Oct. 15, 1963 W. J. DE CHELBOR 3,107,026

CARRYING CASE FOR SOFT DRINKS AND THE LIKE

Filed Nov. 13, 1959 6 Sheets-Sheet 1

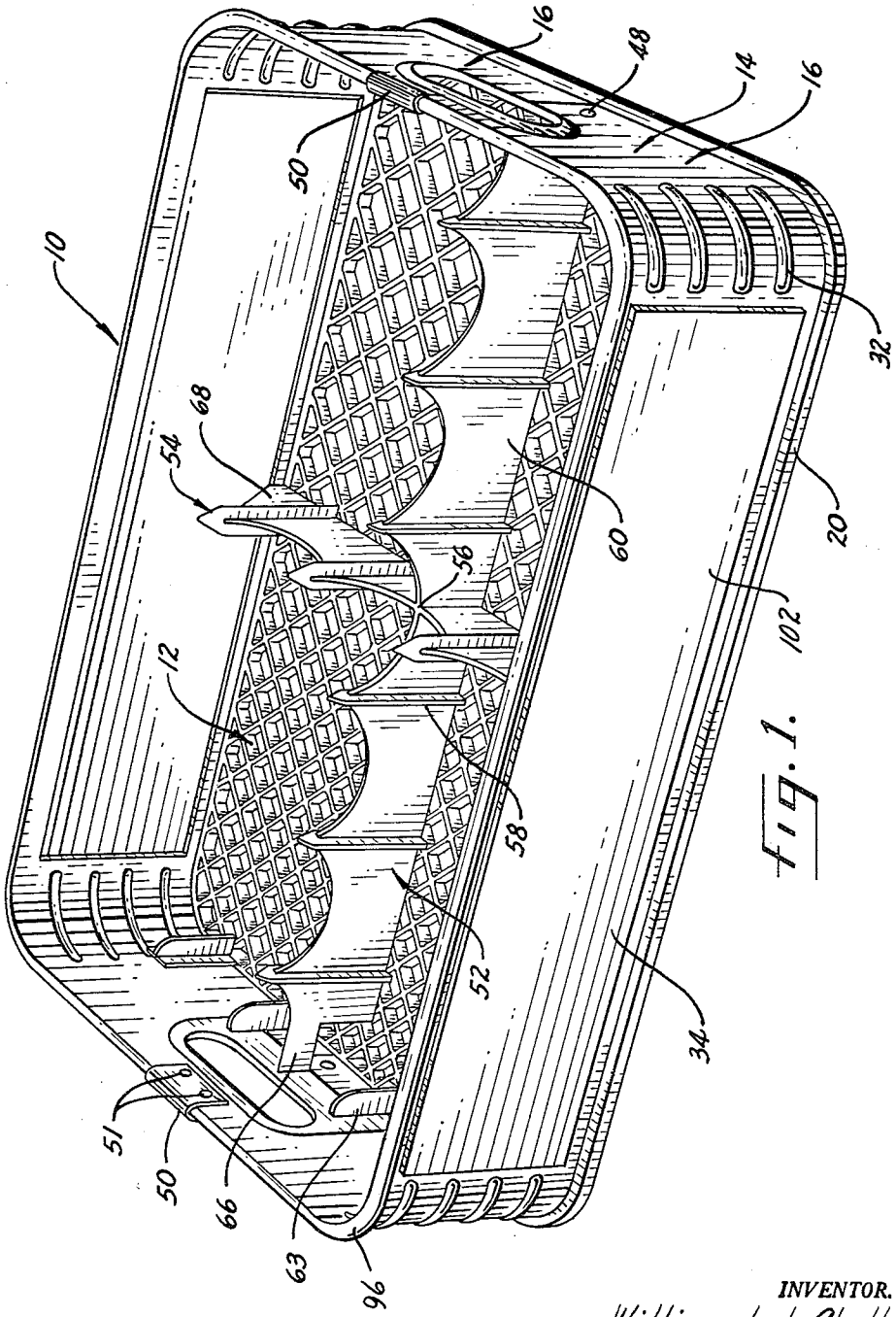


Fig. 1.

