

No. 609,879.

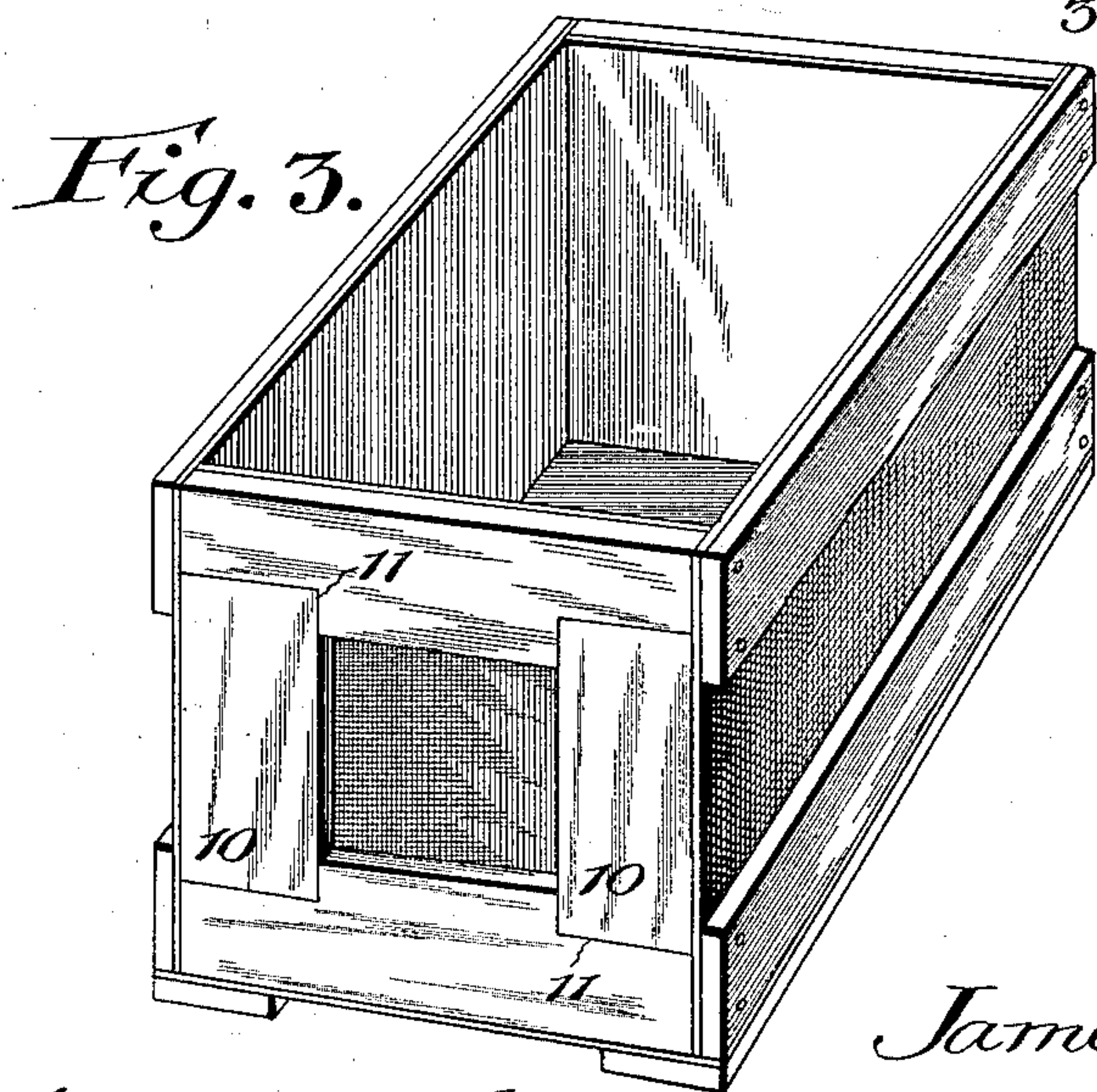
