Jan. 4, 1944. E. W. HUTCHINGS 2,338,113

BOTTLE CARRIER AND SEPARATOR THEREFOR

Filed Feb. 19, 1942

Fig. 1.

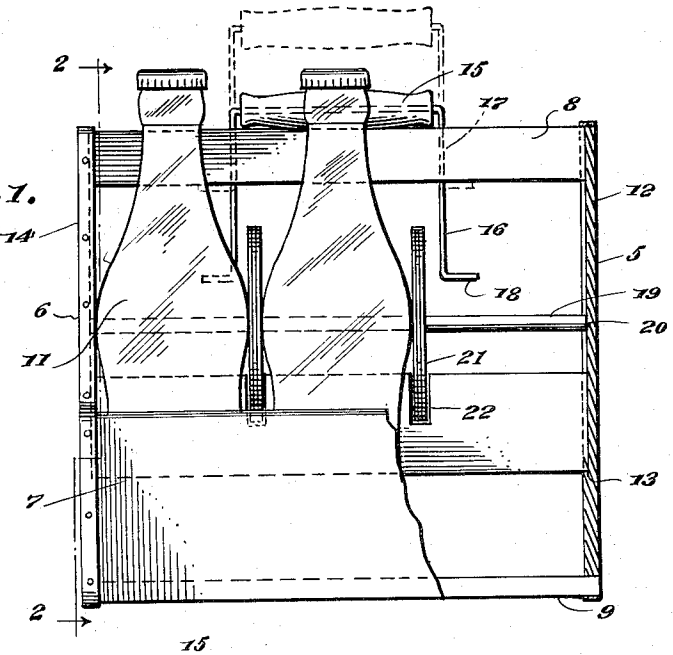



Fig. 2.

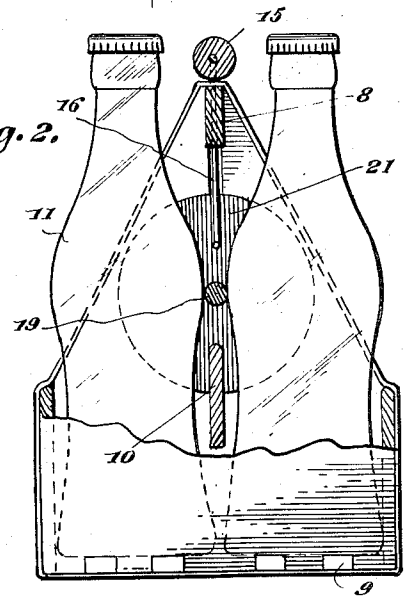



Fig. 3.

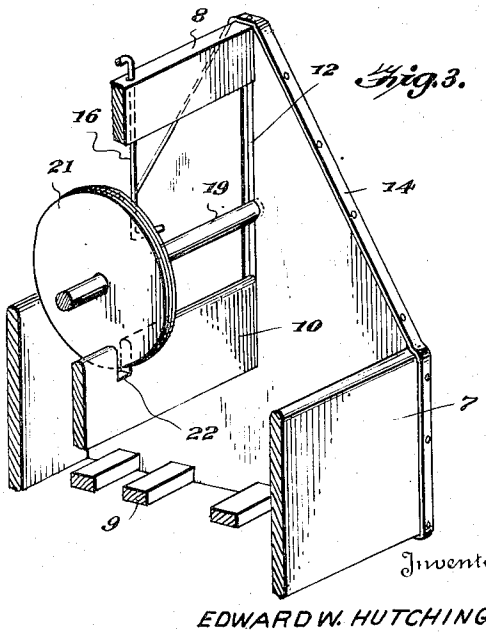
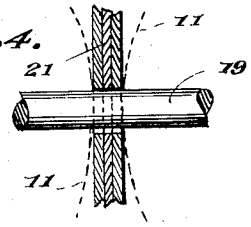



Fig. 4.




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2,338,113

# UNITED STATES PATENT OFFICE

2,338,113

## BOTTLE CARRIER AND SEPARATOR THEREFOR

Edward W. Hutchings, Perry, Fla.

