

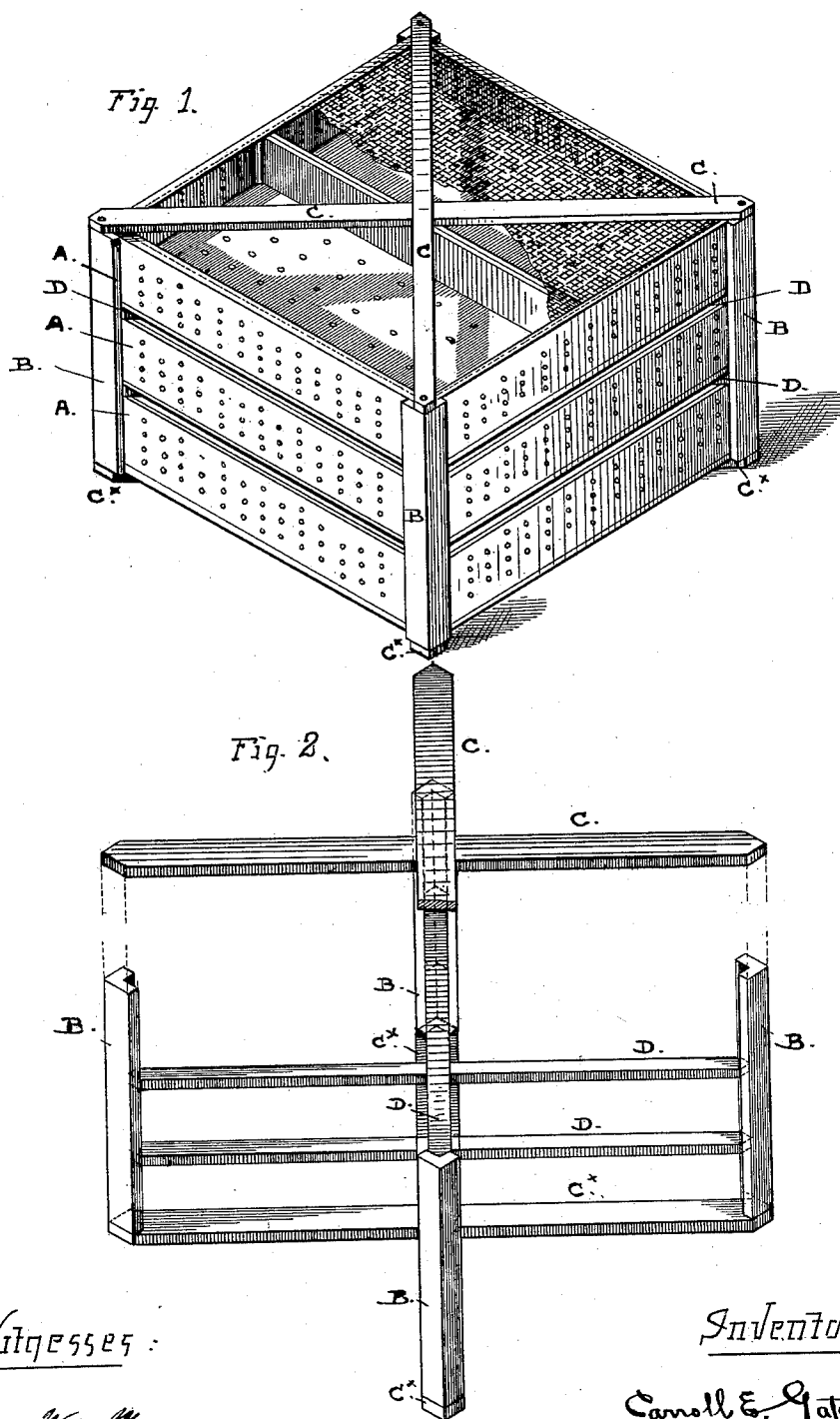
(No Model.)

2 Sheets—Sheet 1.

C. E. GATES.
FRUIT CRATE.

No. 463,111.

Patented Nov. 10, 1891.



Witness:

Wm. Meyer

A. McChaslet

Inventor:

