July 25, 1967 C. R. EARP 3,332,574

BOTTLED BEVERAGE CASE

Filed March 24, 1965 2 Sheets-Sheet 1

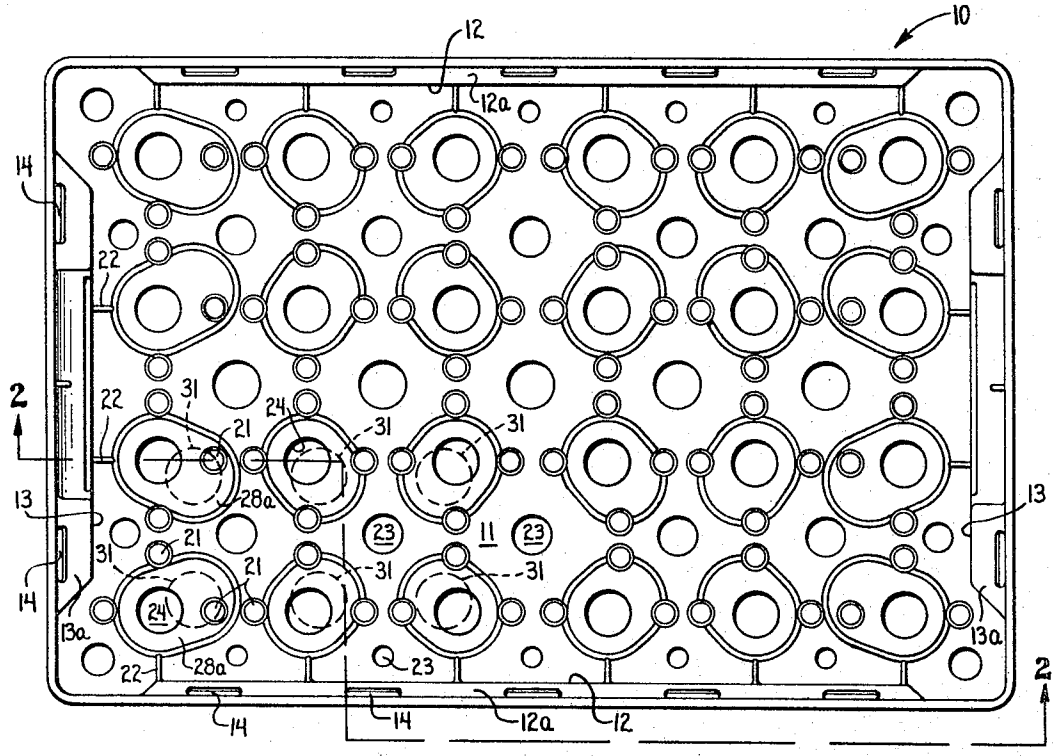


Fig. 1.

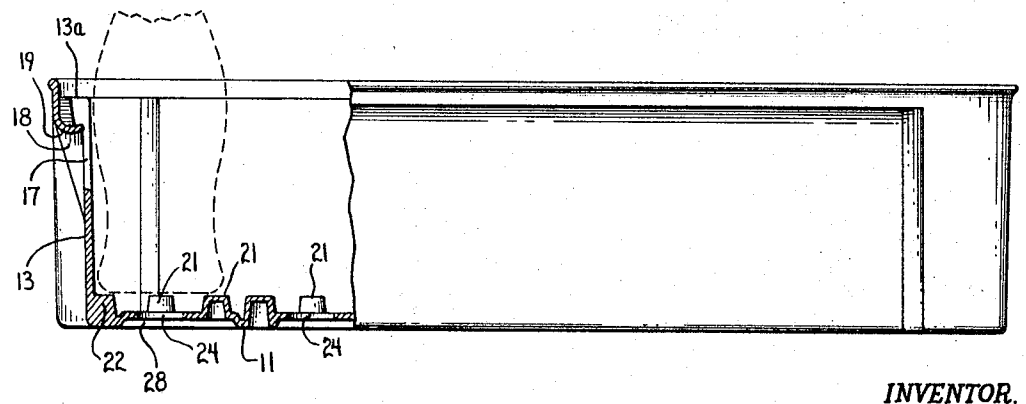


Fig. 2.

