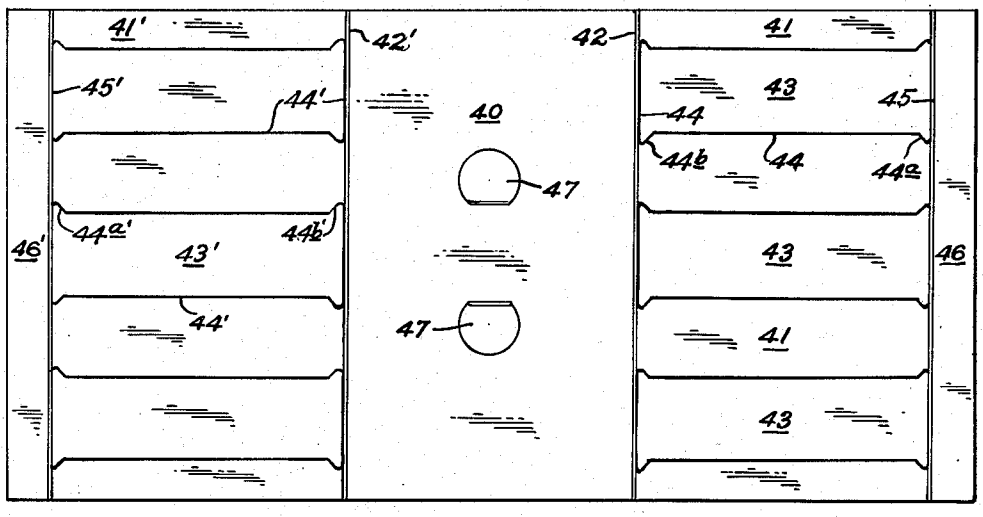


Fig. 5

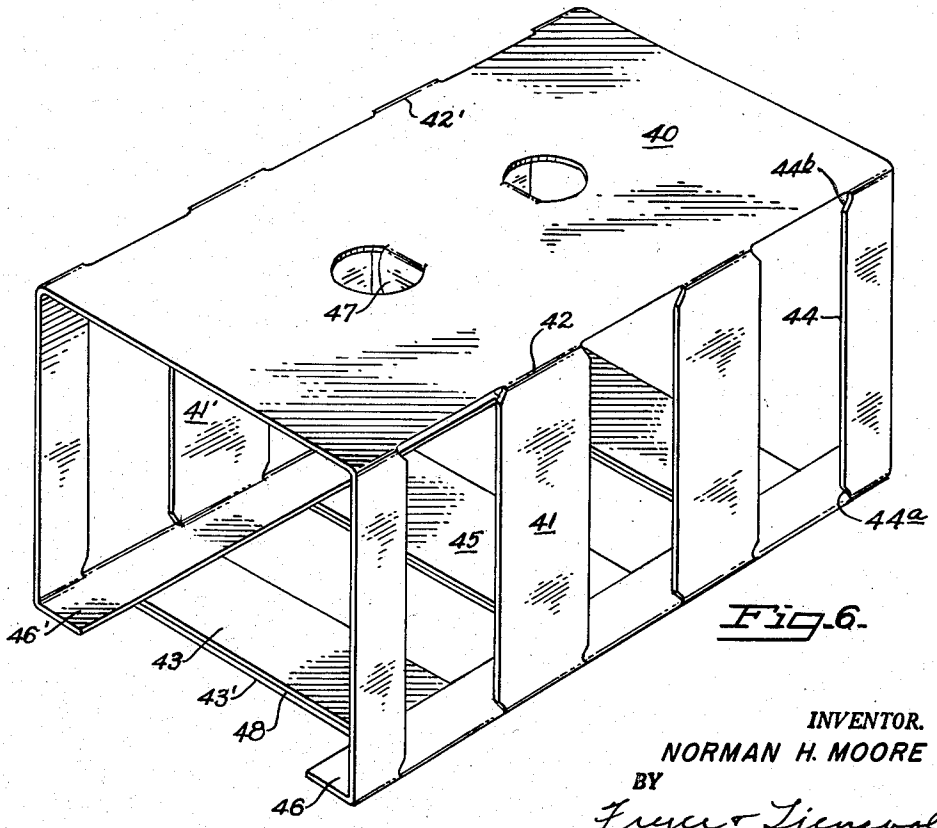


Fig. 6

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3,182,794

CAN CARRIER

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8 Claims. (Cl. 206—65)

This invention relates to a can carrier and more particularly relates to a paperboard blank which may be erected into a carrier for transporting a plurality of cylindrical cans or the like.

