Nov. 8, 1949 G. F. STONE 2,487,491

BOTTLE CARRIER

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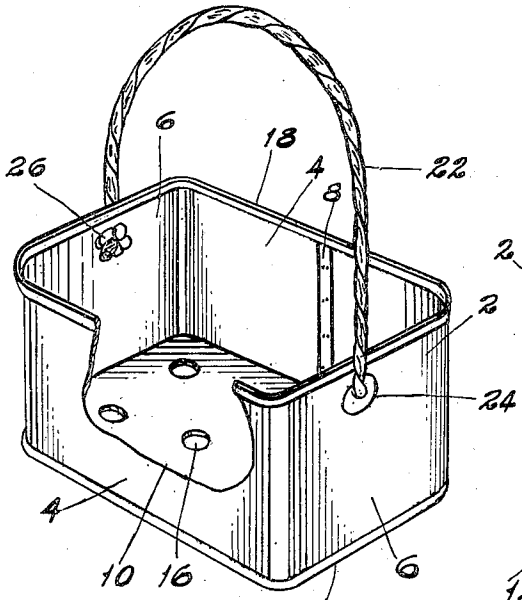


Fig 1

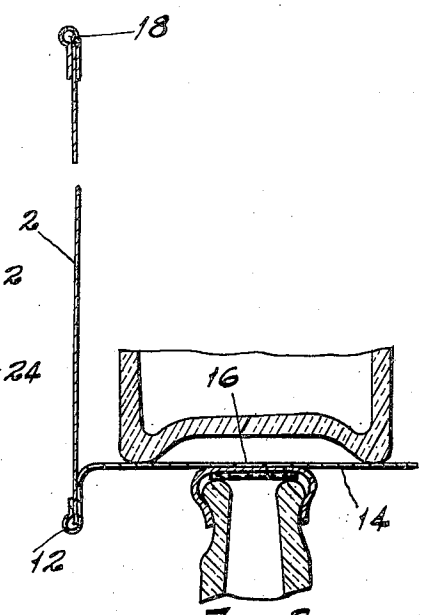


Fig 2

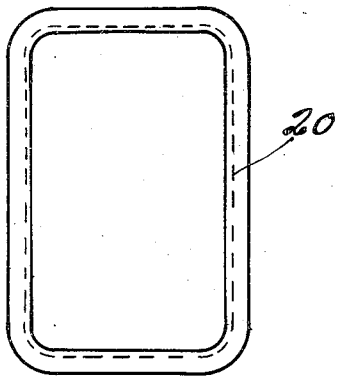


Fig 3

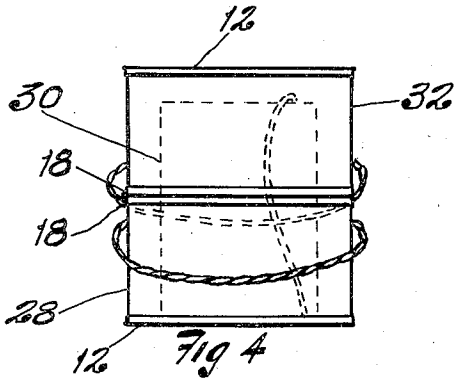


Fig 4

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BOTTLE CARRIER

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2 Claims. (Cl. 229—52)

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My invention relates to bottle carriers and particularly to devices which are economical to produce and are durable in construction and may be used repeatedly.

Bottle carriers for soft drinks and similar products are frequently made of cardboard or other fibrous material because they must be produced economically. However, such carriers are not adapted to be used repeatedly since the weight of the bottles frequently causes the material of the carrier to tear, particularly if the material of which the carrier is formed becomes wet as it often does when the bottles are taken directly from ice or wet storage or if moisture from the atmosphere condenses on the bottles. The cardboard of the handles and other portions of such constructions also may tear or is so flexible that bottles may fall from the carrier. Another objection to bottle carriers heretofore produced results from the difficulty of stacking the carriers for display purposes. Furthermore, manufacturers often object to the use of carriers as heretofore constructed because the bottles are allowed to rub against each other chipping the glass and at times even causing the bottles to break while they are being transported by truck or otherwise.

