

O. C. WYSONG.
DOVETAIL JOINT AND METHOD OF FORMING THE SAME.
APPLICATION FILED SEPT. 18, 1912.

1,122,350.

Patented Dec. 29, 1914.

2 SHEETS—SHEET 1.

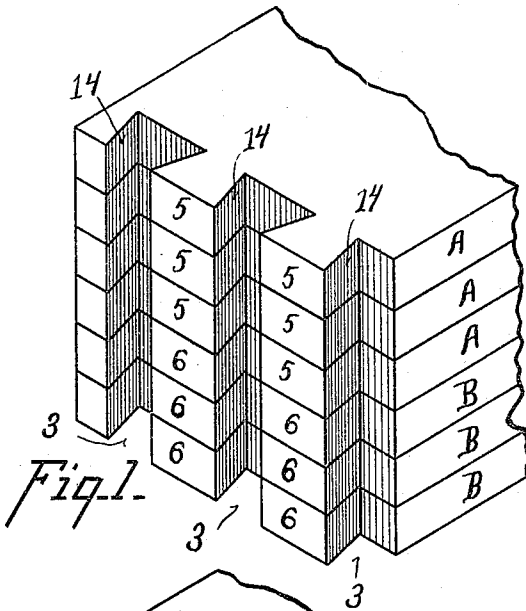


Fig. 1.

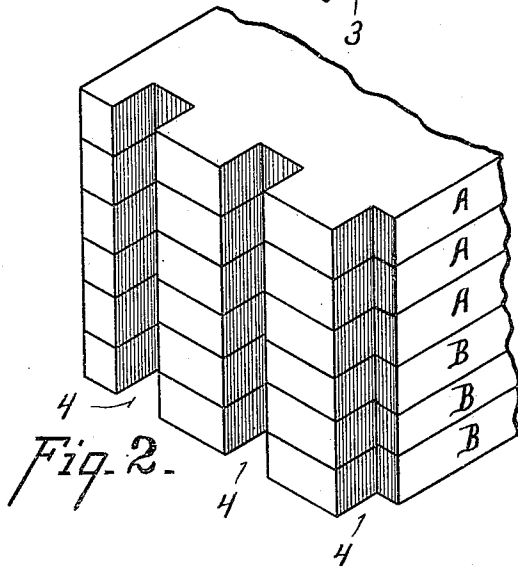


Fig. 2.

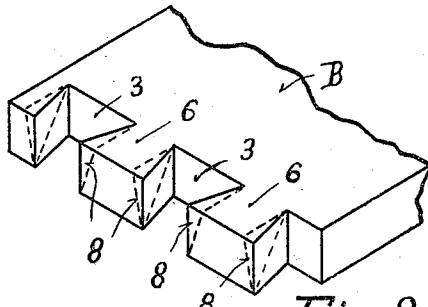


Fig. 3.

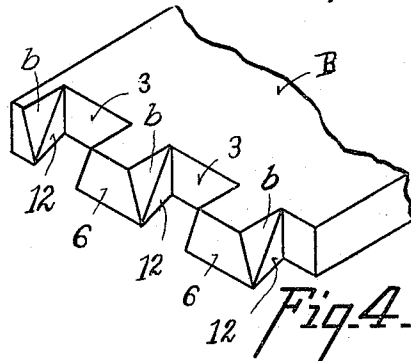


Fig. 4.

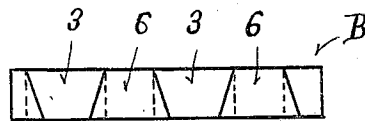


Fig. 5.

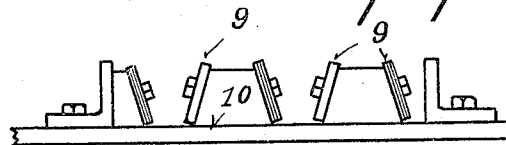


Fig. 6.

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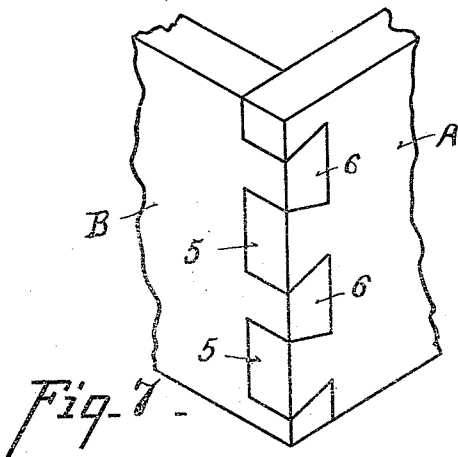
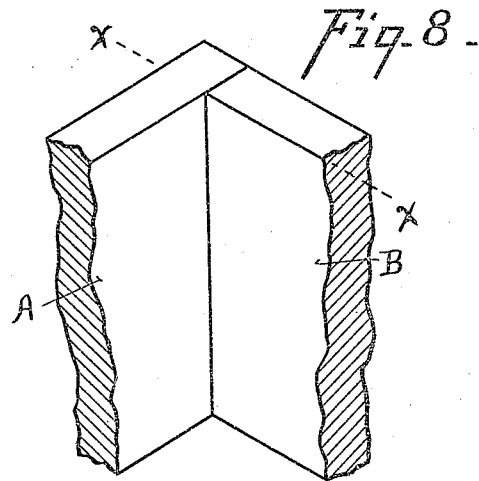
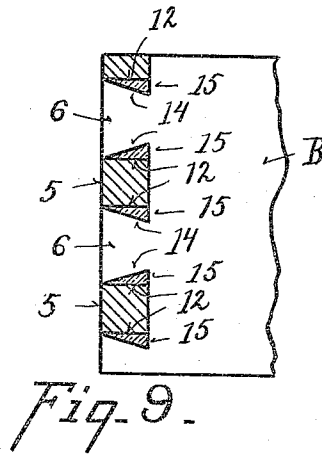
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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DOVETAIL JOINT AND METHOD OF FORMING THE SAME.

