Nov. 18, 1924. 1,516,361

R. E. VAN NESS

COLLAPSIBLE CRATE

Filed Nov. 2, 1923 2 Sheets-Sheet 1

Fig. 1.

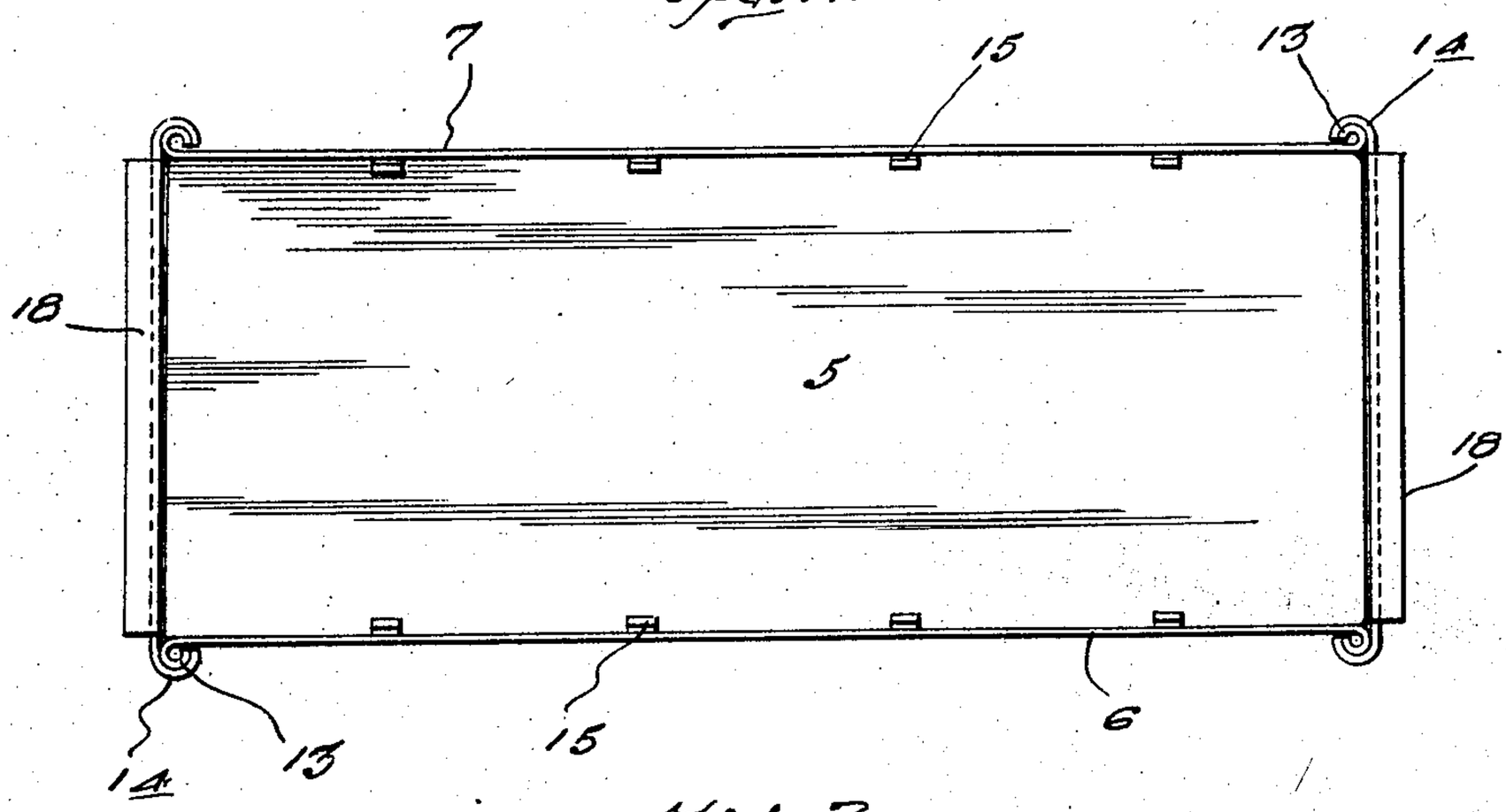

Fig. 2.