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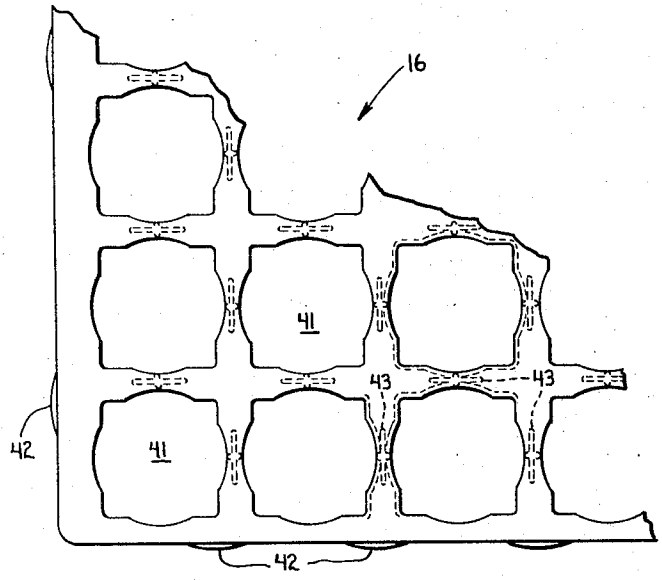


Fig. 3.

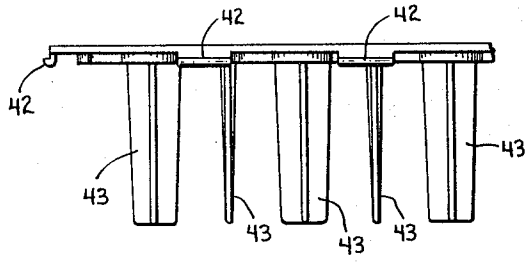


Fig. 4.

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BOTTLED BEVERAGE CASE

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ABSTRACT OF THE DISCLOSURE

A molded beverage case having concavities on the outer face of its base wall, the concavities being elongated and each having its major axis inclined with respect to both the end and side walls of the case.

This invention relates generally to cases for bottled beverages and in particular an improved form of molded case molded from, for example, high impact strength polyethylene, styrene or the like.

Molded, unpartitioned beverage cases have many advantages over conventional wooden cases and over partitioned metal or molded cases. These advantages are pointed out in U.S. Patent 3,106,308, assigned to the assignee of the present invention. The structure there disclosed has on the outer face of its base a series of uniformly spaced indentations or concavities which are frusto-conical in configuration and which receive the bottle tops of an underlying case when the cases are stacked. The accommodation of the bottle tops of an underlying case in these frusto-conical cavities in the outer surface of the base of wall of the case provides the desired stability for the stack of cases whether the bottles in the cases are full or empty.

This stack stability is lost, however, where unpartitioned cases or trays, each loaded with four six-packs are intermingled in the stack with conventionally loaded cases, that is, cases in which the bottles are substantially equally spaced from each other in the case. Since the frusto-conical concavities are oriented on the base of the structure disclosed in U.S. Patent 3,106,308 in substantially uniform, spaced relation, they do not properly receive or accommodate the top portions of bottles in grouped, six-pack, or twelve-pack array. This loss of stability in heterogenous stacking has been a disadvantage in the structure of the patent mentioned above.

The primary object of the present invention is to provide a molded beverage case having indentations or concavities on the outer face of its base wall which are shaped and oriented so that the upper portions of bottles in an underlying case, whether in equally spaced or in grouped array, can be properly accommodated in the concavities so that the desired stability in stacked cases can be maintained.

A further object of the present invention is to provide a molded beverage case which when loaded with bottles can be properly interstacked with other cases in which the bottles are variously spaced or grouped.

A further object of the present invention is to provide a molded beverage case having a tray or base portion which can be utilized as a container for six or twelve pack cartons but which can also be utilized as a uniformly spaced, twenty-four bottle case by addition of a snap-in top-plate or lid for the tray.

