June 26, 1951 C. KILLINGSWORTH 2,558,182

BOTTLE CARRIER

Filed April 14, 1949

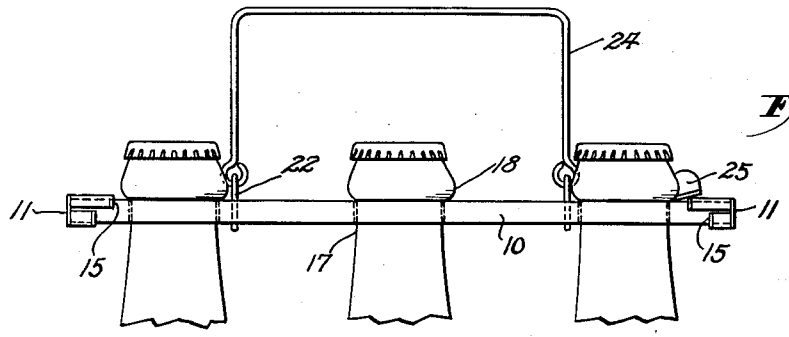


Fig. 1.

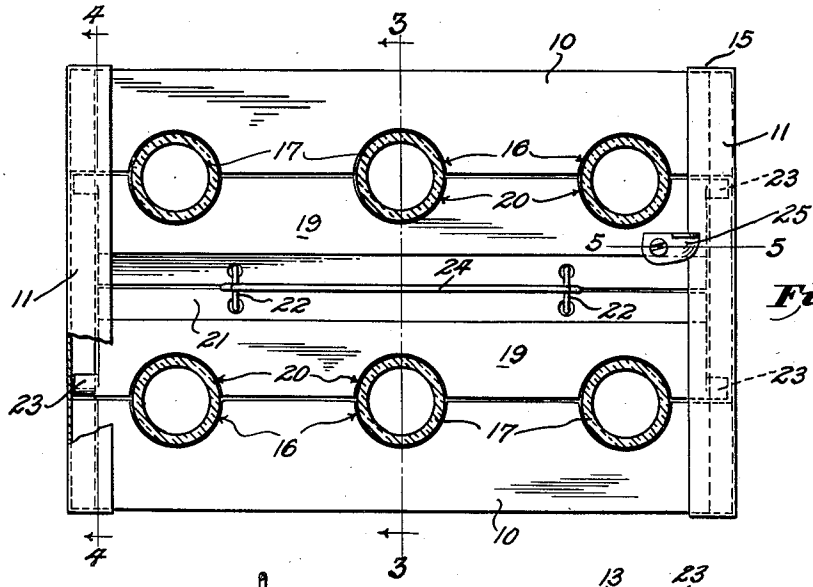


Fig. 2.

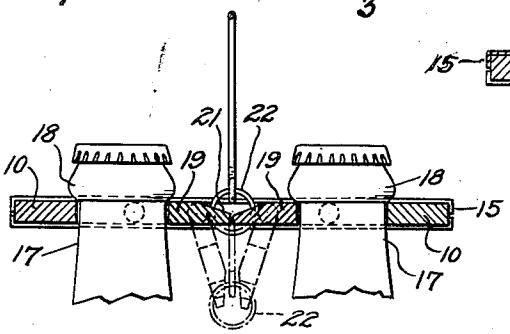


Fig. 3.

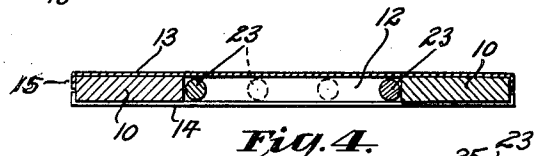


Fig. 4.

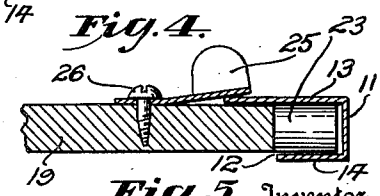


Fig. 5.

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BOTTLE CARRIER

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4 Claims. (Cl. 294—87.22)

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The present invention relates to beverage bottle carriers or racks of the type designed to eliminate use of the usual beverage bottle cartons.