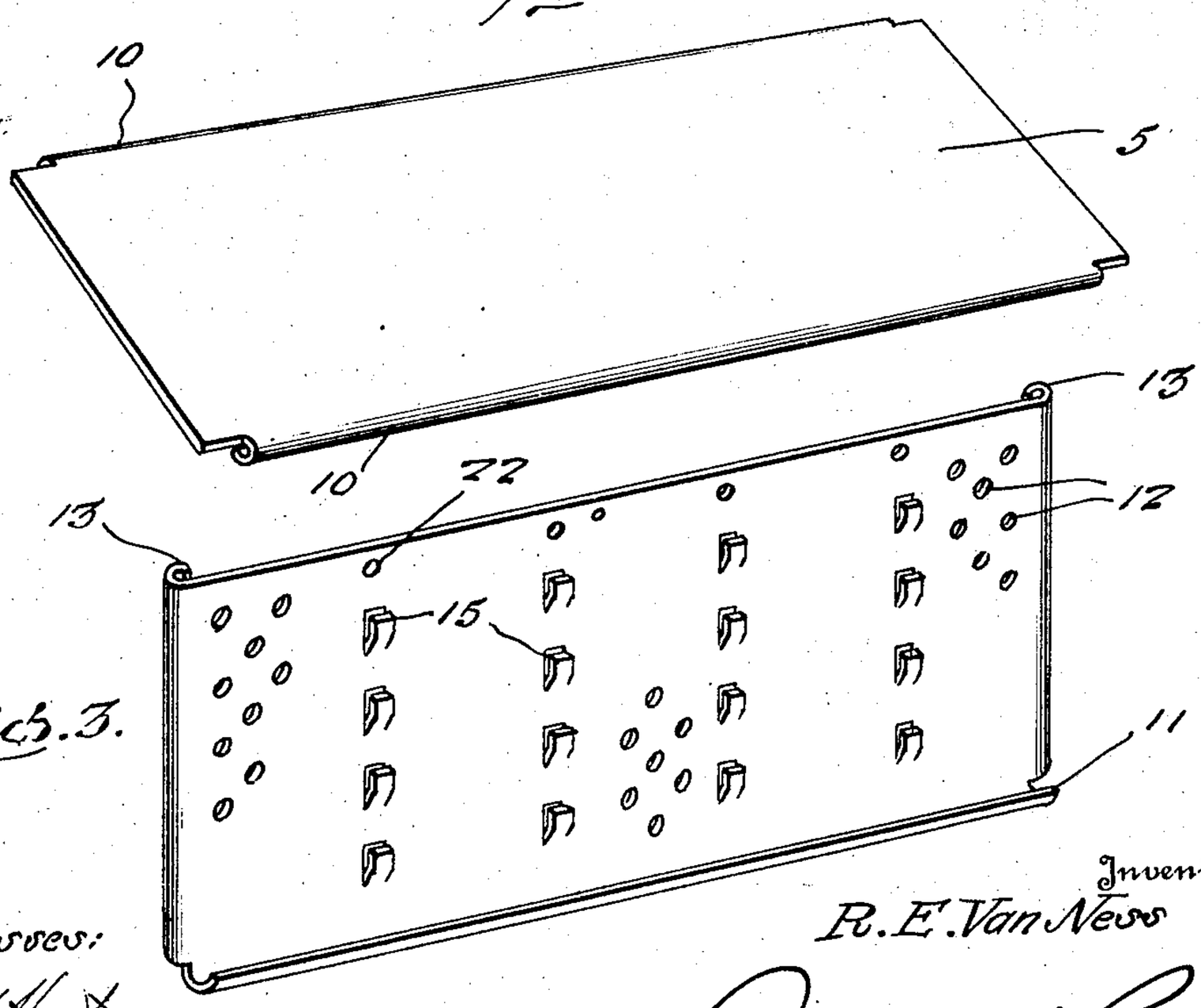

Fig. 3.

Witnesses:
P. W. Hunt

Inventor
R. E. Van Ness

By Clarence A. O'Brien
Attorney

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Fig. 4.

