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BOTTLE CARRIER

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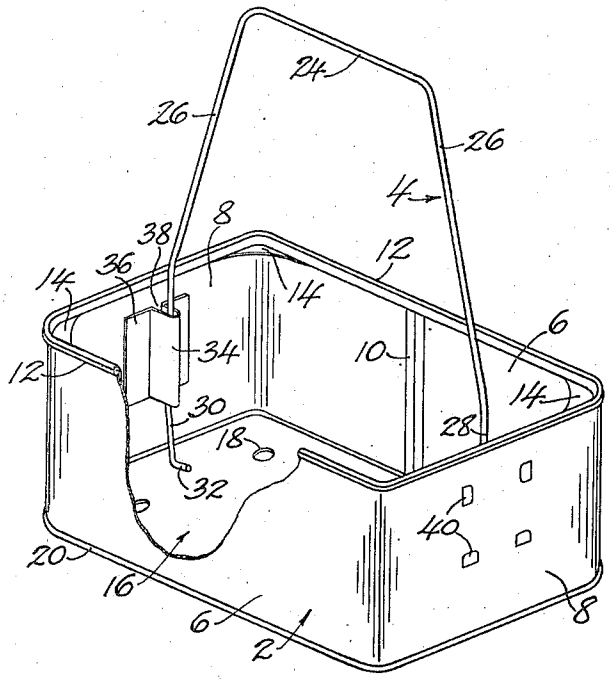


Fig. 1.

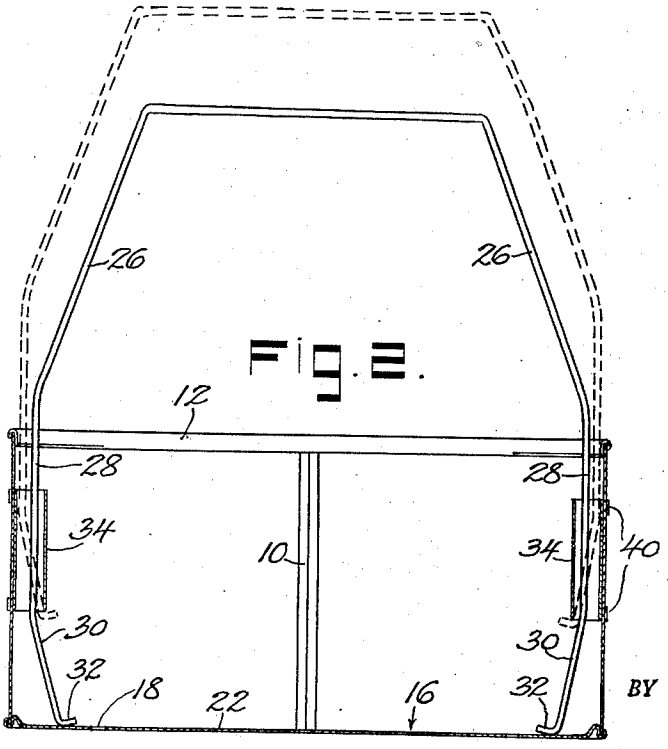


Fig. 2.

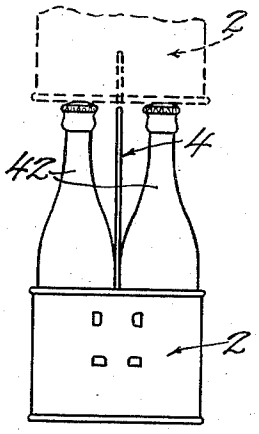


Fig. 3.

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BOTTLE CARRIER

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1 Claim. (Cl. 224—45)

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My invention relates to bottle carriers, and particularly to such bottle carriers which are formed from inexpensive sheet material.

Such carriers are well known and are most commonly used in the soft drink trade where it is the current practice for vendors to furnish them to customers with quantity purchases. Since they are used to carry a load of filled bottles, it is necessary that they be rigid and durable in construction. Also, since the carriers are more or less of a throw-away type, it is necessary to use the most inexpensive material in their construction, and to economize in all possible means in the manufacture and transportation of the same to the place of use.

Heretofore it has been customary to construct this type of bottle carrier with side and end walls formed from a single sheet of inexpensive material such as fiber-board with the free ends thereof suitably secured together. A reinforcing element of suitable rigid material is then positioned around and secured to the upper edges of the side and end walls and a bottom of similar material having drainage openings formed at suitable intervals is secured to the lower edges of said side and end walls by turning portions of the bottom around the same. The reinforcing elements and the turned over portions of the bottom cooperate to give rigidity to said side and end walls. A handle is then provided usually by extending a narrow rigid member between the mid-points of the end walls. The handle is of sufficient height so that the gripping portion extends above the tops of the bottles positioned in the carrier so that the user may grip the handle without interference from the bottles.