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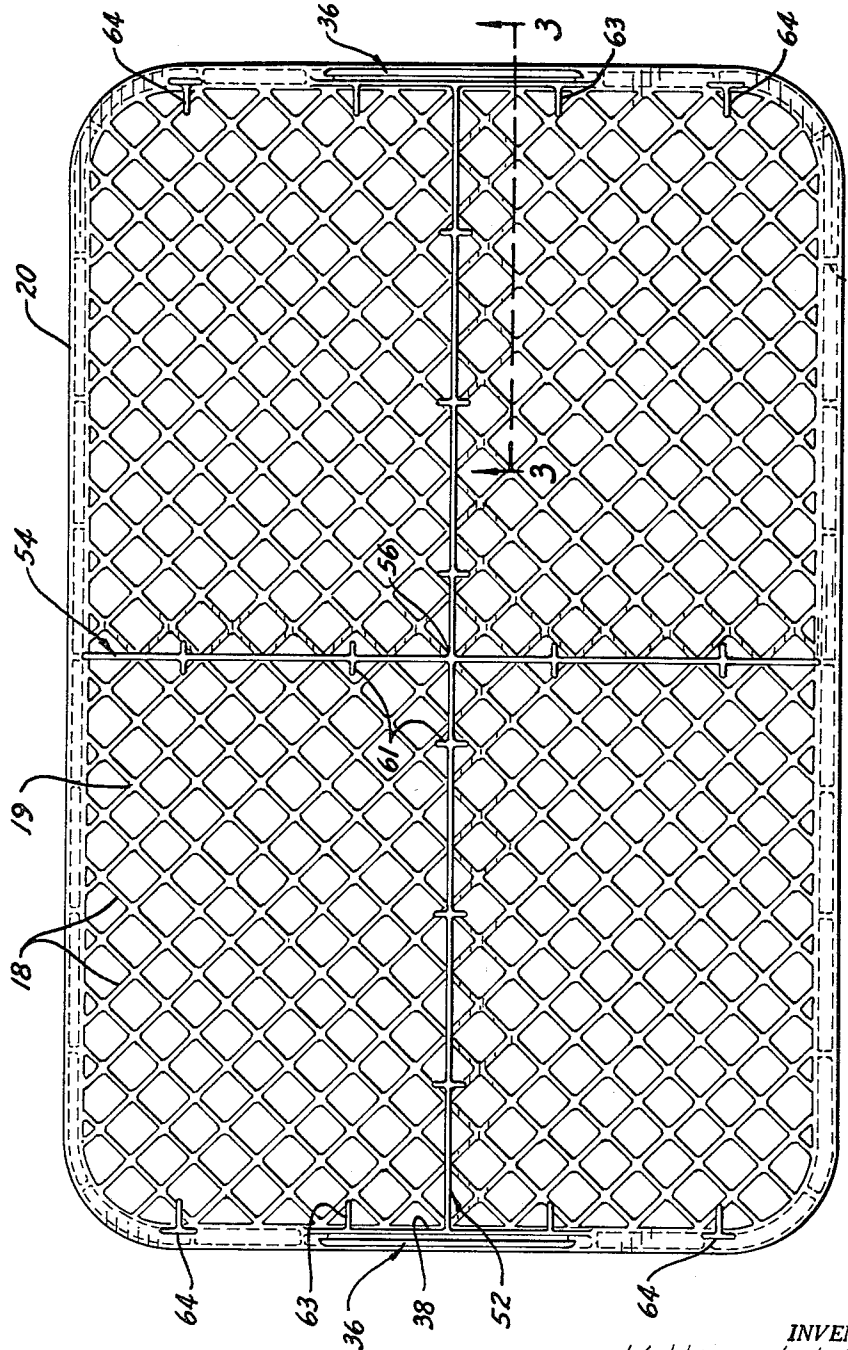


Fig. 2.

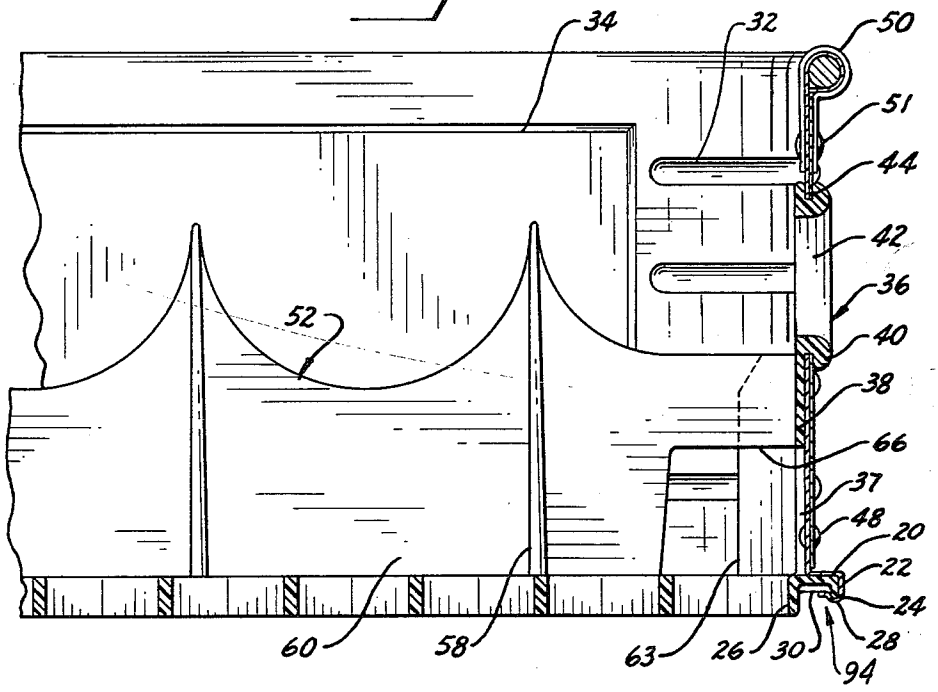
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Fig. 3.



