June 14, 1938. P. N. CURTIS 2,120,600

BOTTLE CRATE

Filed July 23, 1936

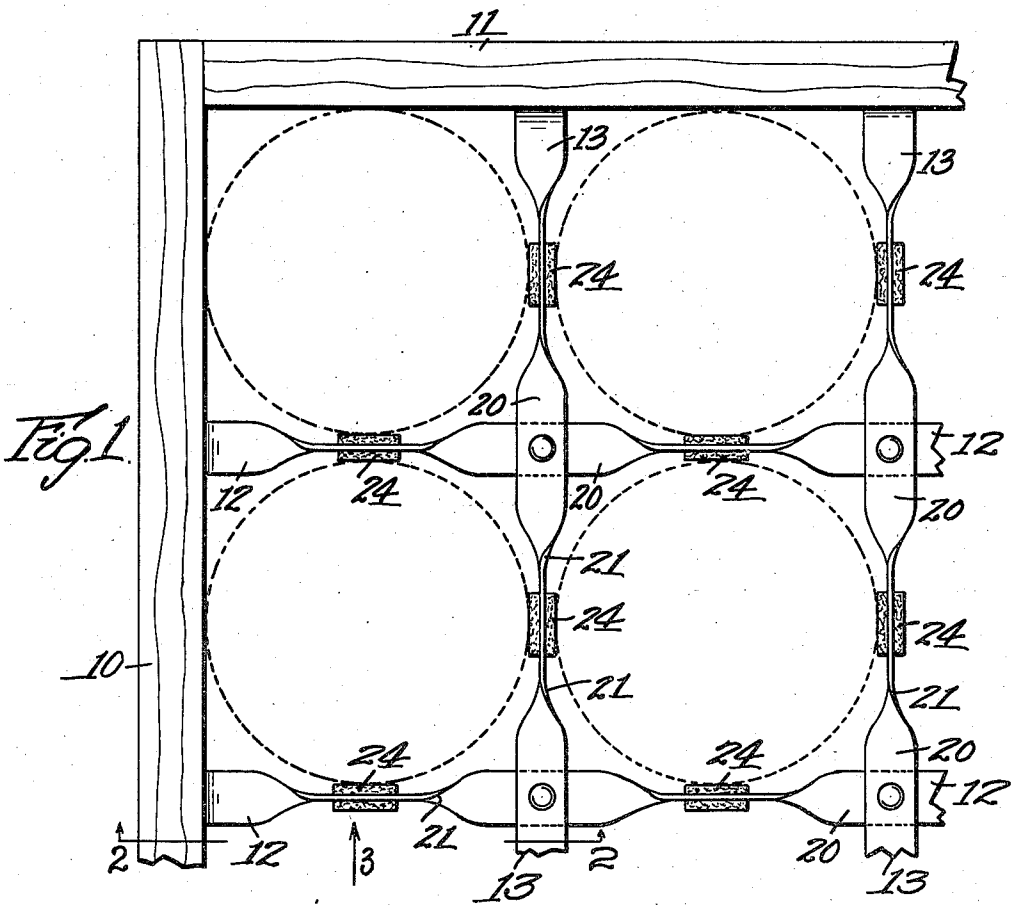


Fig. 1.

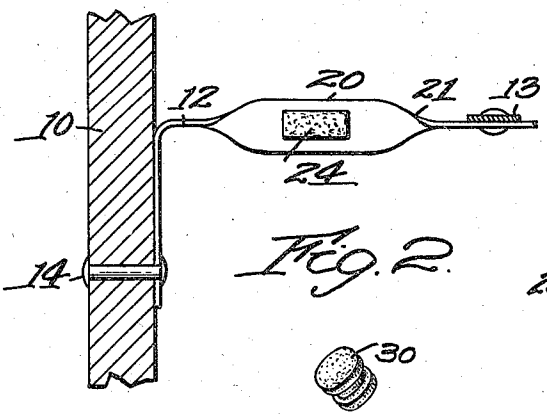


Fig. 2.

