July 7, 1964 J. C. SPERY 3,140,008

WRAPPER TYPE CAN CARRIER

Filed Oct. 26, 1961

FIG. 1

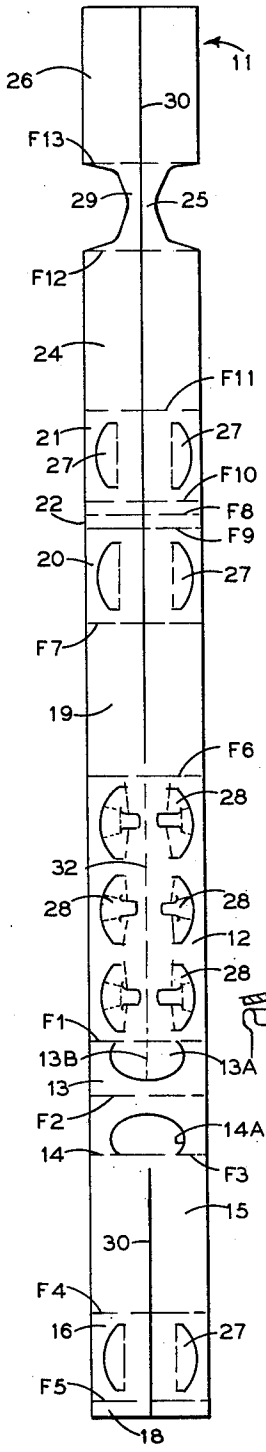


FIG. 3

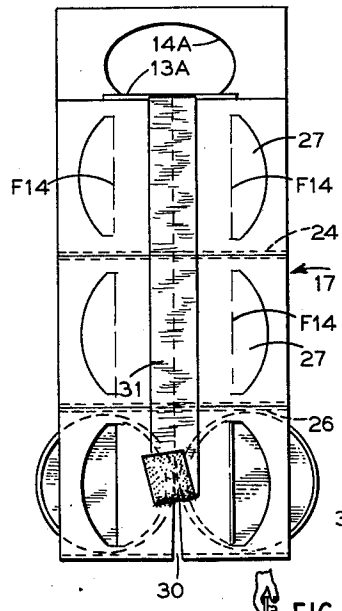


FIG. 2

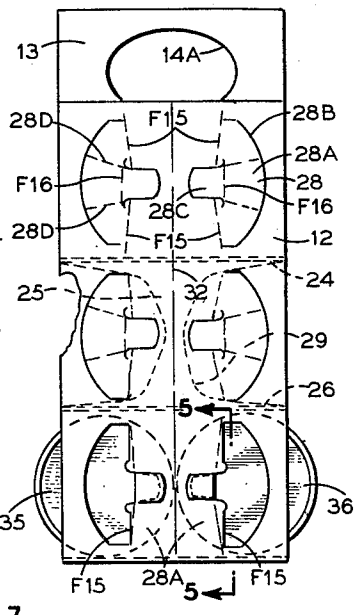


FIG. 7

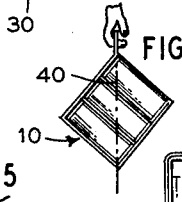


FIG. 4

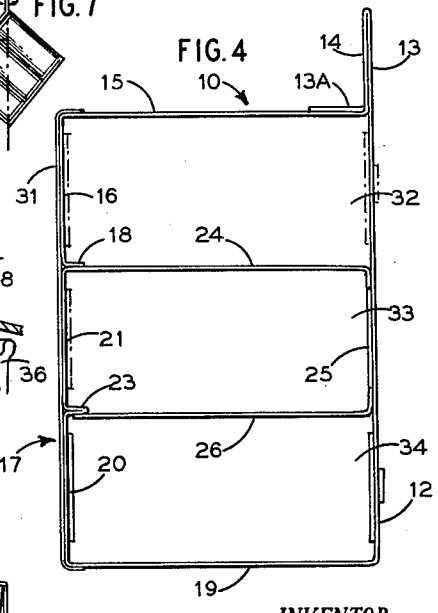


FIG. 5

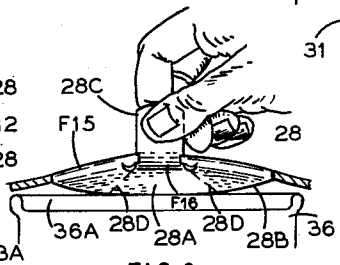
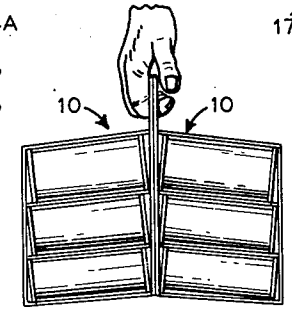


