

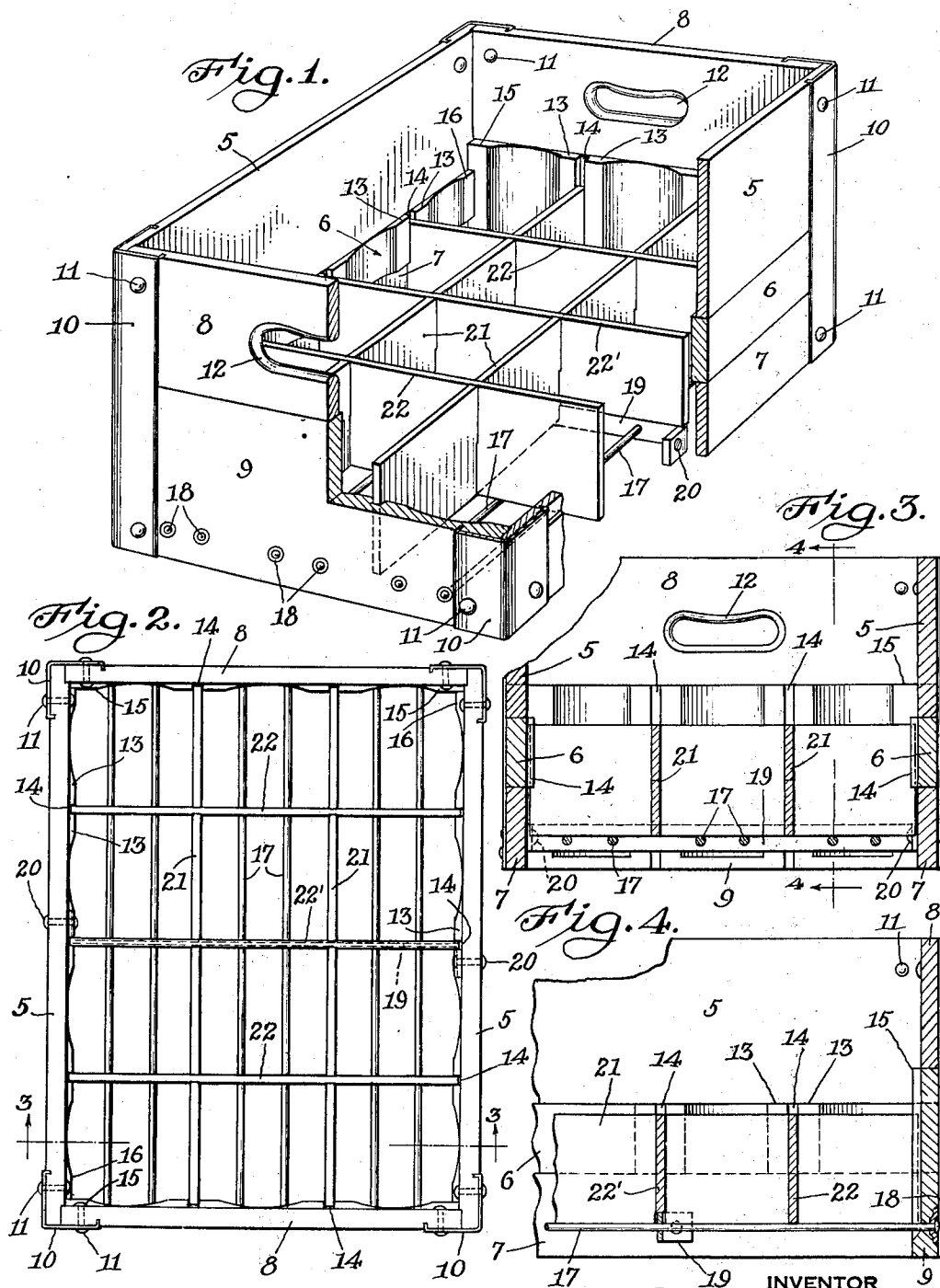
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BOTTLE CRATE

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BOTTLE CRATE

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2 Claims. (Cl. 217-22)

This invention relates to crates of that class which are provided with bottle racks arranged in the bottom of the crate to separate the bottles and to hold them in upright position.

