

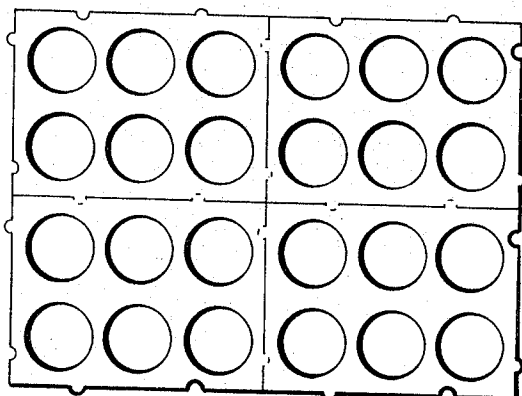
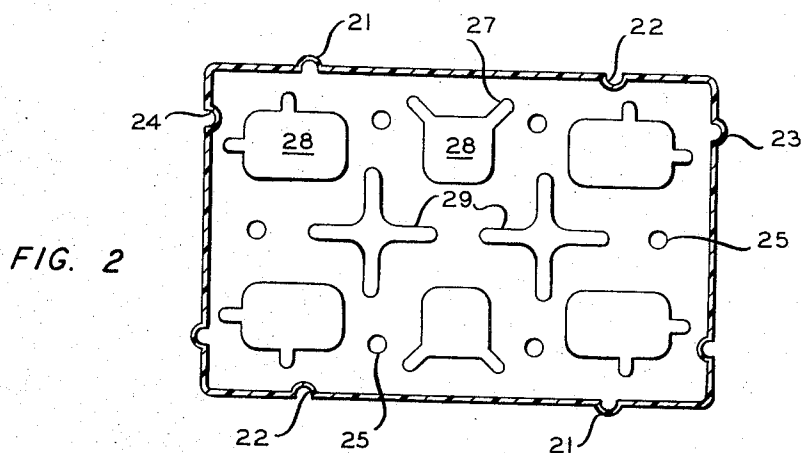
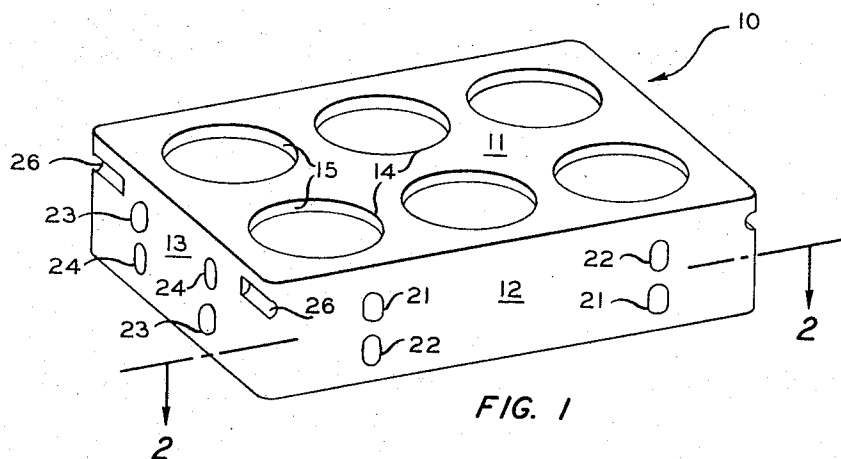
Sept. 12, 1967

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BOTTLE CONTAINER

3,341,053

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2 Sheets-Sheet 1



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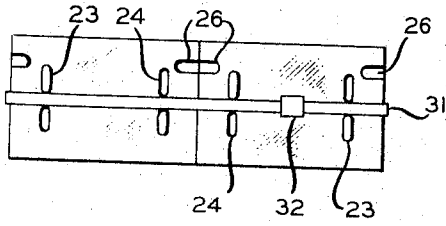


