Aug. 10, 1943. D. R. SWINGLE ET AL 2,326,700

CRATE

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Fig. 1.

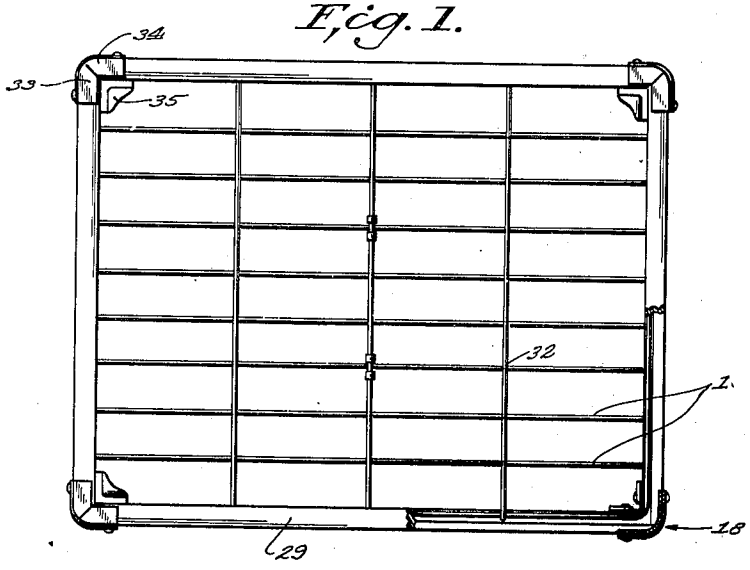


Fig. 2.

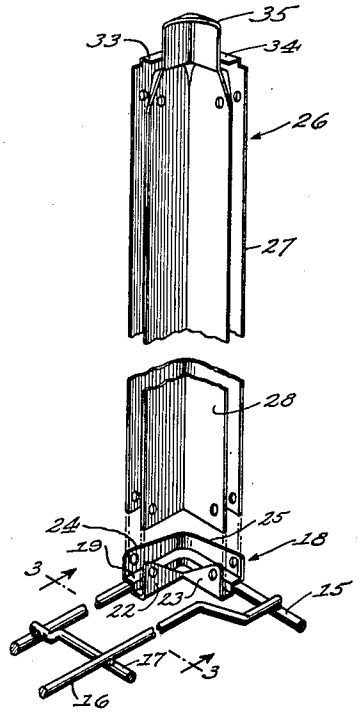


Fig. 3.

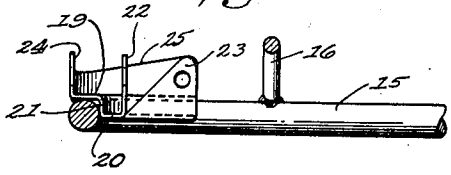
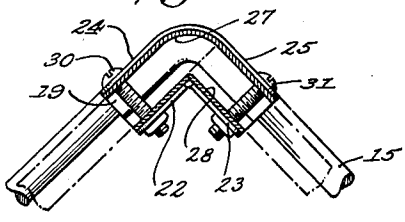


Fig. 4.



Inventors

Donald R. Swingle &
William W. Robinson.

By Cushman Darby & Cushman

Attorneys

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Fig. 5.

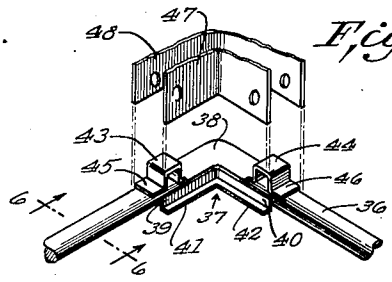


Fig. 6.

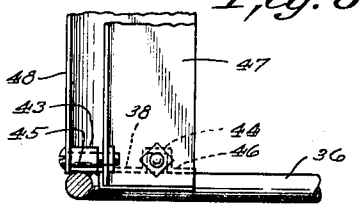


Fig. 7.

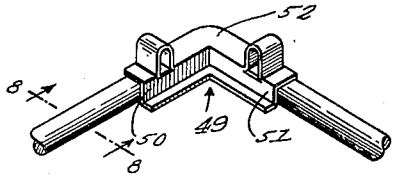


Fig. 8.

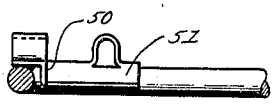


Fig. 9.

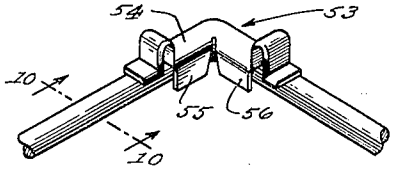
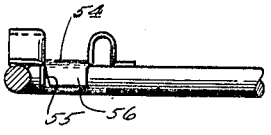


Fig. 10.



Inventors

Donald R. Swingle &

William W. Robinson.

By Cushman Darby & Cushman

Attorneys

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2,326,700

CRATE

Donald R. Swingle and William W. Robinson, Chattanooga, Tenn., assignors to Cumberland Case Company, Chattanooga, Tenn., a corporation of Tennessee

Application January 7, 1941, Serial No. 373,497

6 Claims. (Cl. 217—65)

This invention has to do with crates and in particular with structural features of crates used in the transportation of milk bottles. An object of the invention is to provide an easily assembled and durable frame structure and to this end the invention contemplates a unitary rectangular base structure including welded-on corner fittings for the rigid attachment of upright corner elements. The invention is shown in practical embodiment in the accompanying drawings with reference to which the description will proceed.

In the drawings:

Figure 1 is a plan view, partly broken away, of a crate constructed in accordance with the invention.

