

June 7, 1955

P. ZALKIND  
BOTTLE CARRIER

2,710,219

Filed May 4, 1948

2 Sheets-Sheet 1

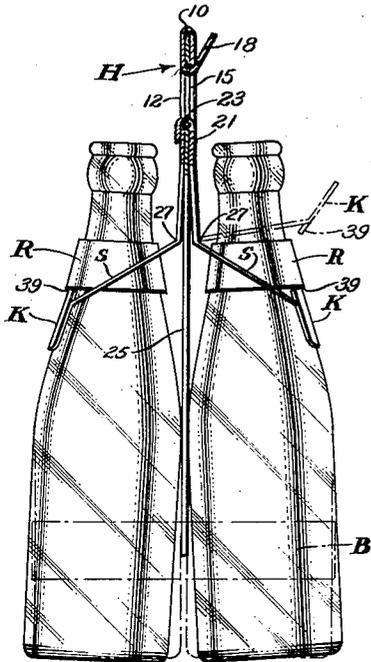


Fig. 1

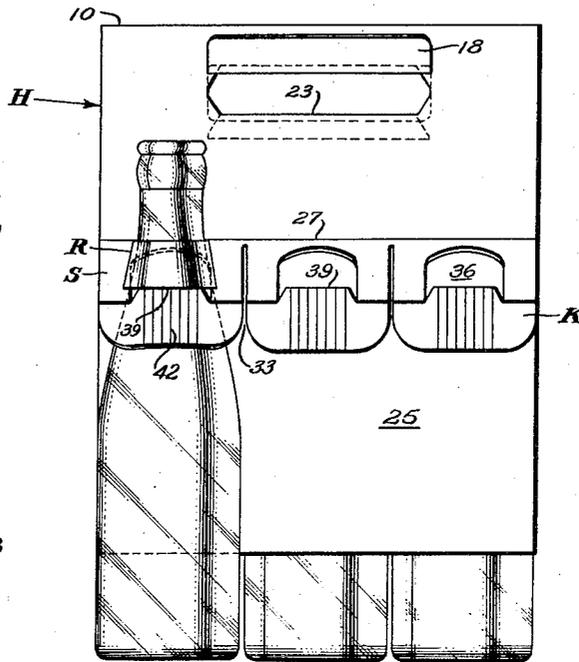


Fig. 2

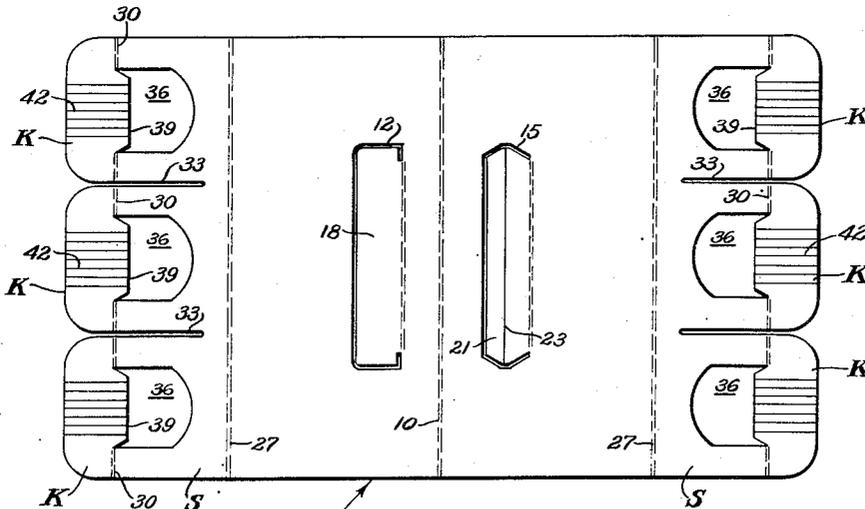


Fig. 3

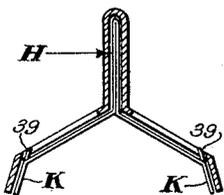


Fig. 4

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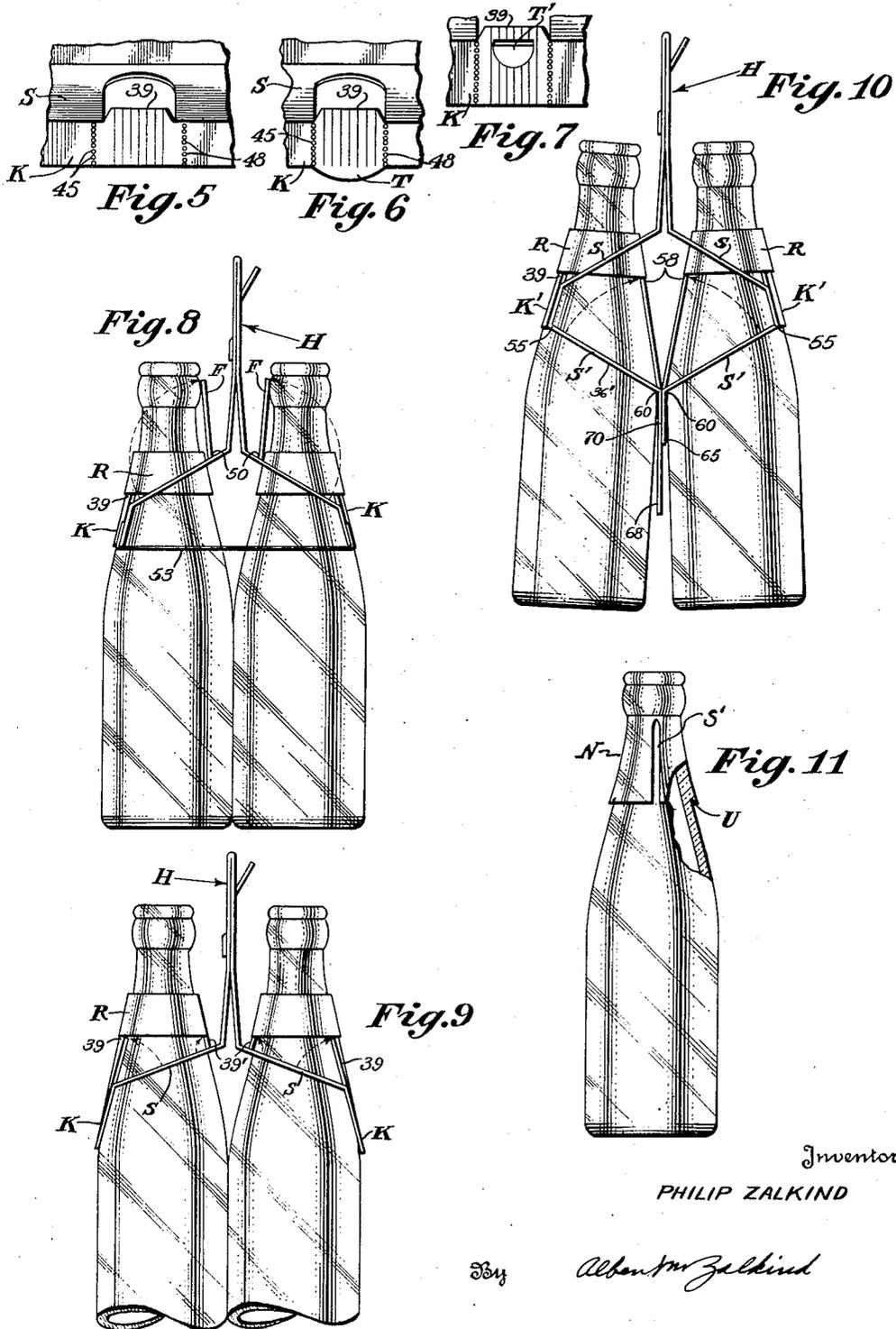
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**BOTTLE CARRIER**

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Application May 4, 1948, Serial No. 24,948

5 Claims. (Cl. 294—87.28)

This invention relates to devices for carrying bottles, jars and the like and more particularly to a device comprised of foldable material such as paper, cardboard, or the like.

