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2,970,715

BOTTLED BEVERAGE CARRYING CASE

Filed Nov. 17, 1958

2 Sheets-Sheet 1

Fig. 1.

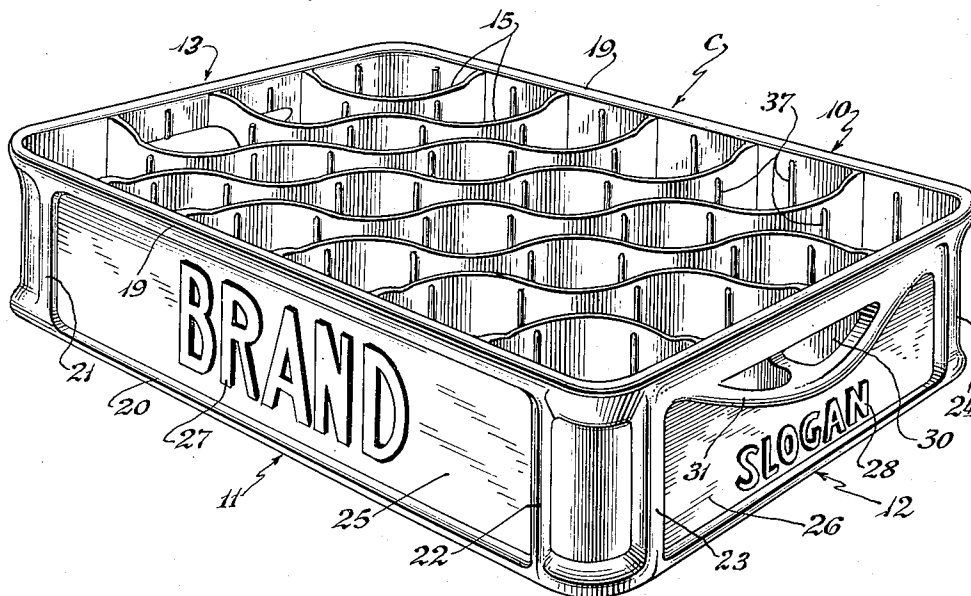
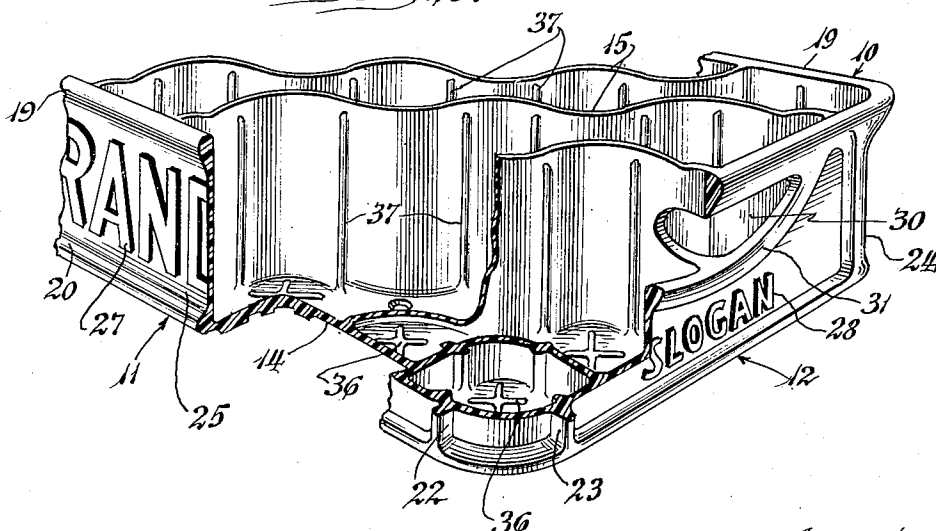


Fig. 2.



