May 1, 1951 C. S. GLENNY 2,551,262

SOFT DRINK BOTTLE CARRIER

Filed Aug. 23, 1946 2 Sheets-Sheet 1

Fig. 1

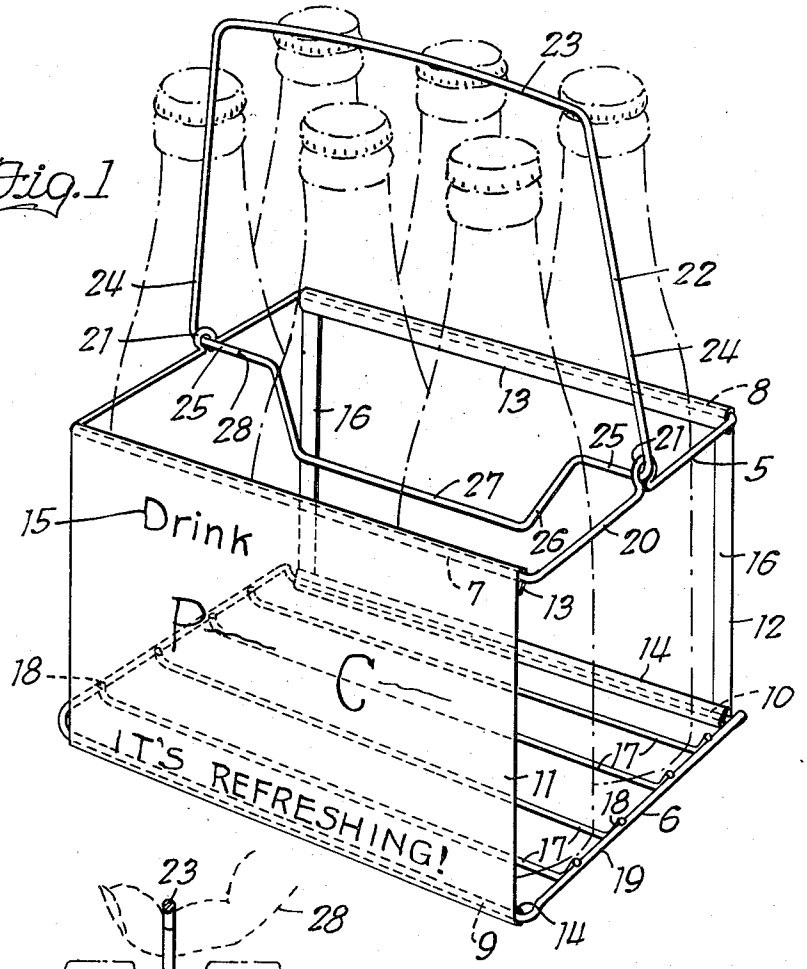
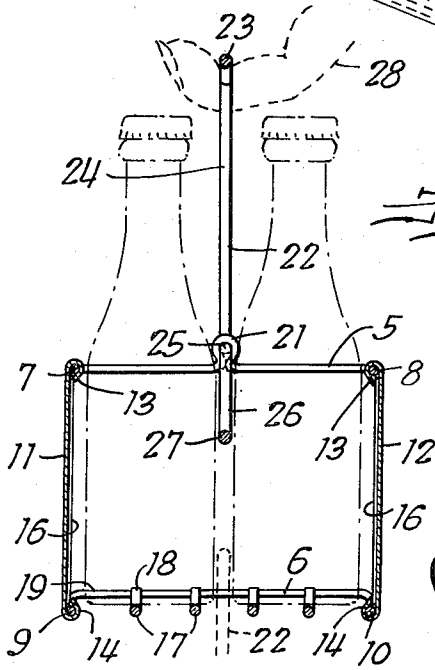


Fig. 2



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May 1, 1951 C. S. GLENNY 2,551,262

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Filed Aug. 23, 1946 2 Sheets-Sheet 2