FIG. 4

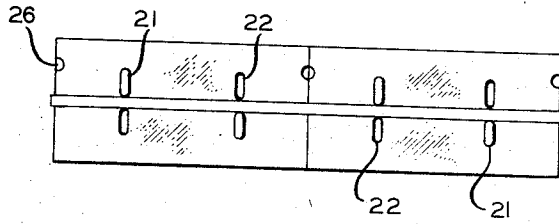


FIG. 5

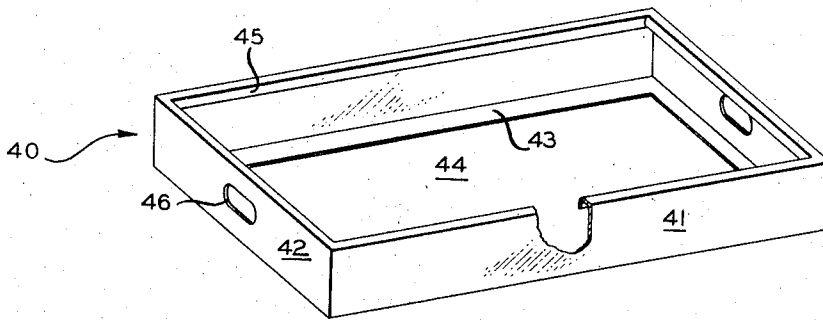


FIG. 6

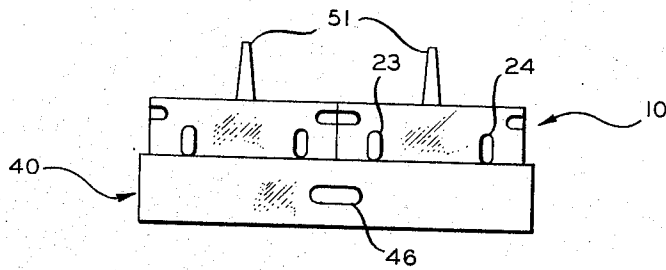


FIG. 7

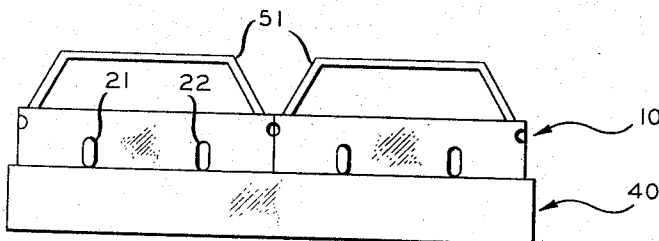


FIG. 8

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BOTTLE CONTAINER

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2 Claims. (Cl. 220—21)

ABSTRACT OF THE DISCLOSURE

A novel container is provided having cooperating lugs and recesses on the side and end walls thereof whereby a plurality of the containers can be grouped together to form a package, the aforementioned projections and depressions cooperating in interlocking relationship to prevent relative movement between the containers and the entire group of containers being secured together.

This invention relates to containers for bottles and similar articles. In one of its aspects, the invention relates to a novel container for bottles having a unique sidewall construction where a plurality of such containers can be arranged in interlocking relationship into a group. In another of its aspects, the invention relates to a shipping and transportation package for bottles and similar articles wherein a group of individual containers are arranged in rectilinear configuration and secured in such relationship. In still another of its aspects, the invention relates to a novel shipping or transportation package for bottles wherein a plurality of individual containers are arranged in interlocking relationship and secured in such relationship by flexible securing means. In still another of its aspects, the invention relates to a shipping package wherein a group of individual containers are arranged in interlocking relationship and secured in such relationship by a frame structure.

Bottlers of beverages and, in particular, bottlers of soft drinks, are confronted with the necessity of meeting increased demands for their products in an ever-changing market pattern. For many years, soft drinks were sold as individual drinks from a soda fountain or in case lots of 24 bottles each. More recently, soft drinks have been marketed in an increasing number and variety of sales outlets. In order to attract the home consumer, the bottlers have marketed their products in small containers commonly known as six-packs. Some experimentation has been made in marketing eight-packs and twelve-packs. Through supermarkets and other sales outlets, these smaller packages of six, eight, or twelve bottles have been sold in increasing numbers. The bottlers, nevertheless, still sell substantial quantities of their products in the old twenty-four bottle case.

Because some soft drinks are sold in the smaller six-packs and similar size packs, and others sold in the twenty-four bottle cases, there is no universal container suitable for both types of marketing. A container suitable for four six-packs is not adapted for use to carry twenty-four individual bottles and vice versa. Until recently, most containers used by bottlers were wooden cases adapted for use either to the six-pack type situation or to use for twenty-four individual bottles. These wooden containers or cases have required high maintenance and frequently become somewhat unsightly through continued use. The result of this unsightly condition is that most retail sales outlets do not display the wooden cases, but instead display the smaller cartons or six-packs in various arrangements that have been worked out by the marketer.

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It is apparent that there is a need for a universal container for soft drinks and similar articles of commerce that can be adapted to any of the bottlers needs with little or no modification. Such a container desirably will be attractive in appearance, light in weight, sturdy, easily cleaned as by washing, and constructed of a material that will insure long life.

It is an object of the invention to provide a bottle container or shipping package which will meet all of the bottlers requirements with little or no modification. It is another object of the invention to provide a container which will receive six, eight, or twelve bottles and which container can be assembled in groups and retained in such group by suitable retaining means. It is yet another object of the invention to provide a shipping and transportation container made up of a group of smaller containers which group can be separated and sold through marketing outlets as individual containers, or which group can be maintained in assembled condition for transportation of case lots of soft drinks. These and other objects, aspects, and advantages of the invention will be apparent upon a reading of the specification, drawings and appended claims.