Application February 19, 1942, Serial No. 431,575

9 Claims. (Cl. 224—48)

This invention relates to bottle carriers and more particularly to that class of carriers shown and described in my pending application filed in the Patent Office on the 9th day of December, 1941, under Serial No. 422,285, the present invention being an improvement thereon.

The object of the inventtion is to improve and simplify the construction of the carrier by eliminating the spaced supporting rods and relatively stationary separator plates carried thereby and in lieu thereof provide the carrier with a single supporting rod having spaced circular separator disks journaled thereon and free to revolve on said rod by contact with the bottles when loading and unloading the carrier, thereby to reduce friction between the parts and facilitate and expedite the loading operation.

A further object is to provide the central partition of the carrier with spaced seating recesses adapted to receive the peripheral edges of the rotating disks, said disks being preferably constructed of laminated material to impart strength thereto and having a limited lateral movement within the recesses to accommodate bottles of different sizes.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

In the drawing:

Figure 1 is a side elevation of a bottle carrier constructed in accordance with the present invention,

Figure 2 is a vertical sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a fragmentary perspective view of a portion of the carrier with the bottles removed therefrom in order to more clearly show the construction of the parts, and

Figure 4 is a detail vertical sectional view showing how the separator disks are journaled on the supporting rod.

The improved bottle carrier is preferably substantially triangular in shape and constructed of wood or other suitable material, said carrier comprising oppositely disposed end walls 5 and 6 connected at their lower ends by side walls 7 and at their upper ends by a horizontal bar 8 constituting a stationary carrying handle.

The carrier is provided with a bottom formed of spaced longitudinal strips 9 and disposed within the body of the carrier centrally thereof is a longitudinal partition 10 defining independent compartments each adapted to receive a row of bottles, indicated at 11. The carrier may be constructed to hold any desired number of bottles and for the purpose of illustration is shown of sufficient size to support and carry six bottles.

The opposite ends of the partition 10 are fitted in vertical seating grooves 12 having their lower ends terminating short of the strips 9 to form stop shoulders 13 and their upper ends intersecting the handle 8, as best shown in Figure 3 of the drawing.

Suitable binding strips 14 preferably extend around the end walls and side walls 7 and over and in contact with the supporting handle 8 to reinforce and strengthen the carrier.

Slidably mounted for vertical movement on the stationary handle or bar 8 is an auxiliary or movable handle 15 comprising an inverted substantially U-shaped member, the opposite legs 16 of which extend through vertical openings 17 in the bar 8 and are provided with terminal stop fingers 18 which by engagement with the lower edge of the bar 8 serve to limit the upward movement of the auxiliary handle.

The parts just referred to are shown and described in my previously mentioned application and, except in combination with other elements now to be described, form no part of the present invention.

When stationary separator plates are employed, there is always a certain amount of friction between the bottles and separator plates when loading and unloading the carriers, and in order to eliminate this objectionable feature, it is proposed to mount the separator members in such a manner that they may revolve by contact with the bottles when inserting the same within the carrier. To this end, there is provided a single supporting rod 19 which extends longitudinally of the carrier substantially midway the height thereof, said rod having its opposite ends fitted in sockets 20 formed in the walls of the guiding grooves 12. Loosely mounted for rotation on the supporting rod 19 are spaced separator members 21 preferably in the form of circular disks formed of laminated material to reinforce and strengthen the same.

The upper edge of the partition 10 is cut away to form spaced seating recesses 22 which receive the peripheral edges of the separator disks 21, said recesses being slightly wider than the thickness of the disks 21 so as to allow a limited lateral movement of the disks on the supporting rod 19 to accommodate bottles of different sizes. It will here be noted that the supporting rod 19 is disposed beneath and in vertical alinement with the stationary handle 8, the distance between the

rod 19 and handle 8 being such as to insure free rotation of the disks at all times.

In loading the carrier, the bottles are held in a perpendicular or upright position and inserted within the carrier. As the end bottles come in contact with the adjacent separator disks, they will shift said disks laterally to a slight degree in one direction so as to accommodate the bottles and at the same time rotate the disks on the supporting rod 19 so as to reduce friction between the parts and facilitate and expedite the loading operation. By then inserting the central bottle of each row within the carrier, the exterior walls of the central bottle will engage the separator disks and force said disks laterally in the opposite direction thereby causing the opposite faces of the separator disks to firmly grip the bottles and not only hold said bottles in spaced relation to each other but also prevent scuffing and rattling of the bottles either when transporting filled bottles or returning empty bottles to the vendor. When removing either filled or empty bottles from the carrier, the separator disks will rotate in the reverse direction, as will be readily understood.