Fig. 3

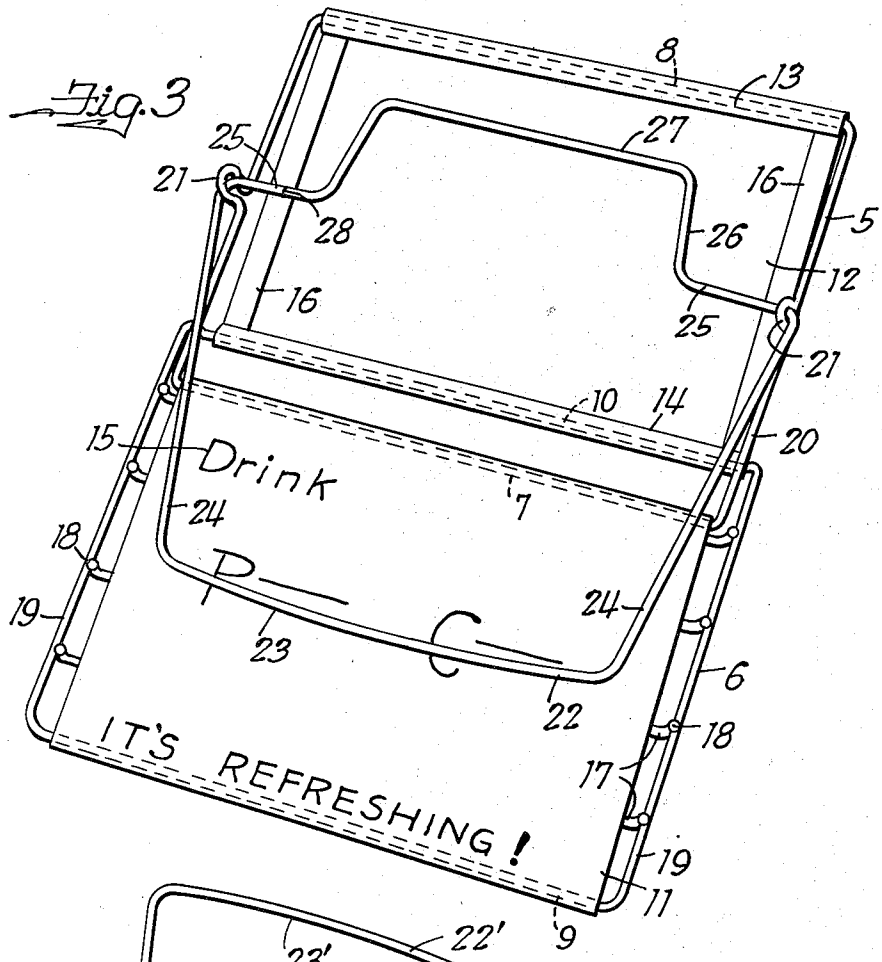
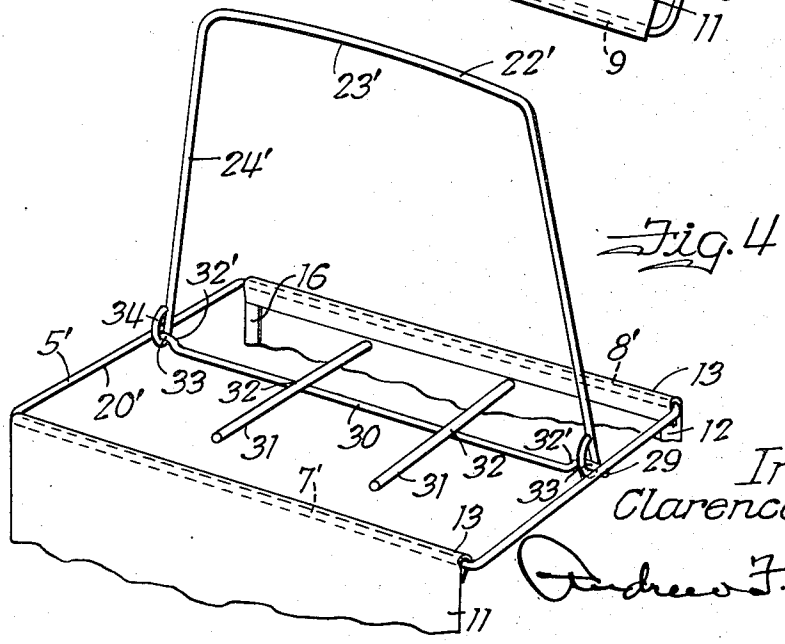