Figure 2 is an exploded isometric view showing a portion of the bottom construction including a preferred form of corner fitting and showing also an upright corner element.

Figure 3 is a section substantially on line 3—3 of Figure 2.

Figure 4 is a transverse section of the corner element of Figure 2 shown as secured to the corner fitting.

Figure 5 is an exploded isometric view showing a modified form of corner fitting and in part an upright corner element.

Figure 6 is a section on line 6—6 of Figure 5 showing the elements in assembled relation.

Figure 7 is an isometric view of a further form of corner fitting.

Figure 8 is a section substantially on line 8—8 of Figure 7.

Figure 9 is an isometric view of still another form of corner fitting, and

Figure 10 is a section on line 10—10 of Figure 9.

Referring to the drawings, and first to Figures 1 to 4, reference numeral 15 designates a continuous rectangular bottom wire or rod constituting a runner and also a frame to which are welded the ends of cross grid wires 16 and 17. Secured in each rounded corner of wire 15 is an angular fitting 18 which includes a flat horizontal portion 19 welded on top of the wire and a dropped channel-like portion 20 which includes a vertical wall or flange 21 bearing against wire 15 inside the corner to serve as positioning means for the fitting. The channel formation 20 is bounded inwardly by angularly related upstanding flanges or ears 22 and 23 which are in planes parallel to angularly related outer flange portions 24 and 25.

The upright corner element 26 comprises an outer angle 27 positioned within and against flanges 24 and 25, as shown in Figures 1 and 4, and an inner angle 28 positioned within and against ears 22 and 23. The thus determined positioning of angles 27 and 28 adapts them to receive between them the ends of the slats 29. The ears 22 and 23, flanges 24 and 25, the lower ends of angles 27 and 28, and the lower slats are pierced to receive securing means such as the bolts 30 and 31, or rivets may be used if desired. The upper portions of the corner elements 26 are secured at intervals through the slat ends.

As indicated in Figure 2, the supporting wires 16 and 17 are upwardly offset so that the bottles will be normally supported in a plane substantially above the plane of the bottom of wire 15, thus preventing breakage if the crate is dropped. The wire 15, which is of substantial rigidity in itself, is reinforced at the corners by the fittings 18, welded thereto, and with the corner elements 26 secured to the fittings a very rigid and durable skeleton structure is provided.

The crate is provided in the usual manner with upper positioning grids of which one is designated by the reference numeral 32 in Figure 1. The upper ends of the outer angles 27 are inwardly flanged at 33 and 34 to overlie the top slats and the upper ends of the inner angles 28 are provided with the usual stacking irons 35.

In Figures 5 and 6 reference numeral 36 designates a corner portion of a frame wire like the wire 15 of the first form. Welded in the corner of the wire is an angular fitting 37 having a flat portion 38 at the lower inner margin of which is formed an angular portion having vertical walls 39 and 40 terminating downwardly in horizontal flanges 41 and 42. The horizontal portion 38 has end portions free of walls 39 and 40 and bent to form upward loops 43 and 44 terminating in feet 45 and 46 welded to wire 36. As shown in Figure 6, the inner angle 47 of the corner element rests on flanges 41 and 42 and against walls 39 and 40. The outer angle 48 bears against the outer edge of the flat portion 38 and the two angles are held together by bolts or rivets passing through loops 43 and 44. The spacing of angles 47 and 48 permits them to receive the slat ends, the lower slats being notched to receive the loops.

In Figures 7 and 8 the fitting 49 is substantially the same as that of Figures 5 and 6, the difference being that the vertical walls 50 and 51 are integral with the horizontal portion 52, being united throughout by welding. The inner and outer angles of the upright corner elements are mounted as in Figure 6.

In Figures 9 and 10 the fitting 53 has a horizontal portion 54 of angular form provided with

downwardly bent ears **55** and **56** against which the inner angle of the upright corner element bears for positioning, the inner and outer angles being secured together through the loops as before.

While several illustrative forms of corner elements have been shown, it will be understood that the invention is not necessarily limited thereto, nor to other disclosed details. We do not restrict ourselves in these matters except as in the following claims.

We claim:

1. A crate comprising a rectangular bottom wire constituting a runner, angular corner fittings welded on top of said wire, upright corner elements each comprising inner and outer angles secured to said fittings, a supporting grid secured to said wire, and slats above said wire with their ends secured between the inner and outer angles of said corner elements.

2. Structure according to claim 1 wherein said fittings have angular vertical flanges inside the corners of the wire and against which the inner angles are secured.

3. Structure according to claim 1 wherein said fittings have angularly related dropped portions abutting the insides of the corners of the wire to position the fittings.

4. Structure according to claim 1 wherein said fittings have angularly related dropped portions abutting the insides of the corners of the wire to position the fittings, and wherein said dropped portions include upright flanges against which the inner angles are secured.

5. Structure according to claim 1 wherein said fittings have angularly related dropped portions abutting the insides of the corners of the wire to position the fittings, wherein said dropped portions include upright flanges against which the inner angles are secured, and wherein said fittings also include angularly related upright outer flanges against which the outer angles are secured.

6. A crate comprising a rectangular bottom wire constituting a runner, angular corner fittings welded on top of said wire, said fittings having angularly related depending portions abutting the insides of the corners of the wire to position the fittings, upright corner elements each comprising inner and outer angles secured to said fittings, a supporting grid secured to said wire, and slats above said wire with their ends secured between the inner and outer angles of said corner elements.

DONALD R. SWINGLE.
WILLIAM W. ROBINSON.