

Nov. 8, 1949

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2,487,109

BOTTLE CARRIER

Filed June 25, 1946

2 Sheets-Sheet 1

FIG 1

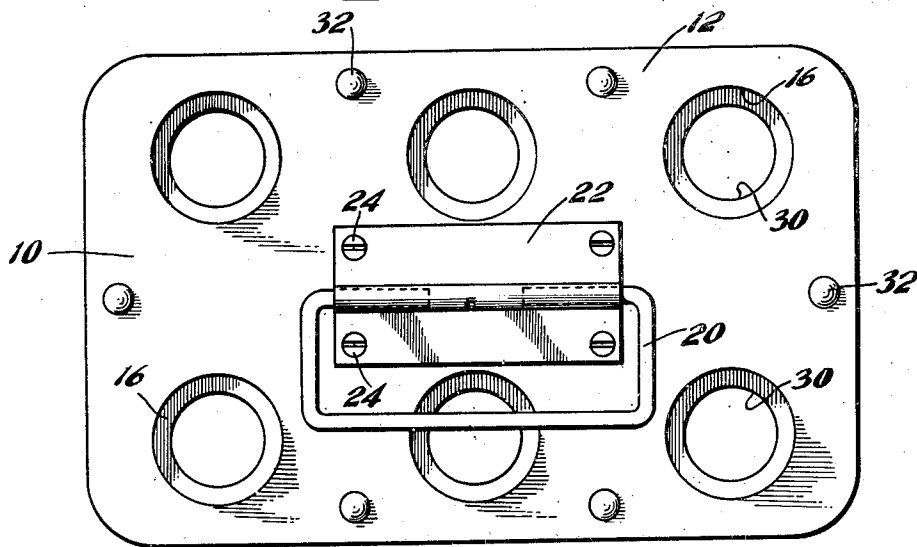
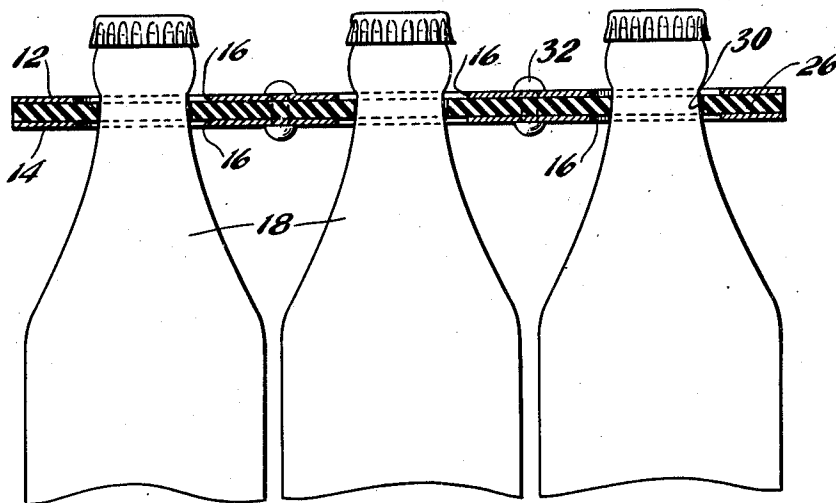