These and other objects will become apparent as the description proceeds with reference to the accompanying drawings in which:

FIG. 1 is a top plan view of a structure embodying the present invention.

FIG. 2 is a side view, partially in section, taken generally along the line 2—2 of FIG. 1.

FIG. 3 is a fragmentary, top plan view of the top plate adapted to be removably joined to the structure shown in FIGS. 1 and 2.

FIG. 4 is a fragmentary, side view of the structure shown in FIG. 3.

Referring initially to FIGS. 1 and 2, a case embodying the present invention is shown as including a generally rectangular body indicated generally at **10**. The body includes an integral base wall **11**, side walls **12** and end walls **13**.

The side walls and end walls have their central portions inset with relation to the corners or junctional areas of the side walls and end walls. As may best be seen in FIG. 1, the upper marginal areas of each of the side and ends walls **12** and **13** are flanged outwardly and upwardly adjacent the inset central portions, the outwardly flanged portions being identified at **12***a* and **13***a*. The outwardly flanged portions provide a horizontal shelf area adjacent the inset portions of the side and end walls which support the marginal areas of a top plate or lid **16** (FIG. 3) which will be subsequently described in detail. The flanged portions are provided with spaced slots **14** which facilitate attaching of the top plate to the body of the case.

As may best be seen in FIG. 2, the inset portions of the end walls **13** are provided with hand grip apertures **17** and adjacent the end margins of the hand grip apertures the body end walls have integrally molded therein generally triangular flanges **18**. The flanges **18** define a portion of the end walls which is shaped as indicated at **19** in FIG. 2. This shaping of the end walls adjacent the hand grip apertures provides hand grip abutments at the upper margins of the hand grip apertures **17**. The base wall **11** has extending upwardly therefrom a series of spaced bosses **21** and these serve to support beverage bottles (one shown in broken lines in FIG. 2) inserted in the case. Ribs **22** extend upwardly from the junctional areas of the side and end walls with the base wall and have the same height as the abutments **21**, the ribs **22** also serving to support beverage bottles in the outer row as indicated in FIG. 2. Spaced over the area of the base wall **11** are drainage apertures **23** and further spaced apertures **24** also aid in this function.

As may best be seen in FIG. 2, the outer face of the base wall **11** has a series of indentions or concavities **28** therein, which, of course, appear in FIG. 1 as slightly raised protuberances there identified at **28***a*. The concavities **28**, spaced over the area of the base wall are generally elliptical or elongated in configuration and, as will be apparent from FIG. 1, each concavity has its major axis inclined with relation to, that is, not parallel to, the side walls and end walls of the case body.

The presence of these generally elliptical concavities **28** in the outer face of the base wall of the case body provides the primary advantage or improvement in a case embodying the present invention. It will be recognized that twenty-four standard sized beverage bottles may be placed in the case body **11** in generally equally spaced relation. When a case body so loaded is placed upon another identically loaded body, it will be understood that the upper portions or cap-ends of the bottles in the underlying case will be accommodated in the concavities **28** in the base wall of the overlying case and a desired stability will thus be provided for the stack. If a loaded case such as that shown in FIG. 1 is stacked over a case in which the bottles are not uniformly arranged but, instead, are grouped in six-pack array, then the elliptical concavities **28** in the base of the case embodying the present invention will permit these grouped bottle cap-ends to be accommodated within the concavities **28**. This is illustrated in FIG. 1 where the cap-ends of bottles in an underlying, six-pack grouped case are shown in broken lines identified

at **31**. It will be understood that if the underlying bottles were grouped in the underlying case in a different pattern, in a twelve-pack array, for example, the elliptical concavities would still be capable of accommodating the cap-ends of the bottles and would preserve the stability of the stack. From the foregoing it will be evident that the presence of the elliptical concavities permits cases embodying the present invention to be intermingled and stacked with other cases in which bottle are uniformly spaced or arranged in grouped array while preserving the stability of the stacked cases by means of the accommodation of the bottle cap-ends in the indentations or concavities **28**.

