No. 706,908. Patented Aug. 12. 1902.

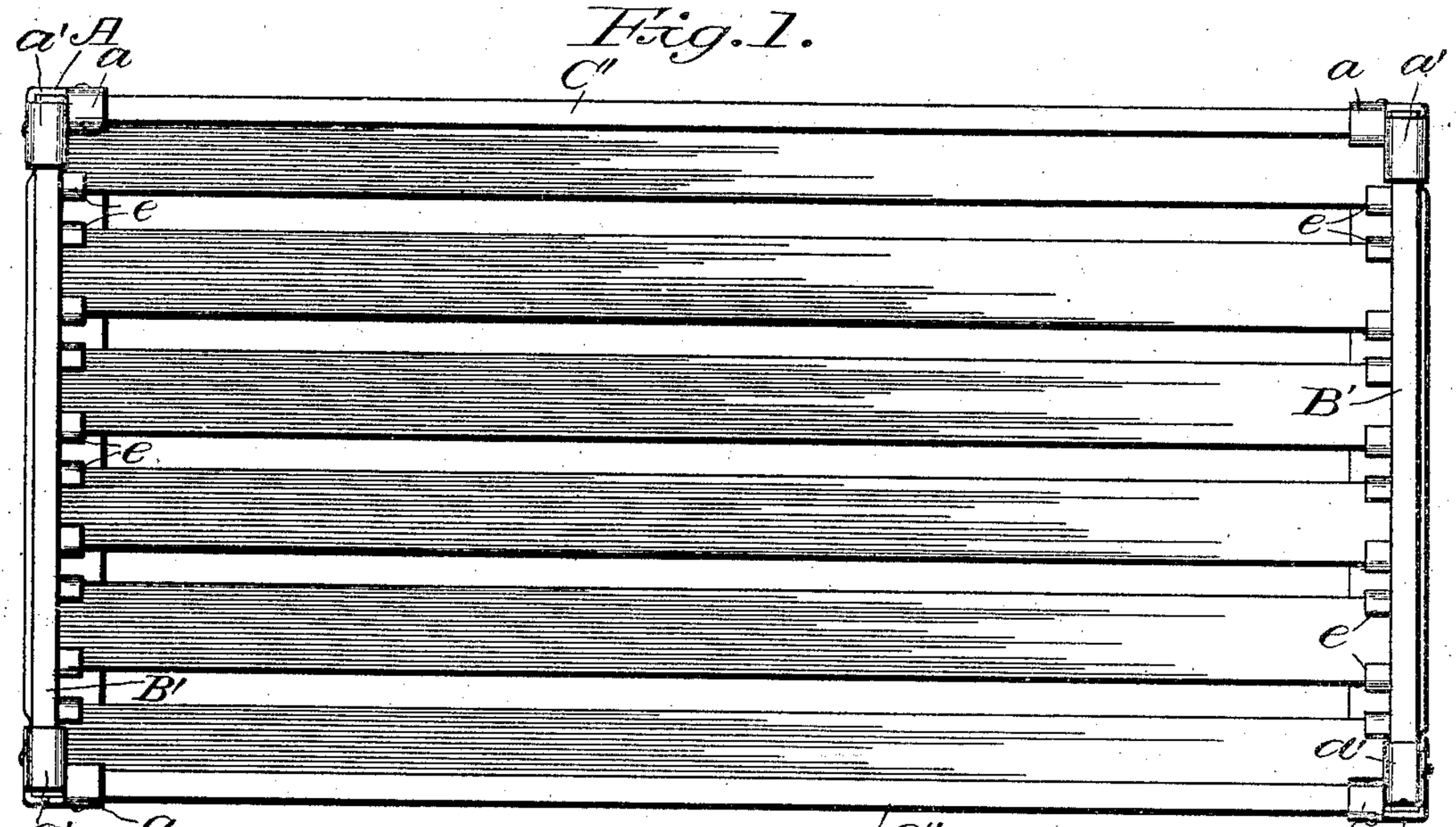
R. DE WRIGHT.

CRATE.

(Application filed June 2, 1902.)

(No Model.)

Fig. 1.