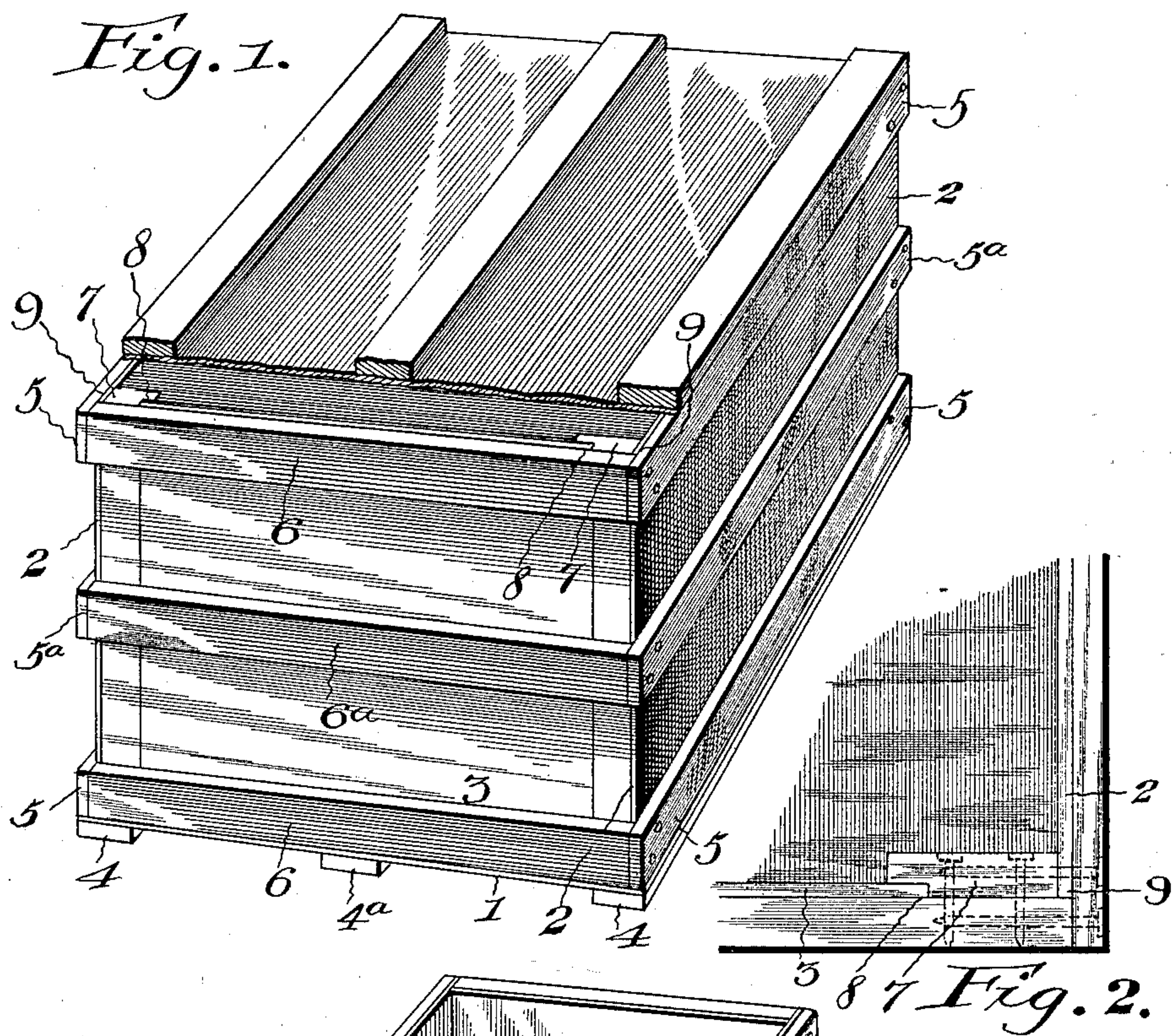
Patented Aug. 30, 1898.

