

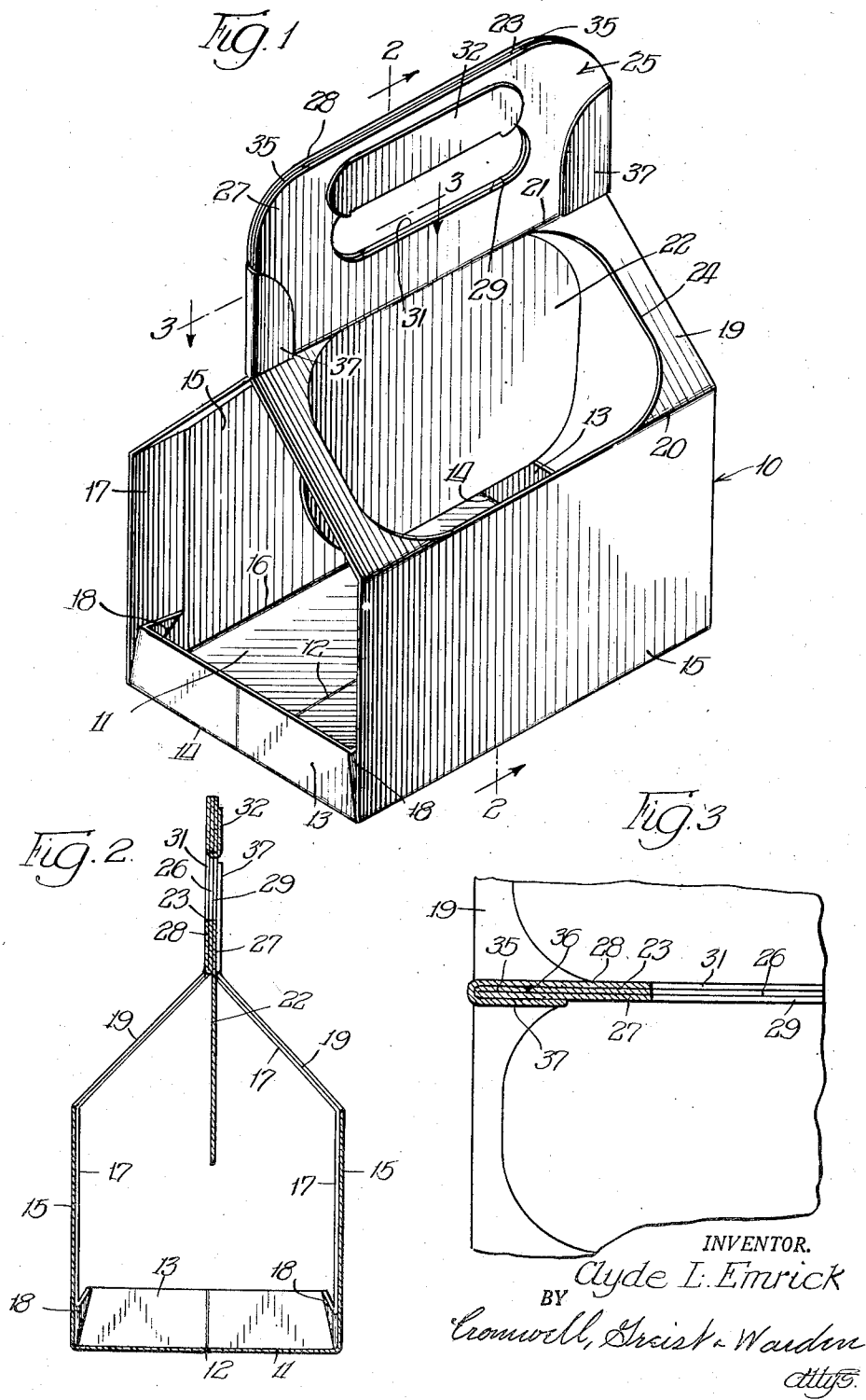
Aug. 21, 1951

C. L. EMRICK
BOTTLE CARRIER

2,565,449

Filed Jan. 8, 1948

2 Sheets-Sheet 1



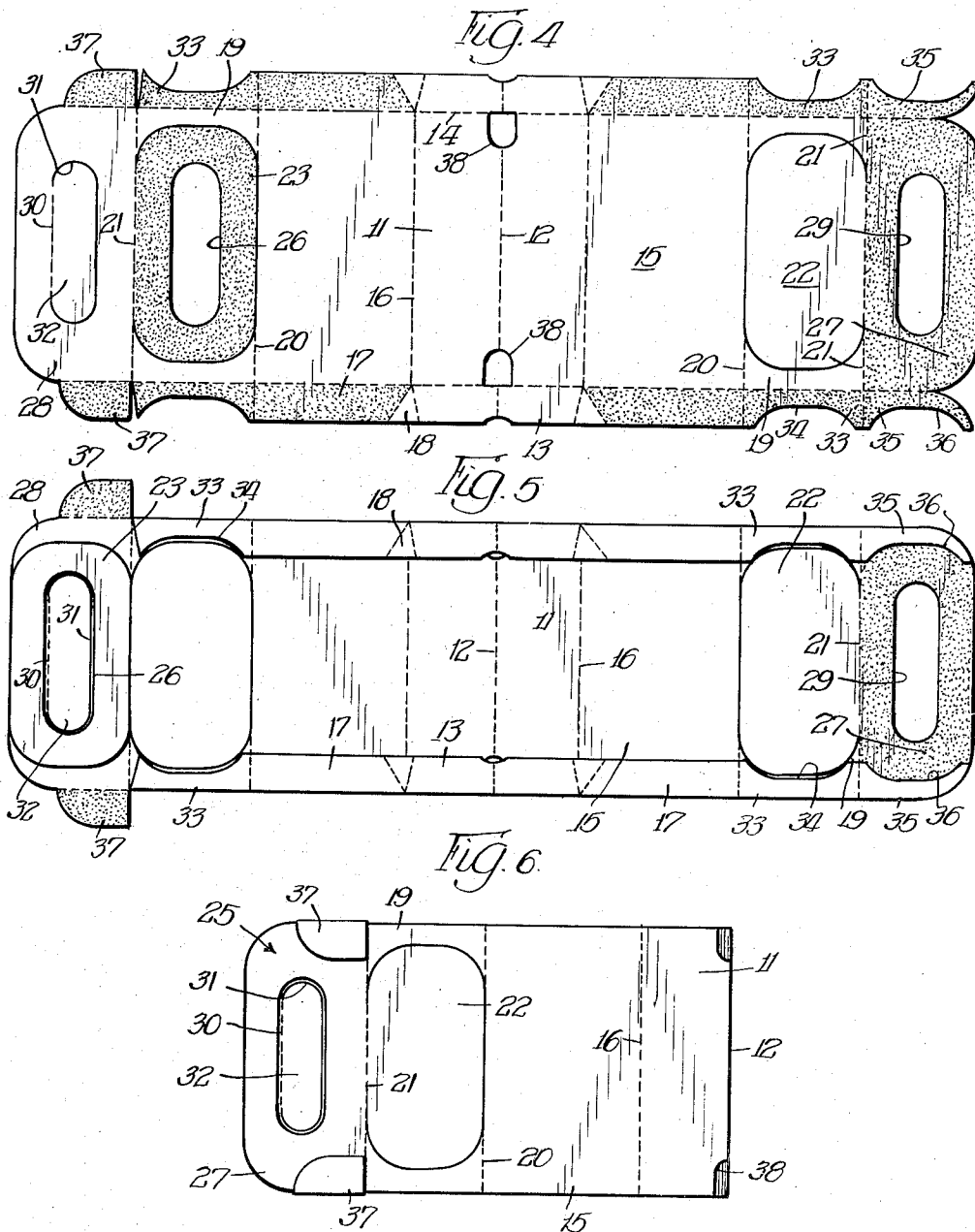
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2,565,449

BOTTLE CARRIER

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3 Claims. (Cl. 229—52)

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This invention pertains to an improved, inexpensive paper board carrier for the packaging and transportation of bottles or like articles. The invention deals particularly with the provision of novel reinforced handle structure for a carrier of this type. Bottle carriers of this type are well known to the public, being employed by many bottlers of soft drink beverages in putting up their product for sale by drug stores, grocery stores and the like.

Such carriers, in many embodiments thereof are known to have a zone of weakness in the suspending handle thereof which, under the rough handling that they commonly receive, is apt to result in failure of the carrier and dropping and smashing of its contents. It has heretofore been proposed to reinforce the handle in various ways, usually by the provision of a multiple-ply construction for the handle; however, such provisions are apt to be impractical from a manufacturing standpoint because of the tendency of the multiple thicknesses of the material to interfere with efficient gluing and securing in a gluing machine of standard type, if indeed, they do not entirely preclude manufacture of the carrier by automatic machinery.

It is therefore a general object of the present invention to provide a bottle carrier having an improved and reinforced handle construction, wherein the reinforcing provisions are so associated and related with one another as to lend themselves admirably to efficient manufacture of the carrier by an existing, well known type of machinery.

A more specific object is to provide an article carrier of the foregoing type including a handle made up of multiple plies of flexible paper board stock which are cut and associated in a fashion to provide a uniform thickness of section of the handle throughout the latter.

Another object is to provide a bottle carrier having a handle of the above improved reinforced, multi-ply type and further provided with wrap-around elements adapted to encompass the handle at its ends, in a manner to prevent a common tendency of the plies of the handle to separate when the carrier is loaded and suspended.