Fig. 4



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SOFT DRINK BOTTLE CARRIER

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10 Claims. (Cl. 224—48)

1

This invention relates to carriers especially designed for carrying small necked soft drink bottles.

I am aware of the numerous designs and constructions of soft drink bottle carriers that have been proposed. However, the majority of these prior constructions have been too complicated and expensive, and many have been objectionable also from the standpoint that they will not permit stacking the bottles in carriers for display purposes in the stores. Furthermore, many of the prior constructions have not been collapsible to the desired compactness for easy and economical shipment. It is, therefore, the principal object of my invention to provide a bottle carrier of simple and inexpensive but strong and durable construction, and one which permits stacking the bottles in carriers for display purposes and which is adapted to fold flat to facilitate economical shipment of large numbers of these carriers.

One of the other advantageous features of the present construction is the use of sheet metal sides which can be fastened securely and economically to the side portions of the top and bottom wire frames by folding the edge portions of the sheet metal around the wire, these side plates being suitably lithographed with the desired advertisements. The folding of the sheet metal around the wire incidentally provides pivotal connections so that the carrier may be folded flat.

Another advantageous feature in the preferred construction is the provision of a downwardly bent middle portion on the lower portion of the wire handle which extends between the two rows of bottles to separate them and hold the handle up ready for grasping and so that it extends up in between the rows of bottles in the carrier above in a stack of carriers set on the floor in a store for display purposes.

The invention is illustrated in the accompanying drawings, in which

Fig. 1 is a perspective view of a bottle carrier made in accordance with my invention;

Fig. 2 is a cross-section through the carrier on a smaller scale;

Fig. 3 is a perspective view showing how compact the carrier is when folded, and

Fig. 4 is a fragmentary perspective view of another carrier showing a modified or alternative construction.

Similar reference numerals are applied to corresponding parts throughout the views.

Referring first to Figs. 1 to 3, illustrating the preferred construction, the reference numeral 5

2

designates the wire top frame, and the reference numeral 6 the wire bottom frame, both frames being of generally rectangular form so as to provide parallel side portions 7 and 8 on the top frame and parallel side portions 9 and 10 on the bottom frame onto which the sheet metal side plates 11 and 12 are adapted to be fastened by folding the upper and lower edge portions around the wire, as indicated at 13 and 14. This type of connection is quite sturdy and is simple to make and it moreover pivotally connects the parts so that the carrier can be folded easily to the flat condition, shown in Fig. 3, for convenience in storage in the store and home but principally for the convenience and economy in the shipment of large quantities of these carriers. The folds at 13 and 14 are inwardly bent so that there are no raw edges exposed on the outside of the carrier and the carrier presents a neat appearance. The sheet metal of the side plates 11 and 12 is usually lithographed with suitable advertisements, as indicated at 15, and if desired, the price of the bottled drinks displayed in the carrier may also appear on the lithographed parts. The ends of the side plates are preferably folded inwardly, as indicated at 16, to avoid exposing any raw edges at those points and to improve the overall appearance of the carriers as well as to lend stiffness and strength to these parts to reduce likelihood of their getting bent out of shape in the rough handling to which these articles are often subjected. The two rows of bottles, three in a row are usually packed in each carrier, as shown, and two longitudinally extending wires 17 are provided in the bottom frame for support of each row of bottles and these have their upwardly bent end portions 18 welded to the upwardly bent end portions 19 of the bottom frame 6. The ends 19 are in vertical planes parallel to, but spaced slightly outwardly from vertical planes in which the end portions 20 of the top frame 5 are disposed, and there is adequate room between the ends of the frame 5 and 6 for the three bottles mentioned. The upward bending of the ends 19 of the bottom frame 6 prevents the lower ends of the end bottles from slipping out through the open ends of the carrier.