In accordance with my invention these objections to constructions of the prior art are overcome by providing a carrier which is substantially rigid in construction and resistant to the action of moisture. They also are made so as to be used repeatedly and may be stacked easily for display and transportation of the bottled goods within the carriers. These advantages are preferably obtained by constructing the carrier in part of fibrous material and in part of metal. Further, the handle provided is secured firmly to the body of the carrier but at the same time may be formed of flexible material which, when the bottles are stacked, normally lies between the bottles in the carrier preventing them from rubbing against each other.

One of the objects of my invention is to provide a novel type of bottle carrier adapted to be used repeatedly.

Another object of my invention is to provide a bottle carrier which is resistant to the action of moisture.

A further object of my invention is to prevent injury to bottles transported in bottle carriers.

These and other objects and features of my invention will appear from the following description thereof in which reference is made to the figures of the accompanying drawing.

In the drawing:

Fig. 1 is a perspective of a typical bottle carrier

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embodying my invention with a portion thereof broken away,

Fig. 2 is a vertical sectional view of a portion of the construction shown in Fig. 1.

Fig. 3 is a plan view of a binding strip embodied in the construction shown in Figs. 1 and 2, and

Fig. 4 is a diagrammatic side view of a number of bottle carriers of the type illustrated in Fig. 1 arranged for shipping.

In that form of my invention chosen for purposes of illustration the bottle carrier is provided with a body 2 which is of generally rectangular shape and has side walls 4 and end walls 6 which are formed of fibrous material such as chipboard, cardboard or the like. This material may be waterproofed if desired and preferably is formed from a single sheet of multi-ply material, the ends of which are joined together by means of a binding strip 8.

The bottom of the carrier illustrated is shown at 10 and preferably is formed of sheet metal. The edges 12 of the bottom are turned downward and reversely folded about the lower edges of the body 2 so as to be securely attached thereto and serve to hold the lower edges of the body rigidly in place. The reversely folded edges 12 further serve as a downwardly projecting bead which spaces the central portion 14 of the bottom from the floor or support on which the carrier may be placed, whereas they prevent displacement of the carrier with respect to the bottles in a lower carrier when a number of carriers are stacked one upon another. The portion 12 thus serves as reinforcing and positioning means which assures strength sufficient to support the bottles even though they may be relatively heavy and affords strength and rigidity to the walls of the body.

The bottom 10 is further provided with openings 16 which as shown are positioned substantially centrally with respect to bottles arranged within the carrier so that they permit water or moisture condensing on the bottles to flow downward through the bottom of the carrier. Water therefore does not collect or stand within the bottom and weakening or deterioration of the fibrous material of which the walls of the carrier is formed is prevented.

The upper edges of the body 2 of the carrier are provided with a reinforcing member 18 which as shown extends downwardly on the interior and exterior of the fibrous walls of the body and is securely clamped thereto so that it strengthens the walls of the carrier and they are maintained substantially rigid and parallel with the reinforcing edge portions 12 of the bottom of the carrier. The reinforcing member 18 preferably

is formed of metal so as to insure the maximum strength in the body of the carrier. When so formed the reinforcing member may be produced from a strip of sheet metal folded over the upper edge of the body, but it is preferably formed as a continuous endless element produced from a blank such as that shown in Fig. 3 and is folded downward along the central line indicated at **20** to engage opposite faces of the side and end walls. When so formed the reinforcing member presents no points of weakness or terminal portions which may be displaced to injure the user or to provide starting points for stripping the member from the edge.

