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R. M. HOLMES

2,299,625

BOTTLE CARRIER

Filed March 21, 1940

Fig. 1

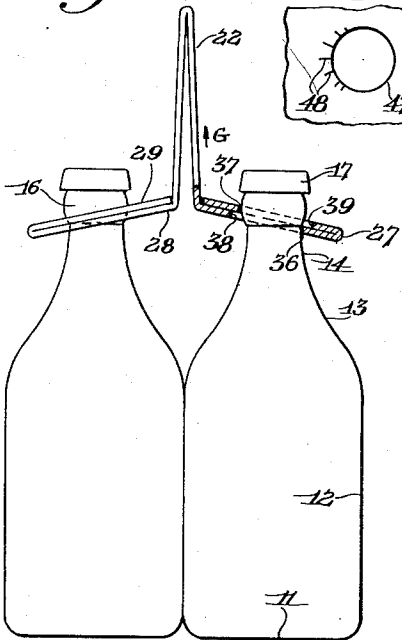


Fig. 10

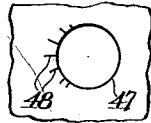


Fig. 7

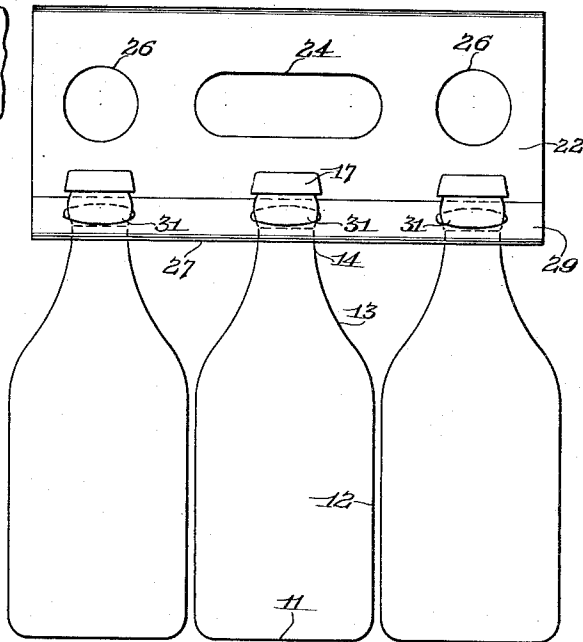


Fig. 2

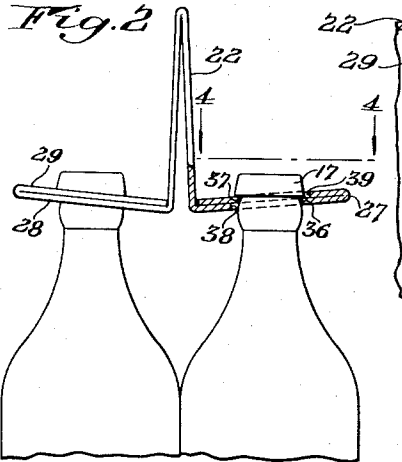


Fig. 4

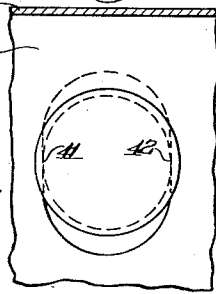


Fig. 9

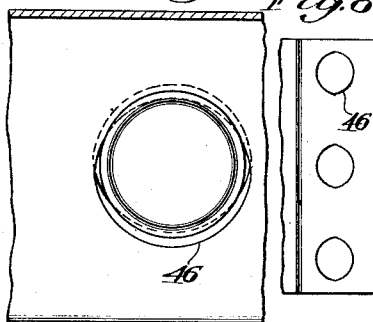


Fig. 8

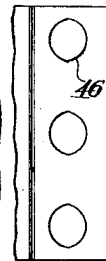


Fig. 5

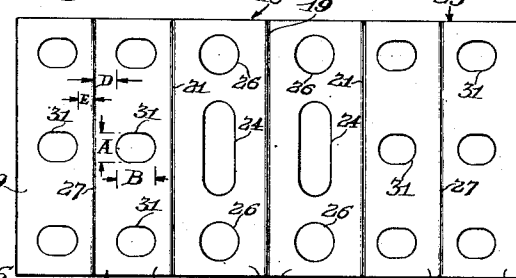


Fig. 3

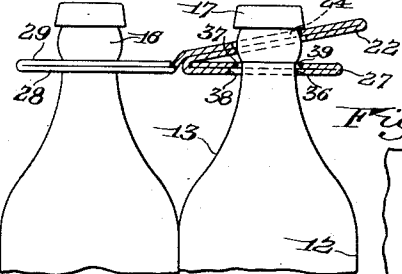
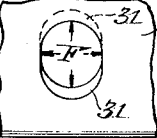


Fig. 6



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UNITED STATES PATENT OFFICE

2,299,625

BOTTLE CARRIER

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Application March 21, 1940, Serial No. 325,211

3 Claims. (Cl. 224-45)

My invention relates to carriers for bottles and other containers and is a continuation in part of my copending application, Serial No. 221,581, filed July 27, 1938, to which reference is hereby made.