FIG. 6



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WRAPPER TYPE CAN CARRIER

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This invention relates to a foldable wrapper type can carrier, and more specifically to improvements directed to facilitate the portage of such wrapper and the accessibility of cans carried therein.

Many different kinds of wrapper type can carriers are known for packaging and distributing a variety of products sold in cans or the like, e.g. beer, soda and various other canned goods. In the known construction such wrappers were either provided with a handle centrally disposed across the top thereof, or else a pair of finger holes were provided in which one inserted his fingers to grip the carrier. With wrappers so constructed it was difficult if not impossible to conveniently carry two such carriers with one hand even though combined weight of several carriers could otherwise be easily managed by the average individual.

Therefore, an object of this invention is to provide a carrier construction having an improved handle construction located with respect to the body portion of the carrier in a particular relationship therewith so as to facilitate portage of the carrier.

Another object is to provide an improved carrier construction which facilitates portage of two carriers with one hand.

Still another object of the invention is to provide a can carrier formed of a single sheet of blank material that is constructed and arranged so that in the carrying position, the weight of the cans carried thereby may be distributed in a diagonal plane of its carrier.

Another discerning problem with known carrier constructions was the difficulty encountered in the removing of a can from the carrier by a consumer. In order to insure retention of the cans in place within such carrier, it is common practice to blank out in the top and bottom panels cooperating can retaining flaps which are folded inwardly of the carrier to be against the inner side of their respective panels. The construction is such that as the cans are loaded, the retaining flaps engage with the chime portion of the cans, and thus firmly retain the cans in position within the carrier.

Because the canned goods are held tightly within such carriers, and because such carriers are formed of relatively heavy and tough paperboard, cardboard and the like, extreme difficulty was heretofore encountered by a consumer when an attempt was made to remove a can from the carrier. Usually a struggle is required to free a can, and then only at the expense of completely destroying or tearing apart the wrapper carrier.

Many wrapper carriers are constructed with so called "easy tear" lines to facilitate removal of a can. Yet difficulty was still oftentimes encountered with such "easy tear" type carriers. Carriers having "easy tear" features, which will function with reliability, nevertheless required destruction of the carrier.

In addition to the difficulties and inconveniences confronting one in removing a can from the known carrier constructions, a further disadvantage inherent with such constructions has been observed in the retailing of canned goods so packaged. Oftentimes a consumer desires to buy less than the number of cans contained in a given carrier. For this reason a consumer will generally break a carrier to purchase only a few cans. Therefore, numerous cartons or carriers of the known constructions are unnecessarily destroyed while still on the shelf of the retail outlets. As a result, the remaining cans fall loose

and very likely become dented or otherwise damaged to result in excessive waste or loss of sales.

Therefore, another object of this invention is to provide a novel carrier construction which will facilitate removal of the cans therefrom either one at a time, or all at once as desired, without materially destroying or damaging the carrier.

Another object is to provide an improved can carrier that is relatively simple in construction, inexpensively produced, and positive in operation.

A feature of this invention resides in the provision that the carrier is formed from a single blank of sheet materials which is readily folded to define a quadrilateral figure having open sides with an integrally connected handle position at the juncture of two sides of the figure.

Other features and advantages will become readily apparent when considered in view of the description and drawings in which:

FIG. 1 is an expanded view of the single blank of sheet material employed in forming the carrier of this invention;

FIG. 2 is a top plan view of the carrier of this invention;

FIG. 3 is a bottom plan view of the carrier;

FIG. 4 is a side view of the carrier;

FIG. 5 is a sectional view taken through line 5—5 of of FIG. 2;

FIG. 6 illustrates a view to show the ease with which two carriers embodying the instant invention may be carried with one handle; and

FIG. 7 illustrates a view showing the ease with which one carrier is carried.