Referring now to FIGS. 3 and 4, the case body **10** may be provided with a top plate **16**, apertured as indicated at **41** to accommodate beverage bottles in the case body. Spaced along the sides and ends of the top plate **16** are depending, barbed abutments **42** which may be snapped into the slots **14** in the side and end walls of the case body. Molded integrally with the top plate **16** and depending from the underface thereof are bilateral separating members **43**. As will be evident from FIG. 3 the separator members **43** extend between adjacent bottles and thereby protect the bottles from breakage. It will be understood that the top plate **16**, once it is snapped in place over the open, upper end of the case body **10**, may be removed therefrom by bowing the top plate upwardly at its center so as to move the barbed abutments **42** slightly counterclockwise (as viewed in FIG. 4) so as to release the abutments from the slots **14**. It will thus be evident that the body portion **10** of the case, without the top plate **16**, may be utilized as a container for six, twelve or other carton pack arrays, and can be modified or converted to a twenty-four bottle case by snapping in the top plate **16**. Used either way, the case may be intermingled in case stacks with either uniformly spaced bottles or bottles in grouped arrays previously referred to.

While the invention has been disclosed and described in some detail in the drawings and foregoing description, they are to be considered as illustrative and not restrictive in character, as other modifications may readily suggest themselves to persons skilled in this art and within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A bottle case of the molded plastic type comprising a rectangular body having an open upper face and an integral base wall, side walls and end walls, a plurality of bosses extending upwardly from the inner face of said base wall for supporting bottles placed in the case, said base wall having drainage apertures therein spaced over the surface of the base wall, a top plate removably positioned on said case body so as to close the open upper face of the body, said top plate having a series of apertures therein through which bottles placed in the case body can extend with the apertures oriented so as to space bottles uniformly within the case body, the outer face of said base wall having a series of concavities therein which are generally elliptical in configuration, each concavity having its major axis inclined with relation to both said end and side walls, whereby said case may be stacked in overlying relation to another case containing bottles in either uniform or grouped array and the bottles in the underlying case will extend into said base wall concavities to provide stability for the stack.

2. A bottle case of the molded plastic type comprising a rectangular body having an open upper face and an integral base wall, side walls and end walls, said base wall supporting bottles placed in the case and having drainage apertures therein spaced over the surface of the base wall, a top plate removably positioned on said case body so as to close the open upper face of the body, said top plate having a series of apertures therein through which bottles placed in the case body can extend with the apertures oriented so as to space bottles uniformly within the case body, the outer face of said base wall having a series of concavities therein which are generally elliptical in configuration, each concavity having its major axis inclined with relation to both said end and side walls, whereby said case may be stacked in overlying relation to another case containing bottles in either uniform or grouped array and the bottles in the underlying case will extend into said base wall concavities to provide stability for the stack.

3. A bottle case of the molded plastic type comprising a rectangular body having an open upper face and an integral base wall, side walls and end walls, said base wall supporting bottles placed in the case and having drainage apertures therein spaced over the surface of the base wall, the outer face of said base wall having a series of concavities therein which are generally elliptical in configuration, each concavity having its major axis inclined with relation to both said end and side walls, whereby said case may be stacked in overlying relation to another case containing bottles in either uniform or grouped array and the bottles in the underlying case will extend into said base wall concavities to provide stability for the stack.

4. A bottle case of the molded plastic type comprising a rectangular body having an open upper face and an integral base wall, side walls and end walls, said base wall supporting bottles placed in the case and having drainage apertures therein spaced over the surface of the base wall, the outer face of said base wall having a series of concavities therein which are generally elongated in configuration, each concavity having its major axis inclined with relation to both said end and side walls, whereby said case may be stacked in overlying relation to another case containing bottles in either uniform or grouped array and the bottles in the underlying case will extend into said base wall concavities to provide stability for the stack.

References Cited

UNITED STATES PATENTS

3,261,495 7/1966 Beesley et al. ---------- 220—21

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