In the container carriers of the prior art, for example, that type of carrier used in connection with the sale of bottled beer and soft drinks through retail outlets, it has been customary to employ a carrier of paper board material of such character that the containers or bottles are substantially entirely enclosed in the carrier. These carriers are usually provided with bases supporting the bottoms of the containers, side walls both on the outside of the containers and between adjacent rows of containers, and with a handle of one character or another which is usually formed by extending one or more of the side walls. Certain types of these containers are also provided with end walls.

These carriers of the prior art require not only expensive fabricating operations to cut the paper board into blanks, fold them, and usually to paste portions of the blanks together, but also are relatively expensive because of the large amount of material required. Sufficient material is employed in most of the designs, with which I am familiar, to substantially enclose the containers. In addition it is inconvenient and expensive to apply the carriers of the prior art at the bottling plant, not only because of their shape, but also due to the fact that the tops of the carriers project above the tops of the containers. The projection of the tops of the carriers above the tops of the containers makes it difficult to pile cases such, for example, as beer cases, one on top of the other. The carriers of the prior art are so inconvenient and expensive that it has been more usual for the retailer of such beverages, as bottled beer, to place the bottles in paper bags. The bags are not only inconvenient to handle but are, of course, subject to breakage.

An object of my invention is, therefore, to provide a carrier for containers which may be made of inexpensive materials; may be inexpensively fabricated; and which may be quickly applied to the containers.

Another object of my invention is to provide a carrier for containers which firmly grips the cap or bead parts, or both, of container so that the containers may be carried in a suspended position.

Other objects and advantages of my invention will be more particularly set forth in the claims and will be apparent from the following descrip-

tion, when taken in connection with the accompanying drawing, in which:

Fig. 1 is an end elevation showing a group of bottles with the carrier of my invention applied thereto and with a part of the carrier in section to better illustrate the invention;

Fig. 2 is a view similar to Fig. 1 showing another position which the parts of the carrier may occupy when applied to the containers;

Fig. 3 is a view showing how the handle of the carrier may be caught beneath the cap part of the container so as to permit the containers to be inserted in a case, carton, or other enveloping structure;

Fig. 4 is a plan view taken substantially on the line 4-4 of Fig. 2;

Fig. 5 is a view showing how the blank is cut and scored for making the carrier;

Fig. 6 is a plan view showing how the container receiving openings of the carrier appear when in superposed relation;

Fig. 7 is a side elevation of Fig. 1, but showing a modified form of container receiving opening;

Fig. 8 is a view of a portion of the blank of the modified form of my invention showing how the container receiving openings are cut;

Fig. 9 is a view similar to Fig. 4 showing a plan view of the modified form of my carrier when applied on a container;

Fig. 10 is a plan view showing another modified form of container receiving opening.

As shown in the above mentioned co-pending application, the carrier of my invention may be applied to bottles, as shown in Fig. 1 herein, or cans, or any other receptacles having a part such as a cap or a bead beneath which the margins of openings in sheet or paper board material may lodge.

The bottle comprises a bottom 11, a body portion 12, an inwardly and upwardly sloping portion 13 and a neck 14. The neck is usually provided with a bead 16. Throughout the specification and claims I will use the term "bead" to designate a portion of the container which is of larger diameter than the smallest diameter of the neck or an enlarged portion below which the margins of an opening in the carrier may grip. To the top of the bottle or other container is applied a cap 17 or other bottle closure.

The carrier, as shown in Fig. 5, comprises a blank or sheet of paper board, or equivalent material, generally indicated by the numeral 18. The blank 18 is provided with a substantially centrally located fold line 19 and a pair of fold lines 21 spaced from the central fold line. The fold

lines 21 divide the structure into a central carrying portion 22 and two end container gripping portions, generally indicated by the numeral 23. The carrying portion 22 on each side of the central fold line is provided with a hand hold 24 and a pair of apertures 26 for a purpose to be described. If desired, the hand hold and the apertures 26 may be a single elongated opening on each side of the transverse center line, although the construction shown is preferable because of the additional strength obtained when the hand hold 24 and the apertures 26 are separated.

