

March 17, 1936.

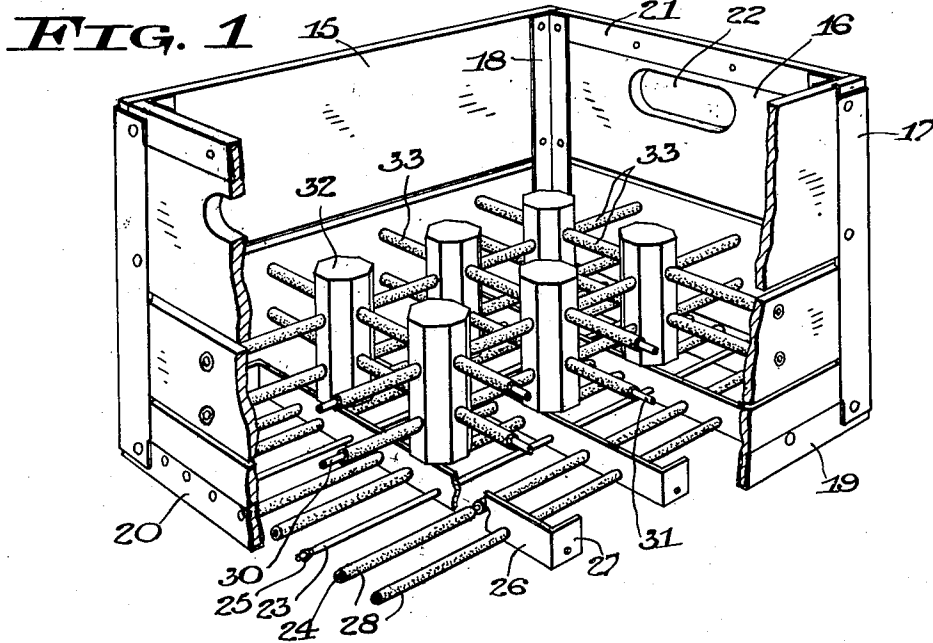
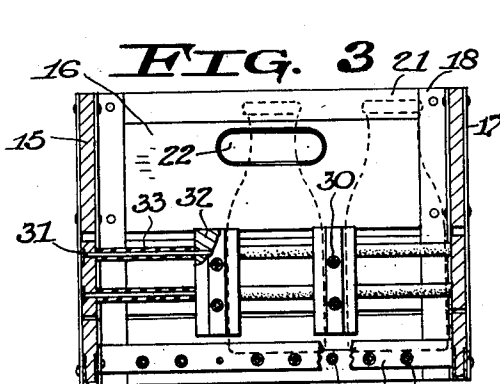
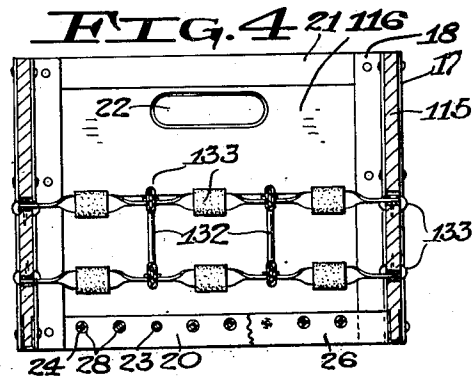
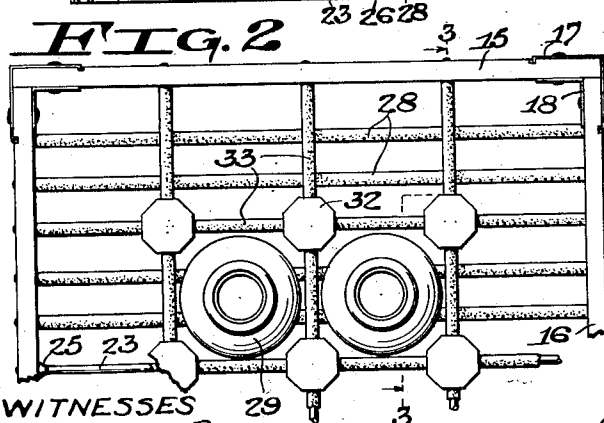
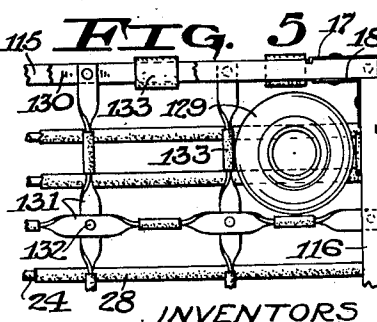
W. J. QUIRK ET AL