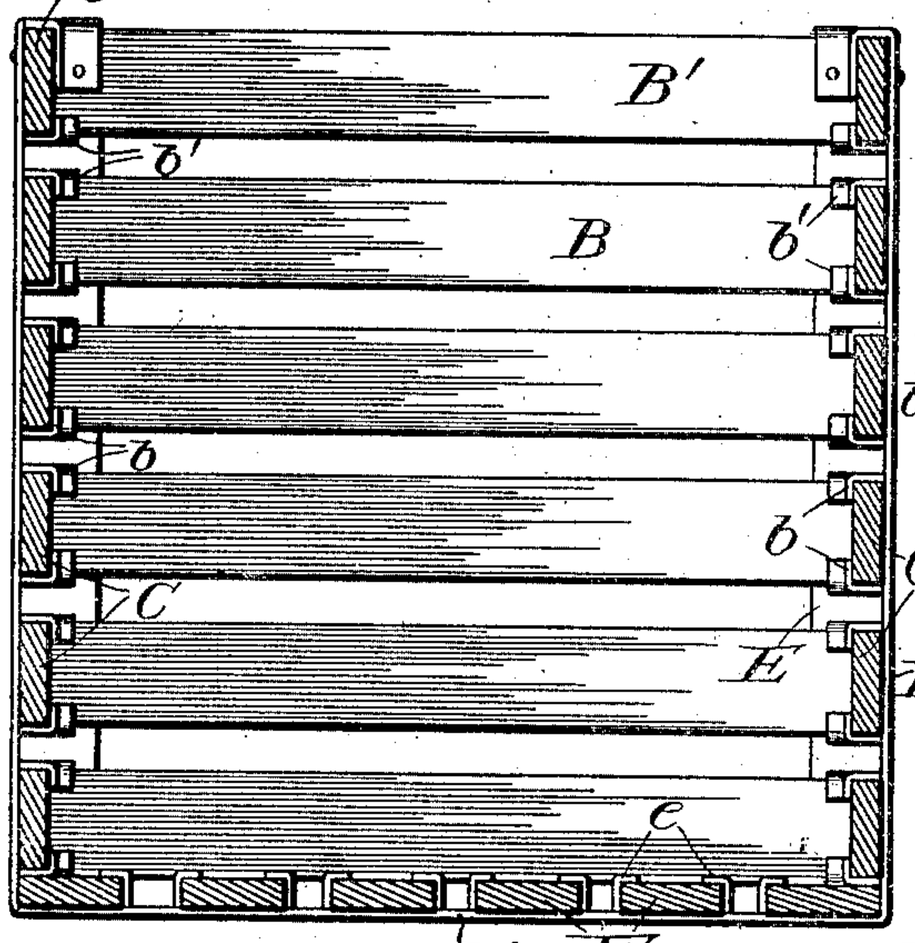


Fig. 2.

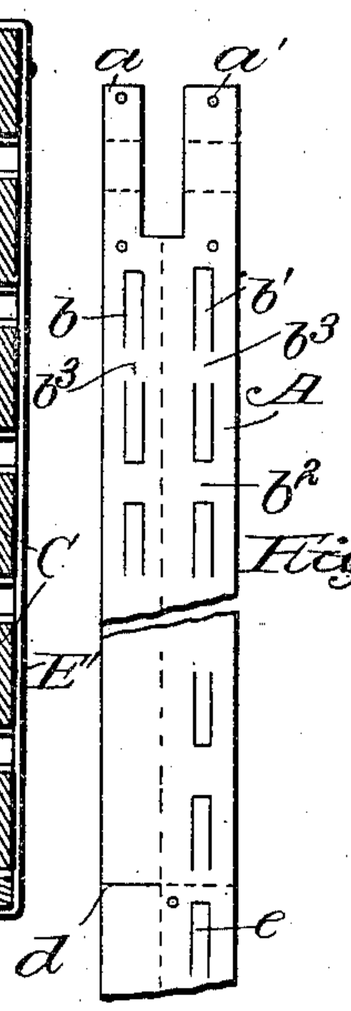


Fig. 4.