It is obvious that there are numerous objections to such constructions. The rigid handle member extending upwardly from the side walls presents an obstacle to the proper stacking of the containers so that when they are shipped it is necessary to utilize a great deal of space. If the handle is not secured to the side and end walls until the carton is received by the retail user, an additional operation requiring much time and labor is necessary to fixedly secure the same to the carrier. Further, the handle prevents the stacking of loaded carriers in the vendor's store. Therefore it is necessary that the vendor use a great deal of space to display his wares. In addition to this, the turning over of portions of the bottom so as to form a bead around the lower edges of the side and end walls leaves the bottom slightly raised above the lower edge of the carrier, and the portions which secure the same to the

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side and end walls are subject to displacement by the weight of the bottles.

My construction overcomes these objections to the prior art by providing a rigid handle member which may be quickly and easily attached to or detached from the end walls of the container. Further, the handle is movably secured in the attaching members so that it may be moved upwardly to a position above the tops of the bottles placed in said carriers, thus allowing the user to adequately grip the same, and also may be moved to a position below the tops of the bottles placed in the carrier so that the loaded carriers may be stacked one upon the other. In addition to this the middle section of the bottom is drawn downwardly so that it lies in the same plane as the under surface of the beaded securing portion. Thus when the loaded carriers are placed on a surface the middle portion of the bottom will rest on said surface and prevent the weight of the bottles from displacing the beaded portion from the lower edges of the side walls of the carrier.

An object of my invention is to provide a new and improved bottle carrier which is inexpensive to produce and economical to ship in quantities.

Another object of my invention is to provide such a carrier which is more durable than those heretofore produced.

A further object of my invention is to provide a novel handle member for said carrier.

A further object of my invention is to provide a new and novel means for detachably securing said handle member to said carrier.

A still further object of my invention is to provide a new and improved bottom for said carrier.

These and other features and objects of my invention may be readily seen from the following description thereof in which reference is made to the figures of the accompanying drawing.

In the drawings:

Fig. 1 is a perspective of a bottle carrier embodying the features of my invention with a portion of a side wall thereof broken away;

Fig. 2 is a vertical section taken through a carrier embodying the features of my invention showing by dotted lines the method of securing the detachable handle member thereto; and

Fig. 3 is an end view of a carrier embodying my invention showing the handle in an upper and lower position.

As shown in Fig. 1, my carrier generally comprises a body portion 2 of a generally rectangular shape and a handle member 4 extending lengthwise along the median line thereof.

The body portion has side walls 6 and end walls 8 formed from a single sheet of fibrous material having its free edges secured together by the binding strip 10. A reinforcing element 12 formed from suitable sheet material such as sheet metal extends along and is folded over the upper edges of said side and end walls so as to form a bead and serves to give rigidity to the carrier construction. This reinforcing strip is further provided with corner pieces 14 which present inwardly facing concavely curved edges for engaging the body portions of bottles placed in the container and thus diminishing rattling or other displacement of said bottles.

Secured to the bottom edges of said side and end walls is a bottom member 16 formed from a sheet of suitable rigid material such as some type of inexpensive sheet metal. Openings 18 are formed at suitable intervals throughout the bottom so as to allow the liquid condensate dripping from the sides of the bottles placed in the container to escape from the carrier.

As shown in Figs. 1, 2 and 3, the bottom is secured to the lower edge of the side and end walls by folding a portion 20 around said lower edges so as to form a bead. In performing the bottom securing operation the middle portion 22 thereof is drawn downwardly so that its under surface lies flush with the under surface of the beaded portion 20 and said middle portion of the bottom will lie flat upon any surface upon which the carrier is positioned. Thus when there is a load of bottles in the carrier they will not tend to push the bottom downwardly and separate the inner wall of the beaded portion from the lower edges of the side and end walls or otherwise distort or weaken the container construction.

The handle 4 extends from one end wall of the carrier to the other. As shown it generally comprises a central gripping portion 24 with legs 26 inclined outwardly therefrom. In the illustration used herein it assumes the shape of a portion of a polygon, but it may be curved or assume any other feasible shape or form. It must, however, be formed of some suitable resilient material, preferably, as in the form shown, steel or some other type of spring wire.