5 The principal objects of the invention are to retain the rack rigidly but removably in the crate, to reenforce the partitions forming the rack, and to protect the ends of the partitions against damage during use of the crate.

10 Further objects of the invention are to provide the walls of the crate with retaining grooves for receiving the ends of the rack partitions and without extending these grooves from the bottom to the top of the crate and thereby reducing the strength of the walls, and without requiring that the walls be thickened from the bottom to the top of the crate to receive the grooves; to confine the rack retaining grooves to sections of the walls at the ends of the partitions; to form the rack retaining grooves between projections on sections of the walls of the crate without reducing the capacity of the crate or requiring its enlargement and without presenting obstructions which would be liable to damage the bottles or interfere with the insertion or removal of the bottles; and to brace the crate at its corners to increase the strength and sturdiness of the crate.

In the accompanying drawing in which I have shown a preferred embodiment of the invention:

30 Fig. 1 is a perspective view of my improved crate partly broken away.

Fig. 2 is a top plan view of the crate.

Fig. 3 is a sectional view on the line 3-3 of Fig. 2.

35 Fig. 4 is a sectional view on the line 4-4 of Fig. 3.

Referring to the drawing, the side walls of the crate comprise sections 5, 6 and 7 and the end walls comprise sections 8 and 9. The side and end walls are joined together at their corners by suitable reenforcing angle members 10 which are secured to the walls by rivets 11 or other suitable fastening means. The end sections 8 are provided with hand holes 12 or other suitable grip devices.

45 The sections of the side and end walls of the crate may be and preferably are of uniform thickness except that the sections 6 of the side walls and the sections 9 of the end walls are provided with inward projections 13 arranged in pairs and spaced apart to form grooves 14. These projections may be integral with the sections or they may be made separate and fastened to the sections. Projections 15 at the side edges of the end sections 9 abut the side walls of the crate and

projections 16 at the side edges of the side sections 6 abut the projections 15, Fig. 1. These abutting projections 15 and 16 interbrace the crate at its corners and add materially to the strength and sturdiness of the crate. I prefer that the joints between the sections in the end walls of the crate should not match either of the joints between the sections in the side walls of the crate.

Rods 17 extend through the end walls of the crate and their ends 18 are riveted or otherwise secured on the outer faces of the end walls. These rods form the supports for bottles in the crate and also tie the end walls together. A bar 19 extends across the crate and is secured by rivets 20 to the side walls of the crate. The rods 17 extend through the cross bar and are supported and held in proper spaced relation thereby and the cross bar also ties the side walls of the crate together.

The rack consists of partitions 21 extending from end wall to end wall and partitions 22, 22' extending from side wall to side wall, the partitions being interlocked where they cross one another to unify the rack. The partition 22' is located directly above the cross bar 19 and therefore this partition is of less depth than the other partitions so that it will rest upon the cross bar while the other partitions will rest upon the rods and all of the partitions will lie in the same plane at their upper edges. The grooves 14 are of sufficient width to receive the ends of the rack partitions and permit the rack to be freely inserted in and removed from the crate, but the projections 13 which form the side walls of the grooves retain and reenforce the ends of the partitions and protect them from damage during use of the crate.