The terminals 18 of the auxiliary handle 15 are spaced from the outer faces of the adjacent separator disks so as not to interfere with the free rotation of said disks. Furthermore, inasmuch as the separator disks are always in proper place to engage the bottles, regardless of the position of the auxiliary carrying handle, said disks will function as separating members when the auxiliary carrying handle is in either lowered or elevated position. If desired, the opposite side faces of the separator disks may be roughened or covered with rubber or other yieldable material to insure a good traction surface and also to present a yieldable cushioning surface to the bottles to further prevent ratttling or scuffing thereof.

While the rotating separator disks are shown in connection with a wooden carrier, it will, of course, be understood that said disks may be used with equally good results on paper or pasteboard cartons, metal carriers or any other type of carrier.

It will also be understood that the carriers may be made in different sizes and shapes so as to accommodate any desired number of bottles and that the side and end walls of the carrier may be used for displaying any suitable advertising matter.

Having thus described the invention, what is claimed as new is:

1. A bottle carrier comprising a body for receiving bottles in rows, and separator members mounted for rotation within the body and extending between adjacent rows transversely thereof with portions of each separator extending between and engaging confronting surfaces of two bottles of each row.

2. A bottle carrier comprising a body for receiving bottles in rows, a supporting rod disposed within and extending longitudinally of the body, and separator members mounted for rotation on said rod and extending between adjacent rows transversely thereof with portions of each separator extending between and engaging confronting surfaces of two bottles of each row.

3. A bottle carrier comprising a body for receiving bottles in rows, a supporting rod disposed within and extending longitudinally of said body, and separator members mounted for rotation on said rod and having a limited lateral movement with respect thereto, said separator members extending between adjacent rows transversely thereof with portions of each separator extending between and engaging confronting surfaces of two bottles of each row to separate and prevent scuffing the adjacent bottles.

4. A bottle carrier comprising a body for receiving bottles in rows, a longitudinal partition disposed within the body and having seating recesses formed in its upper edge, a supporting rod disposed above the partition, and substantially circular separator disks journaled on the rod and having their peripheral edges fitting within the seating recesses in the partition and having a limited lateral movement with respect thereto.

5. A bottle carrier comprising a body for receiving bottles in rows, a partition disposed within the body and having its upper edge provided with seating recesses, a single stationary supporting rod disposed within the body above the partition, and substantially circular separator members mounted for rotation on the supporting rod and extending transversely of the body between adjacent rows of bottles and having their peripheral edges fitting within the seating recesses, said recesses being wider than the thickness of the separator members to permit a limited lateral movement of said members on the supporting rod.

6. A bottle carrier comprising a body for receiving bottles in rows, a partition extending longitudinally within the body and having its upper edge provided with spaced seating recesses, a single supporting rod arranged above the partition and disposed substantially parallel therewith, and substantially circular laminated separator disks mounted for rotation on the supporting rod and having their peripheral edges extending within the seating recesses in said partition.

7. A bottle carrier comprising a body for receiving bottles in rows and provided with sockets, a partition fitting within the body and having its upper edge formed with spaced recesses, a stationary supporting rod disposed above and substantially parallel with the partition and having its ends fitting within the sockets, and substantially circular separator disks mounted for rotation on the supporting rod and having their peripheral edges loosely fitted within the seating recesses and having a limited lateral movement therein.

8. A bottle carrier comprising a body, a partition in said body defining spaces to receive rows of bottles at opposite sides of the partition, and separator members mounted for rotation within the body and extending between adjacent rows transversely thereof with portions of each separator extending between and engaging the confronting surfaces of two bottles of each row.

9. A bottle carrier comprising a body adapted to receive bottles arranged in rows in side by side relation to each other, and separator members rotatably mounted within the body to turn about an axis disposed longitudinally of the rows, said separator members extending between adjacent rows transversely thereof with portions of each separator extending between and engaging the confronting surfaces of two bottles of each row.

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