According to the invention, there is provided a novel container as, for example, a six-pack, which container may be formed by blow molding and which container has cooperating lugs and recesses on the side and end walls thereof, whereby a plurality of the containers can be grouped together in rectilinear configuration to form a package of approximately the same outer dimensions as the conventional twenty-four bottle case, and in which the aforesaid projections and depressions cooperate in interlocking relationship to prevent relative movement therebetween, the entire group of containers being secured together by suitable securing means, which, in one embodiment, may be a flexible band and which in another embodiment may be a shallow frame which likewise secures the containers in the grouped relationship.

FIGURE 1 is a perspective view of a six-pack container. FIGURE 2 is a section of the container of FIGURE 1 taken along the lines II—II. FIGURE 3 is a top view of four containers grouped together. FIGURE 4 is an end view of the grouping of FIGURE 3. FIGURE 5 is a side view of the grouping of FIGURE 3. FIGURE 6 is a plan view of a frame suitable for use with the invention. FIGURE 7 is an end view of a group of containers using the frame of FIGURE 6. FIGURE 8 is a side view of a group of containers using the frame of FIGURE 6.

Referring now to FIGURE 1, there is shown a container, according to the invention which in the particular embodiment is arranged for carrying six bottles. It is understood that the container can provide for eight or twelve, or for that matter, any other number of bottles as desired. The container is indicated generally at 10. Container 10 is provided with a top wall 11, side walls 12, and end walls 13. A plurality of bottle receiving apertures are provided in top wall 11 and, if desired, each aperture can be provided with a down-turned lip or flange 15 which not only aids in guiding the bottles to the final resting place, but also serves as a stiffening member for the top wall.

Each side wall 12 is provided with a pair of elongated convex lugs 21, and a pair of concave depressions or recesses 22. Lugs 21 and depressions 22 are shown more clearly in FIGURE 2. Similar lugs and depressions are provide on each end wall 13, the lugs being indicated at 23 and the depressions at 24. Each end wall of the car-

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rier is also provided with finger-tip receiving areas 26. The finger-tip receiving areas may be depressions, or they may be cut out areas of the end wall. The finger-tip receiving areas are located near the upper edge and at the outside corners of the container.

The arrangement of lugs 21, 23 and depressions 22, 24 is important. As shown, one lug is above a depression and another lug is below a depression in the same wall of the carrier. When two or more of the carriers are arranged in a group as shown in FIGURE 3, the lugs of one carrier will fit into the depressions of the adjacent carrier in interlocking relationship and prevent relative movement therebetween. Because of the arrangement of lugs and depressions, the carriers can be turned end for end and still the interlocking relationship will be maintained. It is apparent that the horizontal spacing between a lug and a depression is not important, so long as the spacing relative to the ends of the carrier is the same in all instances. The same general considerations will apply to the lugs and depressions at the end of the carrier.

In FIGURES 4 and 5 there are shown end and side views of a group of four containers held together by a flexible strap or band 31 which is secured at its ends by a suitable clip 32. The strap or band can be of any suitable flexible material such as nylon, fiber glass reinforced plastic, steel or any other suitable banding material. It is to be observed that when four containers are banded together as shown in FIGURE 4, two finger-tip receiving areas 26 are placed adjacent each other and together form one hand grip suitable for picking up the group of carriers. The flexible band 31 holds the carriers together and the cooperating or interlocking lugs and depressions prevent relative movement between the four carriers so that handling the group by means of the finger-tip receiving areas 26 is an easy matter, in fact is the same as handling the conventional wooden case.

A group of containers may also be secured in an interlocking relationship by use of the frame 40 shown in FIGURE 6. The frame comprises a pair of sidewalls 41 and a pair of end walls 42, a partial bottom or ledge 43 having its central area 44 cut out and an upper rim 45. As shown, rim 45 is an inwardly turned extension of the side and end walls of the frame. If desired, rim 45 may be provided with a downwardly turned lip projecting a short distance into the interior of the frame. As shown, the frame is provided with hand holds or finger-tip receiving areas 46.

To form a shipping or transportation package utilizing frame 40, it is only necessary to insert a plurality of the basic carrier units into the frame. Rim 45 will cooperate with lugs 23 to hold the frame in position. If the downturned lip is provided for rim 45, this lip will be of such dimension that it will substantially fill the vertical space between the projecting lugs 23 so that the frame will be secured against any relative vertical movement with respect to the containers. In FIGURES 7 and 8 a group of containers are shown installed in the frame. When a group of containers are installed in the frame, it is intended that they will fit tightly therein. Thus, the lugs 23 will extend under the rim 45 and it will be necessary to snap the containers into position. This can be accomplished readily by a slight deflection of the walls of the frame in which the containers are being inserted. The flexibility of the plastic material of construction makes this possible.

