No. 875,267. PATENTED DEC. 31, 1907.

E. F. HULBERT.

CRATE STRUCTURE.

APPLICATION FILED APR. 2, 1906.

2 SHEETS—SHEET 1.

FIG. 1.

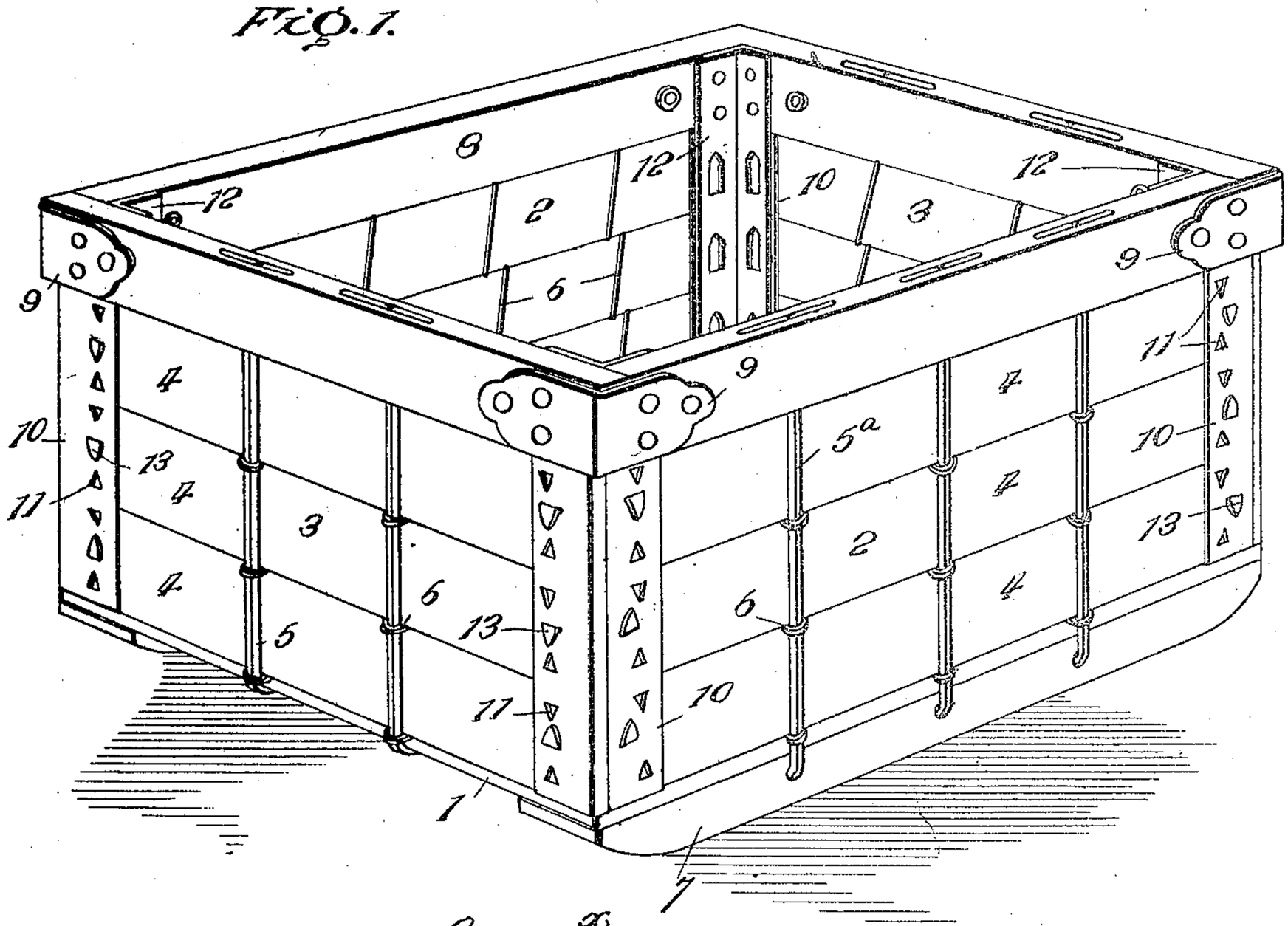
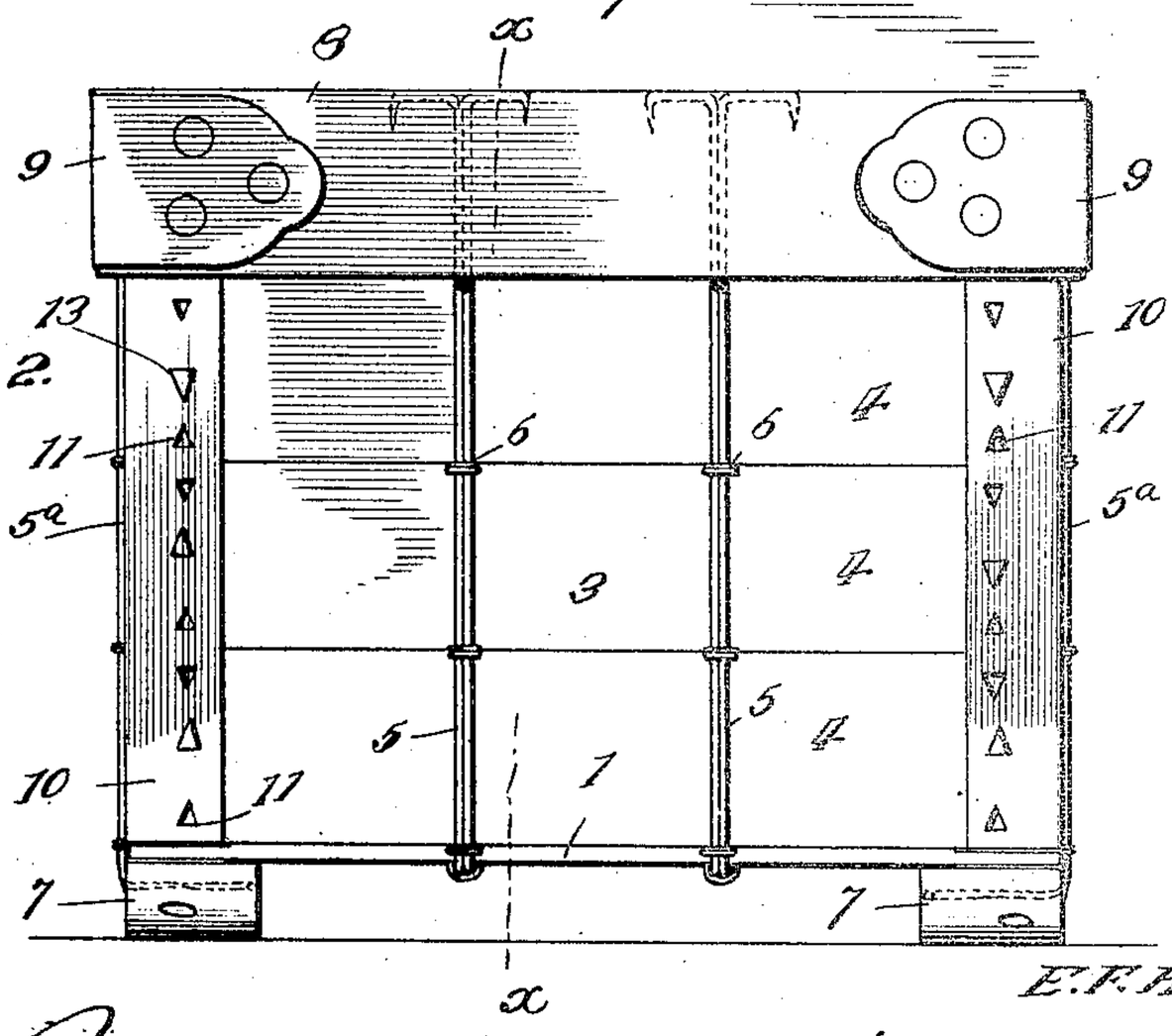