In the construction illustrated, the carrier is designed to receive 6 bottles of soft drinks which are arranged in parallel rows within the carrier. A handle **22** is secured to the carrier and preferably extends from one end of the carrier to the other, parallel to the rows of bottles. This handle may be formed of any suitable material but preferably is flexible and in practice is formed of rope or cordage which extends through grommets **24** located in the end walls **6** of the carrier substantially midway between the side walls and shortly below the upper reinforced edge of the body. The handle may be secured in place by means of knots **26** located on the interior of the carrier so that they cannot pull through the grommets. However, the handles may be secured to the carrier by staples or in any other suitable way desired.

By forming the handle **22** of flexible material it will normally tend to fall into place between the longitudinally extending rows of bottles in the carrier when the handle is not in use. It then serves to prevent the bottles in adjacent rows from rubbing against each other and further tends to press them outward against the side walls of the carrier so as to hold the bottles in place and reduce the tendency for the bottles to rattle and bump against each other when being transported. In use the handle may be grasped and raised upward so that it then extends at an angle between the end bottles in each row to prevent them from tipping over or falling from the carrier even though the carrier is tilted or carried in an inclined position.

The position of the grommets, or other point of attachment of the ends of the handle to the end walls of the body of the carrier, is preferably substantially above the center of gravity of the carrier when it is loaded with bottles. Furthermore, the side and end walls of the carrier are preferably of sufficient height so that they will engage that portion of the bottles which is of greatest diameter. With this construction, it is found that the carrier may be tilted or shaken about without displacement of the bottles. The carriers therefore may be handled carelessly by children or others, and yet serves to hold the bottles secure in place. On the other hand, the bottles are freely removable from the carrier without destroying or manipulating the carrier to free the bottles therefrom.

The form and shape of the carrier may, of course, be varied, but it preferably is constructed so that its width exceeds the height of the side walls while its length is less than twice the height of the side walls. The carriers can then be arranged for shipping or storage as shown in Fig. 4 so that they occupy a minimum of space. In this arrangement a lower carrier **28** is turned upward, a central carrier **30** is turned on end and sideways so as to fit into the first carrier, and a third carrier **32** is inverted over the upper end of the carrier **30**. The rope handles of the carriers **28** and **32** then extend about the top and bottom of the carrier **30** and do not interfere with the arranging and stacking of the carriers.

While I have shown and described a preferred form of bottle carrier embodying my invention, it will be understood that numerous changes and modifications may be made in the form, construction and arrangement of the elements employed and therefore the construction shown and described should be taken as illustrative only and is not intended to limit the scope of my invention.

I claim:

1. A bottle carrier comprising a body of generally rectangular shape closed about the bottom and sides and open at the top, said body having its sides and ends formed from a strip of fibrous material, said bottom for said body being formed of sheet metal provided with perforations located at points corresponding to the approximate centers of bottles placed in the carrier, means integral with said bottom and extending entirely around the periphery thereof for securing said bottom to said fibrous sides and ends and serving to provide a rigid support therefore, an endless strip of reinforcing material extending about the upper edge of said fibrous material and serving to provide a rigid support for said edge, and means extending from one end of said body to the other and connected to each end thereof substantially midway between the sides of the body, said means extending upward above the open top of said body to form a handle for the carrier.

2. A bottle carrier comprising a body of generally rectangular shape, closed about the bottom and sides and open at the top, said body having its sides and end walls formed of fibrous material, said bottom for said body being formed of sheet metal provided with perforations located at points corresponding to the approximate centers of the bottles placed in the carrier, gripping means for fastening the fibrous material to the metal bottom consisting of reversely folded edges of said bottom positioned to form a downward projecting bead extending entirely around the periphery of the said bottom with portions thereof engaging and gripping the inner and outer faces of said walls, a reinforcing element formed from an endless strip of material extending along the upper edges of the fibrous material and cooperating with said gripping means to hold the side and end walls rigidly in place, and flexible means secured to the ends of said body above the center of gravity of the body and extending upward above said open top to form a handle for the carrier.

GEORGE F. STONE.

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