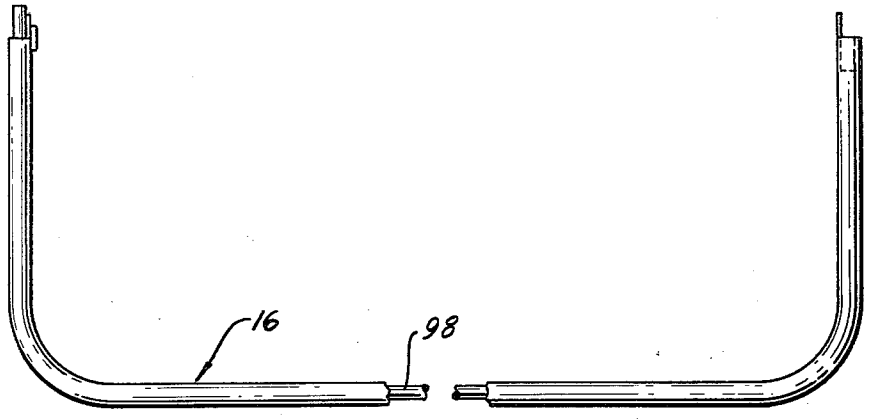


Fig. 5.

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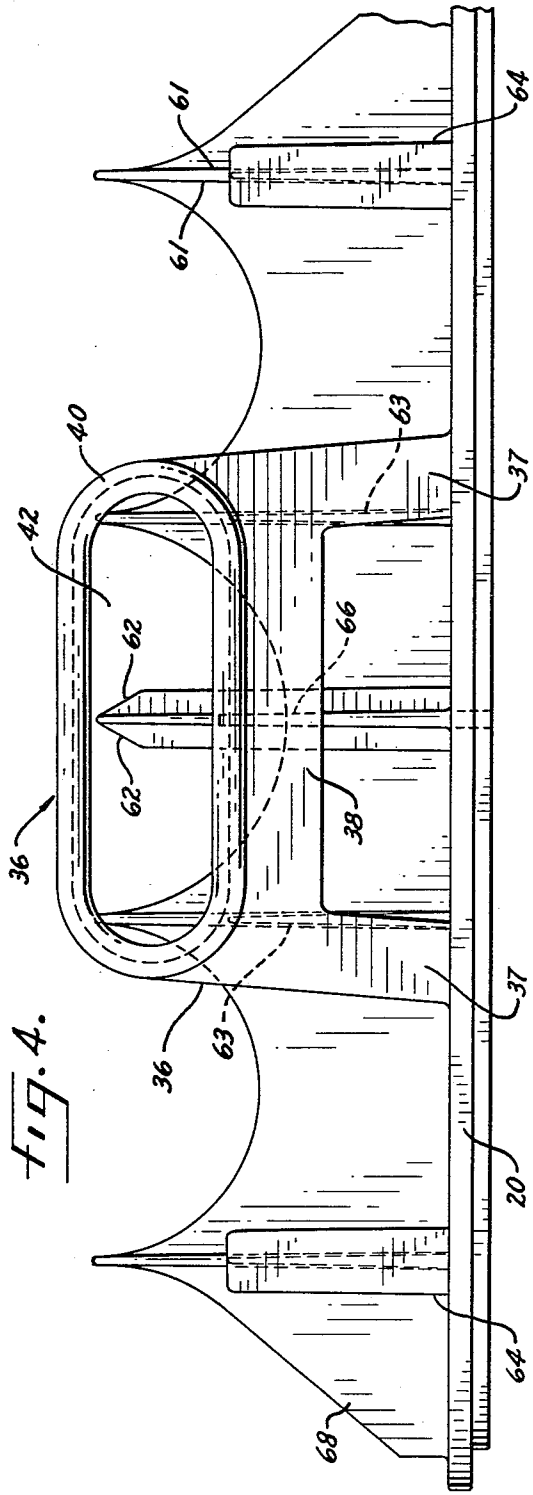


Fig. 4.

