Sept. 16, 1941. N. HAMILTON 2,256,451

BOTTLE CARRIER

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Fig. 1.

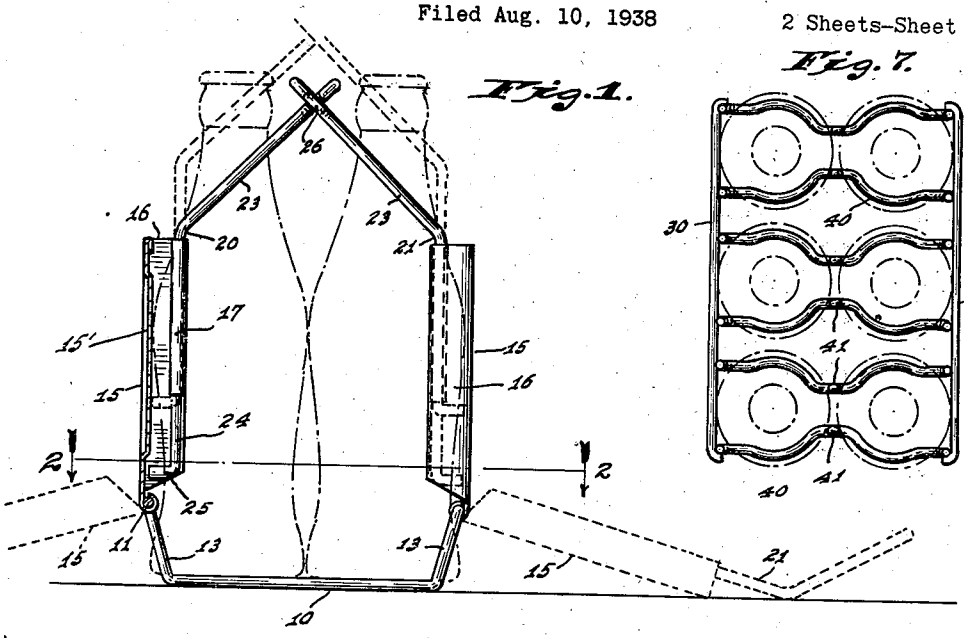


Fig. 7.

Fig. 2.

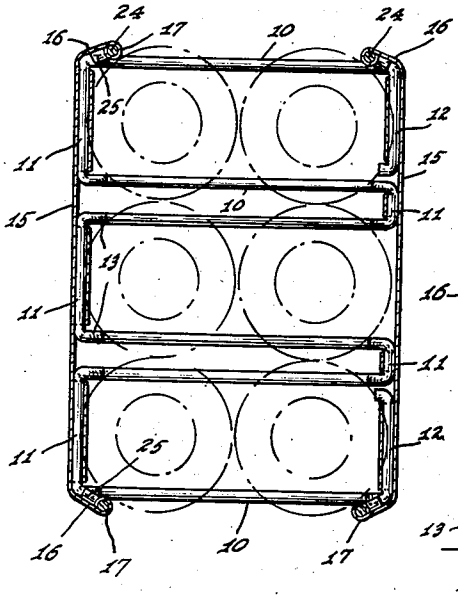
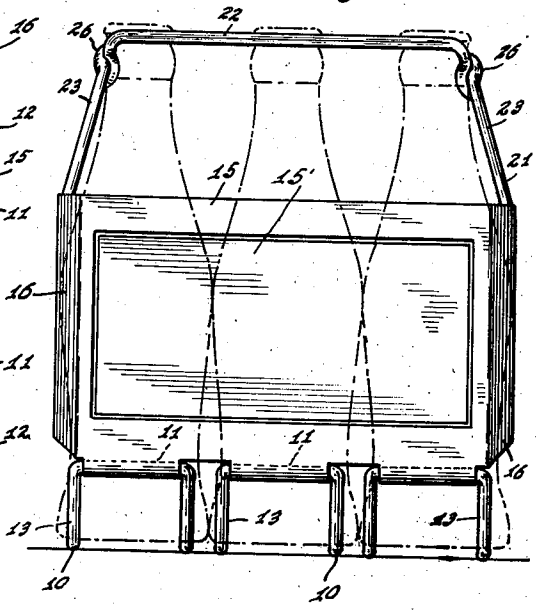


Fig. 3.