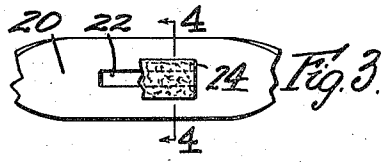


Fig. 3.



Fig. 5.

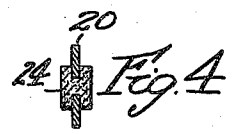


Fig. 4.

Fig. 6.

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BOTTLE CRATE

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Application July 23, 1936, Serial No. 92,171

1 Claim. (Cl. 217—35)

This invention relates to crates or boxes in which milk bottles and other similar articles are packed and handled. Such crates or boxes are commonly subject to quite rough handling and it has been heretofore proposed to provide cushioning means between the bottles therein to reduce breakage thereof.

It is the general object of my invention to provide an improved construction by which cushioning elements may be easily and economically installed on the separator bars of the crate and will be reliably retained in operative position.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claim.

A preferred form of the invention is shown in the drawing in which

Fig. 1 is a partial plan view of a bottle crate;

Fig. 2 is a partial end elevation, taken along the line 2—2 in Fig. 1;

Fig. 3 is an enlarged side elevation of a portion of a separator bar, looking in the direction of the arrow 3 in Fig. 1;

Fig. 4 is a detail sectional view, taken along the line 4—4 in Fig. 3;

Fig. 5 is a perspective view of a cushion element; and

Fig. 6 is a similar view of a different form of cushion element.

Referring to the drawing, I have shown parts of a milk bottle crate including side walls 10, end walls 11 and separator bars 12 and 13. The bars 12 run crosswise between the side walls 10, and the bars 13 run lengthwise between the end walls 11. The separator bars 12 and 13 may be secured to the side and end walls in any convenient manner, as by rivets 14 (Fig. 2).

As shown in the drawing, each separator bar 12 or 13 comprises a series of successive flat portions 20, with intervening twisted portions 21, so that the flat portions are alternately in horizontal and vertical planes. The vertically disposed flat portions 20 are provided with elongated slots 22 (Fig. 3), and cushion elements or plugs 24 are inserted in these slots. The plugs 24 are made of soft rubber or other similar cushion material, and are provided with upper and lower grooves 25 and 26, as clearly shown in Fig. 5.

The plugs 24 may be conveniently manufactured by forming elongated strips of rubber having the H cross section shown in Fig. 5, and by thereafter cutting the strips into short pieces substantially corresponding in length to the slots 22.

The plugs 24 having been thus formed, they are inserted manually or otherwise through the slots 22 and thereafter occupy the positions indicated in Figs. 1 to 3, with portions of each cushioning element projecting substantially beyond both vertical faces of the flat vertical portion 20 of the separator bar 12 or 13 in which it is inserted.

In Fig. 6 I have shown a form of plug or cushioning element 30 in which the enlarged ends and connecting portion are all of substantially circular cross section. When this form of plug is used, the shape of the opening which receives the plug will be made to correspond to the cross section of the plug.

It will be evident that the plugs 24 when thus inserted are very firmly held from displacement, and that they will accurately engage and space the bottles supported in the crate and will also effectively cushion the same.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what I claim is:

In a bottle crate comprising an enclosing casing and intersecting separator bars mounted therein and defining bottle positions in said casing, that improvement which consists in providing each of said separator bars with longitudinally spaced flat vertical portions of single thickness and having horizontal openings therethrough, and in providing soft rubber cushioning elements mounted on said bars in said openings, each cushioning element being substantially H-shaped in cross section, and being mounted in one of said openings with its reduced middle portion in said opening, and with its larger end portions disposed at the ends of the opening and so proportioned in size as to permit ready insertion of the element in the opening, said element projecting beyond and overlying the adjacent vertical faces of the associated separator bar and engaging and cushioning a bottle positioned adjacent thereto by said bars.

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