Aug. 17, 1965 W. J. DE CHELBOR 3,200,988

CARRYING CASE

Filed Oct. 31, 1960 3 Sheets-Sheet 1

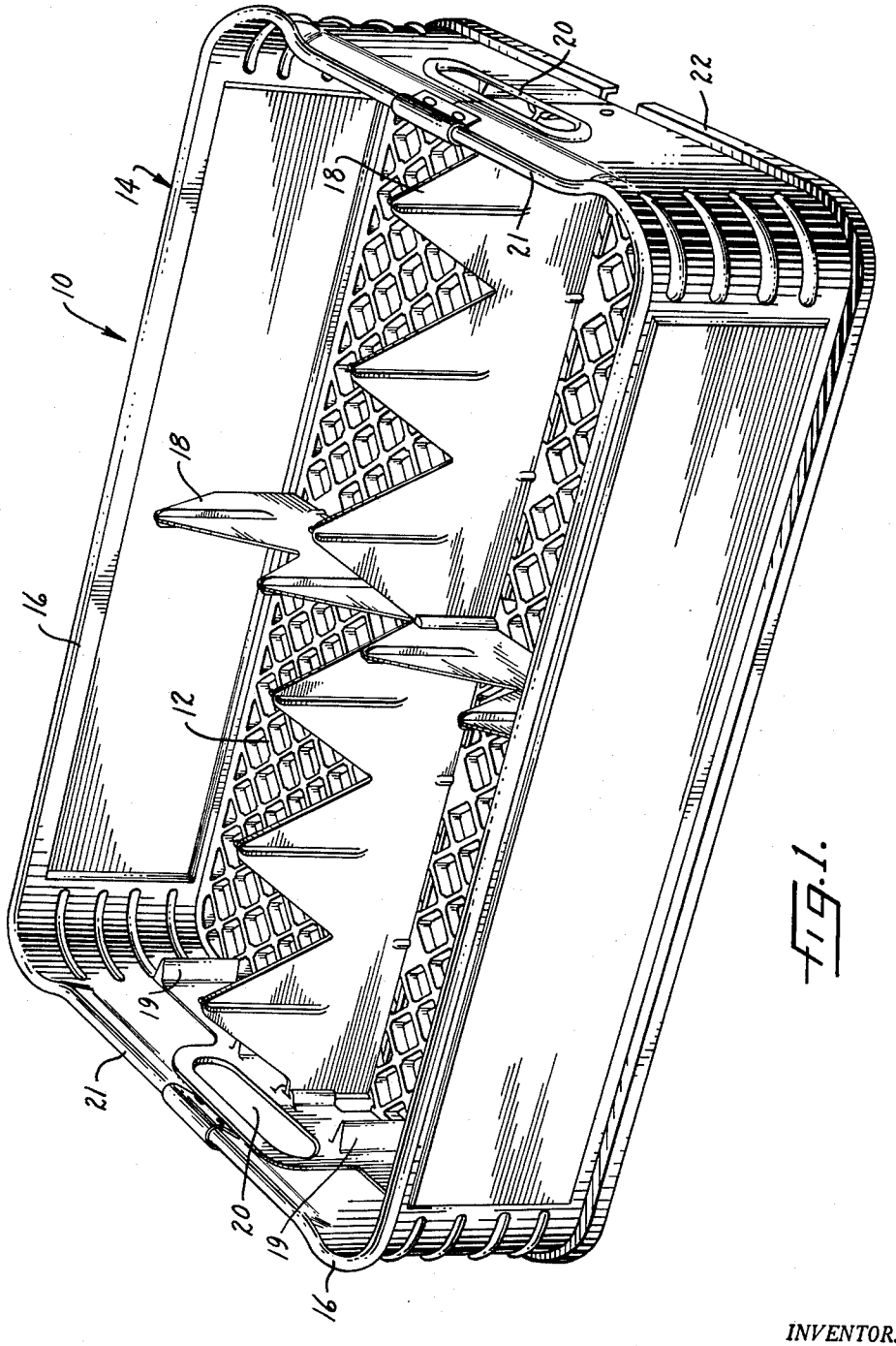

FIG. 1.

