Feb. 27, 1951 S. N. LEBOLD 2,543,698

HANDLE FOR BOTTLE CARRIERS

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Fig. 1

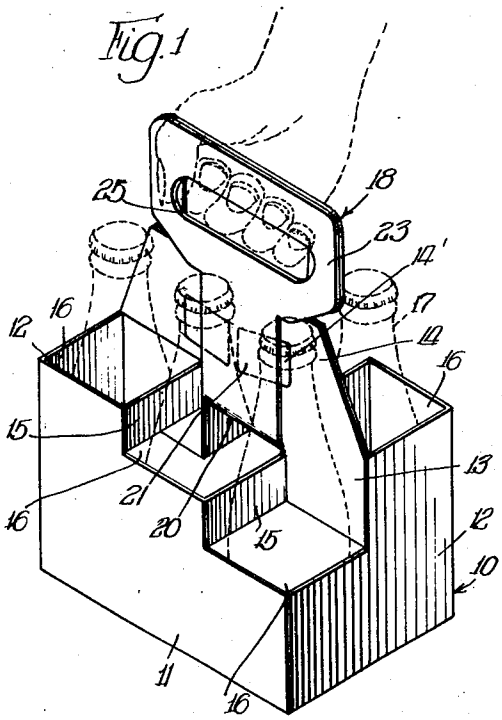


Fig. 2

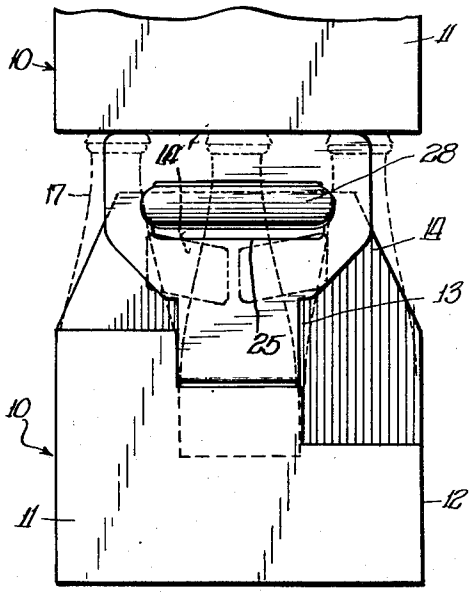


Fig. 3

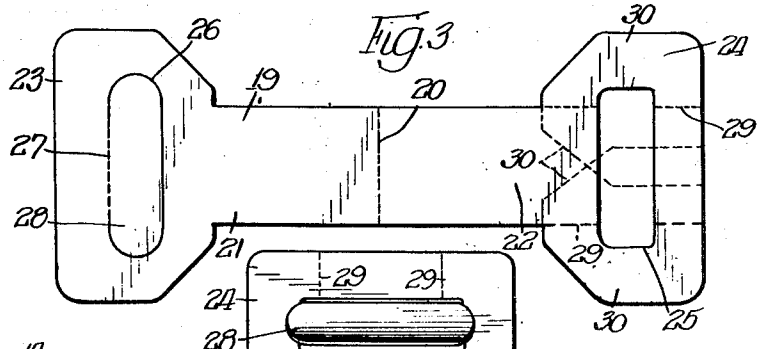


Fig. 4

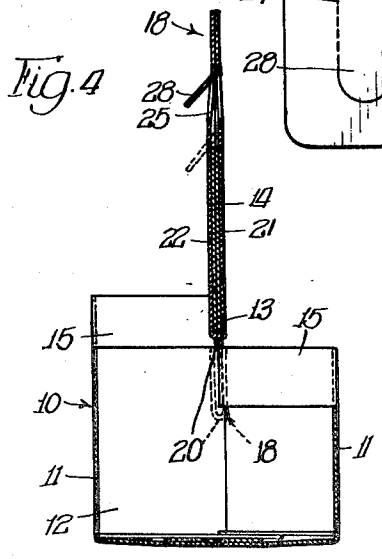


Fig. 5

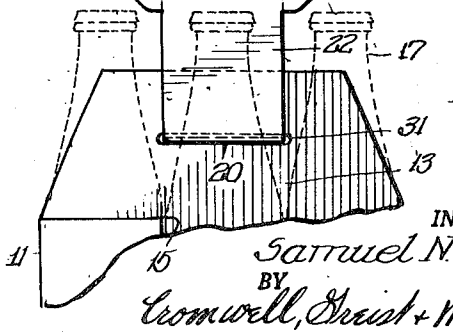


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Fig. 4A.