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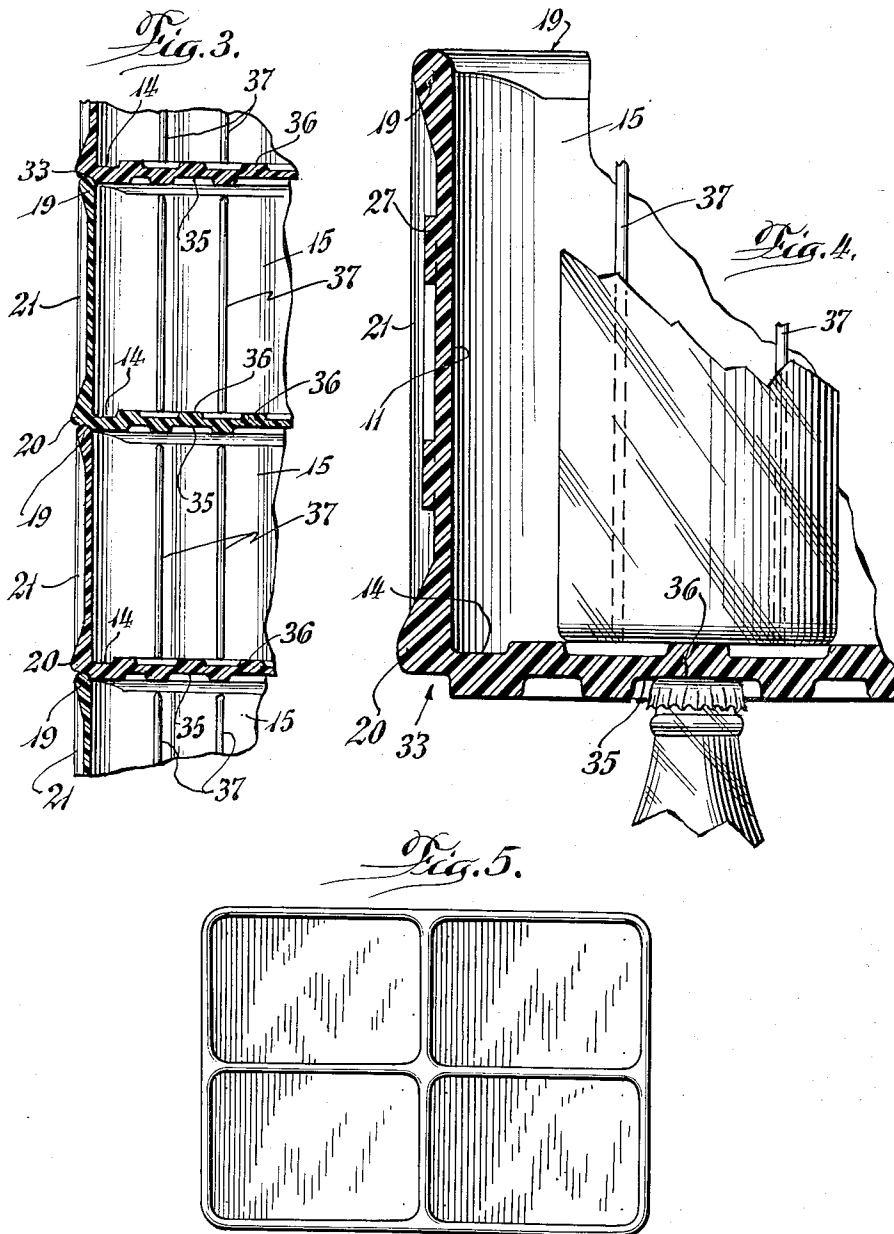
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1 Claim. (Cl. 220—21)

This invention relates to cases adapted to carry a plurality of bottled beverages and, more particularly, to molded cases having new and improved structural and design features.