FIG. 2.



Witnesses

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2 SHEETS—SHEET 2.

FIG. 3.

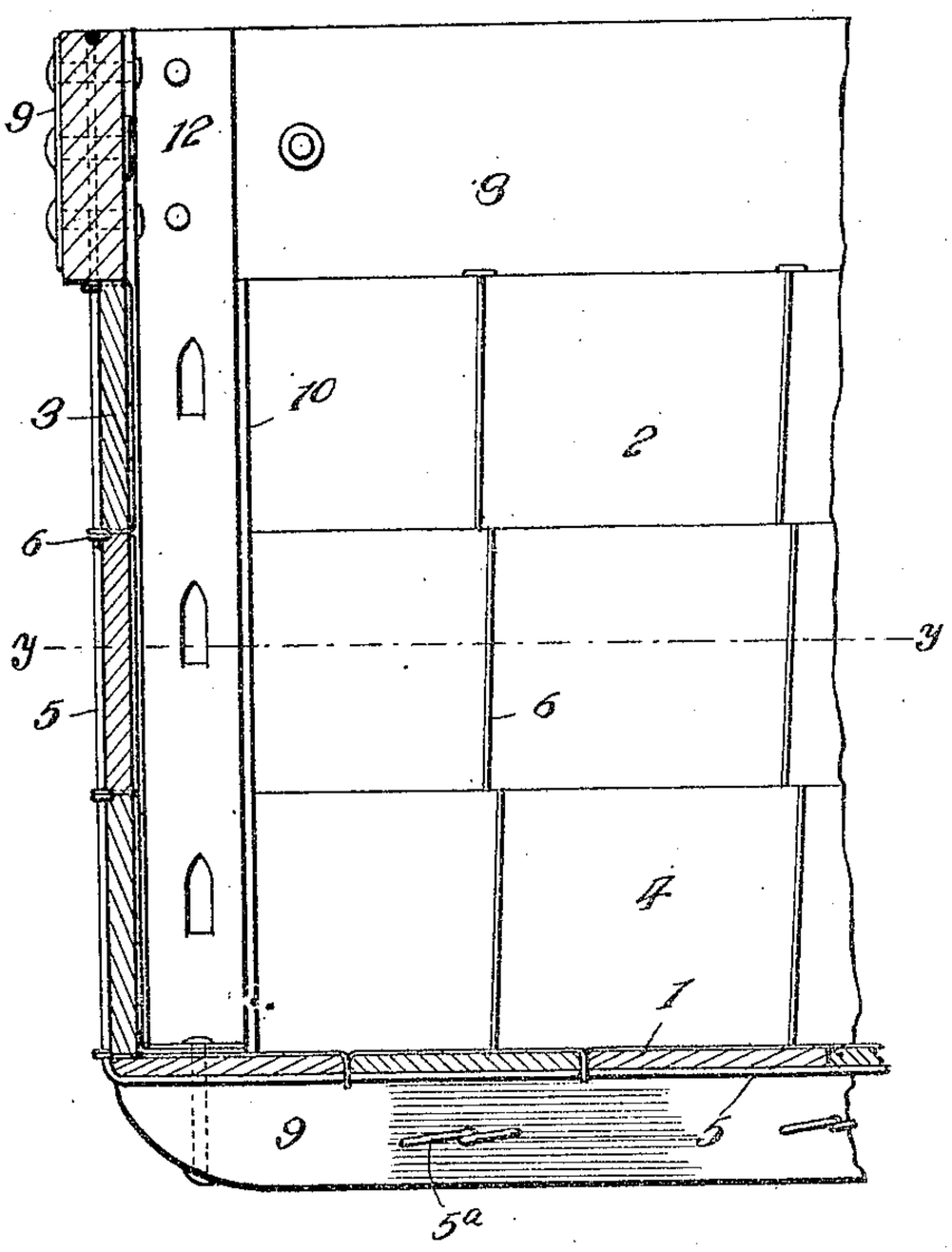


FIG. 4.