2,034,205

BOTTLE CRATE

Filed Oct. 15, 1934

2 Sheets-Sheet 1



WITNESSES
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2 Sheets-Sheet 2

FIG. 6

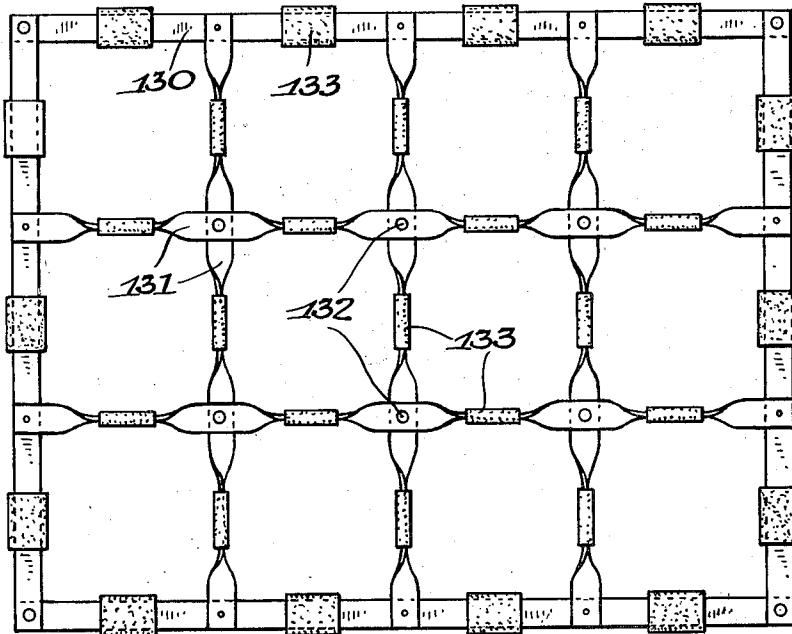


FIG. 7

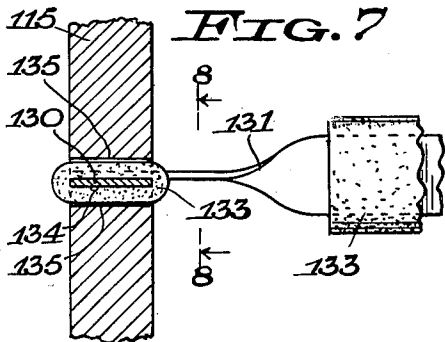


FIG. 8

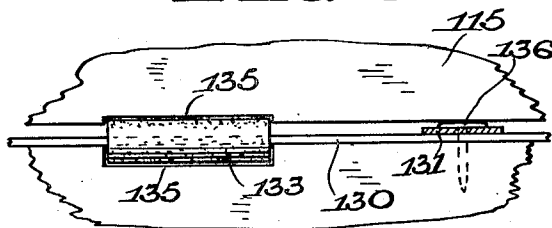
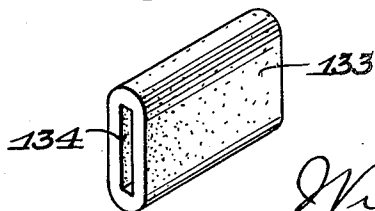


FIG. 9



WITNESSES

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2,034,205

BOTTLE CRATE

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Application October 15, 1934, Serial No. 748,334

8 Claims. (Cl. 217—20)

The invention relates to crates or cases for bottles.

An object of the invention is to provide a milk bottle crate having durable and inexpensive means for cushioning the bottles so as to minimize noise during handling and to prevent damage to the polished outer surfaces of the bottles.

The invention further consists in the several features hereinafter described and claimed.

In the accompanying drawings,

Fig. 1 is a perspective view of a bottle crate embodying the invention, parts being broken away and parts being shown in section;

Fig. 2 is a top plan view of the crate, parts being broken away;

Fig. 3 is a transverse sectional elevation of the crate, taken on the line 3—3 of Fig. 2;

Fig. 4 is a transverse sectional elevation of a modified form of crate;

Fig. 5 is a fragmentary top view of the crate of Fig. 4;

Fig. 6 is a plan view of a cell-forming frame for the crate of Fig. 4;

Fig. 7 is a detail sectional view of the crate of Fig. 4;

Fig. 8 is a detail sectional view taken on the line 8—8 of Fig. 7, and

Fig. 9 is a perspective view of one of the cushioning elements for the crate of Fig. 4.

In these drawings, 15 and 16 designate the usual side and end walls of a rectangular bottle crate, the walls having a riveted connection at the corners of the crate with outer and inner sheet metal angle plates 17 and 18. Each of the walls 15 and 16 is here shown to be formed by spaced parallel boards or slats. The lower edges of the lowermost boards are embraced by sheet metal channels 19 and 20 riveted thereto, and the upper edges of the uppermost end wall boards are embraced by similar channels 21, the latter boards being provided with the usual hand holes 22.

The lowermost sections of the end walls 16 are connected by a number of spaced parallel metal bottom rods or bars 23 and 24, the ends of which are riveted in place. The bars 23 are formed with flanges 25 near their ends to bear against the inner faces of the channels 20. The rods 23 and 24 are supported at intervals by their passage through spaced parallel longitudinally ribbed cross bars 26 having flanged ends 27 riveted to the bottom sections of the side walls 15. The rods 24 carry a series of cushioning tubes or sleeves 28, preferably of rubber, for supporting bottles 29 thereon, the sleeves being confined

against longitudinal movement by the cross bars 26 and the end walls of the crate.