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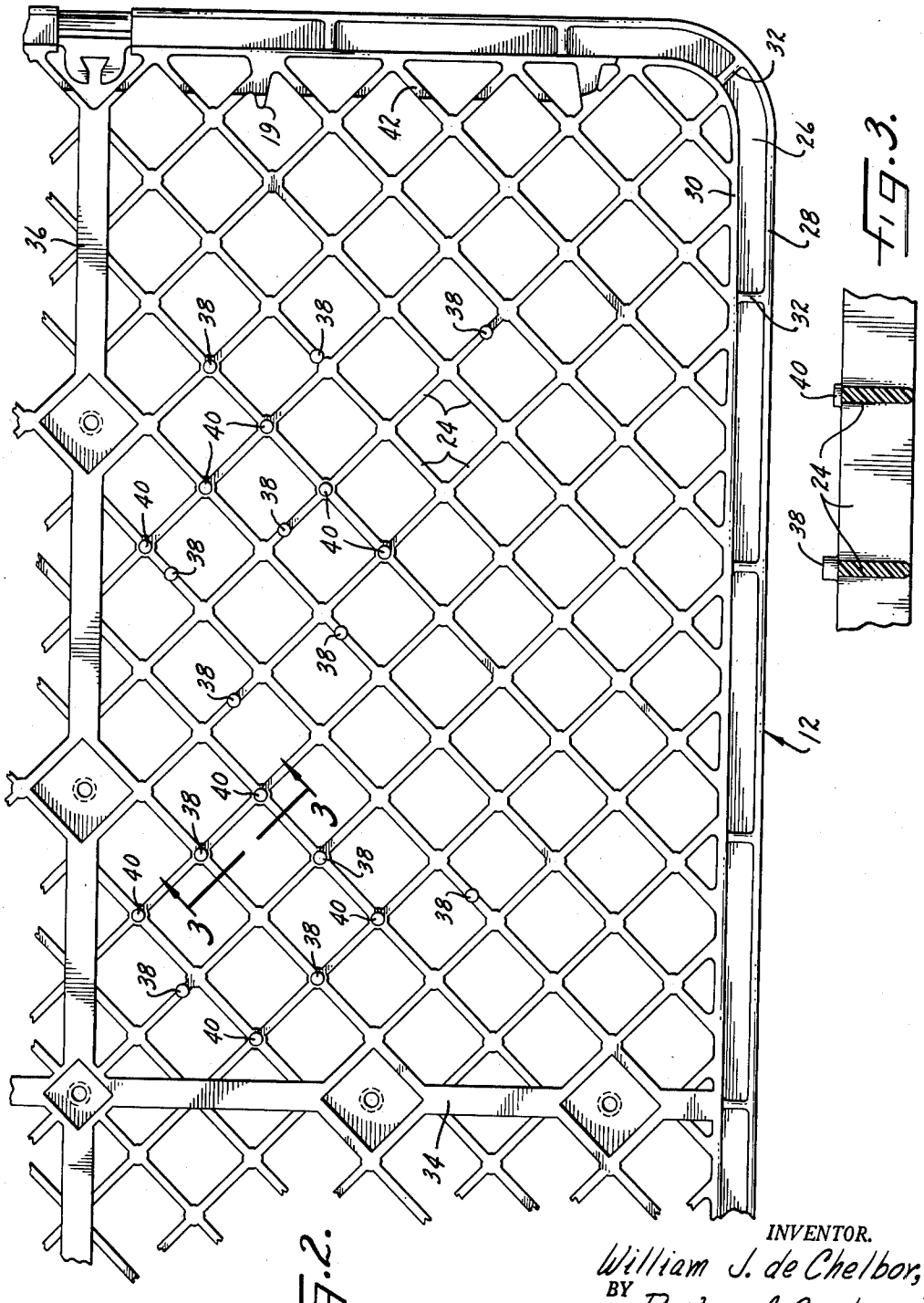

Fig. 2.