The handle should be of sufficient over-all height to allow the central gripping portion 24 to assume a position substantially above the bottles positioned in the carrier when the handle is in an operative position. Its over-all width should be such that sections of the legs 26 thereof, designated by the numeral 28, assume a position in which they engage the interior surfaces of the end walls 8 of the carrier when the handle is in its normal uncompressed position.

Portions 30 of the legs 26 adjacent the extremities thereof are inclined substantially inwardly from the sections 28, and end lugs 32 formed thereon by turning or bending said extremities inwardly at an angle of substantially 90° thereto. The portion 30 should not be inclined too acutely so as to prevent the expansion of the legs of the handle to the position shown in Fig. 2 of the drawing, but should be acute enough to allow the lugs 32 to extend substantially inwardly from the interior surfaces of the end walls 8 and engage the inner walls of the retaining members 34, say at an angle of 10°.

The retaining members 34 are formed of generally rectangular strips of sheet metal stamped so as to present flanges 36 on either side of centrally located open ended grooves 38. In the form shown the flanges 36 are equipped with tabs 40

which are used to secure the retaining members 34 to the end walls of the carrier. When the retaining members are secured to the end walls the flanges 36 lie flush against the interior surfaces of said end walls, and the grooves 38 cooperate with said interior surfaces to form a conduit through which the extremities of the handle may be threaded. The grooves 38 should be of sufficient depth to allow the passage of the lugs 32 therethrough, while they should not be of so great a depth to prohibit the engagement of the lower edges of the interior walls of said grooves by said lugs after the extremities of the handle have been threaded through and allowed to assume a more or less normal unexpanded position.

It is obvious that the handle 4 may be quickly and easily attached to and detached from the side walls of the carrier. In order to attach the handles it is only necessary to spread the legs 26 of the handle 4 sufficiently to allow the lugs 32 to be inserted into the conduit formed by the grooves 38. The handle 4 may then be pushed downwardly until the lugs 32 extend below the lower edges of said grooves. When in this position the handle 4, because of the resilient nature of its material, will attempt to assume its normal, unexpanded position, and the lugs will be forced into a position in which they extend interiorally of the lower edges of the grooves 38, and will engage the lower edges of said interior surfaces when the handle is pulled upwardly. Thus the handle may not be detached from the side walls of the carrier unless the lugs are positively displaced outwardly by the user of the carrier.

It is readily seen that this type of easily detachable handle is a vast improvement over the prior art. Thus the carriers can be shipped in quantity without their handles, and a great saving in shipping cost is effected. Further, the ease with which the handle can be attached does not necessitate the expenditure of an excessive amount of time and labor when the carriers arrive at their destination and are prepared for use.

As shown in Fig. 3 my new and improved means for securing the handle to the end wall allows loaded carriers to be stacked one upon the other. Because of the fact that the handle is slidably retained in the conduits formed by the grooves 38, it may be moved downwardly so that the central gripping portion 24 lies below the tops of the bottles 42 positioned in the carrier. When it is desired to transport the carrier and bottles from one place to the other, the handle may be moved upwardly so that the gripping portion 24 lies sufficiently above the tops of the bottles to provide a space for receiving the fingers of the user.

Various forms of my invention may be readily foreseen. Thus, as noted above, the handle may be shaped as desired, the sides of the carrier may be formed of some other type of sheet material other than fibrous material, and the carrier may be sized and shaped so as to carry varying types and sizes of bottles.

The form of my invention shown and described above is for illustrative purposes only, and it is not intended that the scope of the following claim shall be limited thereby.

I claim:

In a bottle carrier having side and end walls and a bottom secured thereto, a handle member extending between said end walls, said handle member being formed from a length of resilient wire and having a central gripping portion with legs extending downwardly therefrom, said legs

having portions inclined outwardly from said central portion, sections formed at an angle to said outwardly inclined portions and extending generally parallel to said end walls, and other portions inwardly inclined to said parallel sections having lugs formed on the extremities thereof at substantially right angles thereto, and means for receiving and retaining said handle secured to said end walls comprising sheets of metal having central grooves therein cooperating with said end walls to form conduits for receiving the legs of said handle member, said grooves being of sufficient width to receive the above mentioned lugs when the resilient handle member is expanded

outwardly and said lugs adapted to engage the lower edges of said grooves when said handle means is in normal unexpanded position in said carrier.

WALTER A. BEHRENS.

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