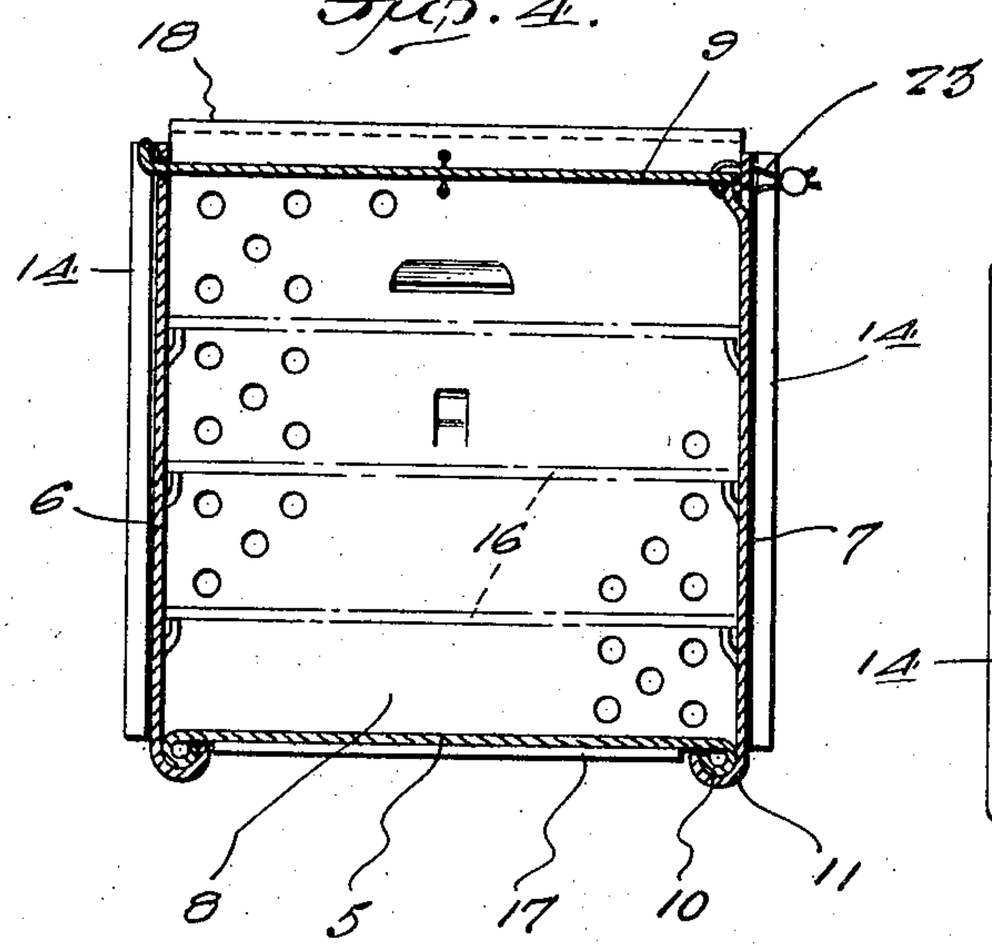


Fig. 5.