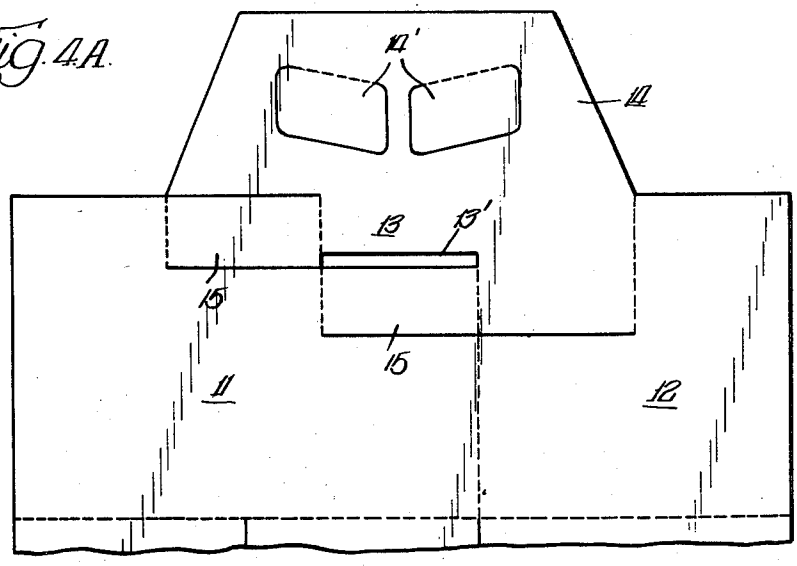
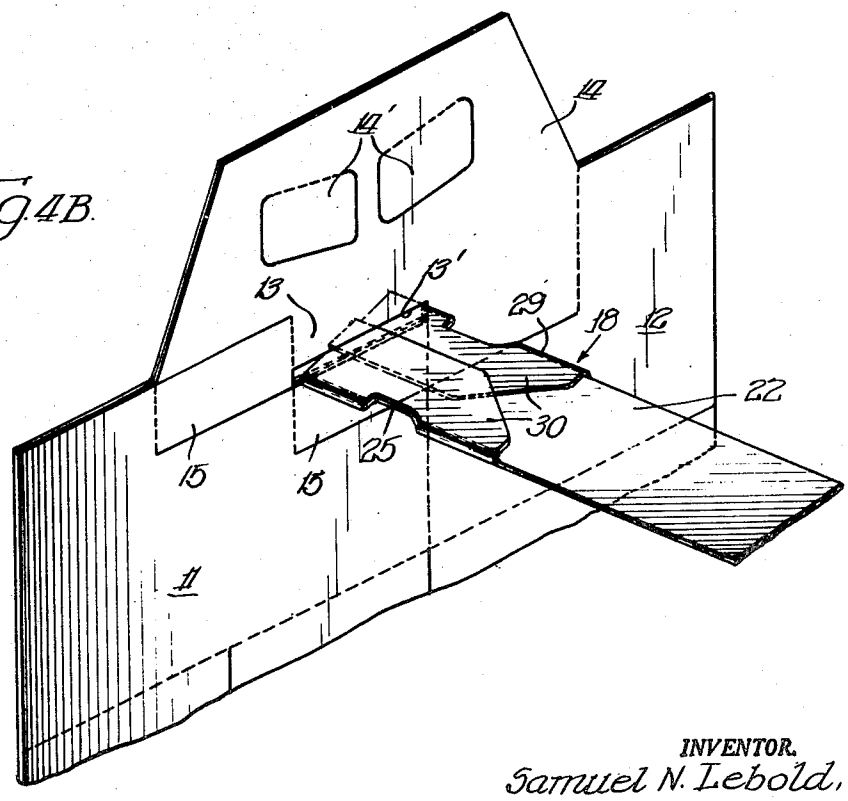



Fig. 4B.

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2,543,698**

# UNITED STATES PATENT OFFICE

2,543,698

## HANDLE FOR BOTTLE CARRIERS

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Application June 14, 1946, Serial No. 676,787

4 Claims. (Cl. 224—45)

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This invention relates to improvements in a bottle carrier or package of the type employed in transporting a number of beverage bottles to and from a store. More particularly, the invention concerns a novel combination of such a carrier and a special suspending handle therefor, and details of construction of the handle itself.