Fig. 3.

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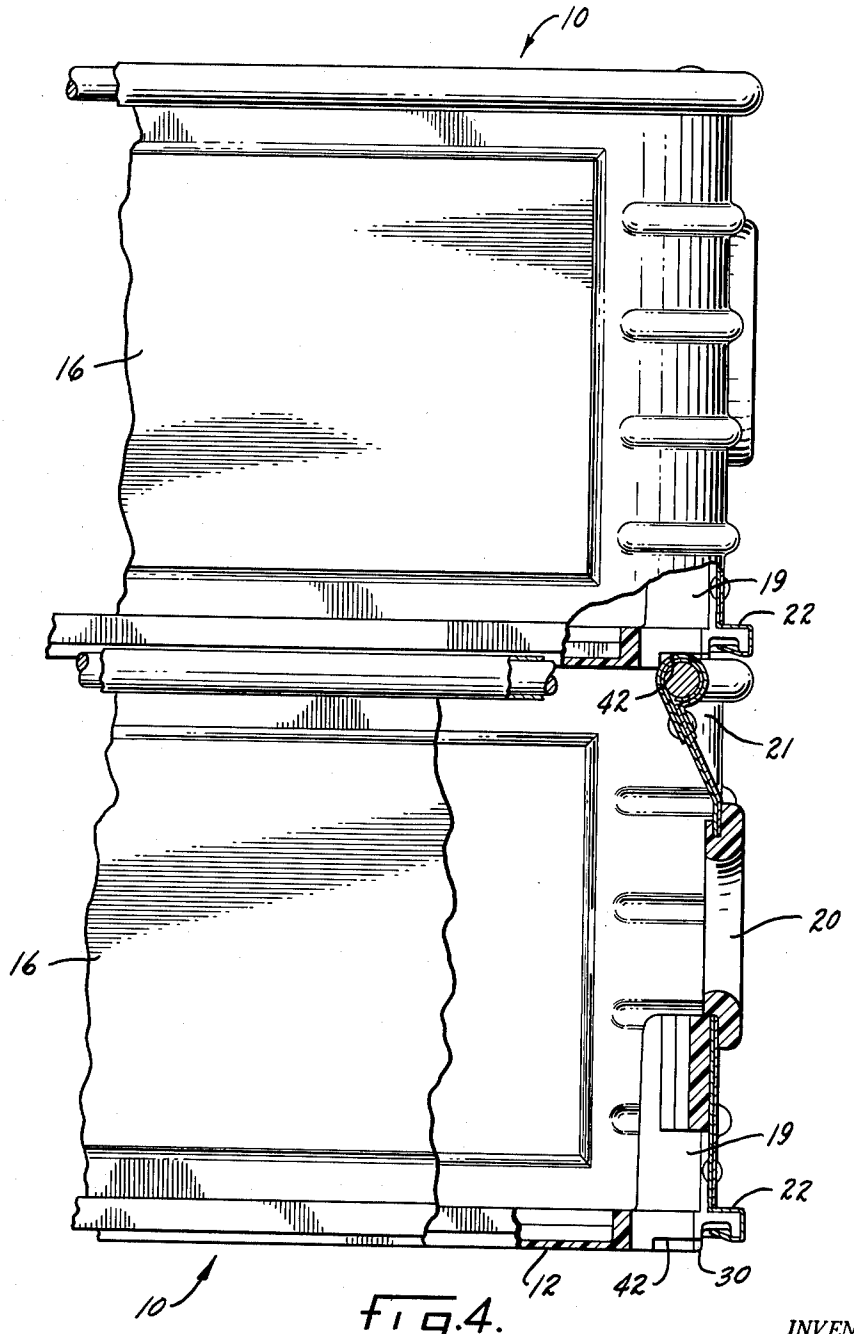

Fig. 4.

