April 22, 1952 J. F. EDER ET AL 2,593,861

BOTTLE CARRIER

Filed March 22, 1949 2 SHEETS—SHEET 1

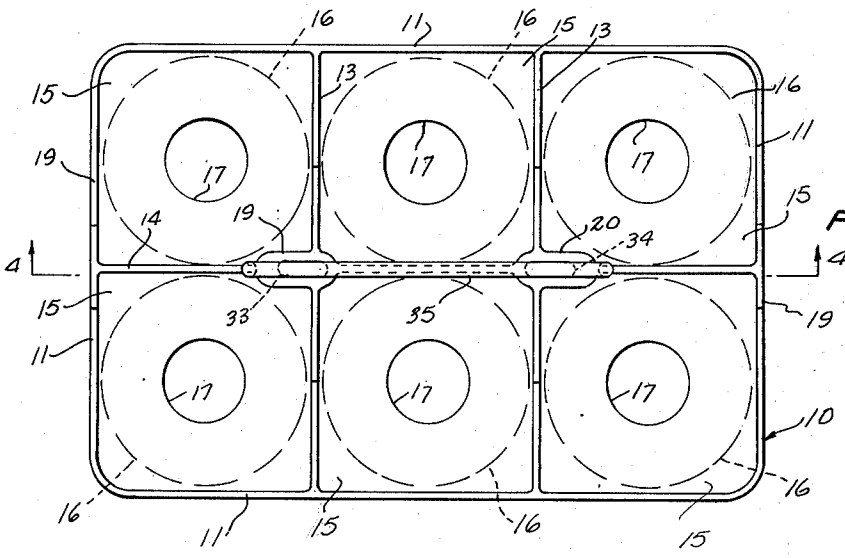


FIG. 1.

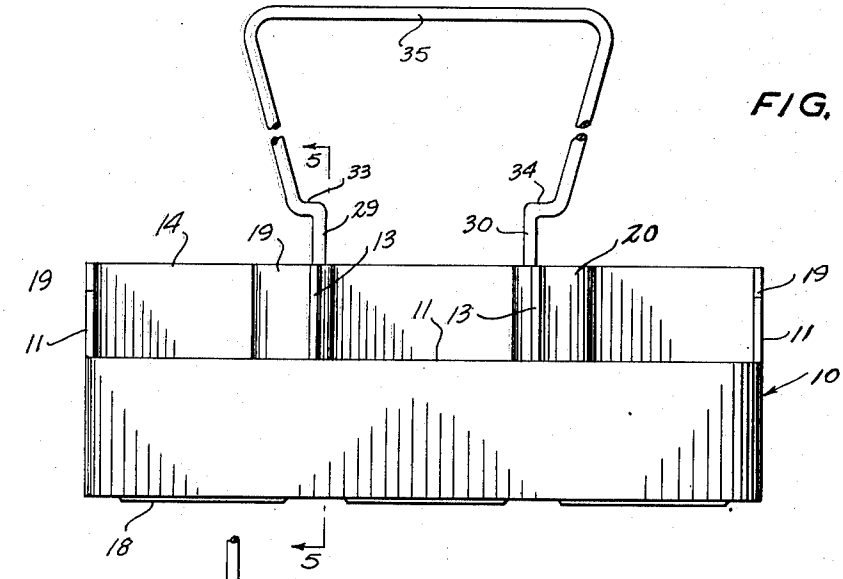


FIG. 2.

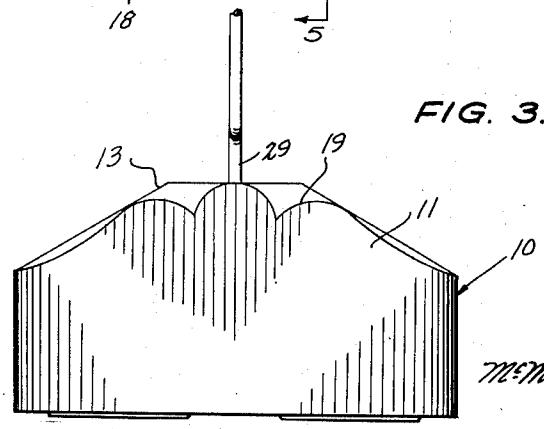


FIG. 3.

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FIG. 4.