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Fig. 4.

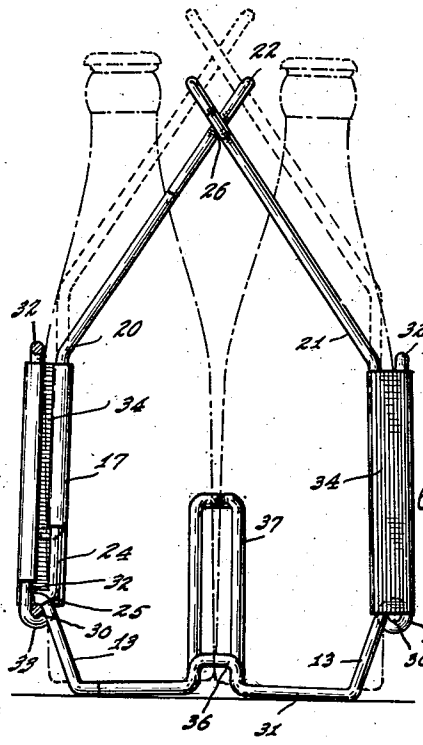


Fig. 5.

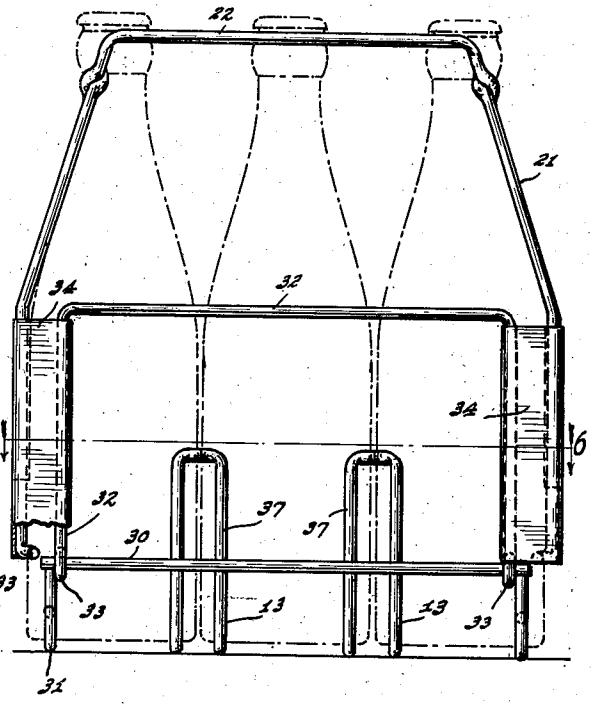
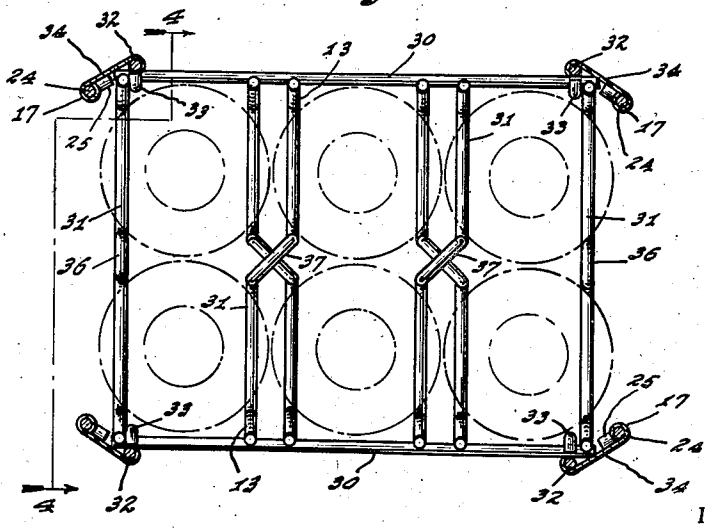


Fig. 6.