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CARRYING CASE

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2 Claims. (Cl. 220—97)

This invention relates to improvements in carrying cases for pop bottles or the like.

One purpose of this invention is to provide a pop bottle carrying case having means on the bottom thereof for interlocking with the bottle tops of the next lower case when the cases are stacked, which interlock provides for some movement between cases.

A further purpose is a pop bottle carrying case having strengthened ends adjacent the handles.

Another purpose is a carrying case of the type described having means for interlocking empty cases.

Other purposes will appear in the ensuing specification, drawings and claims.

The invention is illustrated diagrammatically in the following drawings wherein:

FIGURE 1 is a perspective view of the carrying case of this invention,

FIGURE 2 is a partial bottom view of the carrying case of FIGURE 1,

FIGURE 3 is a section along plane 3—3 of FIGURE 2, and

FIGURE 4 is a section showing two empty cases stacked one upon the other.

In FIGURE 1, a carrying case has been indicated generally at 10 and may include a base 12 surrounded by sides or a body 14. The body may be divided into two U-shaped sections 16 which may be similar and may be formed around the base in a manner set forth in my co-pending application, Serial No. 852,853, filed November 13, 1959. Partitions 18 may be used to divide the interior of the carrying case into sections, and as shown in FIGURE 1, there may be four sections each of which will carry a six pack of pop bottles. The partitions are merely for purposes of illustration and form no part of the present invention. The inventive features herein are applicable to any carrying case, whether it be divided into six pack sections, eight pack sections or into twenty-four individual bottle sections.

The body sections 16 are generally U-shaped, and in assembly are brought in from opposite sides and connected around handles 20 in the center of the ends, in a manner set forth in the above copending application. The sides are preferably made of light gauge metal and the lower edges 22 may form a flange which contains the base 12.

In order to reinforce the sides adjacent the handles, the upper portion of the sides, above the handles, are inwardly recessed, as at 21. Accordingly, the sides adjacent and above the handles are somewhat stronger than other portions of the body.

The base 12 is preferably formed of a grill or grid made of diagonal plastic struts 24. The entire base or bottom is plastic and is connected to the sides or body by the flange 22 which is rolled around the edges of the base, as at 23 in FIGURE 4. Spacers 19 may be mounted on the base 12 and extend up along sides adjacent the handles 20. The spacers position the bottles or packs of bottles within the carrying case and may be integral with the base. The outer peripheray of the base has a channel 26 defined by parallel ribs 28 and 30. The channel 26 is divided into a number of segments by cross ribs 32. There may be two main cross supporting ribs 34 and 36 which reinforce the base, the rib 34 being

lateral and the rib 36 being longitudinal. FIGURE 2 shows one fourth or one quadrant of the base 12, and it should be understood that the other three sections of the base are identical.

In carrying cases of this type, it has heretofore been the practice to provide a number of nubs or projections on the bottom of the base which interlock with the bottle tops on the next lower case when the cases are stacked, one upon the other. There was a sufficient number of nubs or projections so that each and every one of the bottles in a particular case interlocked with the bottom of the above case. In effect, a number of these cases, when stacked, formed a rigid column even though there could be some movement by the bottles when so positioned. The result of this column effect was that it was comparatively easy for an entire stack of cases to tip over. Any slight mis-alignment or any external force such as a push on any one of the cases would start that case tipping which in turn would pull the whole column of cases over. Naturally, this resulted in a considerable amount of bottle breakage and made the carrying cases unacceptable.

To overcome this defect, it is proposed to interlock only the center bottles in each case with the next upper carrying case. The outer rows of bottles of each case will not be interlocked with the next above case. There will be a definite interlock between cases, but at the same time sufficient provision for one case to slide upon the next lower case so that the total of the stacked cases is not a rigid column. In other words, by interlocking only the center group of bottles with the next above carrying case, there will be sufficient friction between the bottles and the next case to interlock them and hold them in position, but at the same time there is provision for slippage between the two cases such that there is not the effect of a column which would tip if one case is pushed. It has been found that by interlocking all but the outside rows of bottles with the next above carrying case that there is sufficient interlock and yet sufficient slippage between the cases to prevent column tippage.