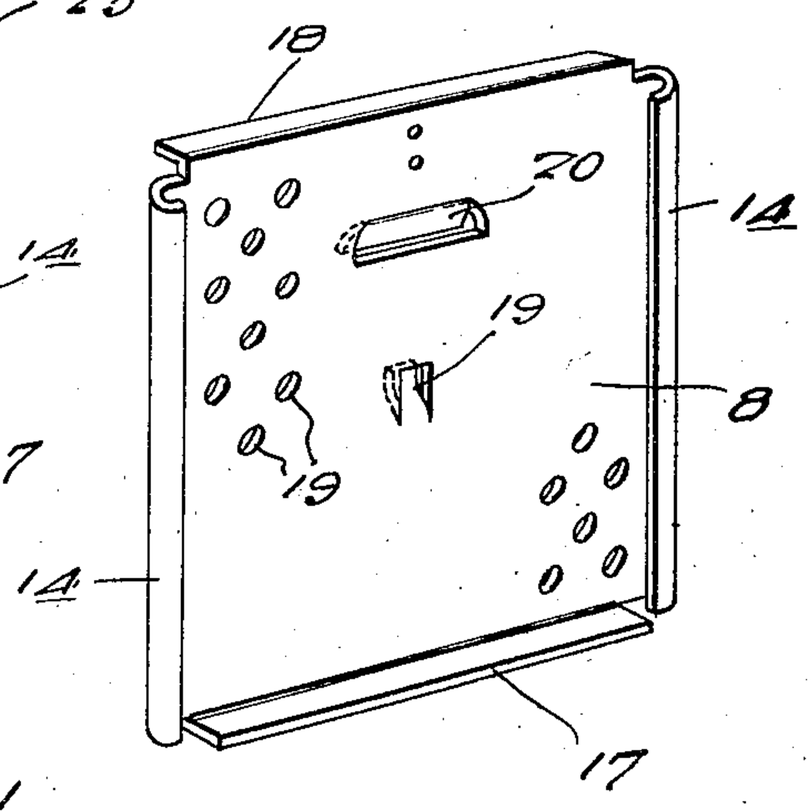


Fig. 6.

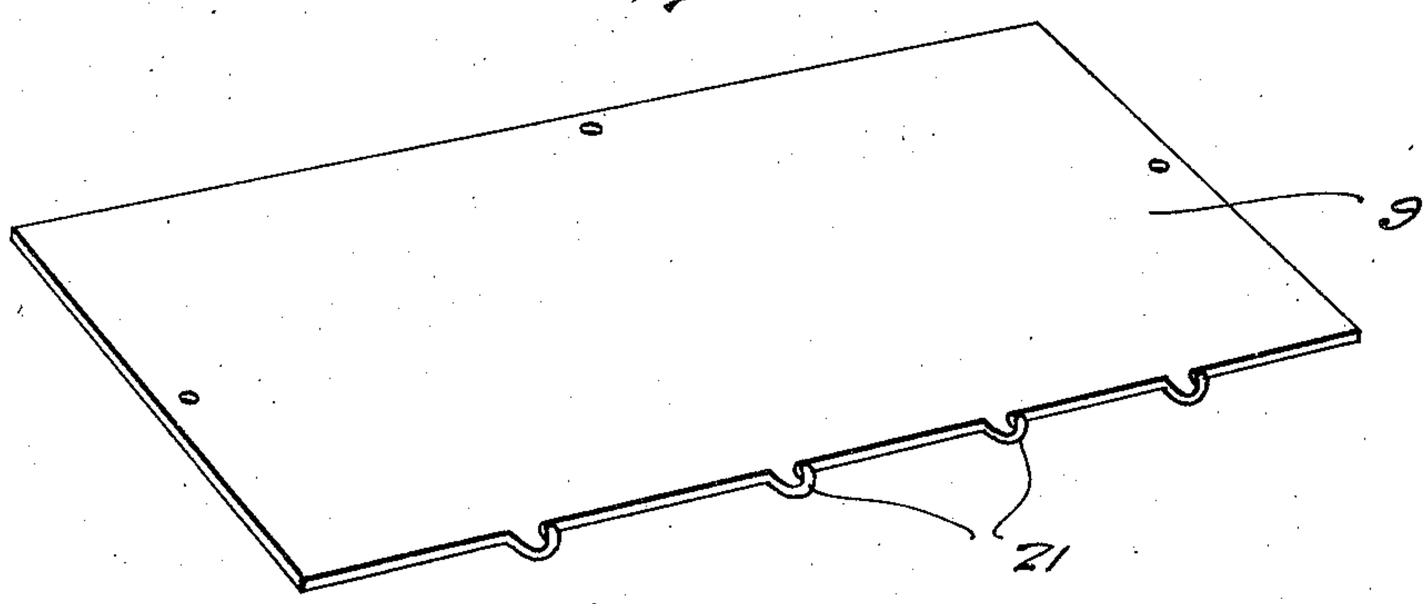
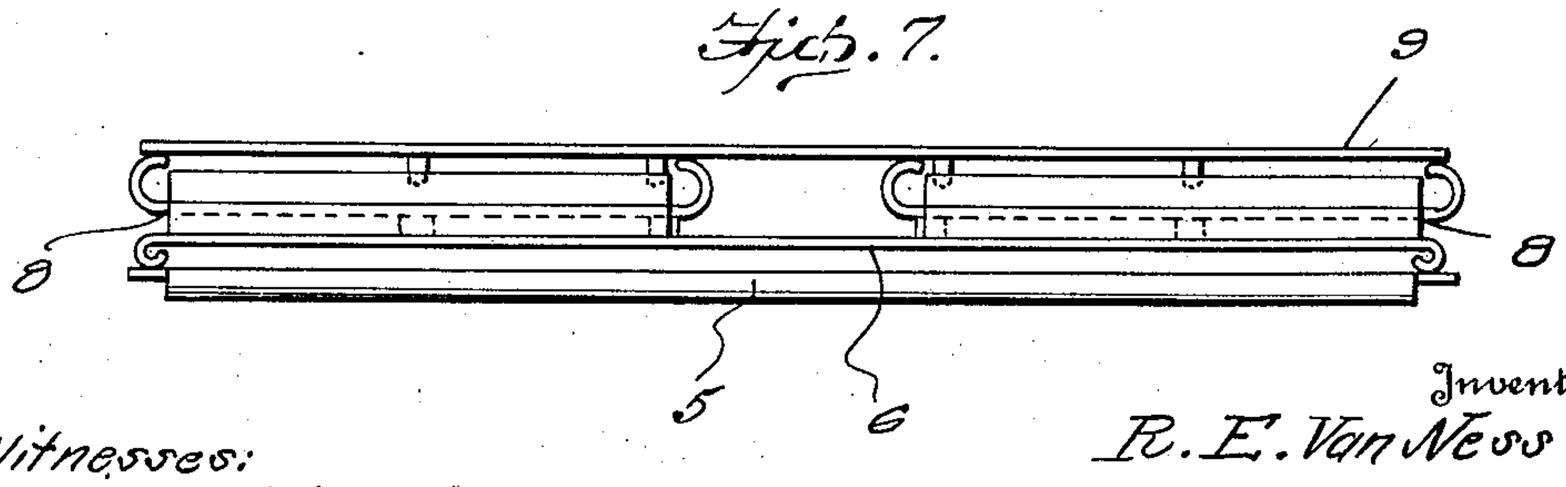