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UNITED STATES PATENT OFFICE

2,256,451

BOTTLE CARRIER

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Application August 10, 1938, Serial No. 224,175

4 Claims. (Cl. 224—45)

It is the object of my invention to produce a carrier for a plurality of bottles or similar articles. More specifically, it is my object to produce a carrier in which the bottles may be quickly and easily inserted, in which the bottles will be positively retained, and from which the bottles may be readily removed. A further object of my invention is to produce a carrier having a handle which will not interfere with stacking of filled carriers. Still another object of my invention is to provide a carrier of simple and durable construction which may be shipped and stored in a knocked-down condition so as to conserve space.

In carrying out my invention I form a carrier with a rigid bottom and with rigid sides which are hingedly connected to the bottom along the side edges thereof. I mount in each side a vertically slidable yoke, such yokes being formed so that they may cross and interlock to form a handle. For cheapness of construction, the various parts of the carrier are preferably formed of wire or sheet-metal.

The accompanying drawings illustrate my invention: Fig. 1 is an end elevation of one form of carrier with a portion thereof broken away; Fig. 2 is a horizontal section on the line 2—2 of Fig. 1; Fig. 3 is a side elevation of the carrier illustrated in Fig. 1; Fig. 4 is an end elevation of a modified form of carrier broken away on the line 4—4 of Fig. 6; Fig. 5 is a side elevation of the carrier illustrated in Fig. 4; Fig. 6 is a horizontal section on the line 6—6 of Fig. 5; and Fig. 7 is a plan view of a modified form of carrier-bottom.

In the carrier illustrated in Figs. 1 to 3 inclusive the bottom is shown as formed of a single piece of wire repeatedly bent to form transversely extending portions 10 interconnected at alternate ends by longitudinally extending portions 11 which are in alinement along opposite sides of the bottom. The end portions 12 of the wire are bent inwardly of the bottom to form longitudinal portions alined with the portions 11. The transversely extending portions 10 are so spaced as to provide adequate support for the bottles which the carrier is to contain. Desirably, the central part of each transversely extending portion 10 is depressed below the plane of the longitudinally extending portions 11 and 12, being connected to such longitudinally extending portions by upwardly and outwardly inclined portions 13.

The sides of the carrier are formed of pieces of sheet metal 15, each of such sides being provided at its lower edge with a series of ears which are bent to embrace the longitudinally extending bottom-portions 11 and 12, whereby each side is hingedly connected to the bottom. Along their vertical margins, the sides 15 are provided with inwardly projecting oblique extensions 16, the extreme edge portions of which are bent inwardly to form, in effect, tubular guides 17.

The handle comprises two yokes 20 and 21 associated respectively with the two sides 15, each such yoke comprising a central horizontal portion 22, an outwardly and downwardly inclined portion 23, and a vertical portion 24. The vertical portions 24 are slidably received in the tubular guides 17 of the sides with which the yokes 20 and 21 are respectively associated, and are longer than such guides so as to be slidable therein. The lower end of each of the vertical yoke-portions 24 are bent horizontally as indicated at 25 to limit upward movement of the yokes relative to the sides.

The sloping side portions 23 of each yoke diverge downwardly, so that it is possible to pass the horizontal portion 22 of one yoke (here shown as the yoke 20) between the inclined portions 23 of the other yoke, as is clear from Figs. 1 and 3. At the points where each inclined portion 23 of one yoke crosses the corresponding portion 23 of the other yoke, both portions are offset, as indicated at 26, to form complementary notches which are held in engagement with each other by the resilience of the wire of which the yokes 20 and 21 are formed. The offset portions 26 are so located that, when they are engaged, the sides 15 will be substantially vertical.

In Fig. 1, I have shown in dotted lines the position occupied by the sides 15 and the yokes 20 and 21 when the carrier is to be filled. With the sides and yokes in the position illustrated in Fig. 1, the carrier is filled with bottles, as indicated in chain lines, the two sides 15 are swung upwardly, the yoke 20 is passed through the yoke 21, and the complementary offset portions 26 interlocked. The device is so proportioned that the inclined portions 16 of the sides 15 prevent any substantial degree of end movement of the bottles, thus holding the bottles positively in association with the carrier. The yokes 20 and 21 are so proportioned that the horizontal handle portions 22 may be disposed below the tops of the bottles, as indicated in full lines in Fig. 1, or moved vertically to a position well above the tops of the bottles to permit the insertion of the fingers beneath the handle portions

22. Upward movement of the yokes is limited by engagement of the yoke-portions 25 with the lower ends of the tubular guides 17. By providing for depression of the horizontal handle portions 22 below the tops of the bottles, it is possible to stack the filled carriers one upon another.