FIG 2



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2 Sheets-Sheet 2

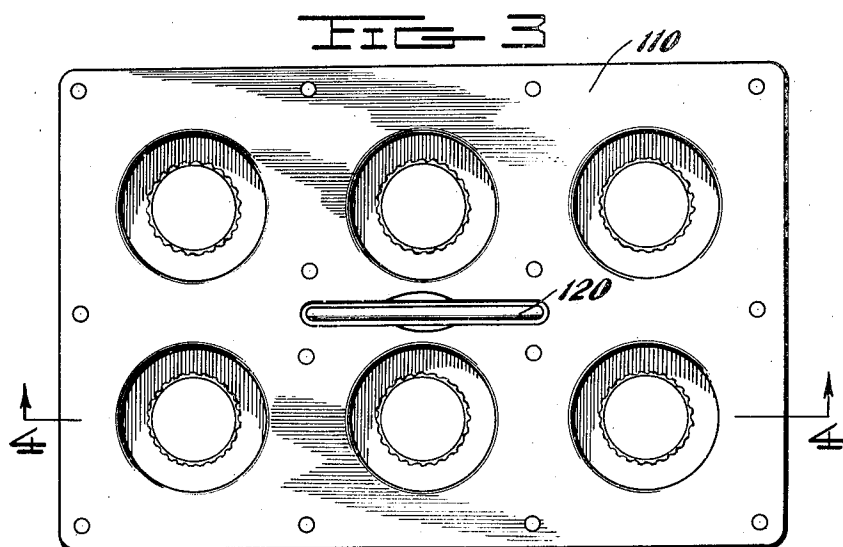
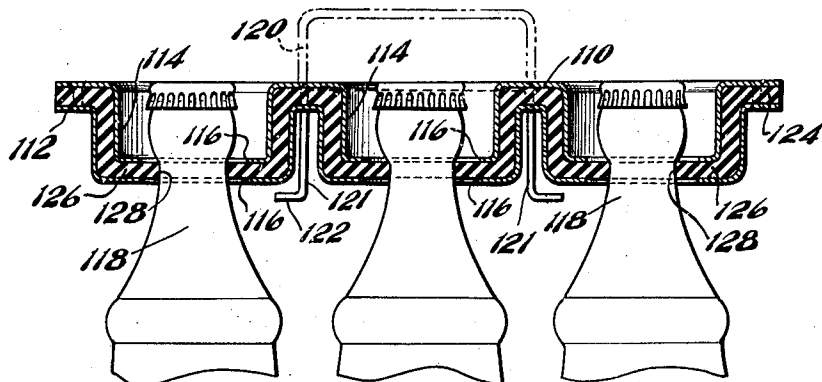
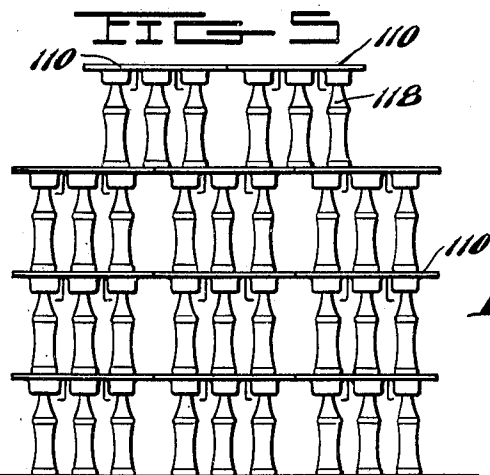
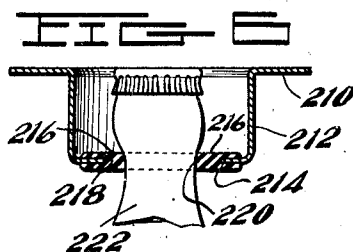


FIG. 4



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BOTTLE CARRIER

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6 Claims. (Cl. 294—87.2)

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The present invention pertains to novel and useful improvements in a bottle carrier and more particularly consists of a compact and lightweight device for securing and expeditiously transporting a plurality of bottles.

An important object of the invention is the provision of a carrier for transporting simultaneously a plurality of bottles.

A further important object of the invention is the construction of a bottle carrier which will accommodate bottles of different sizes.

A still further important object of my invention is the development of a bottle carrier wherein the bottles are securely held by their neck portions.

Yet another object of my invention is the arrangement of a bottle carrier in accordance with the foregoing objects, wherein the bottle supporting means resiliently and securely cushions and retains the bottles by their bulbous neck portions.

Further objects of my invention reside in a construction of bottle carrier which has a flush or plane upper surface unobstructed by the protruding necks of bottles, and which is adapted to be roughly handled without damage to the contents, may be readily stocked in piles in firm and stable equilibrium.

Still another object of my invention is the formulation of a carrier in conformity with the aforementioned objects, which is light and compact when not in use and may be stacked or stored in a very small space.

A further and very important object of the invention is the designing of a carrier which shall be formed of plentiful materials, easily constructed, be of attractive appearance, is durable and withal inexpensive.

These and other important objects which will become later apparent as the following description proceeds, are attained by my invention, one embodiment of which has been illustrated by way of example only, in the accompanying drawings wherein:

Figure 1 is a top plan view of the invention;

Figure 2 is a side elevation partly in section of the invention;

Figure 3 is a top plan view of a modification;

Figure 4 is a vertical section upon line 4—4 of Figure 3;

Figure 5 is a diagrammatic view illustrating a manner of stacking the article of Figure 3; and

Figure 6 is a detail in vertical section of a modified retaining means of Figure 3.

Referring now to the annexed drawings, 10 indicates generally my improved bottle carrier

which comprises an upper plate 12 and a lower plate 14 formed identical therewith. Both plates are provided with a plurality of spaced apertures 16 of sufficient size to loosely receive the capped ends of a variety of sizes of bottles 18. Centrally disposed upon the top plate 12 is a handle 20 secured by a metal strap 22 and screws 24 in a conventional manner. Disposed between the two plates is a sheet of flexible, cushioning material of rubber or the like 26 having apertures 30 aligned with apertures 16 but of smaller diameter. The plates 12, 14 are clamped together compressing the cushion layer 26 therebetween by means of rivets 32 or equivalent fastening means.

The top and lower plates may be constructed of light weight material such as aluminum, sheet metal and the like or even of suitable plastics. As will be apparent, the two sheets constitute a spacing means and a frame for supporting the bottles and serve further as a stiffening means or backing for the cushion means.