It is the general object of the present invention to provide an improved rack and carrying device adapted to receive a plurality of beverage bottles, about the neck portions thereof, and to provide an efficient means for transporting such bottles in a group without fear of accidentally releasing the bottles, resulting in damage and perhaps breakage thereof.

It is another object of the present invention to provide a bottle carrier of this character which comprises but few and simple parts, yet which is characterized by its positive and efficient action in firmly holding and grouping a plurality of beverage bottles in order that the same may be conveniently carried or stored in such grouped relation.

It is a further object of this invention to provide a beverage bottle carrier which, by nature of its simplicity of construction, is economical in manufacture and thereby rendered readily available for use to the individual or to beverage-bottling organizations.

While I am aware that the prior art discloses various devices and apparatus which function to receive and group a plurality of beverage bottles and enable an individual to conveniently carry the same in a grouped condition, to the best of my knowledge there has never been a commercially successful device of this character which functioned with efficiency and whose construction permitted commercialization in volume quantity; and it is, therefore, still another object of the present invention to generally improve upon previously known and patented devices of this character in order to provide an efficient and economical beverage bottle carrier which may be made readily available to the public at relatively low cost.

For further and more complete understanding of the present invention and the various additional objects and advantages ambient thereto, reference is made to the following description and the accompanying drawing, wherein:

Fig. 1 is a side elevational view of my improved beverage bottle carrier, showing its holding position with respect to a group of beverage bottles;

Fig. 2 is a top plan view of the carrier with the neck portions of a plurality of beverage bottles shown in horizontal section;

Fig. 3 is a transverse vertical sectional view taken along a plane indicated by the line 3—3 of Fig. 2;

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Fig. 4 is a similar view along the line 4—4 of Fig. 2; and

Fig. 5 is an enlarged fragmentary vertical sectional view taken along the line 5—5 of Fig. 2 and disclosing the manually operable catch or locking device associated with the present beverage bottle carrier.

With reference to the drawing, it will be seen that the present improved bottle carrier comprises an outer, substantially flat rectangular frame portion consisting of a pair of spaced parallel side members 10 and a pair of spaced parallel end members 11 which are longitudinally channeled, as at 12, and which receive and rigidly hold at their respective ends the end portions of the side members 10. Preferably, as shown in Fig. 5, the end members 11 are formed from relatively light weight metallic sheet stock which, in turn, is formed with the open longitudinally extending rectangular channels or grooves defined by a pair of spaced webs 13 and 14 of unequal width. The side members 10 may be formed from any suitable material, such as wood or synthetic resin stock, and may be secured in any suitable manner within the channels of the end members, such as by crimping the webs 13 and 14 about the side members 10, as at 15, to securely clamp the side members within the channels of the end members. Suitable fastening devices, not shown, may also be employed to additionally insure a tight connection between the ends of the side and end members of the outer frame.

As shown particularly in Fig. 2 of the drawing, the inner opposed edges of the side members 10 are formed at longitudinally spaced intervals with a plurality of half-round or semi-circular recesses or cavities 16 which closely conform to the curvature of approximately one-half the circumference of the neck portion 17 of a beverage bottle immediately below the relatively enlarged flange or bead 18 formed upon such neck portion.

Extending between the end members 11 in parallel relation to, and disposed between the side members 10, are a pair of bottle-clamping slats or crowding members 19 which have their inner opposed edges disposed in substantially abutting relation, and which are formed along their outer side edges with semi-circular recesses 20 in transverse complemental alignment with the recesses 16 formed in the side members 10. The sets of recesses 16 and 20 when disposed in complemental relation, as shown in Fig. 2, form circular openings just slightly larger than the neck portions 17 of the ordinary type of beverage bottle

and are substantially smaller in diameter than the enlarged flange or bead 18 of such bottles, in order that the slats 19, when the recesses 16 and 20 are in complemental registration, serve to crowd or clamp the necks of the bottles to prevent withdrawal of the latter downwardly through the openings or to prevent the frame from sliding upwardly over the enlarged flanges or beads of the bottles.