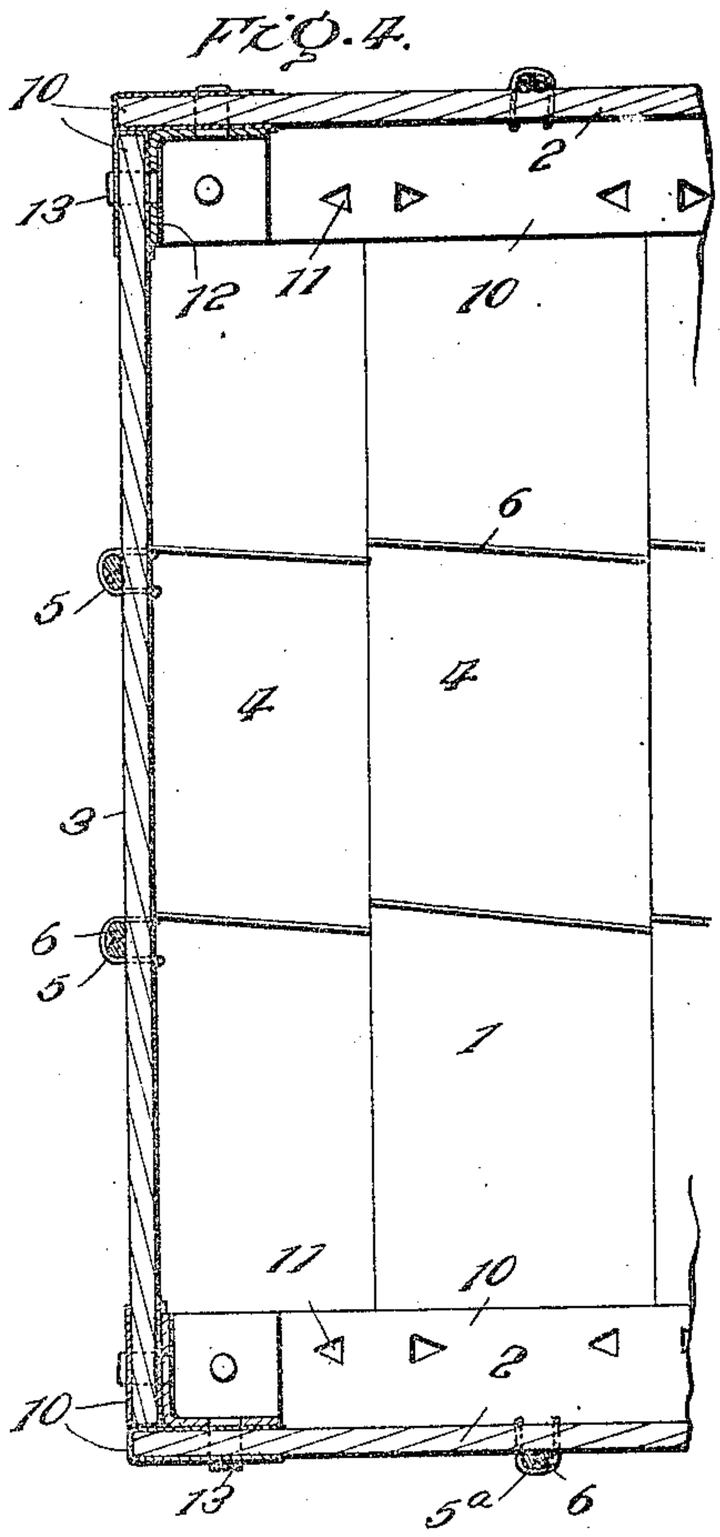


FIG. 5.

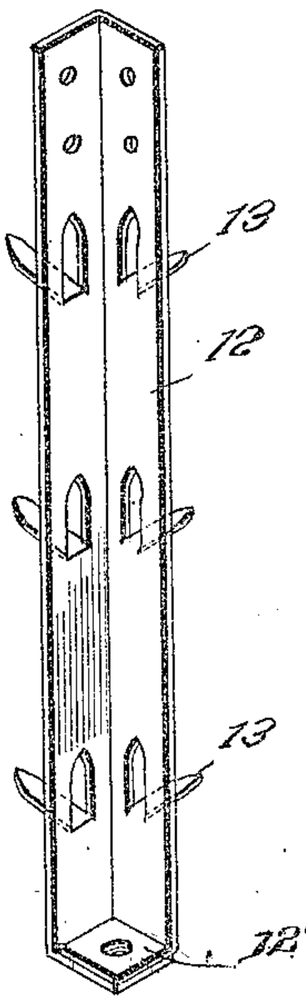
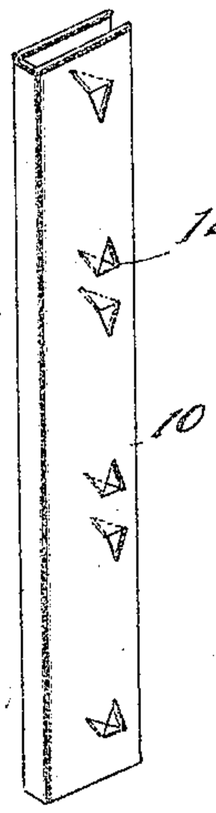


FIG. 6.



Witnesses

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CRATE STRUCTURE.

No. 875,267. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed April 2, 1906. Serial No. 309,505.

To all whom it may concern:

Be it known that I, EDWIN F. HULBERT, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Crate Structures, of which the following is a specification.

My invention contemplates certain new and useful improvements in that class of crates or like structures in which the body of the receptacle is composed of walls formed of slats secured together and reinforced in such a manner as to produce a device having substantially the same rigidity as a solid box structure, although less expensive and having greater wearing qualities.