Carroll E. Gates

By Smith & Brown Attys

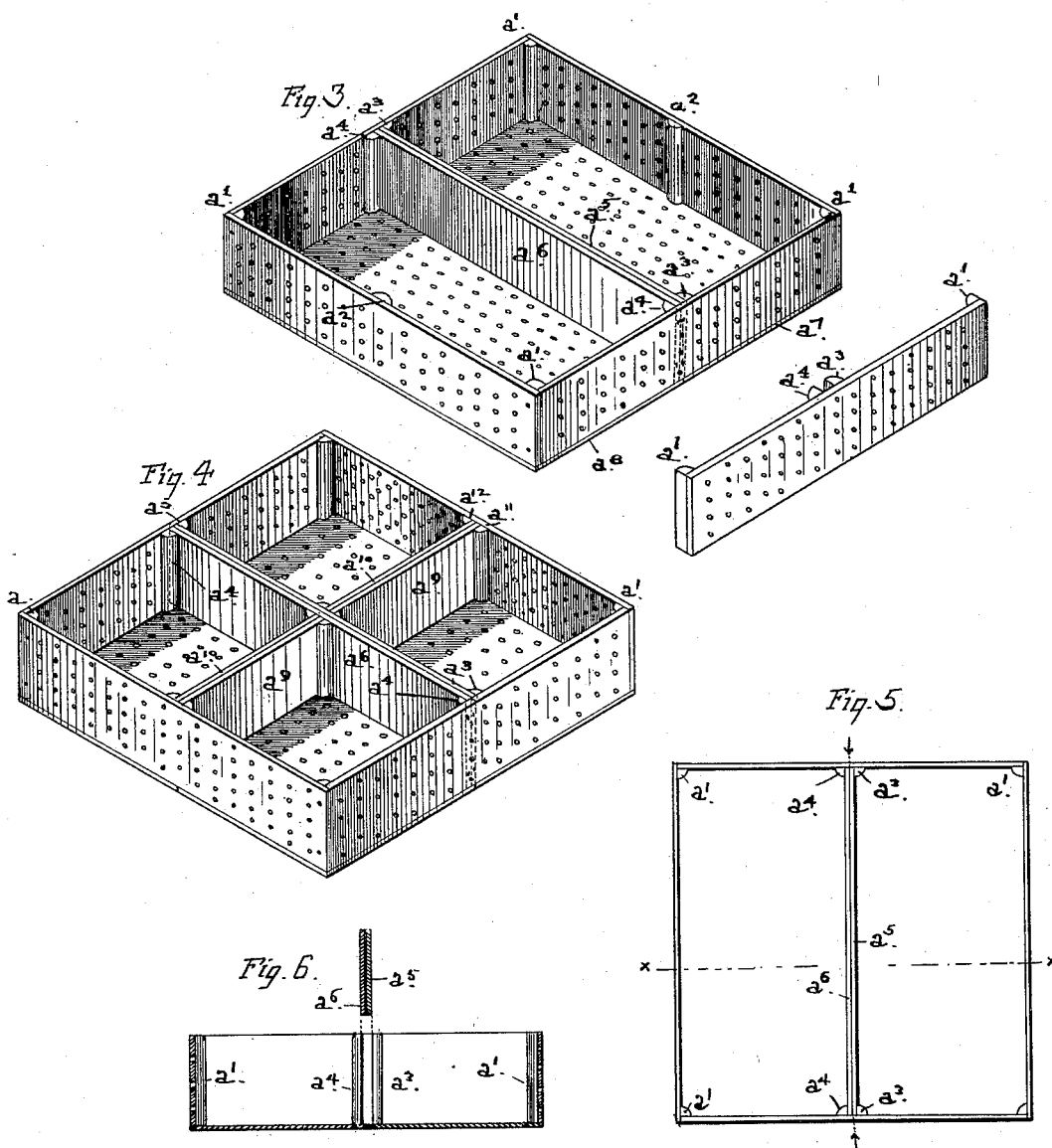
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A. M. Charlotte

Inventor:

Correll & Co.

By Smith & Son Attys.

UNITED STATES PATENT OFFICE.

CARROLL EUGENE GATES, OF OAKLAND, CALIFORNIA.

FRUIT-CRATE.

SPECIFICATION forming part of Letters Patent No. 463,111, dated November 10, 1891.

Application filed January 28, 1891. Serial No. 379,413. (No model.)

To all whom it may concern:

Be it known that I, CARROLL EUGENE GATES, a citizen of the United States, residing in Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Crates and Packages for Small Fruits, of which the following is a specification.

My invention relates to a market crate and package for small fruits, having special features of construction that are adapted to secure thorough ventilation of the fruit, to enable the contents to be divided and subdivided into separate portions or quantities for convenience in retailing the contents of the package, and to furnish a box or receptacle for each divided quantity as sold. The package is constructed of several boxes or receptacles bound together for shipping and handling by a skeleton frame of novel construction and having special ventilative qualities that adapt the package for the more delicate and perishable kinds of small fruits, such as cherries, plums, and apricots. The package contains also a tray or receptacle of novel construction capable of being divided into smaller receptacles, such as halves or quarters, each complete in itself, to hold a given quantity or weight of fruit and furnishing a complete box for the fruit when the tray is divided.

Additional features of strength and lightness, economy of space, and cheapness of construction are secured, also, to a high degree.

The following description explains the nature of my said invention and the manner in which I proceed to produce and carry out the same, the accompanying drawings being referred to by figures and letters.

Figure 1 is a perspective view of the package put together ready for shipping. Fig. 2 shows the parts of the frame in detail. Fig. 3 represents in perspective one of the boxes divisible into halves. Fig. 4 is a view of a box divisible into quarters. Fig. 5 is a top view of a box divisible into halves. Fig. 6 is a cross-section taken through Fig. 5 at $x x$, with the partition-strips detached and raised out of place.