The containers of FIGURES 7 and 8 differ slightly from the container shown in FIGURES 1-4 in that there is provided a handle 51 for lifting and handling the individual container. Handle 51 can be integrally formed with the top of the container, but desirably is a separate element installed in telescoping arrangement. Handles may have their lower ends inserted through appropriate slots in the top surface 11 of the carrier and the lower end of the handle element will be provided with an ap-

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propriate enlarged section to prevent withdrawal of the handle and thus facilitate lifting of the carrier by the handle. Handle elements 51 can be made of the same plastic material as the carrier or can be made of metal or other material as desired.

Referring back to FIGURE 2 of the drawing, features of the bottom of the carrier are shown. Drain holes may be cut into the bottom of the carrier as shown at 25. Also, each bottle receiving area of the bottom may be provided with an embossed or slightly raised area 28. These embossed areas may be further provided with projections 27. Two projections 27 plus a portion of the main area 28 provide a three-point rest for a bottle and thus there is provided a stable support. The bottom of carrier 10 is also provided with upstanding projections 29. Projections 29 may be of any configuration, but conveniently are cruciform as shown. These projections will desirably have tapered upper ends and thus will serve not only to guide the bottle into its resting place, but also to keep the bases of bottles separated while in the carrier. Viewed from below, projections 29 are seen to be hollow and there is a corresponding recess in the bottom of the carrier.

The carrier of the invention is conveniently made by blow molding, although vacuum forming and other differential pressure molding processes can be used. In the blow molding operation, a tube or parison of molten plastic is extruded downwardly between a pair of open mold sections. The mold sections are closed upon the parison, thus pinching off the material above and below the parison, a suitable injection nozzle then injects air inside the parison to blow a bubble outwardly until it conforms to the walls of the mold. Upon cooling of the molten plastic, the mold sections are opened and the intermediate carrier is then completed by removing sections from the top surface to create the bottle receiving apertures. Additionally, drain holes will be cut in the bottom of the carrier and if the finger-tip receiving areas are to be formed by cutting away a portion of the end walls, this operation will also be performed.

In similar fashion, the frame 40 can also be made by blow molding, the differences being largely that there is only a single large aperture cut in the top surface and a single large aperture in the bottom surface.

A number of different plastic materials will be found suitable for the practice of the invention, but rigid polyethylene or high density polyethylene has been found to be especially suitable.

Reasonable variation within the scope of this disclosure and the appended claims will be apparent to those skilled in the art, the essence of the invention being that there is provided a universal carrier which is suitable for use as a carrier for a small number of bottles or similar articles or which may be grouped together and held by suitable securing means to form a larger shipping and transportation carrier.

I claim:

1. A plurality of article containers arranged in rectangular configuration, each individual container having a pair of end walls and a pair of side walls, each of said walls being provided with a pair of projecting lugs and a pair of depressions corresponding in configuration with said lugs, said lugs and said depressions being arranged so that one lug is above one depression and spaced therefrom, said containers being arranged so that at least some of said projections of each of said containers is received by corresponding depressions of the adjacent container whereby said containers are interlocked to prevent relative movement therebetween, said containers being retained in said interlocking relationship by structurally stable securing means having end walls and side walls provided with an overturned lip cooperating with at least one of said lugs on the side and end walls of containers defining the periphery of said plurality of con-

tainers thereby securing said plurality of containers in said interlocked relationship.

2. The combination of claim 1 wherein each of said containers further comprises:

(a) a top wall having a plurality of bottle receiving 5 apertures therein,

(b) a bottom wall having bottle bottom positioning means adapted to peripherally engage said bottle bottoms, said bottom wall also having embossed portions in each bottle receiving area, said embossed portions constituting raised areas on the interior of 10 said container, said embossed portions being adapted to receive the tops of bottles in a container below to register the same and to facilitate stacking; and

(c) said end walls and said side walls are integrally 15 formed with said top wall and said bottom wall, and wherein said securing means comprises a molded frame structure having side and end walls of a height approximately one half that of said containers whereby said inwardly turned lip cooperates with the 20 lowermost of said lugs on the side and end walls of

containers defining the periphery of said plurality of containers.

References Cited

UNITED STATES PATENTS

353,600	11/1886	Sloan	206—65
1,613,111	1/1927	Johnson	220—23.4
2,571,111	10/1951	Clark	220—17 X
2,812,099	11/1957	Eugan	220—23.4
3,037,658	6/1962	Schray	220—17
3,131,829	5/1964	Masser	220—23.4 X
3,151,762	10/1964	Vidal	220—21
3,167,458	1/1965	Brazell	36—166

FOREIGN PATENTS

790,060	5/1935	France.
1,095,646	12/1960	Germany.
881,963	11/1961	Great Britain.

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