The object of my invention is to provide a crate or delivery package of this type, constructed with a view to securing a receptacle having the maximum degree of lightness and at the same time reinforced so as to promote its lasting and wearing qualities to the greatest possible extent.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved crate. Fig. 2 is an end view thereof. Fig. 3 is a section of a portion or corner thereof on the line X—X of Fig. 2. Fig. 4 is a horizontal sectional view on the line Y—Y of Fig. 3. Fig. 5 is a detail perspective view of one of the corner posts. Fig. 6 is a similar view of the metallic clips or binding strips for the edges of the slats.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The bottom 1, side walls 2, and end walls 3 of my improved crate are all composed of slats 4 preferably closely related to each other as shown. The end walls 3 and bottom 1 are reinforced by means of longitudinally extending truss wires 5 preferably located on the outer side and in the present instance arranged in two pairs as shown. The truss wires 5 extend continuously along one end wall and across the bottom and along the opposite end wall. The side walls 2 are similarly provided with truss wires designated 5ª, but preferably the wires 5ª of one side wall are independent of or separate from the corresponding truss wires of the opposite wall. All of the truss wires may be secured to the slats by means of binding or tie wires 6 which in the present instance are wrapped around the truss wires with one or more turns and extend across the inner sides of the slats, as clearly illustrated in the drawings. 7 designates bottom rails or skid pieces, and 8 designates top rails which are preferably somewhat thicker than the slats and are also reinforced by metallic corner pieces 9 riveted to the outer sides of the corners.

My present invention comprehends metallic clips or binding strips 10. which are substantially U shaped in cross section and bind both the side edges of the bottom, end walls, and side walls. These clips 10 are securely attached by means of tangs 11 struck up from the metal of which the clips are formed and penetrating the inner and outer sides of the slats so as to securely hold the clips to the slats without the necessity of rivets or bolts or other securing means. By this arrangement of clips, the clips may be bent around the edges of the slats and secured thereto by punching the metal out of the clips and causing it to penetrate the slats, by one and the same operation. The invention also comprehends preferably metallic corner posts 12 which are preferably of slightly heavier material than the clips 10 and are angular or L shaped in cross section with their lower ends 12ª overlapping each other to form a firm foot. The corner posts 12 are also preferably secured to the slats 4 by means of tangs 13 struck up from the metal of which the corner posts are formed and from both angular members thereof, and the tangs 13 extend not only into the slats and through the interposed sides of the clips 10, but extend completely through the slats and both sides of the metal clips 10 and are bent down upon the outer sides of the said clips, as best seen in Fig. 1. By this means the corner posts are secured firmly to the slats and the use of nails or rivets for this purpose is avoided. The upper ends of the corner posts may be riveted to the top rails 8 by the same rivets that secure the corner pieces 9 to said rails.

My present invention also comprehends an improved means of securing the truss

wires 5 and 5ª to both the top rails and the skid pieces or bottom rails. As shown, the upper ends of the truss wires 5 and 5ª are turned and driven directly back into the top rails, thereby doing away entirely with any slack wire that usually occurs in the old methods of holding the ends of these wires and holding the truss wires very securely. And the bottom ends of the truss wires 5 are driven directly through the skid pieces or bottom rails 7 and are returned and driven back into the skid pieces as best seen in Fig. 3, so that the necessity of binding slats on the bottom of the skid pieces to cover any projecting portions of the truss wires is avoided.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a crate structure which is reinforced to the best possible advantage to combine lightness with strength and which produces a very rigid structure with a maximum degree of wearing quality, as the truss wires are securely held at their ends and slack avoided, while at the same time they are prevented from being worn away and loosened in the use of the crate, no matter how roughly the same may be handled.

Having thus described the invention, what is claimed as new is:

A crate structure embodying slatted walls, the edges of the walls being provided with U-shaped binding clips embracing the ends of the slats and overlapping and abutting against each other, means for securing said slats together, top rails and skid pieces for said walls, means for securing the rails and skid pieces to the walls, corner brackets secured to the corners of the top rails at the outside thereof, and inner corner posts of angular formation, said posts being provided with tangs extending outwardly through the respective binding clips and through the slats and bent over against the outer sides of said clips, the fastening means for the corner brackets extending through and secured to the upper ends of said corner posts.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN F. HULBERT. [L. S.]

Witnesses:

CHAS. C. BROWN,

L. C. BROOKS.