The provision of paperboard carriers for the transportation of a plurality of beverage containing cans has provided the need for a blank constituting a minimum amount of paperboard material which may be expeditiously erected into an efficient carrier. The efficiency of the carrier is generally determined by its ability to positively retain the cans therein during transportation while yet permitting easy removal thereof by the consumer. Conventional paperboard blanks and erected carriers are generally complex in nature, thus requiring complicated setup machinery therefor. Also, such containers do not always assure positive can retention and easy removal thereof by the consumer.

This invention has helped to overcome many of the above-mentioned difficulties by providing a paperboard blank which may be expeditiously erected into an efficient can carrier. The carrier comprises a top panel, two side panels hingedly connected thereto and strap members formed out of the side panels and connected together to form a bottom portion of the carrier. This briefly described arrangement provides that a plurality of cans may be expeditiously arranged in the carrier, positively retained therein during transportation and thereafter easily removed therefrom by the consumer.

In accordance with the above discussion, an object of this invention is to provide a paperboard blank comprising a minimum amount of paperboard material which can be expeditiously erected to form a carrier.

Another object of this invention is to provide an efficient can carrier which is arranged to positively retain a plurality of cans therein and also permit easy removal thereof.

Further and more specific objects of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein:

FIG. 1 is a plan view of a first paperboard blank embodiment, employing novel concepts of this invention;

FIG. 2 is an enlarged perspective view disclosing the blank of FIG. 1 in erected carrier condition with six cans retained therein;

FIG. 3 is an enlarged cross-sectional view taken on line 3—3 in FIG. 2;

FIG. 4 is a partial view taken in the direction of arrows 4—4 in FIG. 3 with the cans removed from the carrier;

FIG. 5 is a plan view of a second paperboard blank embodiment, employing novel concepts of this invention; and

FIG. 6 is an enlarged perspective view disclosing the blank of FIG. 5 in erected carrier condition.

The substantially rectangular paperboard blank of FIG. 1, illustrating a first embodiment of this invention, comprises a centrally arranged top panel **10** having laterally extending side panels **11** and **12** hingedly connected thereto by a first pair of parallel score lines **13** and **14**, respectively. Straps **15** are formed in side panel **11** by cuts **16** which terminate at score line **17** in enlarged cut portions **16***a*. Tabs **15***a* are formed in the straps by suitable cut and score lines. Score line **17**, comprising a first one of a second pair of parallel score lines, is arranged

to hingedly mount straps **15** and an end flap **18** on the side panel.

Straps **19** are formed in side panel **12** by cuts **20** terminating in enlarged cut portions **20***a* at a score line **21**. The score line **21**, comprising a second one of the second pair of parallel score lines, pivotally mounts the straps and an end flap **22** on this side panel. The pairs of score lines are shown to be parallel with each other. Tab portions **23** are formed at the other extremity of straps **19** and are hingedly connected thereon, by score lines **24**. Cuts **25** are also formed at this extremity of the straps for purposes hereinafter more fully understood. Each strap **15** forms a pair of straps with one of the straps **19** and is in substantial alignment therewith. The total lateral dimension of said pair of straps is greater than the lateral dimension of panel **10**.

Locking tabs **26** and **27** are defined by suitable cuts arranged to preferably terminate in score lines **13** and **14**, respectively. Such cuts preferably extend into the score line a distance of approximately one-sixteenth of an inch so as to inhibit tearing therealong. The tabs are arranged in alignment with the straps laterally adjacent thereto. A plurality of arc-shaped tabs **28** are formed by suitable cut and score lines in top panel **10** and define a plurality of lugs **29** thereby. The top panel also has tabs **30** formed thereon by additional suitably arranged cut and score lines.

The blank of FIG. 1 is formed out of a minimum amount of paperboard material and may be expeditiously erected to the carrier position shown in FIGS. 2–4 by suitably folding the blank. The extremities of each pair of opposed straps **15** and **19** which are hingedly connected adjacent bottom portions of their respective panels overlap and are secured together by a standard securing means such as adhesive **31**, as more clearly shown in FIG. 3. The straps thus comprise a bottom portion of the carrier.

