

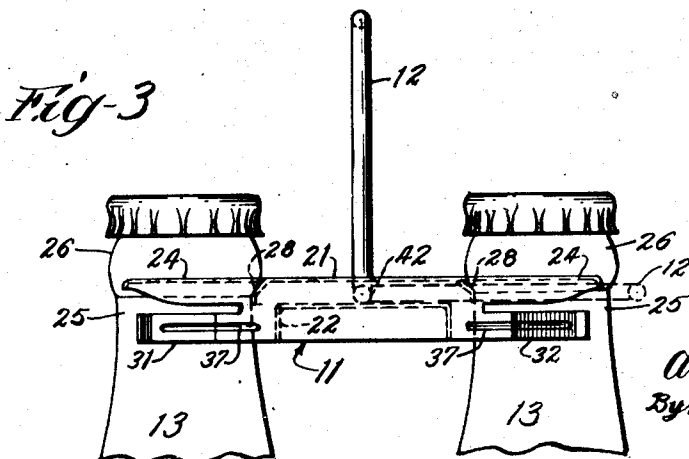
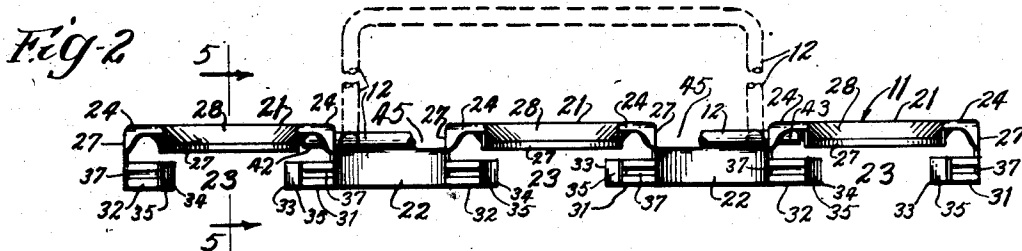
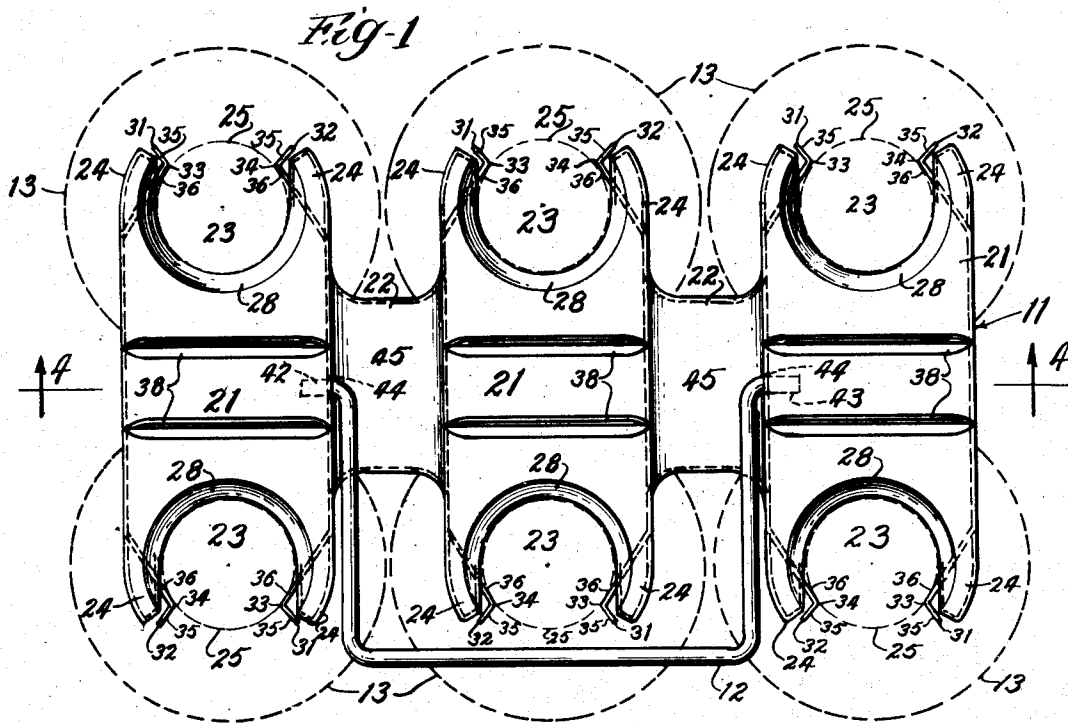
Nov. 10, 1942.