It is an object of the invention to provide a carrier for a predetermined number of bottles of uniform size, all supported within the peripheral walls of the container on either side of a medial partition panel of the latter, and a suspending handle associated with said partition in a novel manner enabling a substantial decrease in the vertical dimension of the partition, while still permitting the carrier and contents to be comfortably and conveniently suspended in the hand in use.

A further object is to provide a combined carrier and separate removable handle therefor characterized by the ease and speed with which the handle may be associated with the carrier, said handle and carrier having coacting provisions enabling the handle to be supported either in an upright position to facilitate insertion of articles into the carrier, or in an inoperative withdrawn position beneath the upper level of the bottles and within the lateral confines of the carrier, thus permitting a number of filled carriers to be stacked vertically upon one another and in side-by-side contacting relation.

A further object is to provide an improved paper board suspending handle for paper board bottle carriers of the type characterized by a cental upstandinrg panel terminating vertically beneath the tops of bottles disposed in the carrier, said handle having novel provisions enabling rapid assembly thereof with the carrier, and being readily retractable to an inoperative position below the level of the bottle tops.

A still further object is to provide a paper board suspending handle of the type described adapted for association with the referred to central panel of the carrier in the manner of a supporting sling which straddles opposite sides of said handle, the handle being readily slidable vertically between its operative carrying position and inoperative lowered position.

The foregoing statements are generally indicative of the nature of the invention, but other and more specific objects will be apparent to those skilled in the art upon a full understanding of the construction and operation of the device.

Various embodiments of the invention are presented herein for purpose of exemplification, but it will be appreciated that the invention is

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suspectible of incorporation in other modified forms coming equally within the scope of the appended claims.

In the drawings,

Fig. 1 is a perspective view illustrating a preferred form of the present invention, including a paper board carrier, a number of bottles contained therein and a suspending grip or handle associated with the carrier, the bottles being illustrated in dotted line for clarity of illustration, and the handle being shown in its operative, elevated carrying position;

Fig. 2 is a fragmentary view in side elevation, illustrating a pair of carriers in vertically aligned, stacked relation, the handle being shown in a retracted or inoperative position permitting such stacking;

Fig. 3 is a plan view illustrating the separate handle in its flat condition as blanked out of a sheet of stock, indicating in dotted lines the method of manipulating the handle for assembly with the carrier;

Fig. 4 is a view in vertical transverse section, more clearly illustrating the relation of the parts in elevated and retracted positions, as indicated respectively in solid and dotted lines;

Fig. 4A is a fragmentary view in elevation, illustrating the carrier in the flat knock-down condition thereof;

Fig. 4B is a fragmentary perspective view showing the mode of associating the handle and carrier in said flat condition of the latter; and

Fig. 5 is a fragmentary elevational view of a modified embodiment.

This invention relates in general to improvements in a bottle carrier of the type illustrated and described in my U. S. Patent No. 2,389,318, dated November 20, 1945, and in particular to an improved suspending handle for such a carrier. The patent referred to describes at considerable length the advantages of providing a medial suspending panel for a carrier of this sort, which panel is proportioned and disposed to extend not higher than the top of bottles in the carrier. Briefly stated, a substantial saving in production cost is effected due to the economy of stock made possible by the feature; and it is possible to stack filled cartons one on top of the other in a vertically aligned, side-by-side arrangement, rather than the laterally staggered arrangement to which earlier cartons were restricted, by reason of their projecting handle. Moreover, it obviates weakening of the handle portion by bending the same over the tops of the closures of the bottles to enable vertical stacking (a pre-formed crease was commonly provided in the handle for this purpose). A marked im-

provement in strength and rigidity also results from the lowering of the point of suspension of the carrier.

All of these substantial advantages are retained in the present construction, which employs a separate, pre-formed grip member easily and quickly associated with the carrier and extending thereabove to a conveniently accessible height for grasping. As an additional feature, said handle is readily and quickly retractable to an inoperative position beneath the level of the bottle caps, enabling the above referred to, vertically aligned stacking of filled carriers. It may also be sustained in vertical alignment with the central panel during loading of the carrier. Hence, when filled, the carrier presents an upstanding handle conveniently located for grasping and transportation.