At the present time, the majority of cases in use for carrying bottled beverages are made of wood, such cases usually being adapted for holding either twenty-four individual bottles or provided with four separate compartments for holding four packs of six bottles each. Wooden cases normally are made by assembling a plurality of preformed parts including a bottom, four sides, and internal partitions. Such parts are generally held together by nails and dovetailing of corners. Metal brackets are also used as additional reinforcement. Frequently, a particular user or bottling company will paint, stencil or otherwise apply advertising indicia or markings to the external surfaces of the sides, such as a brand name or slogan.

In general, wooden cases have given adequate service, however, they do have a number of disadvantages. For example, during use carrying cases are continually subjected to impacts and other rough treatment to the extent that they tend to disintegrate, whereby splinters and larger segments of the wood parts are broken away. Also, by reason of the fact that wood is somewhat porous, cases made from wood have a relatively high moisture absorption creating a warpage problem and consequent loosening of the component parts of the case. In addition, slogans, brand names or other advertising indicia or markings, painted on the external surfaces of the sides are unprotected and, hence, damaged by contact with other cases or objects, whereby the indicia or markings become somewhat illegible after a relatively short time.

In view of the disadvantages of the wooden cases as enumerated above, proposals have been made to make bottled beverage carrying cases from other materials and, particularly, plastics. One such proposal is presented in the patent to Keller, 2,626,079, disclosing a bottle carrying case which may be molded from an appropriate plastic material, for example, rubber, this patent particularly emphasizing a means for improving the strength of the handle grip of such cases. The Ruschman patent, 2,781,147, also discloses a molded case with emphasis on a particular molding composition, namely a rubber friction scrap. While cases molded from compositions of the type disclosed in the foregoing and other patents and having various designs have been attempted, such cases have met with only limited success commercially.

The present invention, while directed to a molded case, is not concerned with any specific molding composition, but rather is primarily concerned with the structural and design features of a case. Thus, the cases of the present invention may be molded from a variety of appropriate plastic materials. Among such materials are not only the aforementioned rubber friction scraps, but thermoplastics, such as polyethylene or polypropylene or even thermosetting resinous materials, for example, phenolic resins.

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It is one of the prime objects of this invention to provide an integral one-piece molded bottle carrying case which may be used interchangeably with present commercial cases and particularly those made from wood.

Another object is to provide a molded bottle carrying case having certain structural and design features, not heretofore employed in carrying cases, which enables the case to withstand appreciable abuse and shock to the end that it has a relatively long life as compared to the normal wooden case.

A further object is to provide an integral one-piece molded carrying case containing raised advertising indicia, such as brand names and slogans, integrally molded with the case in a protected position so as to prevent destruction of or damage to such indicia.

These and other objects will become more apparent from the description of the case set out in more detail hereinafter.

In the drawings:

Figure 1 is a perspective view of an integral one-piece molded case having structural and design features contemplated by the present invention.

Figure 2 is a fragmentary perspective view of one corner of the case, partly broken away.

Figure 3 is a fragmentary view, in cross-section, of a plurality of cases illustrating the manner in which such cases may be stacked when empty.

Figure 4 is a fragmentary view, in cross-section, of a plurality of cases illustrating how the cases may be stacked when loaded with bottled beverages.

Figure 5 is a plan view illustrating a modification of the internal partitions of the case.

Turning now to the drawings and, in particular, to Figures 1 and 2, the letter "C" indicates generally a molded bottled beverage carrying case, the same being provided with side walls 10 and 11, end walls 12 and 13, a bottom 14, and internal partitions 15, all formed simultaneously as an integral unit in a single molding operation. As is disclosed in Figures 1 and 2, the partitions 15 have, generally, a sinusoidal shape and extend angularly across the case. Sufficient partitions are used in the modification shown so as to provide for twenty-four individual compartments. Each compartment is adapted to hold a single bottled beverage.