A. A. VOIGTRITTER  
BOTTLE HOLDER AND CARRIER

2,301,594

Filed Nov. 3, 1941

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig-4

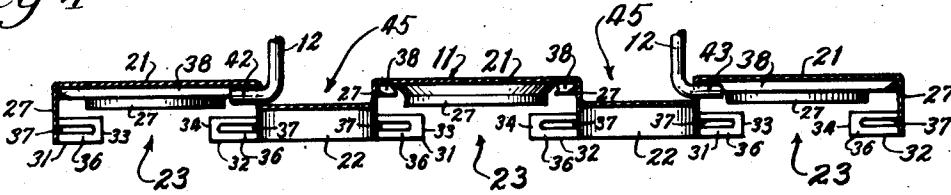


Fig-5

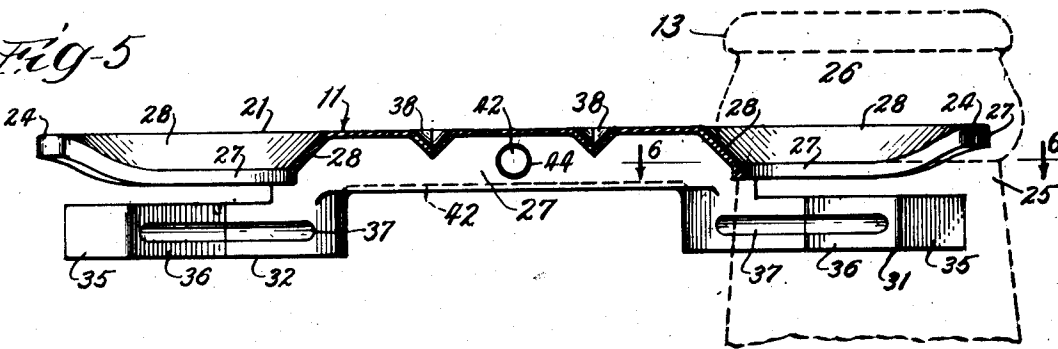


Fig-7

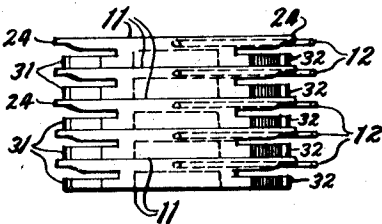
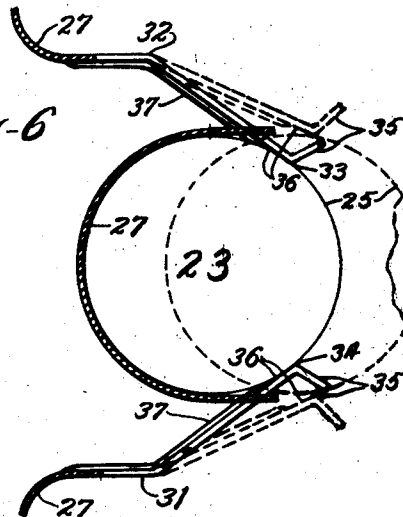


Fig-6



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Att'y

# UNITED STATES PATENT OFFICE

2,301,594

## BOTTLE HOLDER AND CARRIER

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13 Claims. (Cl. 294—87)

This invention relates to a bottle holder and carrier and has for an important object the provision of such a device which will be strong and durable so that it may be used repeatedly and will not be materially damaged as an incident to regular usage.

Another important object of the invention is to provide a bottle holder and carrier which may be loaded mechanically by means of relatively simple apparatus which may be associated with a conveying mechanism leading from a bottling machine.

