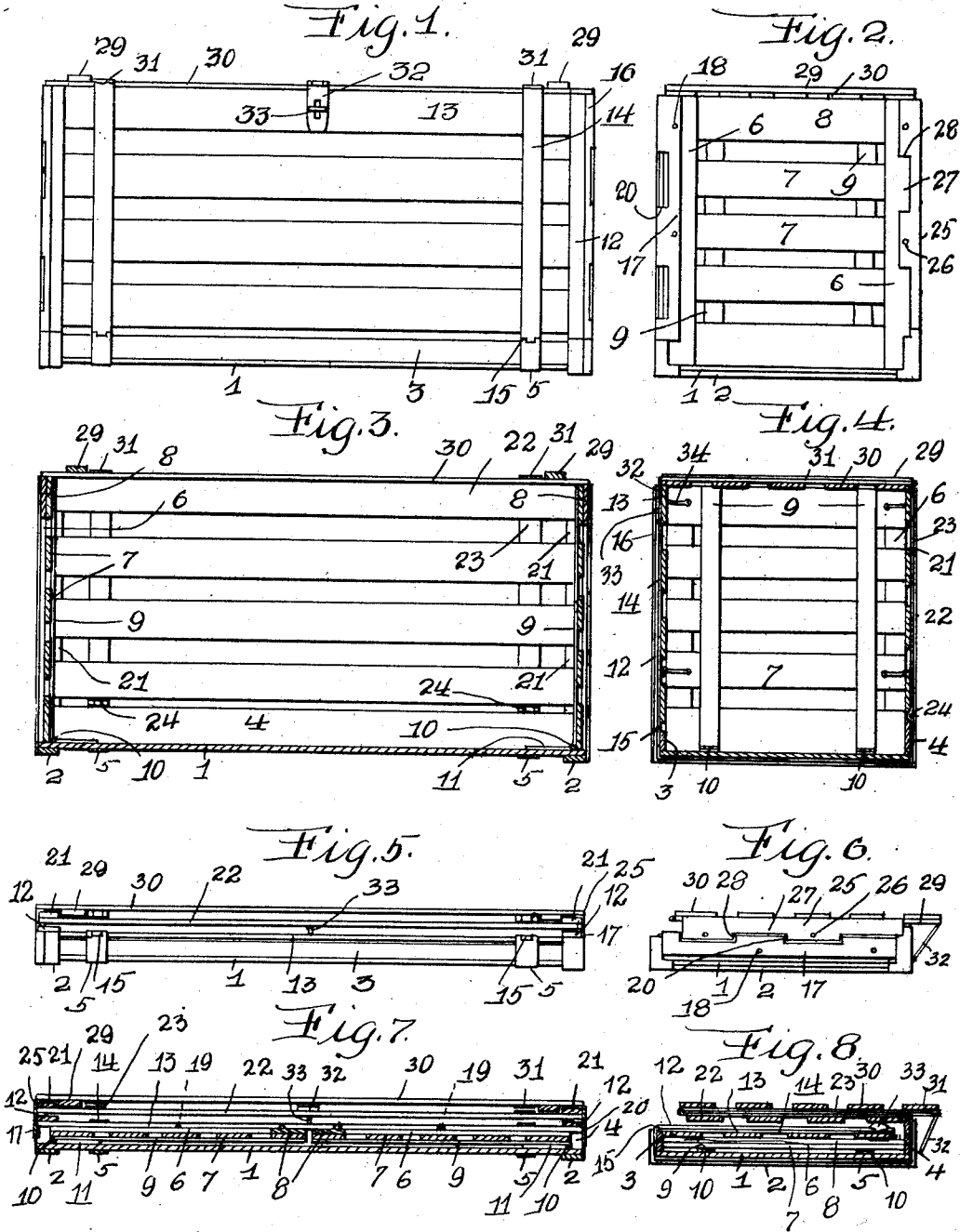


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FOLDING CRATE AND BOX.
APPLICATION FILED FEB. 1, 1911.

998,456.

Patented July 18, 1911.



WITNESSES

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UNITED STATES PATENT OFFICE.

LAWRENCE J. BETZ AND WILLIAM F. NOE, OF ALLISON PARK, PENNSYLVANIA.

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Specification of Letters Patent. Patented July 18, 1911.

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To all whom it may concern:

Be it known that we, LAWRENCE J. BETZ and WILLIAM F. NOE, citizens of the United States of America, residing at Allison Park, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Folding Crates and Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding crates and boxes, and the objects of our invention are to provide a crate that can be folded to occupy a comparatively small space in storage or in transportation, and to provide a crate that can be advantageously used for transporting fruit, various kinds of merchandise and poultry.

Other objects of our invention are to provide a folding crate with novel means for detaining the parts thereof in a set up and rigid position and to accomplish the above objects by a crate that is compact when folded, durable, inexpensive to manufacture and highly efficient for the purposes for which it is intended.

With the above and such other objects in view as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a front elevation of the crate in a set up position, Fig. 2 is an end view of the same, Fig. 3 is a longitudinal sectional view of the crate, Fig. 4 is a cross sectional view of the same, Fig. 5 is a front elevation of the crate in a folded or collapsed position, Fig. 6 is an end view of the same, Fig. 7 is a longitudinal sectional view of the folded or collapsed crate, and Fig. 8 is a cross sectional view of the same.

A folding crate or box in accordance with this invention comprises a bottom, end walls adapted to fold inwardly upon said bottom, a front wall adapted to fold inwardly upon said end walls, a rear wall adapted to fold downwardly upon said front wall, and a lid adapted to fold rearwardly upon the outer side of said rear wall.