J. C. DOZIER.

CRATE.

(Application filed Oct. 25, 1897.)

(No Model.)



Witnesses

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JAMES C. DOZIER, OF LOUISVILLE, KENTUCKY.

CRATE.

SPECIFICATION forming part of Letters Patent No. 609,879, dated August 30, 1898.

Application filed October 25, 1897. Serial No. 656,290. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. DOZIER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Crate, of which the following is a specification.

My invention relates to shipping-crates and analogous receptacles, and particularly to the construction of crates composed mainly of veneer, the object in view being to provide a construction of bracing or strengthening frame adapted to protect and prevent the warping and splitting of the veneer, whereby a single sheet or thickness of veneer for each wall of the crate may suffice.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in perspective of a crate constructed in accordance with my invention. Fig. 2 is a detail plan view of one corner of the crate to show the relative positions of the members at their points of connection. Fig. 3 is a view in perspective of a crate of slightly-modified construction.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The body portions of the bottom, side, and end walls of the crate embodying my invention are formed of veneers 1, 2, and 3, respectively, of single thickness, the grain of the veneer being arranged to run transversely, respectively, of said walls or vertically in the side and end walls. Being of single thickness, veneer, which is liable to split or warp when exposed to changes of temperature, must be strengthened by bracing means, and in order to accomplish the necessary bracing action without the expense incident to using a plurality of layers of veneer, as in the ordinary practice, I employ cleats, which are arranged longitudinally of the plate or horizontally on the side and end walls, and these cleats are disposed exteriorly of the veneer-sheets, whereby they project beyond the outer surfaces of the veneers and thus protect the latter from contact with surrounding objects.

In the construction illustrated in Figs 1 and 2 the crate is provided on each wall with marginal cleats arranged with their outer edges respectively flush with the contiguous side edges of the veneers and at least equal in length with said veneers, any number of intermediate longitudinal cleats being employed between the planes of the marginal cleats, according to the size and prospective use of the receptacle. This arrangement of cleats disposes the grain thereof across or perpendicular to the grain of the veneer-walls, and by connecting the contiguous extremities of the cleats on the adjoining walls of the crate I am enabled to form a bracing-framework consisting of marginal bottom cleats 4, marginal side cleats 5, and marginal end cleats 6, the intermediate cleats 4^a, 5^a, and 6^a on said bottom, side, and end walls having simply an auxiliary bracing action and being required or not, according to the capacity of the receptacle.

In order to secure an efficient connection between the contiguous extremities of the cleats on adjoining walls of the crate, the side-wall cleats are terminally extended beyond the planes of the end-wall veneers to overlap the contiguous extremities of the end-wall cleats, whereby said end-wall cleats abut against the inner surfaces of the side-wall cleats. The bottom-wall cleats, on the other hand, are secured throughout their outer edges to the lower edges of the lower marginal side-wall cleats, the bottom veneer being extended to lie flush at its side edges with the outer surfaces of said connected side and bottom wall cleats.

Obviously in order to strengthen the crate vertically it is necessary to provide some means of connection between the marginal cleats of the side and end walls, and hence in the construction illustrated in Figs. 1 and 2 I introduce vertical braces 7, which at their outer surfaces are flush with the outer surfaces of the end-wall veneer and which are rabbeted at their inner or contiguous edges, as shown at 8, to receive the adjacent edges of said veneer 3. This interlocking connection between the edges of the end-wall veneer and the corner-braces prevents the inward curling of said end edges of the veneer, while the end-wall cleats, which span the end-wall

veneer longitudinally and hold it in operative engagement with said rabbets of the vertical braces, prevent the outward bowing of the intermediate portions of the veneer.

5 Furthermore, I preferably provide an interlocking connection between the side-wall veneers and the corner-braces by extending the end cleats terminally beyond the outer side edges of said braces a distance equal to
10 the lengths of the side-wall veneers to form rabbets 9. It will be seen that these rabbets prevent inward curling of the end edges of the side-wall veneers, while the said veneers are spanned at their outer surfaces by the
15 side-wall cleats.