A further object of the invention is to provide such a device which is constructed and arranged so as to occupy a minimum of space when empty and in groups in relatively small boxes or cartons.

Other objects of the invention, such as the economy of construction and efficiency of the operation, will be apparent as the invention is better understood from the following description, which, taken in connection with the accompanying drawings, discloses an embodiment thereof.

Referring to the drawings:

Figure 1 is a plan view of a bottle holder and carrier embodying my invention.

Fig. 2 is an elevational view showing the device illustrated in Fig. 1, from the front.

Fig. 3 is a similar elevational view showing the device as viewed from an end and illustrating the engagement thereof with bottles.

Fig. 4 is a longitudinal section taken substantially on line 4—4 in Fig. 1, illustrating details of construction.

Fig. 5 is a transverse elevational section taken substantially on line 5—5 in Fig. 2, further illustrating details of construction on an enlarged scale.

Fig. 6 is a horizontal section taken substantially on line 6—6 in Fig. 5 illustrating the bottle registering and gripping action; and,

Fig. 7 is an elevational view showing a group of the holders folded and packed together, as viewed from an end.

To illustrate the invention I have shown a body 11, a handle or bail 12 and a plurality of bottles 13.

Since it is an object of the invention to provide a durable holder and carrier the body 11 is preferably formed of sheet metal and to effect economy the body may be formed of sheet iron properly coated or treated for protection against corrosion and in one piece as shown.

Another feature of the invention is directed to the holding and carrying of groups of bottles

and while the device as illustrated is designed to hold and carry groups of six or less, it will be obvious that such holders and carriers may readily be designed for groups of any practical size from two bottles upwardly in steps of one.

In the preferred form of the body 11 the bottles 13 are held registered or suspended in pairs from holder heads 21 wherein one bottle is balanced against another and where groups of four or more bottles are to be carried a series of such holder heads is provided. Each holder head of the series being arranged to carry two bottles is connected to another holder head in a suitable manner, such as by means of connectors 22 formed as a separate elements or integral with the body 11 as shown.

The holder heads 21 are formed in accordance with the diameter of the bottles 13 to be carried and are bifurcated adjacent both ends to form registering stations or sockets 23 between spaced locating arms 24. The registering sockets 23 are spaced apart in the heads 21 a distance slightly greater than the largest diameter of the bottles 13 to be carried and similarly the holder heads 21 are spaced apart by the connectors 22 substantially the same distance or so that the registering sockets in each one thereof will be spaced apart a distance at least as great as the largest diameter of the bottles to be held and carried.

The registering sockets 23 are preferably semi-circular as shown and the radius thereof should be slightly greater than one half the diameter of the neck of the bottles 13 at a narrow point 25 located immediately beneath the head 26 of the bottle, so that approximately one half of the circumference of the neck of the bottle may be engaged for locating or registering the bottle.

Since the sockets 23 are formed between the locating arms 24, the remote sides of the sockets may be open for receiving the bottles and accordingly the space between the arms 24 should be slightly greater than the necks of the bottles at the point 25, as shown.

For stiffening purposes, when the body 11 is formed of relatively thin sheet metal, the perimeter of the holder heads 21 may be provided with a depending flange 27, which flange may extend completely about the heads 21, including the inner walls of the arms 24 and the walls of the sockets 23. Throughout the sockets 23, the junction between the depending flange 27 and the top surface of the heads 21 is frustro-conically beveled or cupped, as indicated at 28 in Figs. 1 and 5. Thus is provided a socket in which the undercurved portion of the heads of the bottles

may seat. This arrangement not only distributes the load pressure but also to an extent retains the bottles in the sockets 23 while they are being carried.

Yielding means is provided for retaining the bottles 13 in the sockets 23 and to provide such a means I have shown oppositely disposed spring clips 31 and 32, formed integral with and extending from the depending flange 27. These spring clips are arranged to form a narrow gate between points 33 and 34, Fig. 6, located in front of the sockets 23 and in the path of bottle necks moving into or out of the sockets 23.