The ends 20 of the top frame 5 have loops 21 bent upwardly from the middle portions thereof to form ears onto which to attach the wire handle 22. The latter is bent from a single piece of wire to a generally rectangular form to provide a hand grip portion 23 with downwardly projecting end portions 24 and inwardly bent coaxially aligned

trunnion portions 25 which are interconnected by the arms 26 of a U-shaped bottom portion 27, the free ends of the wire being butt welded at any convenient point, as, for example, at 28. The trunnion portions 25 are entered freely in the loops 21 for a loose pivotal connection between the handle 22 and the top frame 5 of the carrier. The downward projection of the U-shaped bottom portion 27 of the handle is of advantage, from the standpoint of keeping the two rows of bottles apart so that there is not so much noise connected with carrying the article, and also because it accounts for the fact that the handle is always held upright for easy grasping of the hand grip portion 23. There is a further advantage of this construction, and that is that the upper end portion of the handle, which projects above the plane of the tops of the bottles enough to make it easy to take hold of the hand grip portion 23, as indicated in dotted lines at 23 in Fig. 2, will also form an interlocking connection with adjacent carriers when the carriers with bottles in them are stacked on the floor for display purposes, the upper end portion of the handle on the next carrier below being arranged to project upwardly between the two pairs of bottom wires 17 into the space between the two rows of bottles in the carrier, as indicated in dotted lines in the lower portion of Fig. 2. In that way, there is less likelihood of an individual carrier sliding sidewise or endwise off a stack and falling to the floor from a sufficient height to result in the breakage of bottles. It is noteworthy in this connection that the downwardly projecting end portions 24 on the handle are in upwardly converging relation, as clearly appears in Figs. 1 and 3, so that there is no difficulty in entering the upper end portion of the handle into the open bottom of the carrier above. It is also noteworthy that the hand grip portion 23 is arched upwardly to give extra hand clearance and a more comfortable grip on the handle and also to give a better interlocking action between the superimposed carriers in a stack. The handle 22, by virtue of the upwardly bent loops 21 in the top frame 5, will lie flat on top of the rest of the folded carrier, as shown in Fig. 3, so that a proportionately larger number of carriers can be packed in a given space for shipment. The upward bending of the end portions 19 does not add any bulk to the folded carrier because the side plates 11 and 12 and the top frame 5 are foldable into the space between these upwardly bent end portions, as clearly illustrated in Fig. 3, thereby filling this space.

The other construction disclosed in Fig. 4 is the same as that just described in so far as its wire bottom frame 6 and sheet metal side plates 11 and 12 are concerned, and for that reason, only the upper portion of this carrier has been illustrated. The rectangular wire top frame 5' has side portions 7' and 8' pivotally connected to the side plates 11 and 12 by folding inwardly the upper edge portions 13. The end portions 29' of the top frame has the end portions 29 of a wire 30 welded thereto, this wire extending through the middle of the top frame to separate the two rows of bottles and having cross wires 31 welded thereto at the intersection points 32 to define stalls for the individual bottles so that one or two bottles may be removed from a row without disturbing the stability of the rest of the package and without permitting the remaining bottles from shifting their positions. In fact, if there is only one bottle left in each row, that is enough to keep the carrier intact. The end portions 29 of the wire 30 are preferably offset upwardly in relation to the rest of the wire, as indicated at 32', to define trunnions 33 on the end portions 29 onto which loops 34 provided on the inverted U-shaped wire handle 22' may be pivoted to connect the handle to the carrier. This handle 22' has its downwardly projecting end portions 24' upwardly converging and has the hand grip portion 23 arched upwardly slightly for the same reasons mentioned before in the description of the handle 22. However, in this carrier, the handle 22' has to depend more or less upon the frictional resistance to turning relative to the trunnions 33 from its upright position, because there is no lower portion like that shown at 27 in Figs. 1 to 3 to engage the bottles and hold the handle in the upright position. Otherwise, this carrier, aside from the difference in the positive spacing of the bottles obtained with the three wires 30 and 31, operates the same as the other carrier and affords the same advantages.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. A bottle carrier comprising a one-piece rigid rectangular wire top frame and a one-piece rigid rectangular bottom frame providing wire side and end portions, rectangular sheet metal side plates adapted to have advertisements applied to their outer sides and having their upper and lower edge portions folded over the wire on the side portions of said frames to pivotally secure the parts together so that the structure may be folded flat, means defining a bottle supporting bottom wall in said bottom frame, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and an inverted U-shaped handle bail pivotally connected by the lower ends of the arms of the U to said loops, the upwardly projecting loops permitting folding of said handle flatly on top of said top frame.