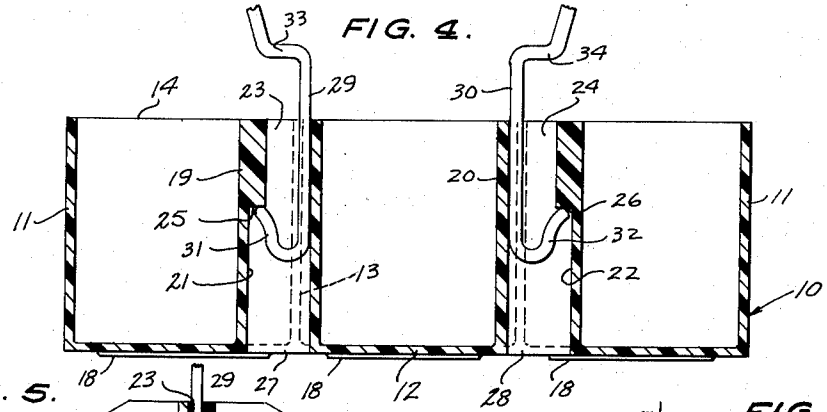


FIG. 5.

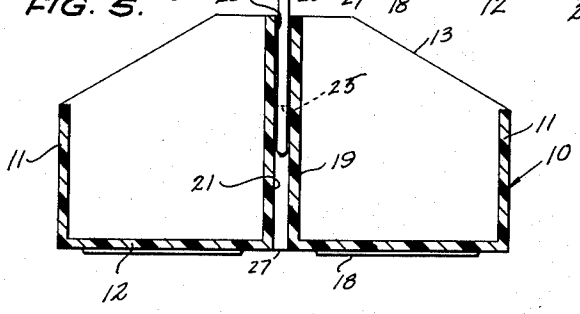


FIG. 6.

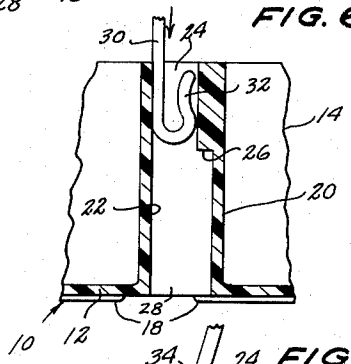


FIG. 8.

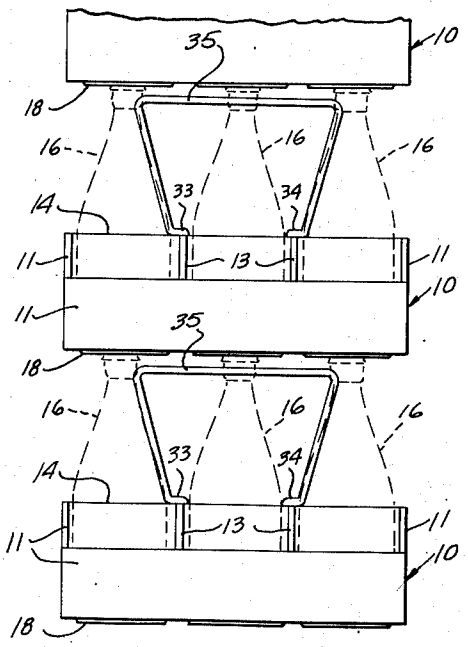
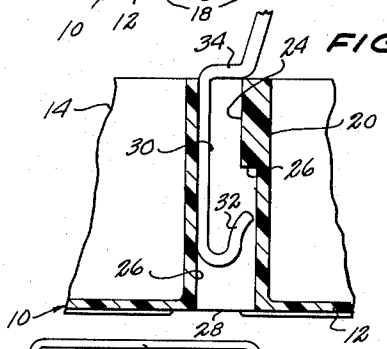


FIG. 7.



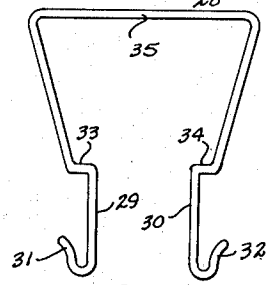


FIG. 9.

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BOTTLE CARRIER

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Application March 22, 1949, Serial No. 82,734

2 Claims. (Cl. 220—21)

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Our invention relates to bottle carriers, and more particularly to the type of bottle carrier adapted to carry a plurality of soft drink bottles in side-by-side relation.

With the foregoing in view, it is an object of our invention to provide an improved bottle carrier of the class described.

A further object is to provide an improved bottle carrier which comprises a tray for carrying a plurality of bottles in upright, side-by-side relation, a carrying handle for the tray, and means operatively connecting the carrying handle to the tray for vertical sliding movement relative thereto and from a carrying position above the uppermost plane of the bottles and a stacking position below said plane whereby to permit a plurality of trays to be stacked one on top of the other with the trays resting on the tops of the bottles of the subjacent trays.

A further object is to provide an improved bottle carrier comprising a one-piece tray of plastic material formed with a plurality of boundary walls and intersecting partitions defining a plurality of bottle compartments, a metal carrying handle for the tray, and means operatively and permanently connecting the handle to the tray for vertical sliding movement relative thereto.