Among the objects of my invention are to provide a device of foldable material which may be manufactured very economically by die cutting in large quantities. Additionally, I provide a device of novel construction which can be handled in bulk in stacks of flat blanks, or partially formed and nested and readily erected and applied to unitary groups of bottles in a rapid and simple manner. Further, my carrier is so constructed as to insure a positive gripping action on bottles, jars and the like in a novel and effective manner, and yet may be easily disengaged without injuring or destroying the carrier, allowing for its re-use, if desired, as, for instance, for return of the bottles to the dealer.

Other objects and features of my invention will be apparent from the following detailed description, taken in conjunction with the appended drawing in which:

Fig. 1 is an end view of one form of my carrier as applied to a plurality of bottles;

Fig. 2 is a side view of the carrier of Fig. 1 showing a single bottle in position;

Fig. 3 is a view of a die-cut blank for the carrier shown erected in Figs. 1 and 2;

Fig. 4 is a sectional view of an applicator for applying carriers as shown in Figs. 1 to 3 to a plurality of bottles;

Fig. 5 is a modification of one of the elements of my carrier;

Fig. 6 is another modification of the same element; and

Fig. 7 is a further modification of that element;

Fig. 8 is an embodiment of my carrier showing a modified form;

Fig. 9 is a further embodiment of my carrier;

Fig. 10 is an additional embodiment; and

Fig. 11 discloses a modified bottle for use in conjunction with any of the carriers herein disclosed.

With reference to Figs. 1 to 3, and particularly with reference to Fig. 3, my carrier comprises a handle member H divided by a fold line 10. Hand holes 12 and 15 are provided in the member H on opposite sides of fold line 10. Hand hole 12 is provided with a flap 18 and hand hole 15 is provided with a flap 21 having a fold line 23 therein. By referring to Fig. 1 it will be obvious that when the handle member H is folded on line 10, the flaps 18 and 21 may be brought through the aligned holes 12 and 15 to secure the handle portions together. The extremity of flap 21 may be glued to the outer marginal face of hand hole 12, as shown. A padding member 25 of sheet fibrous material may be secured between the superimposed handle portions by being provided with a perforation similar to the perforation 12, flaps 18 and 21 thereby act to secure padding member 25 in place.

Handle member H has on either side thereof a shelf member S foldably related thereto as by fold lines 27. Each shelf S has one or more skirt elements K foldably joined thereto as at fold lines 30. In the forms shown

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in Figs. 1 to 3 the skirt elements are shown as separated by virtue of the slots 33 therebetween, which slots extend substantially into the shelf members. As will be later evident, however, my invention may be modified to an extent that the skirt elements on each side of the handle may be integrally formed as a single skirt member with no severance between the elements. Each shelf member is provided with a plurality of apertures 36 and the skirt elements have respective lips 39 protruding into respective apertures 36. A plurality of score lines 42 are preferably, but not necessarily, provided in the skirt elements extending from the extremity of the respective lips to the free edge of the skirt elements. As may be readily seen from Figs. 1 and 2, my construction lends itself to securement on bottles which are provided with abutments or rings R permanently affixed thereto. Rings R may be of plastic, rubber, or the equivalent, frictionally held or cemented or welded on the bottles, or may be an integrally moulded portion of the bottle.

As will be obvious from study of Figs. 1 and 2, when the carrier is applied to a plurality of bottles by being erected and thrust downwardly over the tops thereof, the skirt elements K are rotated as the neck of the bottles and projections R pass through apertures 36, the operation being such that lip elements 39 act as levers causing rotation of the respective skirts and ultimately engage the undersurfaces of respective projections R, whereupon the bottles are securely gripped thereby. The provision of score lines 42 enables each of the several skirt elements to accurately wrap itself about the bottle so as to ensure a maximum of the edge areas of lips 39 to be engaged by rings R. Each skirt element K bears against its respective bottle below the line of engagement and acts to retain the bottle in proper position on lip 39.

