Aug. 29, 1933. H. WILDBERG 1,924,475

BOTTLE CRATE

Filed July 11, 1930

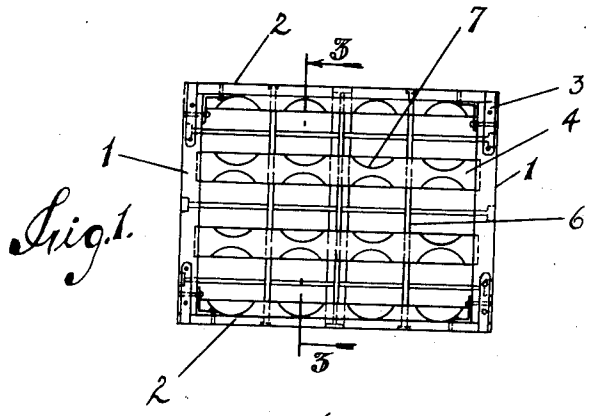


Fig. 1.

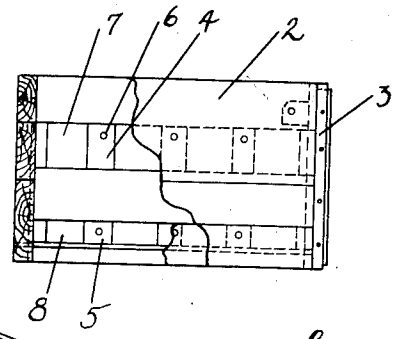


Fig. 2.

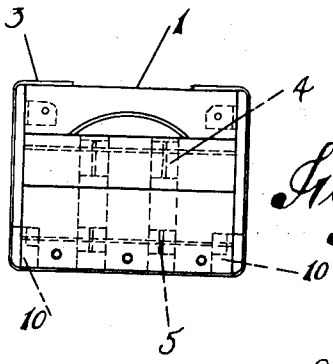


Fig. 2a.

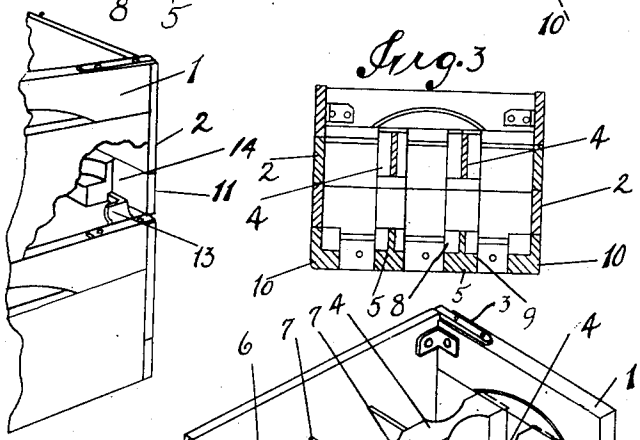


Fig. 3

Fig. 4.

Fig. 6.

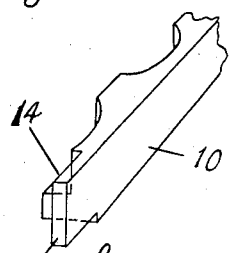


Fig. 5.

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UNITED STATES PATENT OFFICE

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BOTTLE CRATE

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Application July 11, 1930. Serial No. 467,224

4 Claims. (Cl. 217—19)

My invention relates to improvements in milk bottle crates over my former Patent No. 1,133,076, granted March 23, 1915.

In my patent above referred to, wooden partitions are provided extending lengthwise of the crate, and having pockets formed therein and ledges beneath the pockets, into which pockets milk bottles or other bottles are placed.

In the original patent above referred to, no construction is shown for supporting the bottles along the sides of the crate, and it has been the practice for a good many years to insert a strip of wood of square cross-section along the lower edge of the inside of the box at the two sides to form the outer bottle rest for the two outer series of bottles. This ledge, in the form of a piece of wood of square cross-section, was screwed or otherwise secured to the side walls of the crate, and the ends of the crate were cut out so that the said pieces of wood could extend out the full length of the sides. The difficulty with this construction has been that it provided a point of weakness at the part of the crate which was subjected to many of the greatest strains and blows in use.

In the milk industry, crates such as this must slide along through conveying apparatus and down chutes for loading and unloading purposes, and in shipment are constantly being subjected to rough handling. The cutting out of the end walls to receive the side rails above referred to, has weakened the ends walls, leaving a portion along the base which is subjected to being knocked out. It has not provided a strong runner for the sides of the box, since the only real strength, so far as a side runner is concerned, had to be supplied by the side wall of the box, which could not be of great thickness. It did not provide for a strong and secure supporting ledge for the outer portions of the outer rows of bottles, and it left between the bottles a space through which crushed ice placed about the bottles could escape. Where stacking irons are used, located in the inner corners of the box, it is necessary to cut away the side runners which have been used as above noted, which left the side runners in very weak condition.

My invention is designed to overcome these defects in bottle crates of the past, and consists essentially in providing for a new side runner of a like thickness to the thickness of the partitions, and forming pockets therein for receiving bottles, such side runners forming the entire lateral portions of the bottom of the box. As will be noted as the description proceeds, this construction obviates the defects of my old box while retaining all the advantages thereof.

I accomplish my objects by that certain construction and arrangement of parts of which several typical instances will be described, and the novelty of which will be set forth in the appended claims.