It will be noted that when the sides 15 are opened out to the dotted-line position shown in Fig. 1 a plurality of carriers may be nested together, thus conserving space in storage and shipment. The center portion of each side 15 may be offset inwardly to form a protected panel 15' for the display of advertising matter.

In the modification of the invention illustrated in Figs. 4, 5, and 6, the bottom of the carrier is formed of longitudinally extending side-wires 30 interconnected by a series of transversely extending wires 31 whose ends are welded to the wires 30. As in the modification illustrated in Figs. 1, 2, and 3, the cross wires 31 are desirably provided with upwardly and outwardly extending portions 13, whereby the bottle-supporting surfaces of the wires 31 are disposed well below the side-wires 30.

In the arrangement illustrated in Figs. 4, 5, and 6, each side of the carrier is formed as a U-shaped wire-yoke 32 the ends of which are formed into eyes 33 embracing the associated side-wire 30 of the bottom. Desirably, the eyes 33 are disposed closely adjacent cross-wires 31 at the bottom in order to locate each side longitudinally of its associated side-wire 30. To complete each side of the carrier, there are associated with the yoke 32 thereof two sheet-metal members 34, each of which has one of its vertical edges curled to embrace one of the vertical legs of the yoke 32 and its other vertical edge curled to form a guide 17 corresponding to the guide 17 of the modification illustrated in Figs. 1, 2, and 3. Handle-forming yokes 20 and 21 are slidably associated with the tubular guides 17 as in the modification previously described.

In the arrangement shown in Figs. 4, 5, and 6, the cross wires 31 are illustrated as formed to definitely locate each individual bottle which the carrier is to contain. For this purpose, each cross wire 31 at the end of the carrier has an offset central portion indicated at 36 adapted to project upwardly between two bottles at the end of the carrier. The intermediate cross wires 31 at the bottom are arranged in pairs and are bent at their middles to provide upwardly projecting offset portions 37 which cross each other at the top and which, at the point of crossing, may be welded together for the sake of rigidity.

In Fig. 7, I have illustrated a carrier-bottom generally similar to that shown in Figs. 4, 5, and 6 in that it embodies side wires 30 and a series of cross-wires welded thereto. In Fig. 7, however, the cross wires 40 do not cross each other as do the wires 31 in Figs. 4, 5, and 6, but instead are formed with portions conforming generally to the supporting surface of the bottles. Upwardly offset portions 41 at the center of each of the cross wires 40 serve to locate each bottle individually within the carrier.

I claim as my invention:

1. A bottle carrier, comprising a bottom having a central bottle-supporting portion, sides pivoted to said bottom above said bottle-supporting portion, and a yoke slidably mounted in each of said sides and having a central, horizontal handle portion and side portions, said yokes being adapted to interfit with corresponding side portions crossing each other and with the handle portions disposed in parallel relationship, the crossing side portions of said yokes being provided with interengaging complementary offsets.

2. A bottle carrier, comprising a bottom having a central bottle-supporting portion, sides pivoted to said bottom, and a yoke slidably mounted in each of said sides and having a central, horizontal handle portion and side portions, said yokes being adapted to interfit with corresponding side portions crossing each other and with the handle portions disposed in parallel relationship, the crossing side portions of said yokes being provided with interengaging complementary off-sets.

3. A bottle carrier, comprising a bottom having a central bottle-supporting portion, sides pivoted to said bottom above said bottle-supporting portion and swingable about their respective pivotal axes between substantially horizontal and substantially vertical positions, a yoke slidably mounted in each of said sides and having a central, horizontal handle portion, and releasable means for holding said handle portions in juxtaposed position at the top of the carrier.

4. A bottle carrier, comprising a bottom having a central bottle-supporting portion, sides pivoted to said bottom and swingable about their respective pivotal axes between substantially horizontal and substantially vertical positions, a yoke slidably mounted in each of said sides and having a central, horizontal handle portion, and releasable means for holding said handle portions in juxtaposed position at the top of the carrier.

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