A further object is to provide a bottle carrier and handle therefor in which a plurality of constituent handle plies are cut and interrelated in a manner to nest with one another, thereby presenting a uniform sectional thickness throughout the handle, together with wrap-around end flap elements which encompass the

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ends of the handle and effectively prevent separation of the aforesaid plies.

The foregoing statements are indicative in a general way 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.

A single embodiment of the invention is presented herein for purpose of exemplification, but it will be appreciated that the invention is susceptible of incorporation in other modified forms coming equally within the scope of the appended claims.

In the drawings,

Fig. 1 is a perspective view of the improved carrier of the invention in an operative or erected condition, ready to receive its bottled contents;

Fig. 2 is a view in transverse vertical section along a line generally corresponding to line 2—2 of Fig. 1, illustrating the relationship of the multiple plies of the carrier handle;

Fig. 3 is a fragmentary view, somewhat enlarged and in section on line 3—3 of Fig. 1, further illustrating the nested relationship of elements of the handle;

Fig. 4 is a plan view illustrating a blank from which the carrier is fabricated, showing the manner in which the blank is creased for folding and provided with adhesive bearing areas to secure portions of the same together;

Fig. 5 is a plan view similar to Fig. 4, showing the blank following certain preliminary folding operations thereon; and

Fig. 6 is a plan view illustrating the blank in its finally folded and completed condition, ready for use.

Referring to Figs. 1, 2 and 3 of the drawings, the carrier of the invention, designated by the reference numeral 10, includes a flat bottom 11 having a medial crease 12 therein on which the bottom is folded when in a flat, knocked-down condition (illustrated in Fig. 6). This crease extends through the pair of end walls 13 which are bendably connected to the bottom along parallel end marginal lines 14 of the latter.

The bottom 11 has side walls 15 bendably conjoined thereto by crease lines 16 and said side walls have the reinforcing wings or flaps 17 folded thereon and secured thereto. Said wings 17 are merely extensions of the bottom end walls 13, being flexibly connected thereto by the pair of side gussets 18, in a well known fashion. Inclined intermediate panels 19 are flexibly

connected to the side walls 15 by creases 20 and meet one another at the apex of the container portion of the carrier adjacent the parallel fold lines 21 at the top of the respective intermediate panels. The panels are cut to afford a pair of flaps designated 22 and 23 which are adapted to be displaced from the plane of the panel. These flaps are hinged along the respective fold lines 21. The flap 22 is adapted to depend interiorly of the carrier, in the fashion illustrated clearly in Figs. 1 and 2, to serve as a divider for parallel rows of three bottles each which are to be inserted in the openings 24 from which said flaps 22, 23 are displaced.

The flap 23 serves as a reinforcing ply in the handle 25 of the carrier and reference to Figs. 4, 5 and 6 in conjunction with Figs. 1, 2 and 3 will make clear the manner in which it is employed to this end. Flap 23, in addition to being died out of the material of the panel 19 with which it is associated, is further apertured centrally to provide an elongated hand hole 26. Each intermediate panel 19 has an upstanding handle member flexibly connected thereto along the fold line 21, these handle members being respectively designated 27, 28.

Handle member 27 carries an elongated hand hole slot 29 of the same general type as opening 26 and handle member 28 is creased longitudinally at 30 and provided with a U-shaped slit 31 connected to the ends of this crease, in a manner to outline a flap 32 which may be manually displaced about the crease 30 to expose a hand opening. The opening thus exposed is positioned in handle member 28 in exact accordance with the positioning of the hole 29 in handle member 27. Similarly, the aperture 26 in the flap 23 is positioned therein so as to come into register with the opening defined by slit 31 when flap 23 is folded along fold line 21 and superposed on said handle member.

As illustrated in Fig. 4, the intermediate panels 19 have reinforcing flaps 33 flexibly conjoined to their end margins and these reinforcing flaps are cut away or relieved at their outer margin to provide bays 34. The same is true of the continuations 35 of said reinforcing flaps which adjoin the handle member 27, the bays in this instance being designated 36. The opposite handle member 27 carries a pair of end wrap-around ears or tabs 37 foldably connected thereto, which serve a function to be described.

In order to facilitate folding of the carrier in its manufacture, by accommodating the multiple thicknesses of material adjacent the bottom medial line 12 and hence avoiding undue stress on the stock, said medial line has spaced apertures 38 of substantial size formed adjacent its ends. These apertures also afford access of the user's fingers to the opposite end walls 13 to facilitate erecting the same to their operative position shown in Fig. 1.

In construction the carrier, the blank illustrated in Fig. 4 is first provided with a suitable adhesive along the opposite margins thereof, on handle reinforcing flap 23 and on handle member 27, in the manner indicated by stippling in Fig. 4.