The container gripping portions 23 of the blank comprise two flaps separated by a fold line 27. The flaps of the container gripping portion of the carrier will hereinafter be referred to for the purpose of distinguishing between them, as a lower flap 28 and an upper flap 29. For a purpose which will later appear, the upper flap 29 is preferably made slightly wider than the lower flap 28. As shown in the drawing, each of the flaps 28 and 29 is provided with a series of apertures 31, which are preferably in alignment with each other longitudinally and transversely of the blank. In the particular carrier shown, each of the flap surfaces is provided with three apertures so that when the upper flap section 29 is superposed with respect to the lower flap section 28 on each side of the central fold line 19, a carrier is provided for the reception of six containers.

While I have shown the carrier as adapted for carrying six containers, it will be appreciated that the number of containers for which the carrier may be arranged may be varied. It is, however, desirable that the carrier be made so that it will be adapted for the same number of bottles or containers on each side of the central fold line so that the containers on one side of the transverse center of the carrier will balance those on the other side when the containers are carried. For a purpose which will later appear the distance across each of the apertures, the dimension A, is made substantially the same as or perhaps slightly smaller than the diameter of the cap or bead of the container with which the carrier is to be used so that some slight force may be required to move the necks of the bottles through the apertures. The distance across the apertures, the dimension B, is made somewhat larger than the diameter of the cap or bead of the container with which the carrier is to be used.

The apertures 31 are arranged in the flap surfaces 28 and 29 so that while they will partly register with each other when the upper flap 29 is superposed with respect to the lower flap 28, they are spaced so that their axes will be out of registry when the flap sections are superposed. This is accomplished by making the dimension D slightly larger than the dimension E. It will be appreciated that the precise dimensions of the apertures will depend upon the bottles with which the carrier is to be used. Then too in some bottles the bead is larger in diameter than the cap and perhaps some bottles are made with beads of smaller diameter than the caps. These factors should, of course, be considered in shaping the apertures.

In applying the carrier to the bottles or other containers, the flaps should be moved with respect to each other on the fold lines 27 so that the flaps are in slightly angular relation with each other. Then the openings 31 in the lower flap 28 may be quite readily slipped over the upper end of the bottle so as to lodge the margins thereof beneath the bead or cap parts. The upper

flap may then be also swung downward so as to lodge the margins of the openings of the upper flap beneath the bead or cap parts. If desired, the carrier may be applied when the two flaps 28 and 29 are in a plane by moving the bottles through the openings in the lower flap 28 and then swinging the upper flap through 180° around the hinge line 27 to the position shown in Fig. 1.

In Fig. 6 I have shown the axial relation of the openings in the upper and lower flaps. From this view it will be apparent that although each of the openings is larger than the cap or bead of a container with which it is to be used, since the openings are offset with respect to each other, the through opening defined at F is smaller than the largest diameter of the bead or the cap. Those portions of the margins of each opening lodge against, beneath and intimately grip the bead of the bottle so as to prevent the bottle so as to prevent the bottle from slipping through the combined opening. As shown in Fig. 1, the margin 36 of the lower flap grips the bottle beneath the bead while the margin 37 of the upper flap grips the bottle bead either at substantially its largest diameter, as shown in Fig. 1, or preferably slightly below this point. The margins 38 and 39 do not engage the bottle. However, as shown in Fig. 4, the side margins of the openings in both the upper and lower flaps preferably engage the bead of the bottle, as indicated at 41 and 42.

Of particular importance in connection with the carrier of my invention is the fact that, as the carrier is carried, the weight of the bottles is primarily on the lower flap as the force is in the direction of the arrow G in Fig. 1. Assuming the margins of the upper flap to be tightly wedged against the bead of the container, the force in the direction G tends to pull the lower flap upward into engagement with the upper flap. Thus the weight of the bottles tends to bring the two flaps into substantially contiguous superposed relation and any tendency for the bottles to slip out of the openings, increases the wedge effect of the margins of the openings on the bead and tends more tightly to hold the containers in position.

Another important factor tending to increase the locking effect of the margins of the apertures on the necks of the bottles is the fact that, as previously mentioned, the upper flap 29 is made slightly wider than the lower flap 28. This causes the free edges of the upper flaps to wedge against the walls of the carrying portion 22 when the weight of the bottles is applied on the carrier. This wedge effect tends to press the margins 37 of the openings in the upper flaps more firmly against the portions of the bottles which they engage. Moreover, it tends to cause the margins 37 to grip the bottles at a lower point on the bead somewhat below the largest diameter thereof and thus to increase the effectiveness of the carrier. It will be further noted that the lower flap is pulled by the handle, when the weight of the bottles is applied, so that the flaps are urged in approximately opposite directions to thereby more tightly lock the bottles in position.