Fig. 7.



Witnesses:
P. M. Hunt.

Inventor
R. E. Van Ness

By Clarence A. O'Brien
Attorney

Patented Nov. 18, 1924. 1,516,361

UNITED STATES PATENT OFFICE.

RALPH E. VAN NESS, OF HERNANDO, FLORIDA.

COLLAPSIBLE CRATE.

Application filed November 2, 1923. Serial No. 672,336.

To all whom it may concern:

Be it known that I, RALPH E. VAN NESS, citizen of the United States, residing at Hernando, in the county of Citrus and State of Florida, have invented certain new and useful Improvements in Collapsible Crates, of which the following is a specification.

This invention relates to an improvement in crates primarily adapted for use in the shipments of fruits and vegetables, the main objects thereof being the provision of such a crate wherein the same may be readily knocked down or set up and when once set up and filled with fruits or vegetables, there is no liability of the same accidentally collapsing.

One of the main objects of the invention resides in the provision of collapsible crates wherein the different walls thereof may be rigidly joined together without the necessity of providing pin or hinged connections, the said different walls of the crate being formed with cooperative interlocking elements.

With the above and other objects in view, as the nature of the invention will be better understood the same comprises the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings wherein there is shown the most practical embodiment of this invention with which I am at this time familiar, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a top plan view of a collapsible crate constructed in accordance with this invention, the cover thereof being removed.

Figure 2 is a perspective of the bottom wall of the crate.

Figure 3 is a similar view of one of the side walls thereof.

Figure 4 is a vertical transverse sectional view of the present crate in its set up condition.

Figure 5 is an inside perspective of one of the end walls of the crate.

Figure 6 is a similar view of the crate cover, and

Figure 7 is a side elevational view of the crate in its collapsed condition and ready for shipment to the packer or grower.

Now having particular reference to the drawings, there is shown a crate that embodies a bottom wall 5, a pair of similarly formed side walls 6 and 7, a pair of end walls 8 also similarly formed and a removable cover 9, which are all formed from a suitable sheet metal preferably galvanized tin.

