

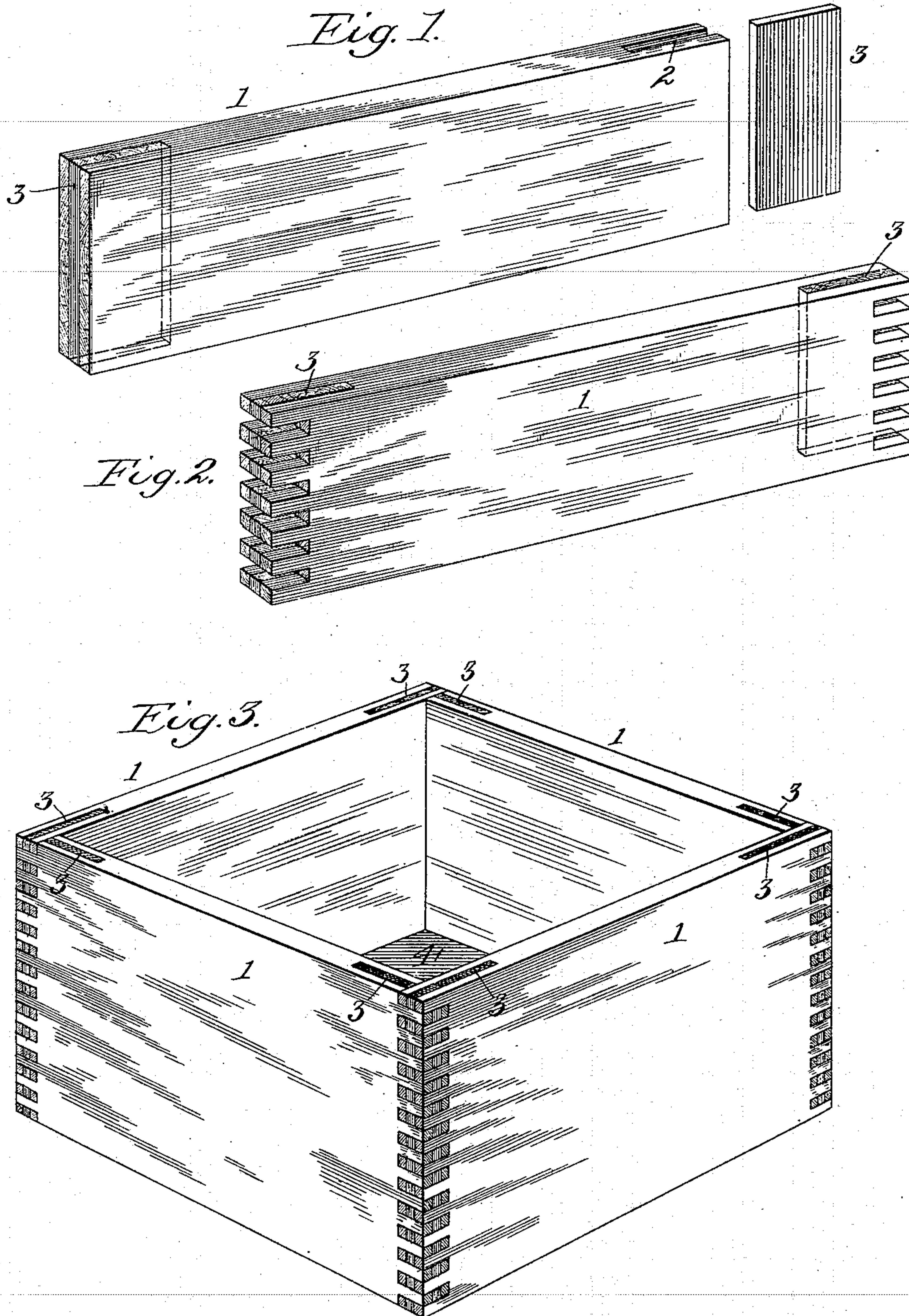
No. 615,294

Patented Dec. 6, 1898.

C. C. MENGEL.  
PACKING BOX.

(Application filed Apr. 2, 1897.)

(No Model.)



Attest;  
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# UNITED STATES PATENT OFFICE.

CHARLES C. MENGEL, OF LOUISVILLE, KENTUCKY.

## PACKING-BOX.

SPECIFICATION forming part of Letters Patent No. 615,294, dated December 6, 1898.

Application filed April 2, 1897. Serial No. 630,456. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. MENGEL, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Packing-Boxes, of which the following is a specification.

My invention relates to the manufacture of boxes; and it consists in a strengthening-strip inserted in a kerf or groove formed in the edges of the side pieces of the box, the grain of the inserted piece running crosswise of that of the main pieces.

In the drawings, Figure 1 represents a strip of wood provided with the kerfs or seats for the strengthening-strip, showing one strip in position and the other detached; Fig. 2, a view of the finished strip after the tongues or tenons and mortises are formed therein; Fig. 3, a perspective view of a box embodying my invention.

The purpose of my invention is to provide means to prevent the tenons and mortises of box members or sides from being thrown out of proper interlocking relation by shrinkage or by expansion of the wood. With a view to attaining this result I construct my box as shown in the accompanying drawings, in which—

1 indicates a narrow strip of wood provided with kerfs or slots at those edges which are to be united with corresponding edges of other pieces in the formation of the box, said kerfs being occupied by closely-fitting pieces of wood arranged with its grain at right angles to or crosswise of that of the main strip 1. The inserted pieces 3 are secured in place by glue or cement of any suitable kind, after which the strengthened edges are mortised and tenoned, as illustrated in Fig. 2. The strip 3 is of a width greater than the length or depth of the mortises and tenons, so that there shall remain an integral uncut portion of said strip extending from edge to edge of the main strip 1, as indicated in Fig. 2.

For ordinary purposes the tenons and grooves may be made by sawing a series of kerfs, as is now commonly done in box-making and as indicated in the drawings, the tenons of one member being inserted into the

mortises of the other, as shown in Fig. 3, in which four such strips are shown united and provided with a suitable bottom 4.

It will be seen that other material than wood may be inserted as a strengthening or tie strip and subsequently mortised with the body of the strip or side piece; but wood is deemed best suited to the purpose on account of its cheapness and facility of working.

By this simple device the box-strips and the tenons are not only strengthened and stiffened, but the expansion and contraction of the box sides, boards, or blanks 1 are prevented, and consequently the tenons and mortises remain of fixed width and if made to fit together in the first instance will continue to fit after lapse of time. This is not true of solid boards or blanks similarly mortised and tenoned.

Having thus described my invention, what I claim is—

1. A box having single-ply side members mortised and tenoned at their ends, the tenons being strengthened by narrow strips of wood secured and concealed in grooves in the ends of the side members, with the grain of the inserted strips crossing that of the side members, all glued together, the cross and longitudinal grain of each tenon being glued to its adjacent tenon, in a mortise.

2. A box having wooden sides solid throughout the major portion of their length, with a narrow strip of wood inserted in a groove between the two surfaces of each side piece, at the ends thereof, said walls being united by interlocking tenons and mortises, and the grain of the inserted strip running at right angles to that of the faces between which it is held, substantially as described; whereby the interlocking tenons are glued together with the longitudinal and the cross grain of each in contact with longitudinal and cross grain of adjoining tenons.

In witness whereof I hereunto set my hand in the presence of two witnesses.

CHARLES C. MENGEL.

Witnesses:

WILLIAM W. DODGE,  
HORACE A. DODGE.