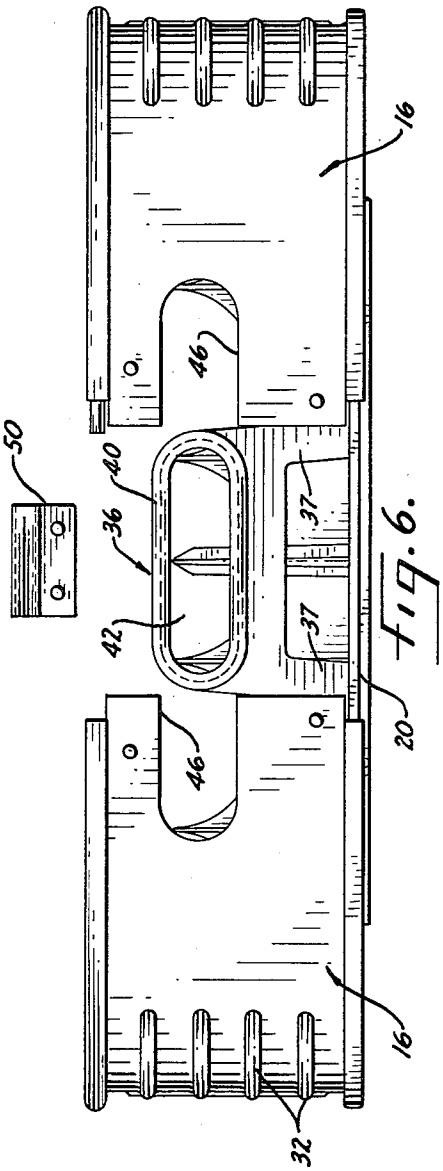


Fig. 6.

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CARRYING CASE FOR SOFT DRINKS AND THE LIKE

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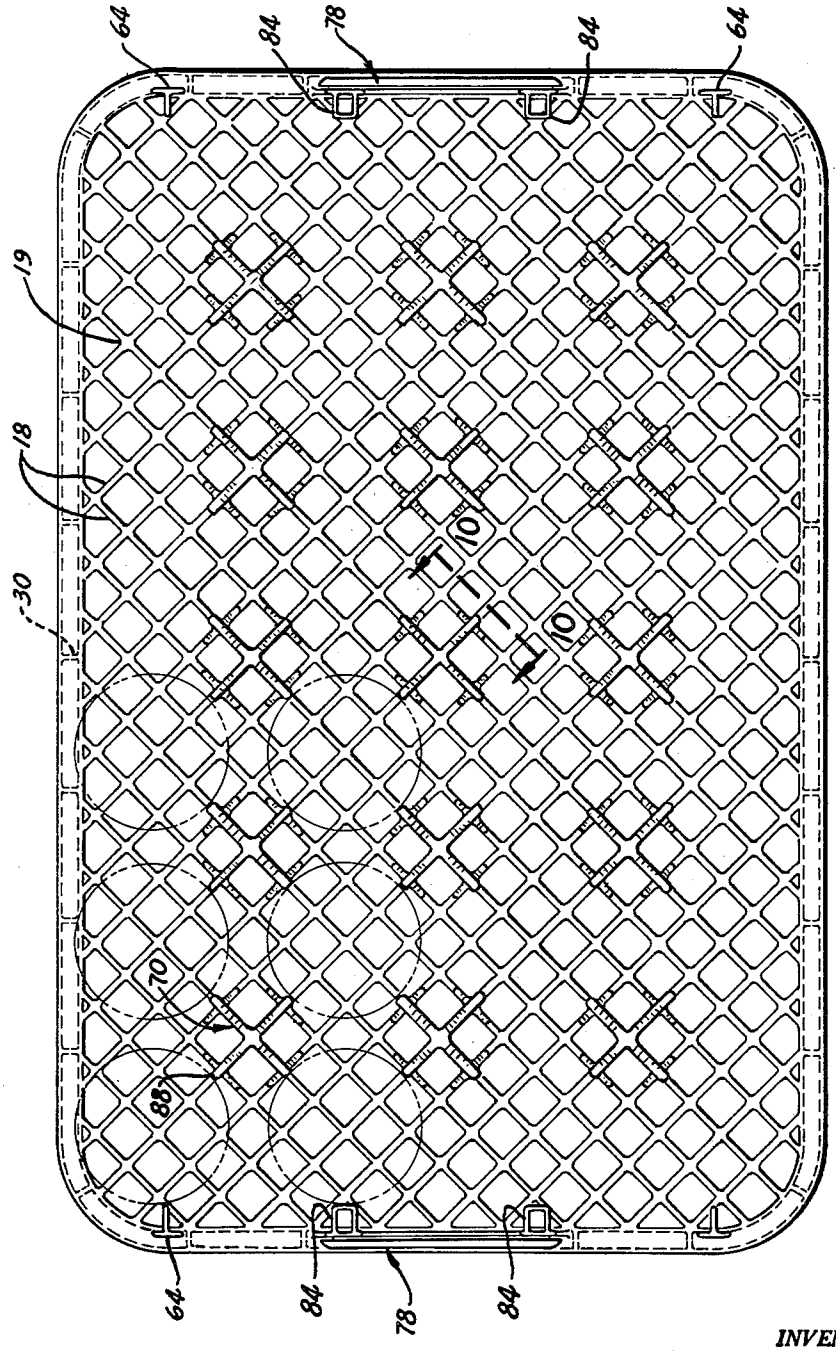