The tab portions **23** of flaps **19** are arranged in an upstanding position between laterally spaced cans C. The plurality of cans are arranged to have side portions thereof extend through the openings formed in the side panels by the straps. As shown, the openings terminate short of the top panel. As shown in FIG. 4, tabs **15***a* of straps **15** are arranged to extend through apertures formed in straps **19** by a portion of cuts **25** to aid in the locking engagement of each pair of opposed straps. End flaps **18** and **22** are held in fixed position under the cans by each pair of connected straps.

As also more clearly shown in FIG. 3, locking tabs **26** and **27** comprise locking means arranged to engage beads B of the cans to thereby aid in the retention thereof in the carrier. Cuts **26***a* and **27***a* are formed in score lines **13** and **14**, respectively, to facilitate folding of the tabs into firm engagement with the can beads. The enlarged cut portions **16***a* and **20***a* also comprise locking means arranged to engage portions of the bottom beads B' of the cans to further aid in this retaining function. Tabs **28** and **30** and lugs **29** are arranged to further retain the cans in the carrier in the manner shown. The apertures formed in the top panel by tabs **30** readily permit manual grasping of the carrier.

The second blank embodiment of FIG. 5 comprises a top panel **40** having identical side panels **41** and **41'** hingedly connected thereto by score lines **42** and **42'**, respectively. Panel **41** has a plurality of straps **43** defined therein by cuts **44** which terminate in enlarged portions **44***a* at score line **45** and enlarged portions **44***b* at score line **42**. Score line **45** hingedly connects the straps onto the side panel along with an end flap **46**. Tabs **47** are formed in the top panel by suitable cut and score lines. Side panel **41'** is identical in construction and arrange-

ment to panel 41 with like numbers thereof accompanied by a prime symbol.

The blank of FIG. 5 may be expeditiously erected to the carrier condition shown in FIG. 6 by suitable set-up methods. As therein shown, each pair of straps 43 and 43' are secured together at selected portions of their opposed surfaces by a standard securing means such as adhesive 48. End flaps 46 and 46' are held in position under the retained cans by the pairs of secured together straps.

The cans, when positioned in the carrier, are adapted to have the upper and lower beads thereof engage the enlarged cut portions 44*a*, 44*a'*, 44*b* and 44*b'* to thereby positively retain the cans in their desired relative positions. The cut portions substantially conform to the portions of the can which are adapted to extend therethrough. The openings formed in the top panel by tabs 49 facilitate manual grasping of the carrier.

From the above descriptions, it is seen that the paperboard blanks are formed out of a minimum amount of paperboard material and that such blanks may be expeditiously formed into a carrier for efficiently retaining cans therein. Also, the cans may be obviously readily removed from the carrier. It should be understood that the novel can carrier concepts of this invention may be readily employed to facilitate the transportation of two, four, six or any other number of cans.

Also, one or more of the more specific features employed in one of the above-described embodiments may be utilized in connection with the other embodiment. For example, locking tabs similar to tabs 26 and 27 of the embodiment illustrated in FIGS. 1–4 may be utilized in connection with the embodiment of FIGS. 5 and 6. In this carrier arrangement, the tabs could be pivoted on score lines 42 and 42' and arranged to extend into straps 43 and 43'.

I claim:

1. A paper board carrier comprising a top panel, two opposed side panels hingedly connected to said top panel and a plurality of opposed straps formed out of said side panels and hingedly connected thereto adjacent bottom portions thereof, said side panels thus having openings formed therein conforming to the configurations of said straps, each strap of one side panel secured to an opposed strap of the other side panel to thereby form a bottom portion of said carrier, a plurality of cylindrical cans arranged in said carrier with a side portion of each of said cans extending through an opening formed by said straps in said side panels and means for locking the upper and lower portions of said cans in said carrier, the openings formed by said straps each extending from the bottom portion of said carrier and terminating short of said top panel, said means for locking comprising enlarged cut portions adjacent the bottom portion of said carrier conforming to the configurations of those portions of the cans which extend therethrough and tabs formed out of said panels hingedly connected to said top panel and arranged in locking engagement with upper portions of said cans.

2. The invention of claim 1 wherein one of said opposed straps has a tab formed thereon arranged to extend through and into locking engagement with the other of said opposed straps.