While Fig. 1 shows the bottles to be slightly aslant to illustrate the general condition, and while such disposition does not affect the efficacy of secure gripping by lips 39 against the rings, nevertheless, as indicated in dot-dash lines, a band B of, for instance, paper, or the like, may be applied about the bottles to ensure parallelism and prevent swaying. It will be obvious that such band B encompasses peripherally two or more bottles and binds them into a unitary package. I have found, however, that such a band, B, although desirable in some cases, is not necessary for the gripping effect of my carrier. Depending, of course, on the shape of the bottle and the location of the gripping rings R parallelism can be provided by suitable design of the holder and placement of projections. As a general proposition, it is desirable to have rings R fairly low on the bottle neck.

As illustrated in Fig. 1, any bottle may be released from the gripping engagement of the respective lip 39 by lifting the respective skirt element K upwardly so as to rotate the lip out of engagement with the respective ring R. While this particular means of releasing individual bottles is a convenience to the consumer, it should be noted that any bottle may be removed from the carrier, of course, by forcefully pulling it outwardly or downwardly, tearing the material of the skirt element in so doing, but this is not necessary, as herein disclosed.

Fig. 4 illustrates an applicator which may be formed of sheet metal and is used as a convenient means of applying carriers of the form shown in Figs. 1 to 3 to a group of bottles. It will be obvious, that in use, a blank is erected and thrust into the applicator as shown, whereupon the applicator is brought down over the tops of a group of bottles until the lips 39 engage below respective rings R.

I regard this as an important feature of my invention for the reason that carriers may be placed over bottles in situ after they have been placed in conventional open-topped crates of the type used in delivery. Thus no

change in the sequence of events in handling the filled bottles is necessitated in the bottling plant.

In Figs. 5, 6 and 7, wherein like reference characters refer to like parts, as heretofore used in Figs. 1 to 3, I show various modifications of the lip and skirt construction to enable ready removal of individual bottles. For example, in Fig. 5, the skirt portion K is provided with perforations 45 and 48 so that when a bottle is grasped and pulled outwardly destruction of the skirt material is conveniently afforded by causing tearing along the perforated lines. In Fig. 6 the perforated lines extend from the corners of lip 39 and a tab T is provided at the free edge of the skirt connecting perforated lines 45 and 48. Tab T may be grasped by the consumer and pulled upwardly to sever the skirt element contiguous with lip 39, whereupon the respective bottle is released. Fig. 7 shows a somewhat similar arrangement except that a tab T' cut from and folded outwardly of the material of the skirt element may be utilized by the consumer, who, by a downward pulling motion, severs the skirt element to release the respective bottle. While some weakening of the material naturally results by virtue of provision of perforated lines 45 and 48, such weakening has no effect on the security of the holder for the reason that the force exerted by the weight of the bottle on lip 39 is substantially in a downward direction and exerts a shearing stress on the perforated lines in the plane of the material rather than an outward pulling stress. It will be appreciated that tabs T and T' may be utilized with or without the assisting perforated lines.

Fig. 8 shows a construction somewhat similar to the form shown in Figs. 1 to 3 except that the aperture in shelf S has a portion of the material thereof folded upwardly to form a flap F. Thus such material instead of being wastage is utilized as a backing member which by virtue of the natural resiliency provided at the fold 50 presses against the bottle to thereby bias it outwardly. This effect promotes parallelism of the bottles as well as assisting snug engagement of rings R with lips 39. A further feature shown in Fig. 8 is that of a strap 53 of paper, or the like, secured at both ends to skirt elements K as by gluing, which strap is provided at both ends of the carrier and reinforces the structure, or which may be provided as an integral part of the blank.

Fig. 9 is based on the construction shown in Fig. 8 but is modified to the extent that the material of each aperture 36 is cut in such proportions that two lips 39 and 39' are formed. These lips engage on opposite sides of a respective ring R and thus serve to distribute the weight carrying area as well as to provide balanced forces acting on the bottle.

Fig. 10 shows a construction wherein the material of skirts K' is provided with a fold line 55 joining to said skirts, on each side of the carrier, an undershelf S'. Each undershelf is provided with an aperture 36' similar to aperture 36 as heretofore described and the material of such aperture is utilized to form the lip 58 engaging the rings on respective bottles on the side opposite to engagement with lips 39.