The crates illustrated have a number of cells to hold the bottles in spaced relation. In that form of crate shown in Figs. 1 to 3, the crate is divided into cells by a number of pairs of rods or bars 30 and 31, the bars 30 extending longitudinally of the crate and the bars 31 extending transversely of the crate, and at their ends having riveted connections with intermediate sections of the end walls 16 and side walls 15, respectively. The pairs of bars 30 and 31 pass through upright octagonal wooden blocks 32 which hold the bars in their proper relation. Each set of bars 30 and 31 are arranged in different horizontal planes. The blocks 32 and bars 30 and 31 may form an assembly before the bars are attached to crate walls. The bars carry a number of cushioning tubes or sleeves 33, preferably of rubber, for abutment with the side walls of the bottles to thereby avoid noise during handling of the crate and the bottles and to prevent damage to the polished outer surfaces of the bottles. The sleeves 33 are confined against longitudinal movement by the blocks 32 and the walls of the crate.

In that form of the invention shown in Figs. 4 to 9, the crate has side and end walls 115 and 116, respectively. As in the device of Fig. 1, the corners of the crate are joined by angle plates 117 and 118, and the end walls are connected by bottom bars 123 and 124 passing through cross bars 126 and carrying cushioning sleeves 128. The bottle cells are defined by a pair of rectangular lattice frames arranged one above the other and formed by marginal bars 130 and cross bars 131, preferably of strap metal, united at their junctions, as by riveting or welding, and the frames being connected at some of their interior junctions by vertical struts or bars 132 having their ends riveted to the cross bars. The marginal bars 130 of the lattice frames are disposed in the slots between the wall sections of the crate and carry flat cushioning sleeves 133, preferably of rubber, each having rounded opposite edges and having a slot 134 through which the supporting bar passes. The sleeves 133 on the marginal bars 130 are confined against longitudinal movement by fitting in notches 135 cut in the adjacent edges of the wall sections, as seen in Figs. 7 and 8. The notches are here shown to be formed in registering pairs, but one notch for each sleeve will obviously be sufficient in many instances. Each sleeve is preferably wider than the thickness of the crate wall and projects at the inner and outer

sides of the wall. At their inner edges the cushioning sleeves are engageable with adjacent bottles in the crate cells, and at their outer edges the sleeves are engageable with adjacent crates or other abutments. The marginal bars 130 are secured to the intermediate wall sections by nails 136.

The cross bars 131 have portions midway between each pair of junctions twisted to lie vertically, and each twisted portion carries one of the cushioning sleeves 132, the opposite flat faces of the sleeves being engageable with the side walls of the bottles which loosely fit in the cells. The flat faces of the sleeves thus present relatively large wearing surfaces. The sleeves on the cross bars are confined against longitudinal movement by the twists in these bars, and are confined against rotation by their fit on the cross bars. If desired, the cushioning elements 133 may be cemented or otherwise secured to the marginal bars and cross bars. The cushioning sleeves 133 are relatively short compared with the bottle-cell width.

When the crate is in use, the bottles placed in the cells rest on the cushioning sleeves 28 of the bottom bars of the cells and are laterally engageable with other cushioning sleeves, so as to minimize noise when the crate is handled and when the bottles are dropped into or removed from the crate, and so as to avoid damage to the polished outer surfaces of the bottles.

What we claim as new and desire to secure by Letters Patent is:

1. A bottle crate or the like having side walls with spaced sections at least one of which has a notch, a bar extending between and along said sections, and a bottle-cushioning element on said bar and confined thereon by said notch.

2. A bottle crate or the like having a cell-forming lattice frame including strap metal cross bars provided with twisted portions, and longitudinally slotted bottle cushioning sleeves fitting on said twisted portions and confined longitudinally by said twisted portions.

3. A bottle crate or the like having wall sections, and a non-metallic cushioning element interposed between said sections and having a bottle cushioning portion projecting at the inner faces of said sections.

4. A bottle crate or the like having wall sections, and a cushioning element interposed between said sections and projecting at the inner and outer faces of said sections to cushion a bottle within the crate and to cushion the outer surface of the crate with respect to an adjacent abutment.

5. A bottle crate or the like having a wall with an aperture and a cushioning element in said aperture projecting at the inner and outer faces of said wall to cushion a bottle within the crate and to cushion the outer surface of the crate with respect to an adjacent abutment.

6. A bottle crate or the like having a bottle-confining lattice frame including intersecting flat metal straps twisted to form portions lying in a substantially vertical plane and disposed between the strap intersections, and flat rubber bottle-cushioning sleeves fitting on said vertical portions of the straps and confined longitudinally by the twists in the straps.

7. A bottle crate or the like having bottle-confining metal straps with portions lying in substantially vertical planes, and flat rubber bottle-cushioning sleeves on the vertical portions of said straps, said sleeves having slots therethrough in which said vertical strap portions fit to prevent turning of the sleeves, and said sleeves having substantially flat opposite walls engageable with the side walls of the bottles.

8. A bottle crate or the like having a wall provided with a slot, a bar extending in and along said slot and secured to the crate, and a non-metallic cushioning element on said bar projecting from at least one face of said wall.

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