fig. 7.

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CARRYING CASE FOR SOFT DRINKS AND THE LIKE

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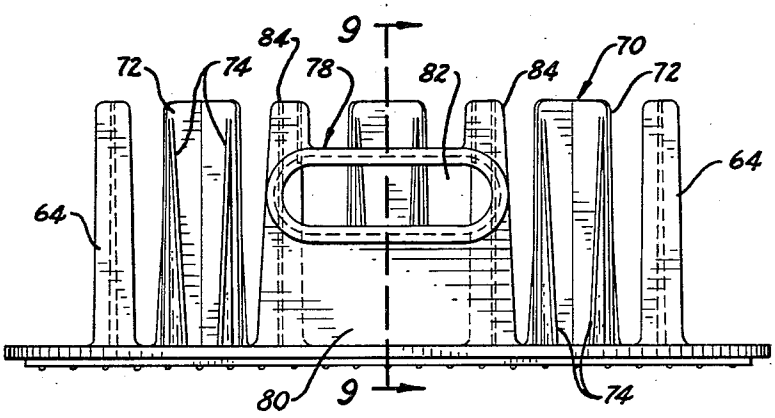


Fig. 8.

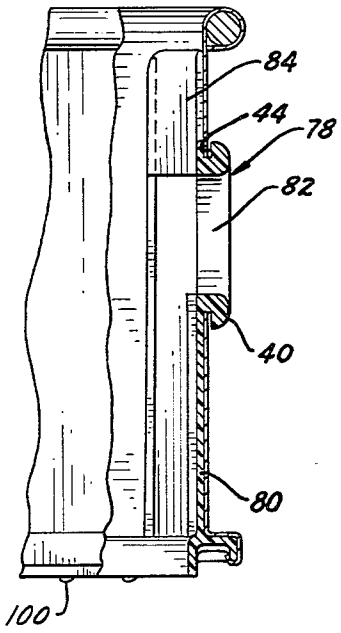


Fig. 9.

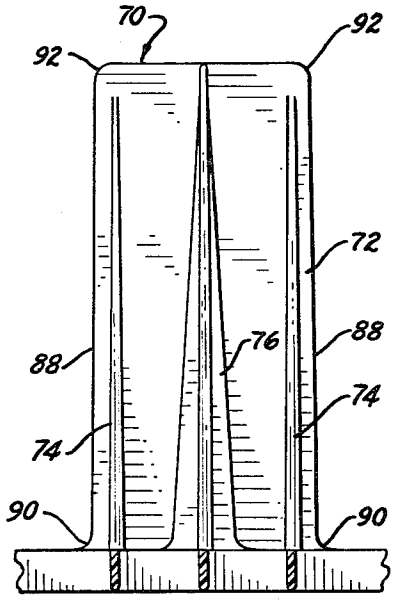


Fig. 10.

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3,107,026
CARRYING CASE FOR SOFT DRINKS AND THE LIKE

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Filed Nov. 13, 1959, Ser. No. 852,853
4 Claims. (Cl. 220—21)

This invention is in the field of carrying cases for soft drink bottles and the like and may be referred to as a combination carrying case of metal and plastic. Hereinafter the carrying case shall be designated as a carrying case for bottled soft drinks, but it should be understood that bottles with any suitable beverages may be used.