The carrier of the present invention, generally designated by the reference numeral 10, is similar to that illustrated and described in the above identified patent. This carrier is of one-piece construction, comprising a bottom and parallel, bendably connected side walls 11 and end walls 12 fabricated from paper board stock. The construction of the carrier permits the use of a relatively light grade of stock, all as described in the patent above referred to, to which reference may be had for disclosure of these details. As also illustrated and described at length therein, the carrier is provided with a central, vertical partition and suspending panel 13 extending parallel to side walls 11 and bendably connected at its ends to the walls 12. Partition panel 13 is of double ply thickness (see Fig. 4) and extends upwardly to constitute a suspending handle member 14 which is likewise of double thickness. Transverse partition strips 15, integrally and bendably connected at their lateral extremities to the side walls 11 and partition panel 13, extend at right angles therebetween in a vertically staggered or stepped arrangement longitudinally of the carrier, to subdivide the space on either side of partition panel 13 into three equal sized, rectangular compartments 16. Each of these compartments is of a width generally corresponding to the maximum diameter of the bottles 17 disposed in the same, enabling insertion of the bottles bottom end first.

The suspending member 14 extends no higher than the upper level of the closures on bottles 17 in operative, supported disposition of said bottles in the carrier 10, and preferably lies somewhat below the tops of said bottles. This is of importance for the various reasons briefly referred to above. To particularize, in connection with the economy of stock which is realized, while the number of carton blanks that can be disposed laterally across a printing and/or cutting cylinder of say 70 inches diameter is more or less fixed, by reason of the standardization of cylinder lengths within certain limits, the number which can be arranged peripherally of the cylinder may be materially increased or diminished in accordance with the vertical dimension of the carton. Accordingly, it is apparent that a high suspending handle 14 would increase the manufacturing cost from the standpoints of output speed and cost of material. A plurality of cartons embodying the features of the patent, and also in accordance with this invention, may be stacked in direct vertical alignment, one on top of the other, with complete stability, as herein illustrated at Fig. 2. It is unnecessary to weaken any portion of the central panel 13, 14 by creasing, scoring or bending an upstanding end of the same to permit folding over onto the bottle tops for stacking. Other advantages of the arrangement will either be apparent to those skilled in the art or will be specifically alluded to in the description to follow.



In my patent referred to, the package shown and described is suspended by hand holes formed in the portion of the carrier corresponding to suspending handle 14, the knuckles of the user engaging the bottles and thrusting the same outwardly so as to effect a snug nesting of the user's hand therein. This results in a minimization of lateral instability and consequent wracking tendency, along with other advantages, all as pointed out in detail in the patent. These hand holes are retained in handle 14, being designated 14', so as to be available for use if desired. However, additional suspending means is also provided.

In the preferred embodiment of the present invention, a separate suspending handle is employed, generally designated by the reference numeral 18. This handle is died out of a sheet of cardboard of an appropriate gauge to afford the desired carrying strength, the died blank being illustrated in Fig. 3 and designated 19. It is symmetrical in outline on opposite sides of a transverse, central, creased bend line 20, comprising rectangular sling portions 21, 22 on either side of said bend line and laterally enlarged handle portions 23, 24 at the ends of the respective sling portions.

One of the handle portions has an oblong hand grip opening 25 formed therein; the other portion 24 is slitted at 26 and creased or scored at 27 in an outline similar to the opening 25, leaving a bendable tab 28 connected thereto. The length of this tab is somewhat greater than the corresponding dimension of opening 25 for a purpose to be referred to. Further parallel longitudinal creases 29 are formed on handle portion 24 in alignment with the sides of the sling portion 22, these creases extending into intersection with the opposed sides of the opening 25.

In applying the above described handle to the carrier 10, the opposed lateral wings 30 which are defined by creases 29 are folded toward one another into compact flat and overlapped relation, in face-to-face contact with one another on the body of the handle portion 24, as illustrated in dotted line in Fig. 3. This reduces the width of the handle 24 to that of the sling and permits its introduction beneath the central panel 13 of the carrier, after which the handle is released and returns to flat condition. The sling portions 21, 22 are then brought together around the crease line 20 and the tab 28 defined by slit 26 is inserted through the opening 25 to secure the handle portions 23, 24 together. The ends of the tab flex to permit this insertion, then snap back to act as locks which prevent inadvertent return of the parts to inoperative position.

It will be noted that panel 13 is cut out or slotted somewhat above the central compartment 16 to provide a slightly enlarged opening 13' above the medial portion of side wall 11, in the flat, collapsed or knock-down condition of the carrier, as illustrated in Fig. 4A. This enables the ready threading insertion of the preliminarily folded handle 18 while the carrier is in said knock-down condition.