2. A bottle carrier comprising a one-piece rigid rectangular wire top frame and a one-piece rigid rectangular bottom frame providing wire side and end portions, rectangular sheet metal side plates adapted to have advertisements applied to their outer sides and having their upper and lower edge portions folded over the wire on the side portions of said frames to pivotally secure the parts together so that the structure may be folded flat, means defining a bottle supporting bottom wall in said bottom frame, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and a handle bail extending lengthwise of the carrier in the middle of the top frame and pivotally connected to said loops, and having a lower portion which extends lengthwise of the carrier below the middle of the top frame and is rigid with the rest of the handle and serves to space two rows of bottles in the carrier and keep the handle in an upright position.

3. A bottle carrier comprising rectangular wire top and bottom frames providing wire side and end portions, rectangular sheet metal side plates adapted to have advertisements applied to their outer sides and having their upper and lower edge portions folded over the wire on the side portions of said frames to pivotally secure the parts together so that the structure may be folded flat, means defining a bottle supporting bottom

wall in said bottom frame, the bottom frame being longer than the top frame and side plates and having the protruding end portions thereof bent upwardly to define abutments across the ends of the bottom of the carrier to confine the lower ends of bottles in the carrier and prevent displacement thereof from the carrier, the side plates and top frame being foldable onto the bottom frame between the upwardly bent end portions, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and a handle bail pivotally connected to said loops, the upwardly projecting loops permitting folding of said handle flatly on top of said top frame.

4. A bottle carrier comprising a one-piece rigid rectangular top frame and a bottom member and rectangular side members connected at their upper and lower ends to the top frame and bottom member respectively, a handle bail member having upper and lower portions extending lengthwise of the carrier in a vertical plane through the middle of the top frame, said bail member being pivotally connected at its opposite ends to the opposite ends of the top frame on a substantially horizontal axis which is intermediate the upper and lower portions of said handle bail member, whereby the lower portion of the handle bail member below said axis is disposed between two rows of bottles placed in said carrier holding the handle bail member in an upright position.

5. A bottle carrier comprising rectangular top and bottom members, and rectangular side members pivotally connected at their upper and lower ends to the top and bottom members respectively, the opposite ends of said carrier being open between the top and bottom members, the bottom member being longer than the top member and having its opposite end portions bent upwardly to provide abutments to confine the lower ends of bottles placed in said carrier resting on the bottom member, the pivotal connections between said members permitting folding of the carrier flat, and said side members and top member being foldable between the upwardly bent end portions of the bottom member, and a handle member extending lengthwise of the carrier in the middle of the top member pivotally connected at its opposite ends to the opposite ends of the top member on a substantially horizontal axis which is intermediate the upper and lower ends of said handle member, whereby the lower portion of the handle member below said axis is disposed between two rows of bottles placed in said carrier holding the handle member in an upright position.