In the drawing:—

Figure 1 is a top plan view of my improved bottle crate.

Figure 2 is a side elevation thereof partly broken away.

Figure 2*a* is a side elevation of the same.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is a broken away perspective view showing the construction used where stacking irons are provided.

Figure 5 is a fragmentary perspective of one of the new bottom rails where corner irons are used.

Figure 6 is a perspective of one of the improved milk crates with the end wall removed.

The crate illustrated is one arranged for the installation of a dozen bottles, which happens to be the standard size of quart milk crates, but it is not desired that this be a limitation of my invention. The crate has end walls 1, 1, and side walls 2, 2, made up of boards secured together, and preferably with metal straps 3 passing from the top of the box down the side walls and across the bottom end walls, and thence up the other side of the box and over the top thereof. The partitions for supporting the bottles in this particular instance are made up in two parts,—the top parts 4 and the bottom parts 5. Transverse rods 6 pass through the partition members, and are secured in the side walls of the box. Also, the ends of the partition members are countersunk into the end walls of the box.

The partitions 4 are formed with recesses or pockets 7 on each side thereof, with the cross rods passing through the thicker parts between the recesses, and the recesses are arranged in such a way as to provide a series of pockets of substantially the size to embrace the bottles which are to be placed in the crate. The lower partition members have pockets 8 formed therein, but these pockets do not extend the full depth of the partition, leaving ledges 9 which form a base on which the bottom of the bottles rest. The recesses in the upper and lower partitions are naturally arranged in line with each other, and the shape of the recesses and spacing of the partitions will be such as to accommodate the desired bottles in the required number.

As heretofore pointed out, the particular novelty on which the present application is based relates to parts not as yet described, namely, the bottom bars or runners that extend along the sides of the box. These runners are formed of thick wooden members 10 substantially wider than the thickness of the side boards of the box. They extend along the bottom of the box with their outer walls flush with the sides of the box, and have reduced end parts 11 which are of the substantially same thickness as the sides of the box. The cross rods 6, which pass through the lower portions of the partition members, also pass through the pieces 10 and are secured in place as by riveting at 6*a* at the outer surface of the said pieces 10.

The end walls 1 are set inside of the side walls, which will also bring them inside of the reduced end parts 11 on the runners, so that the straps 3 pass around these portions 11 of the runners 10, and the end walls are not cut away and weakened at their lower corners as in the old construction above referred to.

An intermediate metal strap 3*a* may also be passed around the box, and will be countersunk into the runners 10 along their sides and bottoms, and also countersunk into the side walls of the box and into the partitions 5.

The runners 10 are formed with recesses 12 corresponding with the recesses 8 in the intermediate partitions, and also with ledges 13 corresponding to the ledges 9 in the intermediate partitions 5. Thus there is not only provided a ledge for the outer row of bottles complementary to the ledge on the partitions 5, but there is also provided a complete pocket for the two outside rows of the bottles.

Where stacking irons 13 are employed in the boxes the portions 11 are made longer than where stacking irons are omitted, thus leaving a space 14 into which the corner irons of an underlying box may project.

It will be noted that I have provided by this mechanism, for strong runners for the box, and eliminated weak sides and ends, which were a defect in my former construction. In addition to this, I have provided for a more complete bottle protection by making a complete base pocket for the bottle, and furthermore I have provided for improved ice holding qualities of the entire box by means of the inwardly projecting portions of the runners. I have accomplished all of this without anything projecting below the level of the end walls of the box.

I do not wish to be limited to the particular form of intermediate partition nor to the strap method of holding the box together, although the particular crate shown in its particular details provides maximum advantages in a milk bottle crate of the wooden partition type.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a bottle crate, the combination with the sides and ends of the box, and with intermediate partitions cut to form bottle receiving recesses with supporting ledges, of relatively wide side runners for the box mounted flush with the sides thereof and projecting inwardly and having bottle receiving recesses and ledges formed therein, said runners having end parts transversely substantially coextensive with the narrower side walls of the box, and with the side walls and said end parts overlapping and fixed to the edges of the end walls of the box, said end parts of the runners substantially coextensive with the sides being long enough to leave a space between the end walls and the inwardly projecting portions of said runners for the accommodation of corner irons used in stacking.

2. In a bottle crate comprising end walls and upper and lower partitions secured between said end walls and having bottle receiving recesses in their sides, the lower partitions also having bottle supporting ledges at the bottoms of their recesses, side walls with their bottom edges substantially in the transverse plane of the tops of the lower partitions, and bottom runners for the side walls, transversely thicker than said side walls and extending in therefrom and having recesses and ledges facing and matching the recesses of the lower partitions, and having end parts reduced to substantially the thickness of said side walls, said end parts and said side walls extending across and being secured to the ends of said end walls.

3. A bottle crate as set forth in claim 2 in which the bottom runners have mortises in the lower edges of their reduced end parts, and including metal straps extending along and attached to the lower edges of the end walls, lying in said mortises and extending up along and sunk into the outer sides of said bottom runners and said side walls and secured to the side walls.

4. A bottle crate as set forth in claim 2 in which the bottom runners have middle mortises in their lower edges midway of their lengths and have mortises in the lower edges of their reduced end parts, and including metal straps secured in the middle mortises and metal straps extending along and attached to the lower edges of the end walls and lying in said end mortises, all of said straps extending up along and sunk into the outer sides of said bottom runners and said side walls and secured to the side walls.

HENRY WILDBERG.