It will be evident from consideration of Fig. 10 that additional material of the blank may be foldably joined to the shelves S' at fold lines 60 to form padding members extending downwardly between the bottles. Such padding members 65 and 68 may be joined by gluing or stapling at 70, as shown.

In Fig. 11 I disclose a form of bottle having a flared portion N moulded thereon which portion terminates in a formation peripherally surrounding the neck of the bottle and which formation may be provided with an undercut U. This construction is particularly adapted for co-action with carriers of the kind hereinabove described by virtue of the recess provided by the undercut U for secure engagement with any of the lip formations disclosed. If desired, the portion N may be provided with

one or more vertical slots S', to accommodate a fork tine for prying the bottle loose from the engaged lip.

While the disclosures made herein are primarily based on the broad principle of providing a lip for engagement with a ring or projection on periphery of a bottle, it should be understood that the invention is in no way limited to conventional die-cutting methods for manufacture. For example, the lip 39 and its skirt element as shown in Figs. 1 to 3, could be preformed in permanently arcuate shape to conform with the dimensions of any specific bottle. Also, instead of score lines 42, corrugations may be used to make portions of the skirt pliable enough to conform to the neck of the bottle.

The bottles intended for use in conjunction with my carrier may be modified in various ways from the forms shown. For example, the ring R may be moulded only partially around the bottle, so that the bottle may be released by rotating it about its axis to effect disengagement with the carrier lip. Also, a portion of the ring may have a rounded convex undersurface, so that when the bottle is axially rotated to bring such portion into contiguity with the lip, the bottle will be released by pushing it down.

I am aware that my invention may be modified without departing from the spirit thereof and I do not seek to be limited by the specific disclosures hereinabove set forth.

I claim:

1. In a carrier for a container having engageable ridge means, a blank of foldable material having an opening therethrough and having aligned fold lines thereacross intersecting said opening, said opening being of size to accommodate a portion of said container, said fold lines being on opposite sides of said opening whereby a portion of the blank bounding said opening is rotatable with respect to the plane of said opening in the remainder of said blank, said portion of the blank having a lip initially extending into said opening, said lip being thus rotatable out of the plane of said opening for engagement with said engageable ridge means, and said portion of said blank being thus engageable with said container below said ridge means, said portion of the blank having at least one score line extending into said lip whereby said portion and said lip may bend to more closely conform to the shape of said container.

2. In a carrier for a container having engageable ridge means, a blank of foldable material having an opening therethrough and having aligned fold lines thereacross intersecting said opening, said opening being of size to accommodate a portion of said container, said fold lines being on opposite sides of said opening whereby a portion of the blank bounding said opening is rotatable with respect to the plane of said opening in the remainder of said blank, said portion of the blank having a lip initially extending into said opening, said lip being thus rotatable out of the plane of said opening for engagement with said engageable ridge means, and said portion of said blank being thus engageable with said container below said ridge means, said portion of the blank having tear lines terminating at said opening and being disposed adjacent the ends of said lips whereby said container may be readily removed by ripping along said tear lines.

3. A carrier for containers having engageable ridge means, comprising a blank of foldable material having a shelf, and skirt means hingedly secured to said shelf, a plurality of openings in said shelf for receiving containers, said openings being bounded on one side by said skirt means, said skirt means being rotatable out of the plane of said openings below said shelf, a plurality of lips secured to said skirt means and initially extending into respective openings, said lips being likewise rotatable out of the planes of respective openings above said shelf so as to engage ridges of respective containers in said openings, said skirt means being engageable with said containers below said ridge means when said lips are in engagement with said ridge means.

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4. A carrier as set forth in claim 3, wherein said skirt means comprise individual panels independently rotatable with respect to each other.

5. A carrier as set forth in claim 4, wherein said individual panels are separated by severance lines which extend into the material of said shelf intermediate adjacent openings for a distance substantially equal to the dimension of said openings in the direction of said severance lines.

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