The spring clips 31 and 32 are beveled or angularly formed so that oppositely disposed inclined surfaces 35 and 36 are provided, the inclined surface 35 is disposed for engagement by the neck of a bottle entering the sockets 23 and so that upon the application of pressure to the bottle and in the direction of the socket, the spring clips will be forced open, and the inclined surface 36 is disposed to engage the bottle neck while the bottle is engaged in the socket for yieldingly retaining the bottle therein. This action is illustrated in Fig. 6, wherein a bottle neck narrow point 25 is shown gripped between the clips 31 and 32 while posited in the socket 23, and shown in dotted lines together with the spring clips in an entering position wherein the spring clips are spread open or separated by pressure on the bottle.

A stiffening bead 37 may be formed in the body of the spring clips 31 and 32, as indicated in the drawings, when thin stock is used to form the body 11. Similarly, stiffening ribs 38 may be formed in the top of each one of the holder heads 21 and in other portions of the body 11 upon occasion.

The connectors 22 may be of inverted channel form as shown and may be reinforced in accordance with requirements upon occasion, such as may be required when the body 11 is formed of thin stock.

To provide a handle to facilitate manual engagement for carrying I have shown a bail forming the handle 12 that is formed of rod stock or wire and is substantially U shaped having outwardly formed lugs 42 and 43 formed at the extremities of the legs thereof for engagement in suitable apertures 44 in the body 11.

The bail or handle 12 is preferably attached to the body 11 at remote points located along or adjacent the longitudinal axis of the body 11 or at such points located in a plane bisecting the body so that the weight of the bottles carried thereby will be substantially equally divided or balanced with respect to the handle.

In order to facilitate folding as shown in Fig. 7, so that a minimum of space is required for packing, the connectors 22 connect with the holder heads 21 at points located below the top surfaces thereof, so that a channel 45 is formed between the heads 21 and of a depth slightly greater than the diameter or thickness of the bail stock, and into which the bail may be folded as indicated in Figs. 2, 3 and 7.

As above described, the bottles 13 are engaged in the sockets 23 by the application of pressure to the bottles, and since the sockets open in opposite directions as clearly illustrated in Fig. 1, the device may be mechanically loaded when posited at the proper elevation between two rows of bottles carried on a conveyor extending from a bottling machine by the application of sufficient

force to bring the bottles together and to overcome the spring clips 31 and 32.

When a bottle is engaged in any one of the sockets 23, it is firmly though yieldingly gripped by the spring clips 31 and 32. A slight twisting movement of the bottle facilitates removal thereof from the socket 23 manually.

Since the holder and carrier device is posited between the bottles when loaded it is obviously protected from undue abuse and it is likewise obvious that the unobstructive location of the device when loaded permits a maximum display of the bottled goods carried thereby.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in form, construction, and arrangement of the parts without departing from the spirit and scope of the invention, or sacrificing all of its material advantages, the form herein-before described being merely a preferred embodiment thereof.

What I claim and desire to secure by Letters Patent is:

1. A bottle holder and carrier comprising, a body provided with oppositely disposed bifurcated portions forming engaging means arranged to engage the necks of a plurality of bottles individually and being disposed in spaced relationship, and a handle device associated therewith and arranged for manual engagement, whereby a plurality of bottles may be held in registered relationship and carried in suspension, said handle device comprising a wire bail pivotally attached to said body at remote points on an axial line bisecting said body.

2. A bottle holder and carrier comprising, a body provided with oppositely disposed bifurcated portions forming engaging means arranged to engage the necks of a plurality of bottles individually and being disposed in spaced relationship, and a wire bail handle device pivotally attached to said body at spaced points located, intermediate the bottle engaging means whereby said body may be manually carried in balanced relationship while bottles are held thereby in suspended relationship.

3. A bottle holder and carrier comprising, a body provided with oppositely disposed bifurcated portions forming a plurality of bottle registering devices wherein the necks of bottles may be engaged in registered relationship, retaining means cooperating therewith for yieldingly holding the bottles with respect to said registering devices, and handle means for facilitating manual engagement thereof, whereby a plurality of bottles may be held in spaced relationship and transported manually.