A primary object of the invention is a combination metal and plastic carrying case which is lightweight and strong.

Another object is a combination plastic and metal carrying case constructed to transmit carrying loads directly to the base.

Another object is a pop bottle carrying case with integral upstanding dividers formed in the base.

Another object is a joint between the base and sides or body of the carrying case which simplifies assembly.

Another object is a carrying case of the above type with island uprights in the case formed integrally with the base.

Another object is a carrying case which is a union of metal and plastic.

Another object is a carrying case of the above type which will hold four six-packs.

Another object is a carrying case of the above type which has twenty-four individual pockets.

Another object is a carrying case of the above type constructed so that the bottles will not spill out when the case is on end.

Another object is a carrying case of the above type which can be easily sterilized.

Another object is a combination carrying case of the above type in which the metal protects the plastic.

Another object is a carrying case of the above type which will have a much greater life expectancy than its wooden equivalent, for example, five or six times that of wood.

Another object is a carrying case of the above type which does not require repairs and maintenance.

Another object is a carrying case which is weather and vermin resistant.

Other objects will appear from time to time in the ensuing specification and drawings in which:

FIGURE 1 is a perspective view of the carrying case;

FIGURE 2 is a top plan view of the base with the sides or body removed;

FIGURE 3 is a section along line 3—3 of FIGURE 2, on an enlarged scale;

FIGURE 4 is an end view of the base in FIGURE 2, on an enlarged scale;

FIGURE 5 is a top view of a body section;

FIGURE 6 is an end view of the assembly separated or exploded;

FIGURE 7 is a top plan view of the base of a modified form;

FIGURE 8 is an end view of FIGURE 7;

FIGURE 9 is a section along line 9—9 of FIGURE 8, on an enlarged scale and with the case assembled; and

FIGURE 10 is a section along line 10—10 of FIGURE 7, on an enlarged scale.

In FIGURE 1, the carrying case has been indicated generally at 10 and includes broadly a base 12 surrounded by sides or a body 14. A explained hereinafter, the body is divided into two U-shaped sections 16 which may be identical.

In FIGURES 2 and 3, the base is shown as made up

of a grill or grid composed of diagonal struts 18 of plastic. It will be noted that the struts are integrally connected at joints 19 or points of intersection and the entire base is surrounded by a rim 20 which has a flange 22 turned down at its outer end into an outer leg 24 and an inside leg 26, shown in cross section in FIGURE 3. The rim also is of plastic and the diagonals or struts merge integrally into the inside leg 26 of the rim, as shown in FIGURE 3. It will be noted that the depth or height of the struts is substantially more than their thickness which provides rigidity and strength against lateral or longitudinal flexing or distortion.

The body sections 16 are U-shaped and in assembly are brought in from opposite sides and connected around the handles in the center of the ends, in a manner explained in detail hereinafter. The sides are preferably made of light gauge metal and the lower edge at 28 is rolled or crimped around or under the outer leg 24 of the plastic rim. I prefer that the downwardly facing channel of the rim formed by legs 24 and 26 be provided with spaced struts or braces 30 for strength and it will be noted that the lower edge or margin 28 of the sides is rolled or crimped against these braces or ribs.

The corners of the sides are preferably provided with outward offsets or beads 32 for strength and the longitudinal side may be offset outwardly at 34 to provide a plate type formation on the side for advertising or otherwise.

Returning to the base, upstanding handles 36 are provided at each end which are integrally formed with the rim of the base. It will be noted in FIGURE 4 that each of the handles has a panel connected to the base composed of legs 37 connected integrally to the base and a cross plate 38 between them with an enlargement or bead 40 thereabove defining a laterally elongated hand opening 42. The bead has a continuous outwardly opening groove 44 encircling it, best shown in FIGURE 3. Each leg of the U-shaped body sections has a slot 46 cut or otherwise formed therein, and it will be noted in FIGURE 6 that these slots fit in the encircling groove 44 in the handle bead. When the U-shaped body sections are brought together from opposite sides, the slots 46 on each section slide in the groove 44 around the handle bead and a degree of overlap is provided between the sides of the body sections so that a suitable connection may be made above and below the handle bead. For example, a rivet 48 may hold the ends of the body sections together below the handle and a lap-over or wrap-around bracket 50 with two rivets 51 may be used above, shown in FIGURE 1.