Along their inner abutting edges, the slats 19 are beveled, as at 21, to provide a relatively small abutting inner edge surface and to provide for hinging movement of the slats along the vertical plane of the carrier. The inner edges of the slats 19 are hingedly united by means of a pair of ring members 22 which extend through openings provided in the inner beveled edges of the slats. Each of the slats 19 is provided at its outer side corner with longitudinally extended circular projections 23 which extend well into the channeled grooves of the end members 11 between the parallel side members 10. The projections 23 have a relatively loose fit within the channeled grooves, in order to provide for rotation and sliding movement of the projections within such grooves.

As shown more particularly in Figures 2 and 5 of the drawings, the end portions of the slats 19 terminate just short of the relatively short webs 14 of the end members 11, but extend beneath the larger webs 13, in order that the slats may hinge downwardly of the carrier, as indicated by broken lines in Fig. 3, but may not hinge upwardly due to their abutting relation with the longer webs 13.

Pivotally connected with the ring members 22 are the hooked end portions of a bail-like handle 24 which functions as a convenient carrying device for the carrier, and, when lifted upwardly upon, serves to maintain the slats 19 in their flat bottle-crowding positions. Upon release of upward pressure applied to the handle 24, the slats 19 are free to hinge upon the ring members 22 and swing downwardly along the vertical plane of the carrier to a substantially folded position, as indicated at Fig. 3, whereupon the outer edges of the slats are withdrawn from engagement with the neck portions 17 of the beverage bottles to effectively increase the size of the bottle-carrying openings, whereby the bottles may be withdrawn downwardly from the carrier or the carrier removed over the neck of the bottles.

For purposes of maintaining the slats 19 in their bottle-clamping positions, a sliding latch device 25 is pivotally connected with one of the end members 11. In the position indicated in Figures 2 and 5, the latch 25 serves to hold the slats 19 against hinging movement to prevent release of the bottles carried by the carrier upon release of the handle member 24. This latch member 25 provides a convenient means for holding the carrier in locked position with respect to a group of bottles when the latter are permitted to rest upon their bottoms, whereby normal lifting movement upon the handle member 24 also functions to spread the slats 19 and to maintain the same in their bottle-clamping positions.

In operation, when it is desired to load the present carrier, the latch 25 is pivoted out of engagement with the web 13 of the end member to permit the slats 19 to hinge downwardly to their substantially folded position along the vertical plane of the carrier, at which time the neck portions 17 of the bottles may be inserted within the semi-circular recesses 16 of the side members of the outer frame, and, after such insertion, lifting

movement upon the handle 24 spreads the slats 19 transversely of the carrier and into clamping engagement with the neck portions of the bottles. Thereafter, the latch 25 may be pivoted to its locking position to prevent accidental release of the bottles when it is desired that the bottles and carrier be placed in a resting condition. It will be understood that upward lifting movement upon the handle functions to firmly hold the slats in their transversely spread positions.

In view of the foregoing, it will be seen that the present invention provides an improved and constructionally simplified bottle carrier or rack which is characterized by its positive action in firmly holding a plurality of beverage bottles in predetermined group relationship, at the same time providing a compact device whose overall size may be substantially less than the area covered by a plurality of beverage bottles in their normal grouped relationship. By nature of the relative simplicity of the construction, such devices may be readily and economically manufactured for sale in volume quantities at relatively reduced costs to the user.

While a single preferred embodiment of the invention has been described in detail, it will be manifest that various modifications with regard to constructional details may be resorted to without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. A beverage bottle carrier comprising a substantially flat rectangular outer frame having spaced parallel side members formed along opposing edges with a plurality of relatively spaced arcuate recesses for the partial reception of the relatively restricted neck portions of a plurality of beverage bottles and spaced parallel end members joining the side members and provided with channeled grooves extending transversely of said frame between the side members thereof, a pair of hingedly united bottle-gripping slats disposed in parallel relation to the side members of said frame and formed at either end with longitudinal projections disposed contiguous to the outer side edges of said slats and extending within the grooves of said end members, the projections formed on said slats supporting the latter for combined hinging and transverse sliding movement between transversely spread positions in abutting relation to the side members of said frame and vertically folded positions in spaced relation to the side members of said frame, said slats when occupying said first-named positions serving to close the recesses formed along the edges of the side members of said frame and to lock the neck portions of a plurality of beverage bottles received in said recesses against vertical displacement with respect to said frame, and handle means connected with said slats and operable when lifted upon to maintain said slats in their transversely spread bottle-locking positions and when released to permit said slats to move to their vertically folded positions in spaced relation to the side members of said frame.