The projections on the walls of the crate are located at corners of compartments formed by the rack and they do not reduce the capacity of the crate or require enlargement of the crate and the compartments in which these projections are located are capable of receiving round bottles of the same diameter as those compartments of the same diameter as those compartments of the rack which have no projections. And since the projections are located at corners of the compartments they are out of the path of movement of the bottles when being inserted in and removed from the crate and, therefore, do not obstruct or otherwise interfere with these movements and are not in a position to damage the bottles. The sections of the walls of the crate are preferably flush on the outer faces of the walls and except for the projections on the sec-

tions 6 and 9, the sections are also flush on the inner faces of the walls. In other words, the sections 6 and 9 are of the same thickness as the other sections except for the projections which may be integral with the sections 6 and 9 or they may be made separate and fastened thereto. And these projections may be wide or narrow for sufficient strength according to the weight of the bottles for which the crate is intended or to meet any other conditions. The bottom wall of the grooves is preferably formed by the inner face of the sections 6 and 9 so that the ends of the rack partitions will slide freely in the grooves and between the upper sections of the walls of the crate. If thick sections 6 and 9 are recessed and grooved to provide integral projections, as shown, the bottom of the grooves may be made flush with the inner faces of the upper sections of the walls of the crate, or shallower, as desired. The grooves should be deep enough to receive and retain the ends of the partitions and they should be narrow enough to snugly secure the ends of the partitions and brace the same so that they will be fully protected against damage by the insertion or removal of bottles or in use otherwise. This protecting means for the ends of the partitions is located, it may be said, within the inner faces of the walls of the crate without weakening the walls by extending the grooves to the top thereof and without lessening the capacity of the crate or in any way interfering with loading or unloading the crate. The rack retaining means not only secure the rack in place and protect the ends of the partitions but they also permit the rack to be easily inserted and removed for repair or replacement.

I have shown the invention as embodied in a milk bottle crate with both the side walls and the end walls of the crate grooved to receive the ends of the partitions, which is the preferred construction, but for some purposes it may be sufficient to provide the grooves only in the side walls or in the end walls, and other changes may be made in the form, construction and arrangement of parts without departing from the spirit of the invention or sacrificing any of the advantages thereof to adapt it for other bottles or articles, or for other reasons, and I reserve the right to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. A bottle crate having side and end walls, projections on the inner faces of opposite walls and abutting the other walls at the corners of the crate, projections on the inner faces of said other walls and abutting the projections on said opposite walls at the corners of the crate to reinforce the crate, the projections on the respective walls of said crate being spaced below

the top edges of said walls, a rack comprising a plurality of crossed interlocked partitions respectively extending between the side and end walls and providing bottle receiving spaces, the length of the partitions extending between the end walls being less than the distance between the inner surfaces of those parts of the end walls above the projections thereon, the length of the partitions extending between the side walls being less than the distance between the inner surfaces of those parts of the side walls above the projections thereon, said projections having recesses therein to receive the free ends of the partitions of said rack whereby said rack may be freely passed over those parts of the walls of the crate above the projections on the respective walls to engage the partitions in said recesses and position said rack in said crate, and means supporting said rack in said crate.

2. A bottle crate having side and end walls, projections on the inner faces of opposite walls and abutting the other walls at the corners of the crate, projections on the inner faces of said other walls and abutting the projections on said opposite walls at the corners of the crate to reinforce the crate, the projections on the respective walls of said crate being spaced below the top edges of said walls, a rack comprising a plurality of crossed interlocked partitions respectively extending between the side and end walls and providing bottle receiving spaces, the length of the partitions extending between the end walls being less than the distance between the inner surfaces of those parts of the end walls above the projections thereon, the length of the partitions extending between the side walls being less than the distance between the inner surfaces of those parts of the side walls above the projections thereon, said projections having recesses therein to receive the free ends of the partitions of said rack whereby said rack may be freely passed over those parts of the walls of the crate above the projections on the respective walls to engage the partitions in said recesses and position said rack in said crate, rods extending between opposite walls of said crate and providing a bottom therefor to support bottles in the bottle receiving spaces of said rack, and a cross bar extending between the walls joining said opposite walls, one of the partitions of said rack being aligned with said cross bar and being smaller in size than the other of said partitions whereby the lower parts of the other partitions rest on said rods when the free ends of said partitions are passed into said recesses, said smaller partition being engaged with said cross bar when the other partitions engage said rods, said cross bar and rods supporting said rack in said crate.

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