The base has an integral upstanding divider or partition structure which includes longitudinal and lateral fences or separators 52 and 54 intersecting in the middle at 56. It will be noted in FIGURE 1 that each fence is composed of upstanding spaced posts 58 connected by intermediate integral webs 60. The tops of the webs are recessed or arcuate, and while the middle or center 56 has been shown as a low point of the web arcs, the fences could come together in the center at a post. Each of the posts, as shown in FIGURE 2, is in the form of slats disposed at right angles to the webs so that they stand out beyond the sides of the webs by a substantial amount. The sides 61 of the posts are upwardly tapered and the ends may be somewhat pointed, as at 62. The legs 37 of the handles are provided with integral right angle ribs 63 which extend in somewhat and are integral with the rim of the base as well as the handles. A spacer in the form of a T cross section post 64 is disposed on each side of the handles, as shown in FIGURE 2, and formed integrally with the rim of the base.

It will be noted that the ends of the longitudinal fence 52 are connected to the crosspiece 38 of the handles by an integral strap 66 and the lateral fence has its end

webs terminate in downpieces 68 which abut the sides of the body sections.

In the form shown in FIGURE 1, it will be apparent that the case is constructed to hold four six-packs and, therefore, has four pockets. The posts 58 of the fences or dividers stand out sufficiently, both laterally and longitudinally, and the end spacers 63 and 64 project inwardly to a degree such that a six-pack with standard dimensions will fit snugly in the pockets. Additionally, the outside dimensions of the carrying case match those of standard wooden cases and the combination case of this invention may be used in standard handling and bottling equipment.

In the form shown in FIGURES 7–10, the base is formed with an exterior rim surrounding the grill or grid composed of a plurality of intersecting ribs or slats disposed generally at right angles to each other. The body around the outside and the joint at the handle at each end may be the same. Instead of the lateral and longitudinal fences which divide the case into four compartments or pockets, integral uprights 70 are formed on the base projecting up inside of the carrying case. It will be noted in FIGURE 7 that three longitudinal and five lateral rows of such uprights are provided defining twenty-four pockets to accept bottles, such as indicated schematically in FIGURE 7. Each of the uprights, shown in detail in FIGURES 8 and 10, is made up of crossed webs 72 which are the integral upward extension of two intersecting ribs or slats in the base. The arms of the webs extend outwardly beyond or overlap the next rib intersection and a somewhat smaller cross upright 74 is provided which is spaced somewhat from the end edge of each web 72 and has its edges tapered upwardly, as at 76. Thus, each upright takes on the appearance of the upward extension of two intersecting ribs in the form of a major cross with minor crosses on each leg thereof where the major cross overlaps the four adjacent rib intersections.

The handle structure 78 has been modified somewhat in that instead of separate legs, such as at 36 in FIGURE 4, an upstanding sheet 80 is provided with a laterally elongated bead and hand opening 82 at the upper end thereof. Reinforcing spacers 84 are in the form of square cross section hollow tubes which are open on the inside in the lower portion thereof, as at 84 in FIGURE 9. It will be noted that the posts 84 rise above the hand opening and are the same height as the uprights 72, as shown in FIGURE 8. Thus, the uprights rise inside of the case to a point just below the upper rim, as shown in FIGURE 9, and their side formation is such that when the case is turned on edge, the bottles in the pocket will not fall out.

In FIGURE 7, the bottles are schematically indicated in several of the pockets and it will be noted that the end edges 88 of the uprights engage the bottles. Since a bottle will be held in a pocket defined by our posts, the bottle will be held by edge contact with the four ends of the converging webs from the four adjacent uprights. It will be noted in FIGURE 10 that the contacting edge 88 is straight and, accordingly, the bottle will be held, with a minimum of clearance, throughout the post height, except for fillets 90 on the bottom and rounding 92 at the top corners.

It should also be noted that the lower outer rim of the plastic grid base, in effect, defines a downwardly opening channel, indicated generally at 94 in FIGURE 3, which will fit over the rolled over rim 96 so that when the cases are stacked empty, the bottom of one interlocks with the upper rim of the one below it. It should be noted that the upper rim is formed by rolling the sheet metal of the U-shaped sides around a rod 98.

The bottom of the gridlike base is formed with a plurality of projections 100 which are disposed in a pattern so that when full cases are stacked, the projections on the bottom of an upper case will fit around and interlock with the tops of the bottles below. This is to say that the projections 100 will be disposed in an annulus or ring under each bottle pocket in a diameter to just fit around a conventional crown cap. Thus, when full cases are stacked, the top case will not slide off when vibrated or otherwise roughly handled.

It should also be noted that in the event of damage, the bands going around the sides can be replaced or repaired. The plastic grid base with the dividers and handle structure can be salvaged and, in fact, can be rebuilt with new bands.

While the term "bottles" has been used throughout, it should be understood that the case could be used for any suitable container.