In general features the construction illustrated in Fig. 3 corresponds with that shown in Figs. 1 and 2; but as the modified construction of crate is designed particularly for
20 small receptacles the intermediate cleats are omitted, and instead of the corner-braces 7 I employ vertical connecting-cleats 10, arranged at their outer edges flush with the contiguous edges of the end veneer and hav-
25 ing their extremities fitted in gains or seats 11 formed in the inner or contiguous edges of the marginal end cleats adjacent to their extremities. Said gains are preferably made of a length equal to the width of the connect-
30 ing-cleats, and this form of connection between the connecting and marginal cleats of the end wall is designed to firmly hold the connecting-cleats against inward displacement during the attachment by nails or other-
35 wise of the side-wall veneers thereto. It will be seen that in the modified construction, as well as in the preferred form of crate, the marginal cleats are connected vertically to give vertical stiffness to the side and end
40 walls and thereby prevent collapsing of the receptacle. The construction shown in Fig. 3, however, provides an unbroken inner surface owing to the fact that the connecting means between the marginal cleats are ex-
45 teriorly disposed, while in the form illustrated in Figs. 1 and 2 the connecting means, consisting of the braces 7, are disposed interiorly, with their outer sides flush with the exterior surfaces of the end-wall veneers.

50 Furthermore, in both forms of crate illustrated in the drawings the length and grain of the marginal cleats are arranged longitudinally, while the grain of the veneer in all of the walls is arranged transversely, said
55 marginal cleats being disposed exteriorly of and bearing against the outer surfaces of the veneers to protect the latter from contact with surrounding objects and to prevent outward bowing of the intermediate portions of the
60 veneers, the greatest tendency of veneer to curl being transverse to the grain thereof.

As hereinbefore described, the edges of the veneer are held from curling inwardly in the preferred form of crate by means of rabbets

in the connecting-braces, while in the modi- 65 fied construction the inward curling of said edges of the side-wall veneers is prevented by contact with the extremities of the end-wall cleats. In small crates the end-wall veneers may be secured in place with sufficient firm- 70 ness without means for holding down the edges thereof.

It will be understood that the above-described construction applies equally to crates, commonly so known, and to boxes, cases, and 75 similar receptacles employed for shipping articles of different kinds, and, furthermore, that in the construction of receptacles of the class named the veneer may be secured to the framework by means of either nails, staples, 80 glue, or any equivalent thereof.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this 85 invention.

Having described my invention, what I claim is—

1. A crate having walls constructed of marginal cleats, the contiguous extremities of the 90 marginal cleats of adjoining walls being secured together, vertical rabbeted braces connecting said marginal cleats at the corners of the structure, and single-layer end and side wall veneers arranged in contact with the in- 95 ner surfaces of said marginal cleats, and fitted at their edges in rabbets in said vertical braces, substantially as specified.

2. A crate having corner-braces provided in their inner or facing sides, parallel with 100 the plane of the end wall, with rabbets, end-wall veneers fitted at their edges in said rabbets, side-wall veneers secured to the exterior or remote faces of the corner-braces, and terminating flush with the outer end surfaces 105 thereof, marginal end cleats disposed parallel and flush with the upper and lower edges of the end-wall veneers, and extending beyond the exterior side surfaces of the corner-braces a distance equal to the thickness of the side- 110 wall veneers, and marginal side-wall cleats parallel and flush with the upper and lower edges of the side-wall veneers, and extending beyond the extremities thereof to lie in contact with the extremities of the end-wall 115 cleats, whereby rabbets, for the reception of the edges of the side-wall veneers, are formed between the corner-braces and the end-wall cleats, and are closed at their outer sides by the side-wall cleats, substantially as specified. 120

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES C. DOZIER.

Witnesses:

JOHN H. SIGGERS,

FRANCES PEYTON SMITH.