The marginal reinforcing and end wall wings are then folded inwardly and secured to the body of the blank in the fashion illustrated in Fig. 5, leaving the wrap-around tabs 37 in original condition. At the same time, the handle reinforcing flap 33 is folded on line 21 and adhered to handle member 28, it being noted that the slightly

larger size of the aperture 26 in said flap, as compared to the slit 31, affords marginal clearance for the swinging of the flap 32 when desired.

The thus folded blank is then folded on medial crease 12 to bring the parts thereof into superposed relation. The bays 36 in the reinforcing elements 35 adjoining handle member 27 fit around the ends of the handle reinforcing flap 23, nestingly receiving the same so that a uniform, triple-ply thickness of material exists throughout the handle area. The securing tabs or ears 37 are next folded around the ends of the thus associated handle parts to complete the carrier. This provides insurance against the separation of the handle plies when the carrier is erected to the position shown in Fig. 1, loaded with six beverage bottles and suspended from the handle. The usual downward and outward separating stress is effectively combated.

As illustrated in Fig. 1, the tab 32 is adapted to be displaced through the registering openings 26, 29 of flap 23 and handle member 27 respectively, thereby affording a gripping member of sufficient surface thickness to eliminate discomfort to the user. Erection of the carrier from the flat knocked-down position of Fig. 6 to the position of Fig. 1 is accomplished by pressing between the handle and the opposite margin represented by medial fold line 12. This causes the carrier to assume the general form of Fig. 1 and it is retained in this form by merely pressing the end walls 13 upwardly so as to cause them to swing about marginal fold line 14 and gussets 18 to a position normal to the bottom 11. This braces the carton strongly in its final position.

The multiple-ply, uniform thickness characteristic of the handle is well illustrated in Figs. 2 and 3 of the drawings, wherein it will be noted that the bays 36 fit snugly around the flap 23 nested therein. The handle has uniform thickness throughout. At the same time, this renders it possible to make an effective glued connection of the handle plies when the parts of the carrier are assembled and secured at high speed by a conventional type of automatic machine. It has been found that many previous types of reinforced handle are unsuited for machine manufacture by reason of the existence of non-uniform ply thickness of the handle.

The wrap-around ears 37 not only lock the handle plies in final position and resist the tendency of said plies to separate under load, they also finish off the end edges of the handle, affording a smooth surface not apt to snag and tear in use.

I am aware that those skilled in the art will perceive the feasibility of various changes and improvements in the structure illustrated and described above, without departing from the principles of the invention. I therefore desire that all such modifications be regarded as within the scope of the invention, as defined by the appended claims.

I claim:

1. An article carrier comprising a pair of side walls, a bottom connecting opposed lower margins thereof and a multiple-ply handle disposed above said walls, said handle comprising a pair of panels connected to upper margins of said respective side walls and a flap cut from the material of one of said walls and hinged thereto along a fold line adjacent and paralleling said upper side wall margin, said flap being folded upwardly about said line into position between said handle panels and secured thereto to stiffen

the same, said panels having reinforcing strips folded thereagainst along end margins thereof and said strips being marginally recessed adjacent the upwardly folded flap to accommodate the same in the plane of the strips.

2. An article carrier comprising a bottom, a pair of side walls connected to opposed margins of the bottom, handle panels integrally connected to upper margins of said respective side walls and extending upwardly therefrom in side by side relation to one another, and end reinforcing flaps flexibly connected to end margins of said side walls and handle panels, said side walls being cut to define article receiving openings and at least one thereof having a tab hinged thereto adjacent upper margins of its said opening, said tab being bendable upwardly to position between said handle panels, the end reinforcing flaps of the opposed handle panel being folded inwardly between said panels and being relieved at the inner ends thereof adjacent said upwardly bent tab to receive the same in the plane of the infolded flaps, the flaps on the other panel being foldable around the ends of the handle and secured thereto.

3. An article carrier comprising a bottom, a pair of side walls connected to opposed margins of the bottom, handle panels integrally connected to upper margins of said respective side walls and extending upwardly therefrom in side by side relation to one another, and end reinforcing flaps

flexibly connected to end margins of said side walls and handle panels, said side walls being cut to define article receiving openings and at least one thereof having a tab hinged thereto adjacent upper margins of its said opening, said tab being bendable upwardly to position between said handle panels, the end reinforcing flaps of the opposed handle panel being folded inwardly between said panels and being relieved at the inner ends thereof adjacent said upwardly bent tab to receive the same in the plane of the infolded flaps, the flaps on the other panel being foldable around the ends of the handle and secured thereto, said panels and upwardly bent tab having registering apertures therein providing a hand hole for the carrier.

CLYDE L. EMRICK.

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