Dec. 18, 1923. 1,478,038

F. KRZYZAK

BOX AND CRATE

Filed March 31, 1923

Fig. 1

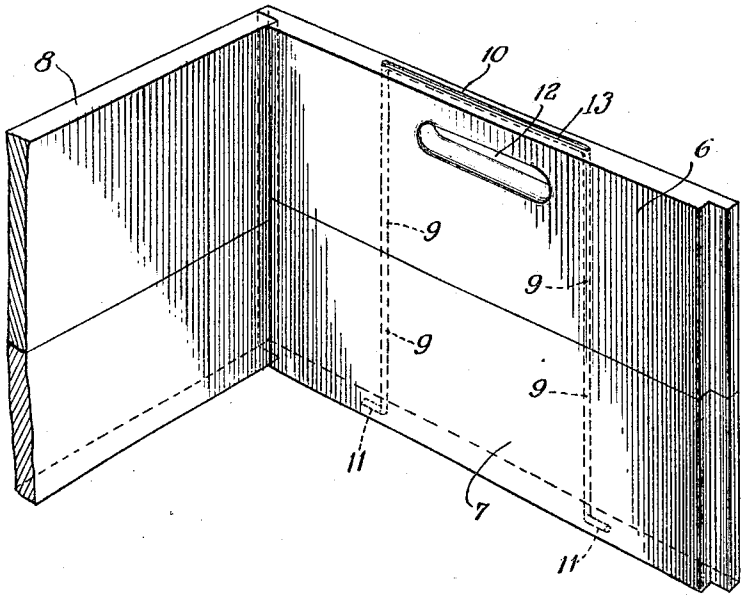


Fig. 2

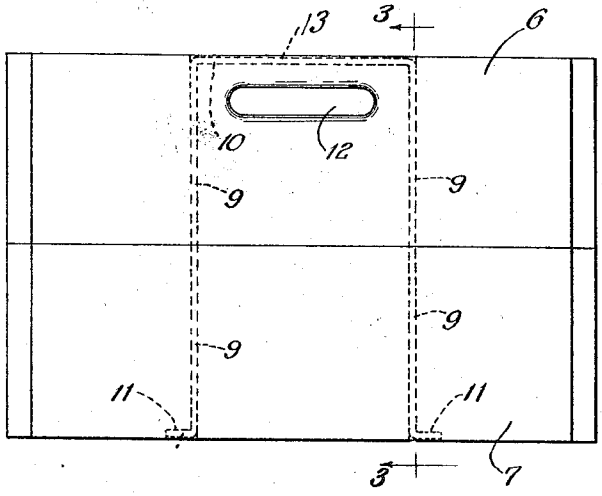
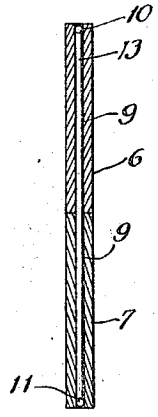


Fig. 3



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UNITED STATES PATENT OFFICE.

FRANK KRZYZAK, OF CHICAGO, ILLINOIS, ASSIGNOR TO MILK BOTTLE CRATE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOX AND CRATE.

Application filed March 31, 1923. Serial No. 629,127.

To all whom it may concern:

Be it known that I, FRANK KRZYZAK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Boxes and Crates, of which the following is a specification.

This invention relates to boxes and crates, and more particularly to the construction of the sides and ends of boxes and crates.

The chief object of my invention is to provide improved means for reinforcing the sides and ends of a box to insure against damage to the box when it is subjected to rough usage.

Other objects of my invention are to provide improved means for reinforcing the side or ends transversely to check any tendency of the sides or ends to crack or split; to prevent total failure of the sides or ends if they do split or crack, and to provide means for reinforcing the material about a hand hole or the like.

Similar characters of reference designate similar parts in the accompanying drawing, wherein—

Fig. 1 is a perspective view of one corner of a box or crate showing an end embodying my invention.

Fig. 2 is an elevation of the end shown in Fig. 1, and

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

In the drawing, the reference characters 6 and 7 designate two sections of an end of a box or crate to which sides as indicated at 8 may be secured in any suitable manner. The sections 6 and 7 are provided with registering bores 9 which communicate with the top and bottom edges of the end. A longitudinal groove 10 in the top edge of the end communicates with the bores 9 of the section 6, and in the bottom edge of the end, I preferably provide a comparatively short groove 11 for and communicating with each of the bores 9 in the section 7. A hand hole is shown at 12 and is disposed between the bores 9 in the section 6.

A wire 13 is arranged to lie in the groove 10 and to pass through the bores 9 of the sections 6 and 7. I prefer to have the groove 10 of sufficient depth to have the wire 13 be in the groove substantially flush with the top edge of the end. The two ends 14 of the wire 13 are preferably bent back into the grooves 11, care being taken to draw the wire 13 taut so as to hold the sections 6 and 7 rigidly in aligned position.

It is readily understood that the wire 13 will tend to prevent the ends from splitting or cracking and that should the ends crack or split the wire will bind the several pieces securely together. Also, the wire 13 reinforces the wall around the hand hole 12 in the section 6 so as to make it nearly impossible to tear out the wall directly above the hand hole.

I am aware that changes in the form, construction and arrangement of parts may be made without departing from the spirit and without sacrificing any advantages of the invention and I reserve the right to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. A box or crate side or end having a plurality of bores communicating with two opposite edges of the side or end, and a wire arranged to lie adjacent to one of said edges and to pass through the bores, the ends of the wire engaging the other of said edges to hold the wire taut.

2. A box or crate side or end having a plurality of bores communicating with two opposite edges of the side or end and a groove in one of said edges communicating with the bores, and a wire adapted to lie in the groove and to pass through the bores, the ends of the wire engaging the other of said edges to hold the wire taut.

3. A box or crate side or end having a plurality of bores communicating with two opposite edges of the side or end, and a wire arranged to lie adjacent the surface of one of said edges and to pass through the bores, the wire coacting with the other of said edges to hold itself taut.

4. A box or crate side or end having a plurality of bores communicating with two opposite edges of the side or end and a hand hole disposed between the bores, and a wire arranged to lie adjacent to one of said edges and to pass through the bores, the ends of the wire engaging the other of said edges to hold the wire taut.

5. A box or crate side or end having a plurality of bores communicating with two opposite edges of the side or end and a

groove in one of said edges communicating with the bores, the side or end being apertured between the bores to form a hand hole, and a wire arranged to lie in the groove and to pass through the bores, the ends of the wire engaging the other of said edges to hold the wire taut.

6. A box or crate side or end comprising a plurality of sections in abutting relation having a plurality of bores communicating with two opposite edges of it, and a wire arranged to lie adjacent to one of said edges and to pass through the boxes, the ends of the wire engaging the other of said edges to hold the wire taut.

7. A box or crate side or end comprising a plurality of sections in abutting relation having a plurality of bores communicating with two of its oppositely disposed edges and a groove in one of said edges communicating with the bores, and a clamping wire seated in the groove and bore and having its ends engaging the other of said edges to hold the wire taut.

FRANK KRZYZAK.