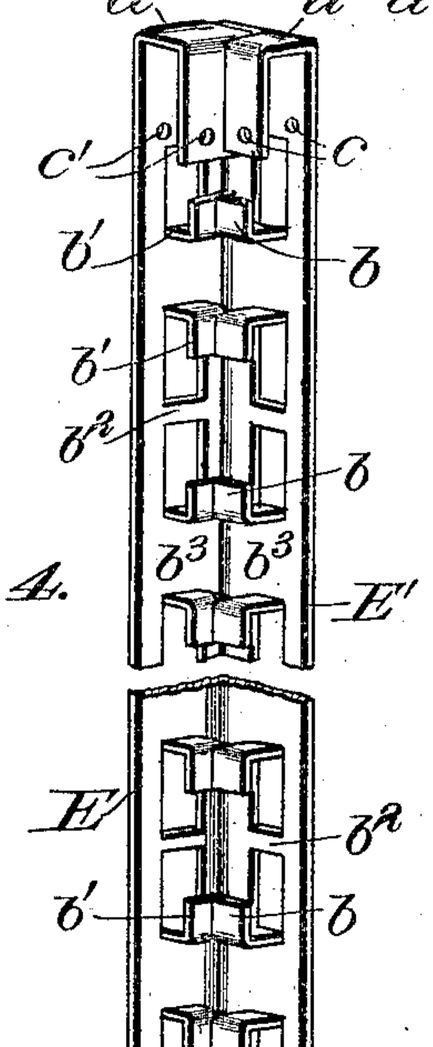
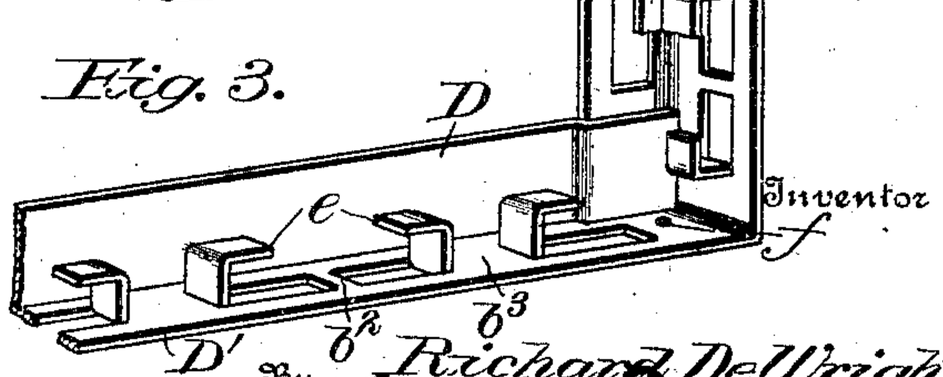


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

RICHARD DE WRIGHT, OF SAUGATUCK, MICHIGAN.

CRATE.

SPECIFICATION forming part of Letters Patent No. 706,908, dated August 12, 1902.

Application filed June 2, 1902. Serial No. 109,864. (No model.)

To all whom it may concern:

Be it known that I, RICHARD DE WRIGHT, a citizen of the United States, residing at Saugatuck, in the county of Allegan and State of Michigan, have invented new and useful Improvements in Crates, of which the following is a specification.

My invention relates to crates for fruits, vegetables, and for other purposes for which crates are generally used, and relates more particularly to the construction of end braces and slat-holders therefor. The object is to provide means for connecting the slats of crates and for bracing the ends and corners, the connecting means being of such construction that when a slat is broken it may be readily replaced, and in practice the side and bottom slats may be separated from the ends when it is desired to knock down and pack the structure in a small compass.

My invention consists in the construction of the end braces and slat-holders, each end piece being made up from a single strip of sheet metal which has punched or struck up therefrom sockets to receive the ends of the slats which form the ends and sides of the crate, an intermediate part of the strip having a single series of sockets which receive the ends of the bottom slats, the strip being bent at right angles to provide an external brace, means also being provided for connecting the brace to the slats to form a crate which can be readily knocked down by removing the connecting means, as will be hereinafter set forth.

The invention further consists in the construction and combination of the parts, as will be specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of a crate made in accord with my invention. Fig. 2 is a vertical section. Fig. 3 is a perspective view of a part of the brace and slat-holder detached, and Fig. 4 is a plan view of a part of the blank.