First having particular reference to the before-mentioned bottom wall 5 which is shown clearly in Figure 2 of substantially rectangular shape, the opposite longitudinal edges thereof being so bent as to provide means for ribs 10, the opposite ends of which terminate short of the opposite ends of said bottom wall 5.

The before mentioned side walls 6 and 7 more clearly shown in Figure 3, are each formed at their lower edges with inwardly and upwardly bent portions for providing longitudinal lips 11 within which engage the beads or ribs 10—10 at opposite longitudinal edges of said bottom wall 5 during the assembling of the box. These side walls 6 and 7 are provided with a desirable number of perforations 12 for ventilating and lightening purposes. Further, the opposite vertical edges of each said side walls 6 and 7 are formed with beads or ribs 13 that extend laterally outwardly from said side walls and are adapted for engagement within the inwardly bent lip portions 14 upon the vertical edges of the end walls 8, Figure 5.

Each of said side walls 6 and 7 is further formed with longitudinal rows of spaced inwardly extending spaced lugs 15 for serving as a supporting means for longitudinally extending partitions 16, Figure 4, for use when the crate is employed in the shipment of berries and the like.

In the assembling of this crate, the bottom and side walls are first interconnected by engaging the longitudinal ribs or beads 10—10 of the bottom wall within the upwardly bent lip portions 11 at the lower edges of said side walls, after which the end walls 8 are applied, by first engaging the lower ends of the vertical beads or ribs 13 within the upper ends of the lip portions 14—14 of the end walls, after which these end walls may be slid in an upward direction, the upward sliding movement thereof being limited by inwardly extending flanges 17 formed upon the lower edge of each of the end walls which also serve as a support for the opposite ends of the bottom wall 5.

The end walls 8 of the crate are of a

slightly greater height than the side walls thereof and are formed at their upper ends with outwardly extending flanges 18 which will effect a supporting means for another crate that may be placed thereon, and for consequently preventing the top crate from resting upon the cover 9 of the lower plate and consequently mashing the fruit or vegetables therein.

Further, each of said end walls 8 is formed with a desirable number of perforations 19 for purposes similar to the perforations in the side walls 6 and 7. In addition to this, each of said end walls is provided at a point substantially centrally thereof, with an outwardly struck lug 19 for providing means upon the opposite ends of the crate for supporting shipping tags etc. These end walls are also provided with relatively long outwardly extending struck out portions 20 for providing lifting and carrying handles.

The cover member 9 is formed at one of ite longitudinal edges with outwardly extending lugs which are bent in an upward direction for providing hooks 21 that are adapted for detachable engagement with a series of spaced openings 22 adjacent the upper edge of the side wall 6, it being of course obvious that after the crate has been set up and filled, said cover 9 may be associated with the crate by placing the same in a relatively vertical position with respect to the crate and engaging the hooks 21 in said opening 22 after which the same may be swung downwardly to a closed position and sealed to the crate through the medium of conventional seals 23, the wire portions of which engage through pairs of openings at the top of the side wall 7 and end walls 8, which are adjacent to single openings at the respective edge and ends of the cover 9 as clearly shown in Figure 4, the edge of the cover 9 adjacent to the side wall 7 being supported upon the upper longitudinal roll of spaced inwardly extending lugs 15 formed upon said side wall 7.

It will thus be seen that I have provided a highly novel and efficient form of collapsible crate and one that may be readily set up and knocked down and also one that may be manufactured and marketed at an extremely small cost, it being preferable that the different elements of the crate be associated in their knocked down condition as shown in Figure 7.

Minor changes may be made within the invention without departing from the spirit and scope of the appended claims.

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

1. In a crate structure, an end wall member comprising a sheet provided at its upper and lower edges with angularly disposed flanges, one flange being disposed beyond one side surface of the sheet and the other flange being disposed beyond the opposite surface of the sheet, the said sheet being provided at its end edges with curved lips.

2. In a crate structure, side wall members having inwardly disposed spaced lugs and provided at their ends with beads, end wall members consisting of sheets provided at their upper and lower edges with angularly disposed flanges, one flange being disposed beyond one side surface of the sheet and the other flange beyond the opposite side surface of the sheet and said sheet being provided at its end edges with curved lips adapted to receive the bead of the side wall members.

In testimony whereof I affix my signature.

RALPH E. VAN NESS.