A further object is to provide in a bottle-carrying tray a novel carrying handle for said tray and novel means for operatively connecting the carrying handle to the tray, said means comprising an upwardly-directed, vertically-elongated socket formed in said tray, said socket having a restricted open upper end providing a stop or shoulder, said carrying handle including a shank slidable in said socket, said shank having an enlarged lower end engageable with said stop or shoulder to limit upward sliding movement of the same in said socket.

Other objects and advantages reside in the particular structure of the invention, the structure of the several elements thereof, combination and arrangement of such elements, all of which will be readily apparent to those skilled in the art upon reference to the attached drawing in connection with the following specification, wherein the invention is shown, described and claimed.

In the drawing:

Figure 1 is a plan view of the carrier according to the invention;

Figure 2 is a side elevation thereof;

Figure 3 is an end view thereof;

Figure 4 is a longitudinal vertical sectional

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view taken substantially on the plane of the line 4—4 of Figure 1;

Figure 5 is a transverse vertical sectional view taken substantially on the plane of the line 5—5 of Figure 2;

Figures 6 and 7 are fragmentary longitudinal vertical sectional views like Figure 4, but showing a part in two different positions;

Figure 8 is an elevational view on a smaller scale showing a plurality of carriers in stacked relation;

Figure 9 is an elevational view of one of the carrying handles apart from the rest of the structure and on a smaller scale.

Referring specifically to the drawing, wherein like reference characters have been used throughout the several views to designate like parts, the carrier according to the invention comprises a tray generally indicated at 10. Preferably, the tray 10 is formed of one piece of any suitable plastic material and comprises a pair of side walls and a pair of end walls secured to the side walls, the side and end walls forming the boundary walls 11 which are integral with a bottom or floor 12. A longitudinally extending partition 14 is arranged within the tray 10 in parallel spaced relation with respect to the side walls and secured to the boundary end walls 11 and bottom 12, which partition is intersected by a pair of transversely disposed partitions 13, the partitions 13 being secured to the boundary side walls 11 and bottom 12 whereby the tray is divided into a plurality of compartments 15 for individual bottles 16. Preferably, the floor 12 is formed with an opening 17 therethrough for drainage and for facilitating the cleaning of the device. Likewise, the under surface of the floor 12 is preferably formed with a plurality of annular ribs 18 concentrically disposed about each opening 17 to reinforce the floors of the individual compartments 15. If desired, the upper edges of the end walls 11 may be ornamentally formed, as at 19.

The tray 10 is formed with one or more upwardly-directed projections formed with upwardly-directed sockets adapted to receive a carrying handle therein. In the embodiment illustrated, the projections comprise enlarged portions 19 and 20 of the longitudinally-extending partition 14. The projections 19 and 20 are formed respectively with upwardly-elongated sockets 21 and 22 which comprise the lower portions of openings extending entirely through the tray from the tops of the partition 14 through the bottom 12. The sockets likewise include

open upper ends of a restricted nature which merge with the lower portions or sockets 21 and 22 to provide stop shoulders 25 and 26. Moreover, it will be noted that the open lower ends 27 and 28 of the sockets 21 and 22 are the full size of the socket for a purpose to be apparent hereinafter.

The carrying hand grip or handle for the device comprises a U-shaped handle having the legs 29 and 30 vertically slidable respectively in the sockets 21 and 22, and which extend upwardly of the upper ends thereof through the restricted open upper ends 23 and 24. The free ends of the shanks or legs 29 and 30 have resilient hooks, as at 31 and 32, respectively, to limit upward sliding movement of the shanks in the sockets 21 and 22. Thus, the embodiment illustrated provides that the shanks 29 and 30 be formed of spring material and that the enlarged lower ends 31 and 32 thereof comprise upwardly-directed spring arms providing latches engaging with the shoulders 25 and 26 to limit upward sliding movement of the shanks. At the same time, the spring arms 31 and 32 are initially inserted in the sockets 21 and 22 by being compressed to lie along the shanks 29 and 30 so as to be passed through the restricted open upper ends 23 and 24 into the sockets proper. This operation is illustrated in Figure 6, wherein the shank 30 is being inserted in the direction of the arrow. However, as shown in Figures 4 and 7, as soon as the upwardly-directed spring arm 32 passes the shoulder 26, the arm expands so that the free end of the spring arm is located below the shoulder 26 for engagement therewith to limit upward sliding of the shank 30 in the socket 26.