6. A bottle carrier comprising rectangular wire top and bottom frames providing wire side and end portions, rectangular sheet metal side plates adapted to have advertisements applied to their outer sides and having their upper and lower edge portions folded over the wire on the side portions of said frames to pivotally secure the parts together so that the structure may be folded flat, means defining a bottle supporting bottom wall in said bottom frame, the bottom frame being longer than the top frame and side plates and having the protruding end portions thereof bent upwardly to define abutments across the ends of the bottom of the carrier to confine the lower ends of bottles in the carrier and prevent displacement thereof from the carrier, the side plates and top frame being foldable onto the bottom frame between the upwardly bent end portions, and a handle member extending lengthwise of the carrier in the middle of the top frame pivotally connected at its opposite ends to the opposite ends of the top frame on a substantially horizontal axis which is intermediate the upper and lower ends of said handle member, whereby the lower portion of the handle member below said axis is disposed between two rows of bottles placed in said carrier holding the handle member in an upright position.

7. A bottle carrier comprising rectangular wire top and bottom frames providing wire side and end portions, rectangular sheet metal side plates adapted to have advertisements applied to their outer sides and having their upper and lower edge portions folded over the wire on the side portions of said frames to pivotally secure the parts together so that the structure may be folded flat, means defining a bottle supporting bottom wall in said bottom frame, the bottom frame being longer than the top frame and side plates and having the protruding end portions thereof bent upwardly to define abutments across the ends of the bottom of the carrier to confine the lower ends of bottles in the carrier and prevent displacement thereof from the carrier, the side plates and top frame being foldable onto the bottom frame between the upwardly bent end portions, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and a handle member extending lengthwise of the carrier in the middle of the top frame pivotally connected at its opposite ends to said loops on a substantially horizontal axis which is intermediate the upper and lower ends of said handle member, whereby the lower portion of the handle member below said axis is disposed between two rows of bottles placed in said carrier holding the handle member in an upright position, the upwardly projecting loops permitting folding of said handle flatly on top of said top frame in the folding flat of the structure.

8. A bottle carrier comprising rectangular top and bottom members, and rectangular side members pivotally connected at their upper and lower ends to the top and bottom members respectively, the opposite ends of said carrier being open between the top and bottom members, the bottom member being longer than the top member and having its opposite end portions bent upwardly to provide abutments to confine the lower ends of bottles placed in said carrier resting on the bottom member, the pivotal connections between said members permitting folding of the carrier flat, and said side members and top member being foldable between the upwardly bent end portions of the bottom member, the top member having upwardly projecting handle attaching loops provided on the end portions of said top member intermediate their ends, and a handle bail pivotally connected to said loops, said loops permitting folding of said handle flatly on top of said top member in the folding flat of said structure.

9. A bottle carrier comprising a rectangular bottom member, and a one-piece rigid rectangular wire top frame providing wire side and end portions, means defining bottle retaining side walls of rectangular form pivotally connected at the top to the side portions of said top frames and pivotally connected at the bottom to the side portions of said bottom member so that the structure may be folded flat, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and a handle bail extending

lengthwise of the carrier in the middle of the top frame and pivotally connected to said loops, and having a lower portion which extends lengthwise of the carrier below the middle of the top frame and is rigid with the rest of the handle and serves to space two rows of bottles in the carrier and keep the handle in an upright position, said upwardly projecting attaching loops permitting folding of said handle bail flatly on top of said top frame.

10. A bottle carrier comprising a one-piece rigid rectangular wire top frame and a rectangular bottom member and rectangular side members connected at their upper and lower ends to the top frame and bottom member respectively, the wires on the end portions of said top frame being bent intermediate their ends to define upwardly projecting handle attaching loops, and a handle bail member pivotally connected to said loops and having upper and lower portions extending lengthwise of the carrier in a common vertical plane through the middle of the top frame, the pivotal axis for said handle bail member being between the upper and lower portions of said handle bail member, whereby the lower portion of the handle bail member below said

axis is disposed between two rows of bottles placed in said carrier holding the handle bail member in an upright position, the upwardly projecting loops to which said handle bail member is pivotally connected permitting folding of said handle flatly on top of said top frame.

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