In FIGURE 2, there are nubs or projections 38 which are positioned on the struts 18 either at the point of intersection of the struts or on the strut itself. As shown in FIGURE 2, the nubs 38 are randomly positioned. However, they may be aligned in a pattern. Besides the nubs 38 there are further nubs 40 which are preferably half as long as the nubs 38 and which are also randomly disposed about the base 12. Again, the nubs 40 may be aligned in a pattern. In any event, it is to be noted that both the nubs 38 and the nubs 40 will only interlock with the center rows of bottles in a carrying case. For example, assuming that the case in FIGURE 2 holds 24 bottles, the outside rows of bottles both longitudinally and laterally will not interlock with the next above carrying case. The area around the periphery of the bottom is flat. The precise number of nubs is not important as sufficient nubs must be provided for a center interlock. For example, in a twenty-four bottle carrying case, it has been found that a total of forty-eight nubs, such as the nubs 38, and a total of thirty-six nubs, such as the nubs 40, are sufficient. These nubs are equally divided among the four quadrants or four sections of the carrying case.

As a specific example of the size of the nubs, in a twenty-four bottle carrying case, the nubs 38 may project $\frac{1}{16}$ of an inch and the nubs 40 may project $\frac{1}{32}$ of an inch.

In order to interlock empty carrying cases, the base has a recessed area or slot 42 which has a size and shape to accommodate the recessed area 21 of the sides or body. This interlock is clearly shown in FIGURE 4. The slot or groove 42 is formed in both the inner rib 30 and in the edge of the base adjacent this rib.

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

Shown and described herein is a pop bottle carrying case having improved means for interlocking one case with the cases both above and below it such that the stack of cases will not tip, as a column. In particular, the invention relates to providing sufficient interlock to hold the cases in alignment and yet sufficient slippage between the cases to prevent a column of cases from being rigidly and unyieldingly connected together. When each and every bottle is interlocked with the next above case, even though each individual bottle may by itself be able to move slightly within the case, the cases are, in effect, rigidly connected together. The number of nubs or projections on the bottom of each case are limited so that the outer rows of bottles are not interlocked with the next above case. The inside bottles hold the cases together, but permit sufficient movement between cases to eliminate the column effect.

The particular means for interlocking the bottles of one case and the bottles of the next above case, are nubs or projections on the bottom of the case. These nubs are preferably randomly positioned, such as shown in the drawings, although they may be aligned in a definite pattern.

The nubs may all be the same size or they may be in different sizes. As shown in the drawings, the nubs are in two different sizes, one twice as long as the other.

A further and important feature of the invention is the recessed ends on the body which strengthens the body adjacent the handles. When a case is lifted, the area around the handles, and in particular the area directly above the handles, receives the entire weight of the case. By recessing these areas of the body, the body is substantially reinforced in the weight supporting areas.

A further feature of the invention is the means for interlocking empty cases. The base is recessed or grooved

at each end at areas generally in alignment with the inwardly recessed body areas. When the empty cases are stacked, the inwardly recessed body areas fit into the grooves or slots 42 in the base, thus interlocking the cases.

Whereas the preferred form of the invention is shown and described herein, it should be realized that there are many modifications, substitutions and alterations thereto within the scope of the following claims.

I claim:

1. In a carrying case for pop bottles or the like, a somewhat rectangular base, an upstanding body around the base and connecting thereto to define a generally open top container, opposite ends of said body having handle openings with defined areas of said ends above the handle openings, inwardly spaced from the corners of the body, being inwardly recessed, said base having a groove at each end of the general size and shape of said defined recessed areas and in general alignment with the recessed areas of said body so that said cases interlock through the combination of said grooves and recessed areas when stacked in the empty condition.

2. The structure of claim 1 further characterized by a plurality of downwardly extending nubs on the bottom of said base, said nubs being randomly positioned on said base under all but the outside rows of bottles.

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