In FIGURE 1, the width of the posts 58 could be varied so that the unit would hold different size six-pack cartons.

I have also embossed a panel 102 in each side of the U-shaped body section for strength. The sides are embossed out so that suitable advertising may be displayed along the sides.

The use, operation and function of the invention are as follows:

A combination metal and plastic carrying case is provided which may be made for four six-packs or for twenty-four individual bottles. Either type has the advantage that it is of standard dimensions and may be used in conventional bottling and handling equipment, although the cross sectional dimensions of the walls and spacers are substantially less than those of a standard wooden case.

The case is constructed so that handling forces will be transmitted directly to the base and no excess stress will be applied to the joint between the metal and plastic. The divider or partition structure is formed integrally and extends up from the grid or grill base. The case is totally open and may be easily and quickly washed and cleaned. The base has sufficient strength and the integral formation of the base, separator structure and handles, one with the other, insures strength. Additionally, the over-all appearance of the case is far superior to anything on the market.

In the twenty-four pocket cases of FIGURE 7, the case may be stood on end and the bottles will not fall out.

Additionally, the uprights insure line edge contact with the bottles resulting in a firm support. The uprights additionally rise integrally from the base and are formed as the upward extension of the ribs. Thus, no covering surfaces are provided which would hinder cleaning. The grid is totally and completely open and, as shown in FIGURE 7, the webs and reinforcing struts of the uprights will in no way block cleaning solutions.

The surrounding housing may be the same for either the twenty-four or the four pocket case. In fact, any number of pockets could be used. The handle structure may be the same for either, except for the differences noted.

Of particular importance is the joint between the handle and the side wall since the loading forces will be carried directly by the legs of the handle and will not be passed through the edge joint on all four sides. In effect, the base, with its integral handle structure and dividers, carries the load, while the body serves primarily as a closure and not as a load carrying member. However, the sides will resist lateral flexing in the middle of the base.

Another advantage of combining metal and plastic at the handle opening is that in cold weather the hands of the user will not stick to the handle opening since it, in effect, is lined with plastic. It is well known that the skin on a person's hands tends to stick to cold metal. Also, it should be noted that the spacers 63 in FIGURE 1 add strength to the handle structure as well as provide proper spacing for six-pack cartons.

While the preferred form and one modification of the invention have been shown and described, it should be understood that additional modifications, alteration and variations may be made without departing from the invention's fundamental theme. It is, therefore, wished that the invention be unrestricted, except as by the appended claims.

I claim:

1. In a carrying case for bottles and the like composed of three basic parts, an integrally molded unitary plastic base member and a surrounding metal body member composed of two interfitting body sections, the base member including an elongated, generally rectangular, integral, perforate base, each longitudinal side edge of the base being in the form of a generally unencumbered free edge, upstanding handles at each end thereof integral with the base, including an integral panel rising from the base with a formation defining a laterally elongated hand opening adjacent the top and integral therewith, the body member being rigidly interfitted with and connected around the free edge of the base and defining a container therewith, each of the body sections being generally U-shaped when observed separately and, when assembled, being disposed along each side and extending inwardly at each end outside of the panels overlapping each other both above and below the formation defining the hand openings, and an interlock around the formation defining the hand openings of the handles, the lower edge of each of the body sections being connected substantially continuously to the free edge of the base but constructed such that substantially all of the handling forces will be transmitted directly between the handles and the base.

2. The structure of claim 1 further characterized in that the perforate base is formed with intersecting integral diagonally disposed ribs, the ribs being vertically elongated, and a flange integral with and outstanding around the base adjacent the upper surface thereof, the lower edge of the body sections being formed outwardly around and bent in under the base flange on all four sides.

3. The structure of claim 1 further characterized in that each handle includes upstanding posts spaced uniformly on each side of the longitudinal center line of the case, and a lateral strap connected between the posts at the upper end thereof, the strap having an elongated opening therein, a bead extending beyond the end of the strap around the opening and defining a continuous groove, the body sections being notched and fittted into the groove, both above and below the handle opening and on each side thereof.

4. The structure of claim 1 further characterized by and including upstanding spacers inside of the case at each end integral with the base and abutting the inside of the body sections.

References Cited in the file of this patent

UNITED STATES PATENTS

2,243,625	Gettelman	May 27, 1941
2,534,879	Powell	Dec. 19, 1950
2,648,456	Baxter	Aug. 11, 1953
2,673,658	Stevenson	Mar. 30, 1954
2,830,729	Brackett	Apr. 15, 1958
2,935,221	Mitchell et al.	May 3, 1960