3. A paperboard carrier comprising a top panel, two opposed side panels hingedly connected to said top panel and a plurality of opposed straps formed out of said side panels and hingedly connected thereto adjacent bottom portions thereof, said side panels thus having openings formed therein conforming to the configurations of said straps, each strap of one side panel secured to an opposed strap of the other side panel to thereby form a bottom portion of said carrier, a plurality of cylindrical cans arranged in said carrier with a side portion of each of said cans extending through an opening formed by said straps in said side panels and means for locking the upper and lower portions of said cans in said carrier, the openings formed by said straps each extending from said top

panel to the bottom portion of said carrier, said means for locking comprising enlarged cut portions at both extremities of said openings substantially conforming to the configurations of those portions of the cans which extend therethrough.

4. A paperboard blank having a substantially rectangular cross-section comprising a centrally arranged panel defined by a first pair of parallel score lines formed in said blank, a second pair of parallel score lines formed in said blank parallel to said first pair of parallel score lines to define side panels with said first pair of parallel score lines arranged to extend laterally from said centrally arranged panel, parallel cuts formed in said side panels arranged to extend laterally from said centrally arranged panel to form three pairs of equally spaced and aligned straps between said first and second pairs of score lines, said straps hingedly connected at said second pair of score lines and each arranged to be struck-out of said side panels to form openings each adapted to receive a side portion of a cylindrical can and a flap arranged to extend laterally from each of said side panels and defined by said second pair of parallel score lines, the cuts forming said straps in said side panels forming enlarged cut portions adjacent to said second pair of parallel score lines.

5. A paperboard carrier comprising a top panel, two opposed side panels hingedly connected to said top panel and a plurality of opposed straps formed out of said side panels by substantially parallel cut lines and hingedly connected thereto adjacent bottom portions thereof, said side panels thus having substantially rectangular openings formed therein conforming to the configurations of said straps, each strap of one side panel secured to an opposed strap of the other side panel to thereby form a bottom portion of said carrier, a plurality of cylindrical cans each comprising a bead formed on at least one of the upper and lower portions thereof, said cans arranged in said carrier with a side portion of each of said cans extending through an opening formed by said straps in said side panels and means for locking at least one of the upper and lower portions of said cans whereon said beads are formed in said carrier, said means comprising further openings formed in each side panel of the carrier each arranged to receive the bead formed on at least one of the upper and lower portions of said cans, each of said further openings arranged in alignment with each one of the openings formed by each of said straps.

6. A paperboard blank having a substantially rectangular cross-section comprising a centrally arranged panel defined by a first pair of parallel score lines formed in said blank, a second pair of parallel score lines formed in said blank parallel to said first pair of parallel score lines to define side panels with said first pair of parallel score lines arranged to extend laterally from said centrally arranged panel, parallel cuts formed in said side panels arranged to extend laterally from said centrally arranged panel to form three pairs of equally spaced and aligned straps between said first and second pairs of score lines, said straps hingedly connected at said second pair of score lines and each arranged to be struck-out of said side panels to form substantially rectangular openings each adapted to receive a side portion of a cylindrical can each opening arranged in alignment with a further opening formed in said side panels at at least one of said first and second pairs of score lines, each of said further openings adapted to receive a bead of a cylindrical can therein and a flap arranged to extend laterally from each of said side panels and defined by said second pair of parallel score lines.

7. The invention of claim 6 wherein said further opening is enlarged relative to each opening formed by each of said straps.

8. A paperboard blank having substantially rectangular cross-section comprising a suitably cut and scored blank having a centrally disposed panel defined by a first

pair of parallel score lines, a second pair of parallel score lines formed in said blank parallel to said first score lines and defining two side panels extending from said centrally disposed panel, said side panels each having parallel cuts forming three equally spaced straps arranged to extend substantially perpendicular relative to said first and second pairs of score lines, said straps hingedly connected at said second score lines and arranged to be struck-out of the side panels to form openings each adapted to receive a side portion of a cylindrical can, each strap formed in one side panel arranged in substantial alignment with one strap formed in the other side panel to form a pair therewith, the total lateral dimension of said pair of straps being greater than the lateral dimension of said centrally disposed panel, said straps further arranged to terminate

short of said first pair of score lines each opening arranged in alignment with a further opening formed in said side panels at at least one of said first and second pairs of score lines, each of said further openings adapted to receive a bead of a cylindrical can therein.

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