While I prefer to apply the carrier so that the margins of the flaps will lodge beneath the bead part of the bottle, it is possible to use the carrier as shown in Fig. 2, in which case the margins of the openings are lodged beneath the cap part. The carrier is perhaps not quite as effective in this position. However, the action

is somewhat similar to that described above since the margins 36 and 37 catch beneath the cap and the side edges of the margins 41 and 42 provide a substantially continuous circle of material beneath the lower margin of the cap. Occasionally, when applying the carrier, the upper flap will lodge below the cap part while the lower flap will lodge below the bead. The flaps will then be slightly separated but the container will be held effectively.

As more clearly described in the above mentioned co-pending application, the hand hold 24 and the openings 26 in the carrying portion of the carrier, may be slipped over the caps of the bottles to assume the position shown in Fig. 3. Thus, the carrier may be applied, for example, if used in connection with beer bottles, by applying the carrier at the bottling plant and then moving the handle or carrying portion to the position shown in Fig. 3 and inserting the bottles in a case, carton, or other enveloping container. The containers, together with the carriers applied thereto, may be then shipped to the point of use. The retailer may conveniently sell the beer in units of six bottles, or if a customer only wants, for example, four bottles, two of the bottles may be removed from the carrier.

In Figs. 8 and 9 I have illustrated a slightly modified form of my invention wherein the apertures are somewhat elliptically shaped as shown at 46. With this type of opening the margins of the openings are also offset with respect to each other and the margins grip the bead, as illustrated in Fig. 9. A side elevation of the carrier in position on the bottles with the type of openings shown in Figs. 8 and 9 has been illustrated in Fig. 7.

In Fig. 10 I have shown another modified form of my invention wherein the openings 47 are substantially circular with a portion of the margin slitted, as shown at 48, so as to provide, in effect, an oval opening, of substantially the same shape as those illustrated in Fig. 5. The openings 37 in the upper and lower flaps will be also offset with respect to each other so as to provide a through opening which is smaller in diameter than the cap part or the bead part, or both, of the container with which the carrier is to be used.

While I have shown and described the preferred forms of my invention, it will be understood that various modifications and changes may be made therein, particularly in the form and relation of parts, without departing from the spirit of my invention as set forth in the appended claims.

I claim:

1. A carrier for two or more containers each of the type having either a cap part or a bead part or both, the said carrier comprising a sheet of paper board material having a carrying portion and a gripping portion for containers, said gripping portion having openings therein, the margins of the openings being constructed and arranged so that the tops of the containers may be each moved into one of said openings and so that at least one of said parts lies above the opening with the margins of each of the openings intimately gripping one of the containers

beneath one of said parts, said carrying portion normally extending upward above the top of the containers and being apertured with the openings thereof respectively in alignment transversely of the sheet with the containers so that when in use the apertured portion may be used as a hand hold and said carrying portion being foldable down so as to lie substantially flat adjacent the top of the containers with the margins of the openings in the apertured portion caught beneath the cap parts to enable the containers, together with their carriers in position, to be packed in cases and shipped in that condition without the carrier projecting above the container tops.

2. A carrier for preferably an even number of containers arranged preferably in two parallel rows for example six containers of three containers in each row, each of the containers having either a cap part or a bead part or both, said carrier comprising a single sheet of paper board material having a two-part carrying portion, a pair of container gripping portions each having a plurality of apertures therein, a fold line between said carrying portion and each of said gripping portions whereby the gripping portions may extend substantially at right angles to the carrying portion on opposite sides thereof, each of said apertures being so constructed and arranged as to receive the neck of a container within the margins of the opening and in gripping engagement with one of said parts whereby the containers may be lifted by the carrying portion with the containers suspended to hang downward from the margins of said openings and with the containers on one side of the carrying portion substantially balancing the containers on the other side of the carrying portion, said carrying portion having apertures therein so constructed and arranged that they are in alignment with the tops of the containers so that the carrying portion may be folded down to one side along said fold lines and the edges of the apertures in the carrying portion caught beneath the cap parts of the containers on that side so that the carrying portion may lie substantially in a plane below the tops of the containers, said apertures in the carrying portions serving as hand holds when released from their cap engaging position.

3. A carrier for a container having a cap part, a bead part, or both, said carrier comprising a single sheet of material having a carrying portion and two superposed integral flaps having a hinging fold line between them, the lower of said flaps being attached to the carrying portion and the upper of said flaps having a free edge extending substantially parallel to said fold line, said flaps extending laterally from the carrying portion and the upper of said flaps being wider than the lower flap, said flaps having openings at least partly in registry with each other and adapted to receive one of said parts, the flaps being arranged so that the weight of the container pulls the upper flap toward the lower flap and wedges said free edge against the carrying portion.

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