The brace and slat-holder is made from a flat strip of sheet metal A of sufficient length to extend about the two sides and across the bottom of the crate and slightly beyond the upper edge of the sides and ends. The ends of the strip A are cut out to provide separate end portions $a\ a'$, one of which is considerably wider than the other, and this strip is punched to provide a number of tongues b, b', and e, which are located at the same distances from the edges of the strip. Between the tongues there is left connecting portions b^2 and wider portions b^3, which determine the space between the slats. The vertical portions which are formed from the strip A have tongues arranged alongside of each other, which when bent, as shown in Fig. 3, provide sockets for the ends of the end slats B and for the ends of the side slats C, the terminal portions $a\ a'$ being bent so as to provide, with the upper tongues, sockets for the upper end and side slats B′ C′, and such terminal portions and the parts opposite thereto have perforations $c\ c'$ for the passage therethrough of nails which enter the upper slats B′ C′. It will be noted that the tongues b, b', and e are first bent so as to project at right angles from the strip A and then again at right angles, so that the terminal portions will be parallel with the body portion of the strip and that the ends of the tongue when so bent project toward each other to provide sockets, the vertical corner-pieces having sockets which are in line with each other, though at right angles one to the other.

The strip A is bent upon itself, so that the intermediate or connecting portion will be at right angles to the vertical and parallel sides, and adjacent to where the strip A is bent to form the corner there is a slit d, which extends partially across the blank, and a tongue is omitted from the part which holds the end slats. The end portion of the strip D is swaged inward, so that the vertical corner-strip E will lie in said inwardly-bent portion, and as the strip A is bent at right angles slightly to one side of its longitudinal center the side E and the solid portion D of the bottom part will be slightly wider than the side E′ and the bottom part D′, said bottom part D′ having the tongues e, which provide sockets for the bottom slats F.

The bottom strip or brace and slat-holder D D′ has a single row of tongues e, arranged in pairs except at the ends and adjacent to the corner bends near where the sides D and E overlap. The end of the part D′ has perforations $f\ f$, through which nails are passed to engage the bottom slats and prevent longitudinal displacement of the side and bottom

slats. Nails are likewise passed through the perforations *c* and *c'* to hold the end and side slats.

As shown, the sheet-metal strip A is bent at right angles to one side of its longitudinal center and also at right angles transversely on a line with the slit *d*, which provides parallel sides which are integral with the bottom connecting portion.

In the make up of a crate two strips which form the end braces and slat-holders are used, and to separate or knock down the crate it is only necessary to remove the nails which are passed through the perforations *c* and *f*, which engage the side and bottom slats, and the vertical side pieces are prevented from spreading apart by nails which enter the perforations *c'* and engage the upper slats.

It will be noted that by the construction shown but a few number of nails are used, that the ends of each of the slats are covered, and that the braces extend about the ends and bottom of the crate to thoroughly brace the same.

The device herein before described provides a cheap, simple, and effective brace and slat-holder, and when the sides and bottom slats are removed they may be packed in the ends, so as to occupy but little space when the crate is in its knockdown form.

I claim—

1. In a knockdown crate, an end brace and slat-holder comprising an angular strip of sheet metal shaped to present parallel side members with tongues which are struck up therefrom, the tongues having parallel sides and straight ends at right angles with the sides, the tongues being bent inward from the side members of the angular strip and adjacent to the ends toward each other to provide slat-receiving sockets, registering perforations through each of the end portions of the angular strip, and perforations through the part which connects the parallel side members, the perforations being positioned adjacent to the side members; whereby when nails are passed through the perforations and the slats which enter the sockets adjacent to the perforations the crate will be maintained in position for use, substantially as set forth.

2. An angular brace and slat-holder for knockdown crates, comprising side pieces having tongues having blunt ends, the tongues being bent to provide sockets for the ends of the side and end slats, a connecting portion having sockets for the bottom slats, and perforations adjacent to the ends and the bent portions of the brace for the passage of nails to lock the brace and slat-holder to the slats, substantially as shown.

3. A sheet-metal end brace and slat-holder for knockdown crates, made up from a continuous strip which is angular in cross-section, bent tongues struck up from the strip to provide sockets, connecting portions between the tongues, an angular bar or connecting portion having a single line of sockets and a strip in line therewith, and perforations adjacent to the ends of the brace and slat-holder and near the transversely-bent portion thereof through which are passed nails for connecting the upper and corner slats to the braces, substantially as shown and for the purpose set forth.

In testimony whereof I have hereunto signed my name.

RICHARD DE WRIGHT.

Witnesses:

W. P. DUNTON,

JOHN H. SCHUMACHER.