In the operative position of the handle member 18, a convenient carrying grip is afforded, as illustrated in Fig. 1, yet the handle member may be readily pushed downwardly to a position il-

lustrated in Fig. 2 and in dotted line in Fig. 4, at or below the tops of the bottles in the carrier. This permits vertical stacking and the numerous other advantages referred to above. The laterally projecting tab 28 limits downward movement beyond this point by engaging the top margin of panel 14, leaving the handle conveniently accessible for later grasping.

In Fig. 5 a slightly modified embodiment of the structure of Figs. 1–4 is illustrated. In this form, details of the handle member 18 are in general the same as described above. However, this handle member is inserted in a transverse elongated slot 31 formed in the central panel 13, 14, rather than underneath said panel as in the embodiment of Fig. 1. Obviously, this permits manufacture of the handles 18 from a smaller amount of stock while still bringing the hand hole 25 sufficiently above the bottle tops to afford a convenient grip. The handle is slidingly depressible parallel to panel 13 after being slightly flexed laterally to clear the bend line 20 from slot 31. Limitation of its downward movement is provided in the same manner as in the form of the invention shown in Figs. 1–4 inclusive.

Various other modified constructions of a handle adapted for connection to the suspending panel 14 of the carrier illustrated or to a similar member on a related type of carton will readily suggest themselves to those skilled in the art. It is appreciated that the handle may be fabricated of many different materials and I therefore desire that the invention be not unduly construed in this regard. Likewise, while particularly adapted for association with a bottle carrier such as shown in the above identified patent, its utility in connection with other types of cartons is apparent. Regardless of its particular form, the present construction provides a package of highly compact and economical character, including a carrier and associated handle capable of being comfortably transported by the user, and proof against destructive action between handle and carrier when so used, the handle being quickly and easily positionable in any desired relation to its associated carrier, depending upon the operation which is to be performed. All of the benefits characterizing the depressed central panel which are outlined above and in the referred to patent are retained in the present structure.

In the form of the invention shown in Figs. 1 through 4B, the slitted hand holes 14', of the type shown in the above identified patent, also in my copending application, Serial No. 776,553, filed September 27, 1947, now Patent Number 2,460,229 dated January 25, 1949, are retained in the central suspending portion 14 of the carrier. Thus, if it is not desired to employ the separate handle contemplated by this invention, or if such handles are not available, the user still has the means to get a firm and comfortable grip on the carrier to transport the same as described in the patent and application.

I claim:

1. Supporting means for an article carrier of the type having an upstanding suspending panel, comprising a suspending handle of flexible, nonmetallic, sheet-like material including an elongated horizontal portion supportingly engageable beneath a portion of said panel along an elongated line of contact, a grip portion extending substantially above the top of said panel in operative carrying position thereon, and sling portions integrally connected to one another at said contact line and to said grip portion medially of the width of the latter, with reference to the direction of said contact line, said sling portions laterally embracing and extending above the panel on either side of said contact line, said handle being retractable relative to said panel to position said grip portion in substantially withdrawn relation to the top of said panel.

2. Supporting means for an article carrier of the type having an upstanding suspending panel, comprising a suspending handle for the carrier including a flexible paper board member having sling portions integrally connected along an elongated transverse bend line which is engageable, in operative carrying position in suspending relation to said panel along an elongated line of contact, said sling portions being adapted to parallel the sides of the panel, and grip elements on said respective sling portions for grasping the handle to suspend the carrier, said sling portions being connected to said respective grip portions medially of the latter, with reference to the direction of said transverse bend line.

3. Supporting means for an article carrier of the type having an upstanding suspending panel, comprising a suspending handle for the carrier including a flexible paper board member having sling portions integrally connected along an elongated transverse bend line which is engageable, in operative carrying position, in suspending relation to said panel along an elongated line of contact, said sling portions being adapted to parallel the sides of the panel, and grip elements on said respective sling portions for grasping the handle to suspend the carrier, one of said grip portions being creased for bending in the direction of the length of said member to facilitate assembly to the carrier, said sling portions being connected to said respective grip portions medially of the latter, with reference to the direction of said transverse bend line.

4. A suspending handle for a bottle carrier adapted to be supportingly engaged with a carrier through an opening in the latter, comprising a one-piece, elongated and flexible fibrous sling member having a pair of legs integrally connected to one another at a transverse fold line and coacting grip portions of width greater than that of the legs integrally connected thereto at the opposed ends thereof, at least one of said grip portions being longitudinally creased for transverse folding to thereby decrease its width and enable insertion in said carrier opening in supporting engagement with the carrier at said fold line.

SAMUEL N. LEBOLD.

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