Referring to the drawings, there is shown the improved carrier **10** of this invention in which a plurality of canned goods, e.g. beer, soda and various other products, are packaged. The carrier **10** may be constructed so as to accommodate any convenient number of cans, the illustrated embodiment is arranged to accommodate six cans. Therefore, it will be understood that the specific number of cans accommodated is not of essence to the invention to be described.

According to this invention, the can carrier **10** is formed of a single blank of sheet material **11**, such as cardboard, paperboard and the like. FIG. 1 illustrates the details of the preformed and die cut single blank **11**.

Essentially blank **11** is substantially a rectangle in shape, and it is provided with a plurality of transversely extending preformed fold lines or creases to partition the blank **11** into the several panels connected in end to end relationship. Accordingly, it will be noted that the top panel **12** is connected along foldline F1 to integrally connected handle folds **13** and **14**, which are adapted to be reversely folded about foldline F2. Connected to handle fold **14** along foldline F3 is an end panel **15**. To the other end of the end panel **15** and connected along foldline F4 is an end piece which makes up an end portion **16** of the bottom panel **17**. Connected to the end portion **16** is a marginal flap **18** foldable about foldline F5.

The other end panel **19** is connected to the other end of the top panel **12** along foldline F6. A middle portion **20** and the other end portion **21** of the bottom panel are successively joined to the end panel **19** with foldline F7 connecting portion **20** to panel **19**. Interposed between the middle and end portions **20** and **21** of the bottom panel **17** is a section **22** of the blank which is adapted to be reversely folded about foldline F8 to form a ridge **23**. See FIG. 4. Foldlines F9 and F10 connect the ridge **23** to respective bottom portions **20** and **21**.

A first intermediate panel **24** is connected along foldline F11 to the portions **21** of the bottom panel **17**. Connected about foldline F12 to the upper end of the interme-

diate panel 24 is a top sub panel 25, and a second intermediate panel 26 is foldable about foldline F13 relative the sub panel 25.

As shown, the blank portions 16, 20 and 21 which make up the bottom panel 17 are die cut to define can retaining flaps 27 which are adapted to be reversely folded along their respective foldlines F14 inwardly of the carrier.

Also the handle folds 13 and 14 are die cut. In accordance with this invention the handle fold 14 is provided with a completely blanked out portion to define a hole or opening 14A. The other handle fold 13 is die cut to provide a flap 13A which is foldable about foldline F1. It is to be noted that flap 13A may be provided with a perforated easy tear line 13B.

In accordance with this invention, the top panel 12 is also provided with die cut-outs to define a series of can retaining flaps 28 corresponding with those in the bottom panel.

The sub panel 25, which is adapted to underlie the center portion of the top panel 12 is provided with the die cut to define an opening 29 for accommodating the middle pair of can retaining tops 28 of the top panel. Preferably the can retaining flaps 28 of the top panel 12 are of the type described in my co-pending application Serial Number 145,678, filed October 17, 1961.

An important feature of this invention resides in the preformed, die cut split 30 that extends from one end of the blank 11 to a point adjacent and normal to foldline F6, and from the other end of the blank to a point adjacent the foldline F3. As shown the respective splits 30 are co-axially disposed along the longitudinal centerline of the blank 11. It is to be noted that the split 30 cuts through the entire thickness of the blank 11 to cut the blank 11 into two pieces which are jointed by the top panel 12 and connected handle folds 13, 14. If desired the top panel 12 may be closed at 31, but not cut.

In the folded position of the blank 11, as best seen in FIG. 4, the handle folds 13, 14 are reversely bent beyond one end of the top panel 12 to define an extension thereof. The end panel 15 is folded normal to handle fold 14, thus placing the handle at the junction of the top and end panels 12 and 15, respectively. It will be observed that flap 13A of handle fold 13 is extended through the opening 14A of handle fold 14 and the flap 13A is glued to the end panel 15. The bottom portion 16 of the bottom panel is folded normal to end panel 15, and marginal flaps 18 folded normal to the bottom portion 16.