The bottom of the crate comprises a rectangular board or plate 1 having the under side thereof at the ends provided with transverse supports 2 and the upper side

thereof at the longitudinal edges provided with cleats 3 and 4, the cleat 4 being of a greater height than the cleat 3. The bottom side of the plate 1 adjacent to the ends thereof is provided with transverse straps 5 extending upwardly upon the outer sides of the cleats 3 and 4.

The end walls are identical in construction, each wall comprising vertical bars 6 having the inner sides thereof connected by transverse slats 7. The upper ends of the bars 6 have the confronting faces thereof connected by a bar 8, said bar reinforcing the upper edge of the end wall. The inner sides of the slats 7 are connected by vertical straps 9 extending from the upper edge of the uppermost slat to the lower edge of the lowermost slat, the straps 9 being located adjacent to the vertical edges of the end walls and having the lower ends thereof hinged, as at 10 to hinge members 11 mounted upon the plate 1 at the ends thereof.

The front wall comprises vertical bars 12 connected by longitudinal slats 13, and the outer sides of the slats adjacent to the bars 12 are provided with straps 14 having the lower ends thereof pivotally connected, as at 15 to the ends of the strap 5 at the upper edge of the cleat 4. The bars 12 are provided with vertical angle bars 16 having the flanges 17 thereof extending beyond the ends of the slats 13 and provided with openings 18 adapted to receive pins or studs 19, carried by the outer sides of the vertical bars 6 of the end walls, adjacent to the outer edges of said bars. The flanges 17 are cut away, as at 20 for a purpose that will presently appear. This front wall is adapted to fold inwardly upon the outer side of the end walls and the flanges 17 shield the hinged edges of said end walls.

The rear wall comprises vertical bars 21 connected by longitudinal slats 22, and these slats have the outer sides thereof, adjacent to the bars 21, provided with vertical straps 23, the lower ends of the straps 23 being pivotally connected, as at 24 to the ends of the straps 5 at the upper edge of the cleat 3 and the upper ends of the straps 23 extend above the upper edge of the uppermost slat 22 of the rear wall. The vertical bars 21 are provided with angle bars 25 having openings 26 adapted to receive the pins or studs 19 at the rear edges of the end walls of the crate. The bars 25 are cut away, as at 27 providing tongues 28 having openings

26 formed therein, and these tongues are adapted to enter the cut away portions 20 of the angle bars 17, when the rear wall is folded inwardly upon the outer side of the front wall, these bars are adapted to shield and fully protect the ends of the front and rear walls.

The lid comprises bars 29 connected by longitudinal slats 30, and these slats have the outer sides thereof adjacent to the bars 29 provided with straps 31 having the rear ends thereof hinged to the upper ends of the straps 23. The front edge of the lid intermediate the ends thereof is provided with a pivoted hasp 32 adapted to be placed over a turn-button or staple 33 carried by the upper edge of the front wall upon the outer side thereof. When the lid is folded rearwardly upon the outer side of the rear wall, the bars 29 of the lid are adapted to fit between the straps 23 and the bars 21 of the rear wall.

To maintain the end walls in a set up position and the pins or studs 19 in engagement with the angle bars 17 and 25, the inner sides of the end walls, adjacent to the upper edges thereof, are provided with pivoted hooks 34 adapted to be swung into engagement with eyes or staples 36, carried by the inner sides of the front and rear walls adjacent to the upper edges thereof.

It is thought that the manner of folding or collapsing the crate will be apparent without further description, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claims.

What we claim is:—

1. A folding crate comprising a bottom plate, longitudinal cleats carried thereby and one of said cleats of a greater height than the other of said cleats, end walls hinged to said bottom plate and adapted to fold inwardly thereon, pins carried by the outer sides of said walls adjacent to the vertical edges thereof, a front wall hinged to one of the cleats of said bottom plate and adapted to fold inwardly upon the outer sides of said end walls, angle bars carried by the vertical edges of said front wall and having flanges provided with openings adapted to receive pins at the forward ver-

tical edges of said end walls, said angle bars having cut away portions, a rear wall hinged to the other cleat of said bottom plate and adapted to fold inwardly upon the outer side of said front wall, angle bars carried by the vertical edges of said rear wall and cut away to provide tongues adapted to extend into the cut away portions of the angle bars of said front wall when said walls are folded, the tongues of said flanges having openings formed therein adapted to receive the pins at the rear vertical edges of said end walls, and a lid hinged upon the outer side of said rear wall.

2. A folding crate comprising a bottom plate, longitudinal cleats carried thereby and one of said cleats of a greater height than the other of said cleats, end walls hinged to said bottom plate and adapted to fold inwardly thereon, pins carried by the outer sides of said walls adjacent to the vertical edges thereof, a front wall hinged to one of the cleats of said bottom plate and adapted to fold inwardly upon the outer sides of said end walls, angle bars carried by the vertical edges of said front wall and having flanges provided with openings adapted to receive pins at the forward vertical edges of said end walls, said angle bars having cut away portions, a rear wall hinged to the other cleat of said bottom plate and adapted to fold inwardly upon the outer side of said front wall, angle bars carried by the vertical edges of said rear wall and cut away to provide tongues adapted to extend into the cut away portions of the angle bars of said front wall when said walls are folded, the tongues of said flanges having openings formed therein adapted to receive the pins at the rear vertical edges of said end walls, a lid hinged upon the outer side of said rear wall, means including hooks adapted to connect said end walls in a set up position to said front and rear walls, and means adapted to connect the front edge of said lid to the upper edge of said front wall.

In testimony whereof we affix our signatures in the presence of two witnesses.

LAWRENCE J. BETZ.
WILLIAM F. NOE.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.