From the foregoing explanation, the operation of the device will now be apparent. One or more bottles of various sizes are inserted, cap first up through the aligned apertures, the unsupported inner rim portion of the inner periphery of the apertures of the rubber member yielding to permit the forced insertion of the bottled necks. When the weight of the bottle is released, it squeezes the rubber tightly between the two plates and the bottle, causing it to grip the same firmly, yet resiliently. This selective yielding and gripping action may be better explained by noting that when the bottle is inserted, the rubber is placed under tension and has room in which to yield and stretch; but that when the weight of the bottle is applied, the rubber is placed under compression and hence is confined between the plates and bottle and cannot readily yield. The parts are so proportioned however that the bottle may be withdrawn by applying a greatly increased force thereto.

It will be evident that while I have shown the apertures as circular, they may be made of various shapes and even crinkled or serrated on their edges in order to vary the yielding and gripping action. Rims or flanges may also be employed to stiffen and enhance the gripping action, and rubber bushings may be resorted to, in order to reduce the areas of the apertures, when desired.

When a plurality of bottles are left standing, the carrier does not materially extend beyond the dimensions of the group of bottles, occupying very little room, and when removed may be compactly stored.

Turning now to Figures 3 and 4, a modified

form of carrier is disclosed. In this construction, an upper plate 110 is disposed in parallel spaced relation to a lower plate 112 substantially identical therewith. The plates are provided with a plurality of recesses or sockets 114, having a central aperture 116 therein, for loosely receiving the neck of a bottle as indicated at 118.

Suitably attached to the carrier is a handle 120 of any suitable type, one form being indicated as comprising legs 121 having intumed ends 122 and being vertically slidable through the carrier plates for extended operative position or recessed idle position thereon. If preferred, the form of handle shown in Figure 1 may be utilized. Intermediate the two plates is secured a sheet of resilient cushioning material 124 which has recessed portions 126 whose apertures 128 are smaller than but aligned with the openings 116. The functioning of the plates, apertures and resilient material is identical with that of the corresponding elements of Figures 1 and 2, it being noted that the recesses 114 are of such diameter and depth as to surround and receive a bottle top in protected relation with the top surface of the carrier being unobstructed or unbroken by the bottle tops.

In the embodiment there are no upstanding or protruding ends of bottles, and the bottle necks are sufficiently protected to permit rough handling of the containers and extensive stacking or heaping of the containers upon each other in sufficiently rigid and stable manner for quick handling, for example, as shown in Figure 5.

In certain uses of the invention, I may prefer to replace the continuous sheet of flexible cushioning material with individual cushions disposed in each socket 114, the assembly being identical with that shown in Figure 4.

Alternately, I may prefer to form the carrier of a single metallic plate, as at 210 in Figure 6, having recessed portions 212 and apertures 214 similar to those shown in Figure 4. In this construction a cushioning member 216 in the form of a grommet or bushing is employed, having a peripheral groove 218 embracing the wall of the aperture 214, the aperture 220 of the bushing embracing the neck of the bottle 222 in the same manner as shown in Figure 4.

It is evident that various embodiments of the construction shown may be employed in practicing the principles of the invention, and accordingly I may utilize all modifications falling within the scope of the appended claims.

I claim as my invention:

1. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and resilient retaining means disposed adjacent said apertures for retaining said bottles therein, said resilient retaining means consisting of a sheet of flexible material secured to said plate member and provided with orifices aligned with said apertures and a means secured to said first plate and compressing said flexible sheets therebetween.

2. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and re-

silient retaining means disposed adjacent said apertures for retaining said bottles therein, said resilient retaining means consisting of a sheet of flexible material secured to said plate member and provided with orifices aligned with said apertures and a second plate identical with and secured to said first plate, and having apertures aligned therewith, and compressing said resilient sheet therebetween.

3. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and resilient retaining means disposed adjacent said apertures for retaining said bottles therein, said plate member having the bottle necks recessed therein to provide an unobstructed upper plain surface.

4. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and resilient retaining means disposed adjacent said apertures for retaining said bottles therein, said resilient retaining means consisting of a sheet of flexible material secured to said plate member and provided with orifices aligned with said apertures and a means secured to said first plate and compressing said flexible sheets therebetween, said apertures being depressed below the upper surfaces of said carrier for recessing the tops of bottles secured thereby.

5. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and resilient retaining means disposed adjacent said apertures for retaining said bottles therein, said resilient retaining means consisting of a sheet of flexible material secured to said plate member and provided with orifices aligned with said apertures and a means secured to said first plate and compressing said flexible sheets therebetween, said apertures being depressed below the upper surfaces of said carrier for recessing the tops of bottles secured thereby, said resilient means consisting of a disk of flexible material seated in each recess in said plate member and having a bottle retaining orifice aligned with the aperture in said recess.

6. A bottle carrier comprising a plate member, apertured means in said member for receiving in spaced relation a plurality of bottles, and resilient retaining means disposed adjacent said apertures for retaining said bottles therein, said apertured means being recessed into said plate member, a cushioning disk in each apertured means and having an orifice therein for retaining a bottle neck in recessed relation to said plate member.

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