The other end panel 19 is folded normal to the top panel 12. Bottom end 20 is folded normal to end panel 19. Between bottom portions 20 and 21 section 22 of the blank 11 is reversely folded to define a ridge 23. The first intermediate panel 24 is folded normal to bottom portion 21 to extend between and parallel to the end panels 15 and 19. Sub panel 25 is folded normal to intermediate panel 24, in underlying relationship to the top panel 12. In this position it will be noted that retaining flaps 28 of the top panel 12 are aligned with the openings 29 of the sub panel. As shown, the marginal end 18 of the blank 11 is glued or otherwise secured to the lower end of the intermediate panel 24. The other intermediate panel 26 is folded normal to the sub panel 25 and it has its lower end glued to one side of the ridge 23.

It will be noted that the preformed split 30 divides the bottom panel 17, end panels 15, 19, and intermediate panels 24, 26 into two halves. Except for the top panel 12 and connected handle folds 13, 14 the carrier would be cut in two. Means are provided for securing the split 30 in folded carrier can holding position. In accordance with this invention an adhesive strip of tape 31 or the like, as shown in FIG. 3, secures to two halve sections of the bottom panel portions and thus serve to prevent separation of the divided sections of the carrier.

With the construction described a sturdy wrapper type carrier 10 is had. As shown in FIG. 4, the intermediate panels 26, 24 subdivide the carrier into can receiving cells

32, 33 and 34 with two cans 35, 36 being disposed in side-by-side relationship in each cell of the illustrated embodiment as seen in part in FIG. 2. It is to be observed that the carrier 10 in the empty and folded position can be shipped, if desired, in a flattened position and which can then be easily squared prior to loading.

With the described construction it will be apparent that the cans packed therein can be readily removed all at once simply and easily. To remove all the cans at once, one needs only to strip off the strip of tape 31, as partially shown in FIG. 3. When the tape 31 is removed, it will be apparent that the carrier 10 tends to break open along the precut split 30 as noted. Thus the divided portion of the carrier may be easily spread to effect removal of all the cans packed therein without further tearing the carrier. If desired the carrier 10 can be readily reassembled simply by bringing the spread portion of the carrier together and replacing the tape 31.

To remove the cans one at a time without damaging the carrier, a special retaining tab 28 of the type disclosed in my co-pending application Serial Number 145,678, filed October 17, 1961, is provided.

Briefly, this flap construction 28 includes a can retaining portion 28A which has an arcuate peripheral edge portion 28B adapted to be folded about a foldline F15. A grip or pull tab 28C is integrally connected to the can retaining portion 28A; and both are die cut out of the top panel 12 and sub panel 25 of the carrier.

The arrangement is such that when the flap 28 is folded in can retaining position, the tab portion 28C is folded so as to extend outwardly of the carrier. Accordingly, the tab 28C is preferably folded about a foldline F16 formed at the base of the tab 28C in the plane of the can retaining portion 28A. Consequently, the tab 28C is cut down to its base and into the plane of the flap 28A a distance sufficient so that the tab 28C will extend upwardly through the space from which it was die cut.

With the flap described, a grip is provided so that when a pulling force is applied thereto, the can retaining portion 28A and the adjacent portion of the top panel overlying the same will bow outwardly, as seen in FIG. 5, thus freeing the retaining portion 28A from the chime 36A of the can 36. With the retaining portion 28A disengaged from the can 36 the can 36 can be readily removed from the wrapper simply and quickly; without resulting damage to the carrier. While not shown, a similar retainer flap may be formed in the bottom panel. Flexing of the can retaining portion 28A of the flap 28 may be enhanced by preformed crease lines 28D.

From the foregoing description it will be apparent that the improved carrier 10 can be easily carried in one handle. In carrying one carrier, the portion of the handle folds 13, 14 is such that the weight of the cans is distributed along a diagonal plane 40 of the carrier, as seen in FIG. 7. Also it is to be noted that the strategic positioning of the handle folds 13, 14 as described, enables one to carry two of the carriers in back-to-back relationship with one hand as shown in FIG. 6.

Also with the described construction the cans may be removed one at a time, or all at once as described, without materially damaging the carrier, as described.

While the improved wrapper carrier of this invention has been illustrated and described with reference to a preform split extended through the thickness of the sheet material, it will be understood that an "easy tear" line or perforated line may be substituted in lieu of the preformed split 30. In such event it will be appreciated that the scored or perforated "easy tear" line will have to be cut or separated to effect the spread necessary to remove all the cans.