2. A beverage bottle carrier comprising an open rectangular frame provided with flat spaced parallel side and end members, the side members of said frame being formed along the inner side edges thereof with a plurality of longitudinally spaced semicircular recesses opening inwardly of said frame for the partial reception of the restricted neck portions of a plurality of beverage bottles, the end members of said frame being formed with inwardly opening channels extend-

ing transversely between the side members of said frame, a pair of substantially flat hingedly connected slat members extending longitudinally of said frame between and in parallel relation to the side members thereof, said slat members being formed at either end with longitudinal projections disposed contiguous to the outer side edges of said slats and occupying the channels formed in the end members of said frame, the longitudinal projections of said slat members supporting the latter for transverse sliding and downward hinging movement with respect to said frame, and handle means connected with said slat members along their inner edges and operable when lifted upon to move said slat members to a flat transversely spread position in abutting relation to the inner edges of the side members of said frame to close the recesses formed therein, and when depressed to move said slat members to a vertically folded position in spaced relation to the inner side edges of the side members of said frame, said slat members when occupying their transversely spread position being disposed in the transverse plane of said frame with the recesses formed in the outer edges of said slat members defining with the recesses formed in the inner edges of said side members circular openings of a size slightly larger than the diameter of the restricted neck portions of beverage bottles to be carried by said carrier.

3. A beverage bottle carrier comprising a substantially flat rectangular outer frame having spaced parallel side members formed along opposing edges with a plurality of relatively spaced arcuate recesses for the partial reception of the relatively restricted neck portions of a plurality of beverage bottles and spaced parallel end members joining the side members and provided with channeled grooves extending transversely of said frame between the side members thereof, the end members of said outer frame being provided with inwardly projecting ledges disposed above the channeled grooves, a pair of hingedly united slats carried within the grooves of said end members in parallel relation to the side members of said frame for combined hinging and transverse sliding movement between transversely spread positions in abutting relation to the side members of said frame and vertically folded positions in spaced relation to the side members of said frame, said slats when occupying said first-named positions serving to close the recesses formed along the edges of the side members of said frame and to lock the neck portions of a plurality of beverage bottles received in said recesses against vertical displacement with respect to said frame, the inwardly projecting ledges of the end members of said frame overlying the ends of said slats and preventing hinging movement thereof in an upward direction, handle means connected with said slats and operable when lifted upon to maintain said slats in their transversely spread bottle-locking positions in abutting engagement with the ledges formed on the end members of said frame and when released to permit said slats to move to their vertically folded positions in spaced relation to the side members of said frame, and a latch device pivotally carried by one of said slats adjacent one of the end members of said frame and engageable with said one of the end members when said slats occupy their transversely spread positions for locking said slats against vertical folding movement.

4. A carrier for bottles of the type provided with a relatively restricted neck region, comprising a substantially flat rectangular frame having spaced parallel side and end members, the side members of said frame being formed at longitudinally spaced intervals along their inner side edges with a plurality of arcuate recesses for the partial reception of the restricted neck regions of a plurality of beverage bottles, the end members of said frame being formed with inwardly opening channels and inwardly projecting ledges disposed above the channels; a pair of flat bottle-gripping slats disposed in parallel relation to the side members of said frame and formed with longitudinally extended pivot projections contiguous to the outer side edges of said slats, the pivot projections of said slats extending within the channels of the end members of said frame and supporting said slats for combined downward hinging movement and transverse sliding movement with respect to said frame, said slats being formed along their outer side edges with a plurality of arcuate recesses disposed in transverse alignment to the arcuate recesses formed in the side members of said frame, the ledges formed on the end members of said frame overlying the end regions of said slats to prevent hinging movement thereof in an upward direction; and handle means hingedly uniting said slats along their inner edges, and operable, when lifted upon, to move said slats to transversely spread positions in the plane of said frame and to bring the outer edges of said slats into substantially abutting engagement with the inner edges of the side members of said frame, whereby to close the arcuate recesses formed in the inner side edges of the side members of said frame.

CARL KILLINGSWORTH.

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