My improved package is composed of a number of trays or shallow boxes A and a light skeleton frame that binds and holds the

boxes together in compact form and in such a firm manner that the package is capable of withstanding the rough handling to which these packages are exposed in the course of transportation. Four upright corner-posts B and several sets of diagonal cross-bars C C^x form the skeleton frame. The posts are grooved or cut away on the inner faces or corners to take the corners of the tray A, the distance between the posts being determined by the size of the trays that compose the package, and the cross-bars C C' are nailed against the ends of the posts. Intermediate cross-bars D D are placed between the trays and are suitably shaped at the ends to set into the corner-posts. In making up the package the bottom cross-bars and the corner-posts are nailed together, and the intermediate cross-bars are set in position between the posts in alternate order until the whole set of trays is in the frame. The top cross-bars are finally nailed down to the corner-posts to complete the package. The intermediate bars D serve the double purpose of spacing the trays, so that a clear space between the top of one and the bottom of the next tray is preserved, and of stiffening and strengthening the package. They act principally to resist lateral strains and pressures against the sides of the package.

In the construction of the trays I use some light stuff such as veneering or thin board, either single or double, and to secure free ventilation of the contents I perforate the stuff with numerous holes or apertures, both that for the bottom and that for the sides. The bottom pieces and side panels are united by posts a' at the corners and intermediate posts a^2 at the sides, to which the bottom and sides are nailed or glued. The posts at the corners are made of quarter-round stuff, while those of the sides are of half-round shape in cross-section.

A divisible tray or box that can be readily separated to produce two independent and complete boxes or receptacles is formed by fixing the quarter-round posts $a^3 a^4 a^3 a^4$ in the center of two opposite sides of the tray and setting across the tray between them a partition formed of two separate panels $a^5 a^6$, one of which is nailed or fastened at the ends against the posts $a^3 a^3$, while the other is secured in like manner against the posts $a^4 a^4$.

For the bottom of the tray two separate boards $a^7 a^8$ are used, and the joint or line of division between the two partition-strips $a^5 a^6$ is set to coincide with the line of separation between the bottom boards. The bottom pieces are secured to the corner-posts and are also fastened to intermediate posts at the sides of the tray. In this manner a tray is formed having single side and end panels and a double partition-strip separating its space into two compartments of equal size. By cutting through the two end panels with a knife at the line of separation between the two partition-strips two independent and complete trays or receptacles will be produced, and this is readily done without disturbing the contents of the tray. In like manner, following this construction, I produce a tray having four compartments, each of which forms a complete and independent receptacle when separated from the others. The cross-partitions subdividing the tray are composed of two separate strips $a^9 a^{10}$, which are secured at the ends to the posts; but in place of half-round I use quarter-round posts $a^{11} a^{12}$, spaced to let in the two partition-strips between them. A tray of four or more compartments is thus produced, each of which has separate or independent sides and ends and is a complete receptacle when cut away from the others.

It should be mentioned that the bottom of the tray is in separate sections or pieces, each forming the bottom of one division of the tray, and the line of separation between one bottom section and the other coincides with the line of separation between the partition-strips above. These bottom sections are fastened in place by nailing them to the ends of the posts.

The parts for the boxes are cut to size and packed in bulk for shipping, together with the parts of the skeleton frame, ready to be assembled and put together at the orchard or place of packing. The posts are glued or nailed to place on one side or end strip ready to take the other strips and the bottom of the box. As thus constructed, a tray can be separated into receptacles at pleasure or the contents sold in bulk without division, as the purchaser of fruit may require. It will be seen, also, that a tray of such form is stronger and better capable of holding its position in the frame and of retaining the fruit than sev-

eral smaller detached or separated trays in the same row or layer. These advantages render my improved crate and package particularly adapted for shipping small fruits.

To confine the fruit in the topmost tray, and also to protect it from being stolen on the way, I usually cover the top tray with some coarsely-woven fabric, such as mosquito-netting, securing the edges of the cover to the rim of the tray by tacking it at intervals all around. In some cases, particularly with small fruits, I cover the other trays in like manner.

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

1. The combination, with a set of separate fruit-holding trays or boxes, of the notched or grooved corner-posts, the diagonal top and bottom bars fastened to the ends of the said posts, and the intermediate bars placed between the trays, as described, and adapted to space the trays and to stiffen the frame.

2. A divisible fruit-holding tray or receptacle having its space divided by a partition composed of two strips or panels, extending from one end or side panel of the tray to the opposite end or side panel and having separate corner-posts for uniting the division-panels and the sides, as set forth, and a divided bottom formed of separate pieces, whereby the tray can be divided into separate and independent receptacles by cutting through the ends of sides between the partition-strips, substantially as described.

3. A compartment tray or receptacle having outer end and side panels, intermediate partitions composed of double strips independently secured to the ends or sides, dividing the tray into separate compartments, and cross-partitions or double strips, also independently secured in place and subdividing the compartments, substantially as described, whereby a tray can be separated into several independent receptacles by cutting through the outer panels at the junction of the partition-strips.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

CARROLL EUGENE GATES. [L. s.]

Witnesses:

JAMES L. KING,
W. N. KEMPSTON.