While in accordance with the provision of the statutes there is illustrated and described herein a specific form of the invention, and those skilled in the art will understand that changes may be made in the form of the apparatus disclosed without departing from the spirit of the

invention covered by the claims, and that certain features of the invention may sometimes be used to advantage without a corresponding use of the other features.

What is claimed is:

1. A foldable wrapper type can carrier comprising a top panel, a bottom panel and connecting end panels for defining a closed figure having open sides, said end and bottom panels having a continuous split extending along the length thereof, a strip of material detachably adhered to the bottom panel for connecting the split portion of said bottom panel in the assembled position of said carrier, and aligned can retaining flaps formed in the top and bottom panels, said aligned retaining flaps being reversely folded inwardly of said carrier and adapted for engaging the chime of a can disposed therebetween, and one of said aligned can retaining flaps having a lift tab integrally connected therewith whereby a pull applied on said lift tab causes the connected chimes engaging retaining flap and associated panel to lift away from the chime of the can retained between said aligned flaps to facilitate individual release of said cans one at a time without disturbing the retention of any of the other cans or destroying the carrier.

2. A foldable wrapper type can carrier comprising a top panel, a bottom panel and connecting end panels for defining a closed figure having open sides, said end and bottom panels having a longitudinally extending split along the length thereof, a detachable strip of material adhered to the bottom panel for connecting the severed portions of said bottom panel together in the assembled position of said carrier, and aligned can retaining flaps formed in the top and bottom panels, said aligned retaining flaps being reversely folded inwardly of said carrier and adapted for engaging the chime of a can disposed therebetween, and one of said aligned can retaining flaps having a lift tab integrally connected therewith, said tab being folded outwardly of said carrier to form a grip whereby a pull applied on said lift tab causes the connected retaining flap and associated panel to lift away from the chime of the can retained between said aligned flaps so as to facilitate individual release of said cans one at a time without disturbing the retention of the other cans and without injury to the carrier.

3. A foldable wrapper type can carrier formed on a single blank of sheet material comprising,

(*a*) a top panel,

(*b*) a handle connected about a foldline to one end of said top panel,

(*c*) said handle including a pair of reversely bent handle folds,

(*d*) an end panel connected about a foldline to the free end of said handle folds,

(*e*) each of said handle folds having a cut out portion to define a hand grip opening,

(*f*) a cut out portion of one of said handle folds defining a flap that is folded so as to extend through the cut out portion of the other handle fold to overlie said end panel,

(*g*) an end portion of the bottom panel connected along a foldline to the other end of said end panel,

(*h*) a marginal end flap connected about a foldline to the end portion of said panel,

(*i*) another end panel connected along a foldline to the other end of said top panel,

(*j*) another end portion of the bottom panel connected along a foldline to said other end panel,

(*k*) a middle portion of said bottom panel,

(*l*) a reverse fold forming a ridge interconnecting said other end portion and middle portion of said bottom panel,

(*m*) an intermediate panel disposed parallel to the end panels of said wrapper, said intermediate panel being connected along a foldline to said middle portion of said bottom panel,

(*n*) a top sub panel adapted to underlie the middle portion of said top panel connected along a foldline to said intermediate panel,

(*o*) a second intermediate panel connected to said sub panel about a foldline, and spaced from said first mentioned intermediate panel,

(*p*) said second intermediate panel having its free end secured to the ridge interconnecting the middle and end portions of said bottom panel,

(*q*) aligned can retaining flaps formed in the top and bottom panels adapted to engage the chime of a can retained therebetween,

(*r*) said ends, intermediate and bottom panels being longitudinally split,

(*s*) an adhesive strip for securing the split of said bottom panel for maintaining the severed portion of the bottom panel in assembled can holding position,

(*t*) and said strip being readily removable whereby said carrier becomes separated along the split thereof to facilitate removal of the cans therefrom,

(*u*) and including a lift tab formed integral with said can retaining flap, and said tab being folded outwardly of said carrier to form a grip whereby a pull applied to said lift tab causes the connected retaining flap and associated panel to lift away from the chime of the can retained between said aligned flaps so as to facilitate individual release of said cans one at a time without disturbing the retention of the other cans and without injuring the carrier.

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