Normally, due to the strength and impact resistance that can be incorporated into many currently available molding compositions, a molded bottle carrying case may be formed having relatively thin sides as compared to the fairly heavy or thick sides of a wooden case. Accordingly, with selected compositions, over-all dimensions of some molded bottle carrying cases may be smaller than the equivalent cases made from wood. It is desirable, however, that the molded cases be formed in a manner whereby they can be used interchangeably with wooden cases. This requirement is particularly important with respect to use of the cases in automatic filling and loading machines which have been adopted by the bottling industry. The internal dimensions of a molded case should be such that it can adequately hold bottles of predetermined size in a reasonably firm manner. Correspondingly, the external dimensions of the case, preferably, should be sufficient to trip the various levers, etc. which are used in automatic bottle filling and loading machines without requiring any appreciable change in such machines when a molded case is substituted for a wooden case. The flanges and ribs, which constitute an important part of the design of the cases of the present invention in that they offer protection to raised advertising indicia, may also serve to enlarge the external dimensions of the case when required.

As shown in the drawings, each of the side and end

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walls, for the most part, is relatively thin in cross-section. Extending continuously around the upper and lower perimeter of the case are flanges 19 and 20, which actually are integral with and constitute thickened projections of the side and end walls. As indicated, these flanges, projecting outwardly from the walls, enable the molded case to have appreciably larger external dimensions without the necessity of using additional material to make the respective walls, as a whole, relatively thick. Further, the flanges as well as the ribs, described below, serve as additional reinforcement for the walls.

In addition to the flanges, each side and end wall is provided with two horizontally spaced ribs, the ribs of walls 11 and 12 being indicated by the numerals 21, 22, 23, and 24, respectively. Each rib extends between the flanges 19 and 20 and constitutes an integral part of the walls. It will be noted that, by reason of the flanges and ribs, wholly enclosed recessed areas are formed on the outer surface of each wall, such as recessed area 25 on side wall 11 and recessed area 26 on end wall 12. During the molding operation, a particular brand name 27, slogan 28, or other indicia, may be molded into the recessed areas 25 and 26 as an integral part of the walls. The indicia, as shown, is preferably molded with raised letters, which thereby increases the appeal of the particular advertising involved. It is contemplated that the letters of the brand and slogan, while projecting outwardly from the surfaces of a wall, will not extend beyond the flanges 19 and 20 or ribs 21, 22, etc. Thus, the flanges and ribs will substantially protect the raised indicia from appreciable damage or disfigurement. This relationship between the flanges, ribs, and raised indicia is further illustrated in Figure 4 which shows clearly the protection afforded by the flanges 19 and 20 and rib 21 to the letters of the brand name 27.

In preparing a particular molded case for selected customers, certain color contrasts may be employed. For example, the unaltered portions of recessed areas 25 and 26 may be changed in appearance by applying a light colored paint, such as white, while the surface of the brand and slogan letters may be covered with a contrasting color to make them stand out. It can readily be seen, by reason of the protection afforded by the flanges and ribs, that paint or other coloring applied to the surface of the recessed areas and the surface of the raised letters will be relatively well protected from abrasion or wear due to contact with other objects.

In order to give additional support to the handle areas, the handle opening 30 is provided with a flange section 31 around its lower perimeter which extends up to and blends with that portion of the flange 19 extending around the end wall. The flange 31 in addition also provides further protection for the letters of the slogan 28 in the same manner as the flanges 19 and 20 and ribs 23 and 24.

In order to conserve space, it is desirable that bottle carrying cases be formed in a manner which will enable them to be more easily stacked, either empty or loaded. With this requirement in mind, the bottom of the present case is designed with certain structural features which enables the accomplishment of the foregoing.

As is best disclosed in Figures 3 and 4, the lower flange 20 is positioned slightly above the lower extremity of the case. Further, that portion of the bottom 14 extending below the walls is recessed slightly inward from what might be considered its normal juncture with the walls if the latter were extended downward. This design results in the formation of a continuous recess 33 around the bottom perimeter of the case. When the cases are stacked empty, the upper edge of the flange 19 is adapted to fit into recess 30 such that the bottom of a higher case of a stack is nestled and reasonably well secured in the case immediately below, as is indicated in Figure 3.