4. A bottle holder and carrier comprising, a body provided with a plurality of bottle registering devices wherein the necks of bottles may be engaged in registered relationship, said registering devices being associated with upwardly and outwardly flared surface portions forming sockets for receiving at least a portion of the heads of the bottles, and handle means for facilitating manual transportation thereof.

5. A bottle holder and carrier comprising, a body provided with a plurality of bottle registering devices wherein the necks of bottles may be engaged in registered relationship, said registering devices being associated with upwardly and outwardly flared surface portions forming sockets for receiving at least a portion of the heads of the bottles, retaining means cooperating with said

registering devices for holding bottles therein, and handle means for facilitating manual transportation thereof.

6. A bottle holder and carrier comprising, a body provided with a plurality of bottle registering devices wherein the necks of bottles may be seated and registered, spring clip retaining devices formed integral with said body and being disposed adjacent said registering devices for yieldingly holding bottles against the seat therein, and handle means for facilitating manual transportation thereof.

7. A bottle holder and carrier comprising, a body arranged to form a series of receiving stations disposed in a common plane and in spaced parallel rows, each one of said receiving stations being adapted to receive the narrow neck portion of a bottle and opening laterally with respect to the longitudinal axis of the body, retaining devices formed integral with said body adjacent each one of said receiving stations and being disposed to yieldingly retain bottles therein, and a ball engaged with said body whereby the body and bottles engaged therein may be manually transported.

8. A bottle holder and carrier comprising, an elongated body having bifurcated projections extending therefrom in opposed relationship and forming spaced parallel rows of bottle receiving stations wherein the neck portion of bottles may be engaged and supported against longitudinal movement in at least one direction relative to the body, flexing retaining elements formed on said body adjacent each one of said receiving stations and being disposed to retain bottles therein, and a ball engaged with said body whereby the body and bottles engaged therein may be manually transported.

9. A bottle holder and carrier comprising, an elongated body having bifurcated projections extending therefrom in opposed relationship and forming spaced parallel rows of bottle receiving stations wherein the neck portion of bottles may be engaged and supported against longitudinal movement in at least one direction relative to the body, spaced cooperating spring clips supported adjacent each one of said receiving stations for yieldingly engaging bottles disposed therein, and a ball engaged with said body where-

by the body and bottles engaged therein may be manually transported.

10. A bottle holder and carrier comprising, a body carrying gripping devices disposed in parallel rows and opening outwardly with respect to an intermediately disposed axial line, each one of said gripping devices being arranged to yieldingly grip one member of a group of bottles individually and for cooperation with the other gripping devices to secure the group of bottles together for carrying, said body being proportioned and arranged to be disposed between the bottles of the group when attached thereto, and a ball attached to said body and arranged to extend above the bottles of the group whereby the assembly may be carried.

11. A bottle holder and carrier comprising, a body formed to provide bottle receiving pockets opening in opposite directions wherein the necks of bottles may be engaged as an incident to horizontal movement thereof toward a point located intermediate the bottle receiving pockets, yielding clip latching means whereby the bottles are yieldingly secured in said pockets, and a carrying ball pivotally attached to said body to facilitate folding for packing.

12. A bottle holder and carrier comprising, a body provided with oppositely disposed bifurcated portions forming engaging means wherein the necks of bottles may be engaged, and a carrying ball attached thereto, the bifurcated portions of said body being disposed in a common plane and opening in laterally opposed relationship to facilitate the engagement of bottles therein as an incident to movement of the bottles on a plane parallel to the plane of said bifurcated portions.

13. A bottle holder and carrier comprising, a body provided with oppositely disposed series of bifurcated portions each forming individual engaging means wherein the necks of bottles may be engaged, and a carrying ball attached thereto, the bifurcated portions of said body being disposed in a common plane and arranged in groups opening in laterally opposed relationship to facilitate the engagement of bottles therein as an incident to movement of the bottles on a plane parallel to the plane of said bifurcated portions.

ANNIE A. VOIGTRITTER.