To limit downward sliding of the shanks 29 and 30 in the sockets, each shank is formed with a fixed laterally-directed stop 33 or 34 which is engageable with the upper surface of the shoulders 25 and 26 to limit downward sliding of the shanks. As best seen in Figures 8 and 9, the upper ends of the shanks 29 and 30 are connected together by hand-grip-providing crosspiece 35 which lies in the vertical plane defining the longitudinal partition 14. Thus, the bight or hand grip 35 is automatically positioned intermediate the vertical planes separating the bottles 16 for a purpose now to be apparent. With the shanks 29 and 30 in the uppermost position, as shown in Figure 4, the hand grips 35 are located above a horizontal plane defining the upper ends of the bottles 16. In this position, the tray may be filled with bottles and be conveniently carried. However, when in a store or the like, it is desired to stack a plurality of carriers each filled with bottles 16, the hand grips 35, together with the shanks 29 and 30, are slid downwardly until the stops 33 and 34 engage the upper surfaces of the shoulders 25 and 26. In such lowered position, the hand grips 35 are located below the horizontal plane defining the tops of the bottles 16, whereby successive carriers 10 may be stacked atop the bottles of a subjacent carrier without wobbling or other insecurity. At the same time, by limiting the downward sliding of the shanks 29 and 30, they are restrained from projecting below the floors 12 of the trays and also are restrained from being lowered any great distance below the plane defining the upper ends of the bottles 16. Thus, as clearly shown in Figure 8, the hand grips 35 are so positioned as to be conveniently gripped without any stretching or groping when it is desired to pick up a carrier 10 by the hand grip 35 and carry the same, even though the hand grip is in the lower position.

It is obvious from the foregoing that the shanks 29 and 30 are permanently secured in the sockets 21 and 22. Moreover, by providing the open lower ends 27 and 28 of the sockets of full size, in the event that it is desired to replace a broken handle, it is a simple matter to sever the shanks 29 or 30 below the stops 33 or 34, whereby the lower ends of the shanks will drop out through the open lower ends of the sockets. Also, by providing open lower ends of the sockets, the same are readily cleaned and/or sterilized. Likewise the openings 17 in the compartments 15 provide means for readily rinsing out these compartments and also provide drainage openings for any condensation forming on the bottles 16. Moreover, by forming the tray of plastic material, the same is non-corrosive and susceptible of a long useful life. If desired, of course, the sides or outer surfaces of the boundary walls 11 may be suitably ornamented and/or formed with advertising indicia for the bottler or other proprietor of the tray.

Moreover, while we have shown and described what are now thought to be the preferred embodiments of the invention, it is to be understood that the same is susceptible of other forms and expressions. Consequently, we do not limit ourselves to the precise structure shown and described hereinabove except as hereinafter claimed.

We claim:

1. In a bottle carrier, a tray comprising a bottom, a pair of spaced side walls positioned upon said bottom and secured to the latter, and a pair of end walls positioned upon said bottom and secured to said side walls, a longitudinally extending rigid partition arranged within said tray in parallel spaced relation with respect to the side walls and secured to said bottom and end walls, a pair of transversely disposed rigid partitions positioned within said tray intersecting said longitudinal partition and fixedly secured to said bottom and side walls to thereby sub-divide the tray into a plurality of individual compartments for the reception therein of a bottle, said longitudinally extending partition being formed with a longitudinal open ended socket at each of the points of intersection with said pair of transversely disposed partitions, each of said sockets having one of its walls cut away inwardly from the open end adjacent said bottom and terminating at a point adjacent to and spaced from the other open end thereof to thereby form a shoulder, and a resilient U-shaped handle having the free ends of its legs adapted for insertion through the other ends of said sockets and into the portions of the sockets between said shoulders and said one ends of said sockets, the free end of each of said legs being bent upwardly and outwardly to form an arm slidable within the portion of the socket between said one end thereof and the adjacent shoulder and engageable with the adjacent shoulder to limit its slidable movement in one direction.

2. In a bottle carrier, a tray including a bottom and a pair of spaced side walls, a longitudinally extending rigid partition arranged within said tray in parallel spaced relation with respect to said side walls and secured to said tray, said partition being formed intermediate its ends with at least two longitudinal open ended sockets spaced from each other, each of said sockets having one of its walls cut away inwardly from the open end adjacent said bottom and terminating at a point adjacent to and spaced from the other

open end thereof to thereby form a shoulder, and a resilient U-shaped handle having the free ends of its legs adapted for insertion through the other ends of said sockets and into the portions of the sockets between said shoulders and said one ends of said sockets, the free end of each of said legs being provided with a resilient hook slidable within the portion of the socket between said one end thereof and the adjacent shoulder and engageable with the adjacent shoulder to limit its slidable movement in one direction.

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