Further, to reduce to some degree relative movement of cases when stacked loaded, the bottom of each case is provided with a slight recess 35 which is adapted to re-

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ceive the top of a bottled beverage disposed in the case immediately below.

In order to permit the free egress of any water which collects in the case, a plurality of holes may be provided in the bottom of the case. To further assist in the discharge of any such water and also to reduce, as much as possible, the adherence of dirt to the bottom of bottles which has accumulated in the bottom of the case, each compartment is normally provided with several raised projections 36 for supporting the bottom of a bottle and prevent it from resting flush with the bottom of the compartments.

As is shown in Figures 1 and 2, a plurality of sinusoidal partitions has been provided forming twenty-four individual compartments into which may be inserted twenty-four individual bottled beverages. Where the material used to mold the case has enhanced physical properties, such partitions are entirely adequate. For a case having twenty-four compartments, it is possible to mold the partitions in the usual rectangular pattern normally found in wooden cases. However, partitions of this type are not particularly advantageous in a one-piece molded case and, in fact, require more material, thereby increasing costs. Frequently, the partitions are such that the compartments are slightly oversize with respect to the average bottle carried in the case and, accordingly, it may be desirable to provide a plurality of vertically extending ribs 37 on the surfaces of and formed integrally with the sinusoidal partitions. When such ribs are used, they are normally provided in groups of four for each individual compartment. In addition to the use of the ribs in reducing the dimensions of the particular compartments so as to insure a reasonably snug fit for bottles, such ribs do give additional strenght to the partitions.

As previously indicated, it may be desirable to provide a molded case which can be used to carry a currently popular six-pack carton. In such instances, a case, as shown in Figure 5, having four individual compartments may be used. Except for the change in internal partitions, the external structure and design of the walls and bottom will remain the same to achieve the objects heretofore mentioned. Likewise, other partition designs may be employed as required.

Having described the invention and certain exemplary embodiments thereto, what is desired to be claimed is as follows.

We claim:

An integrally molded one-piece plastic beverage bottle case comprising four walls each having a straight portion and rounded end portions, said walls integrally connected at said end portions, a bottom, said case having twenty-four compartments formed by a series of eight independent portions extending at an angle across said case, the shortest two of said partitions being arcuate and the remaining portions being sinusoidal, said compartments having opposed integral vertically extending ribs molded on either side of said portions in back to back relationship for providing a snug fit for the bottles disposed in the compartments, the bottom of said compartments having a plurality of small projections to prevent the bottom of a bottle disposed in the compartments from resting flush with the bottom of said compartment, two vertically spaced outwardly projecting flanges extending continuously around the upper and lower external perimeter of said case, each flange comprising an integral part of said walls, two horizontally spaced ribs comprising an integral part of each wall and extending between said flanges and connecting said flanges, said spaced ribs being located on either end of the straight portion of each wall and before the rounded end portions, said flanges and said ribs forming between them recesses at the corners and on the sides of said case, raised advertising indicia disposed in said recesses, and integral with walls, the maximum projection of said indicia from the surface of said walls not exceeding the projection of said flanges and ribs, and handle open-

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ings provided in two opposing walls, said opening being bounded at the tops by the upper of said projecting flanges and a third curved flange extending around the remaining perimeter of said opening and connected at its ends to said upper flange, a recess extending around the lower external perimeter of the lowermost flange and adapted to receive the upper edge of a case when said cases are stacked in an unloaded condition, said bottom having on its under side a plurality of recesses adapted to receive the tops of the bottles disposed in a lower case when a plurality of cases are stacked in a loaded condition, at least two of said portions being recessed at one end at the place of connection of said two portions with said wall at said handle openings, and all of said walls,

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partitions, flanges, ribs, recesses, projections, bottom and openings, having smooth rounded edge surfaces.

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