1,122,350.

Specification of Letters Patent.

Patented Dec. 29, 1914.

Application filed September 18, 1912. Serial No. 721,000.

To all whom it may concern:

Be it known that I, OLMEDO CORTEZ WYSONG, a citizen of the United States, residing at Greensboro, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Dovetail Joints and Methods of Forming Same, of which the following is a specification.

My invention relates to improvements in dovetail joints and method of forming the same.

One of its objects is to provide a dovetail joint for cabinet work boxes, and similar articles in which the tongues and grooves may be cut in a multiplicity of stock members at one operation.

Another object is to provide an improved form of interengaging dovetail tongues and grooves and method of forming the same.

Another object is to provide pockets or recesses in the joint to receive the glue thereby producing stronger joints.

My invention further comprises certain details of form, combination and arrangement, and order of procedure, all of which will be fully set forth in the description of the accompanying drawings in which:

Figure 1 is a perspective view of a stack or series of stock members with dovetail tongues and grooves cut in the end thereof. Fig. 2 is a perspective view of a stack or series of stock members illustrating a preliminary step preferably employed in producing the dovetail tongues and grooves of Fig. 1. Fig. 3 is a perspective view of one of the stock members of Fig. 1, having indicated thereon in dotted line a subsequent step of clipping the corners of the dovetail tongues. Fig. 4 is a view similar to Fig. 3 illustrating in full line said subsequent step of clipping the corners of the dovetail tongues. Fig. 5 is an end view of Fig. 4. Fig. 6 is a plan view of a means or mechanism for clipping the corners of the dovetail tongues. Fig. 7 is an outside perspective view of a dovetail joint formed by employing a stock member of the style illustrated in Fig. 1 and a stock member of the style illustrated in Figs. 4 and 5. Fig. 8 is an inside perspective view of Fig. 7. Fig. 9 is a sectional view through the same on line *xx* of Fig. 8.

The accompanying drawings represent the preferred embodiments of my invention.

In Figs. 1 to 5 and 7 to 9 I have illustrated a dovetail joint with open tongues and grooves suitable for general cabinet work, box corners and similar uses. The tongues and grooves for this joint are preferably formed by stacking and clamping a considerable number of stock or work members A and B together upon a suitable work holder, whereupon they may be subjected directly to the action of a series of conical cutters whereby a series of dovetail grooves 3 are formed in the end of all of said stock members at one operation. Such practice however in order to cut the dovetail grooves rapidly under all conditions would subject the conical cutters to unnecessary strain and be liable to heat the cutters so as to affect or draw their temper and be liable to dull their cutting edges. I therefore prefer to employ two sets of cutters, one set which may consist of a series of circular saws to make rough or preliminary cuts such as illustrated in Fig. 2, and to remove the bulk of the material from the grooves, said preliminary cutters to be followed by a series of conical cutters which make finish cuts and transform the preliminary grooves 4 of Fig. 2 into the dovetail grooves 3 of Fig. 1, with intervening dovetail tongues 5, and the two sets of cutters for making the preliminary and finish or dovetail cuts are preferably mounted in one mechanism in line so that one feed movement of the stock subjects it to the action of both sets of cutters and produces the tongues and grooves upon one end of a series of stock members as illustrated in Fig. 1, whereupon the stock is reversed and its opposite end treated in like manner. By employing both preliminary and conical cutters, the stock may be fed rapidly to the cutters even when cutting hard wood without heating or injury to the cutters, while by stacking the stock members and grooving a number of them at one operation the edges of the grooves are not liable to be splintered as the cutters leave the respective stock members. The stock members may however if desired be cut or grooved one at a time. After the stock members A and B have both been cut or grooved to one pattern as illustrated in Fig. 1, one set of said stock members, say members B are separated from members A and are then further treated to clip or chip the corners 8 indicated in dotted lines Fig. 3 from said dovetail tongues, thereby causing

the tongues of stock members B to assume the outline illustrated in Figs. 4 and 5. The corners 8 of tongues 6 are preferably severed by means of knives 9 set in a frame 10, to which knives the stock members B are successively presented endwise, whereupon the grain of the stock being parallel to the cut, said corners 8 are readily cut or chipped away from the tongues 6. Other means may be employed if desired to cut away or remove the corners 8. After the corners 8 have been cut away from the tongues 6, the stock members are ready to be assembled as indicated in Figs. 7, 8 and 9 to form dovetail joints, which is effected by inserting the tongues 6 of members B endwise into the grooves 3 of members A. When the members A and B are so assembled they present an unbroken face on the outside and also on the inside, but as will be noted from Fig. 9 the faces 12 of the tongues 6 do not quite make contact with the adjacent faces 14 of the tongues 5, leaving tapered recesses or spaces 15 between said faces 12 and 14 into which the excess of glue commonly employed to unite dovetail joints is crowded so as to fill said spaces. The glue in spaces 15 upon setting and drying serves to greatly increase the strength with which the respective tongues are locked together.

The improved dovetail joint as herein illustrated and described is capable of considerable modification without departing from the spirit or principle of my invention, and the said joint has many points of practical superiority and economy.

Having described my invention, what I claim is:

1. A dovetail joint comprising two members each provided with dovetail tongues and intervening dovetail grooves, the corners of the tongues of one of said members being removed to permit said tongues to be inserted endwise in a transverse direction into to interlock with the dovetail grooves of the opposite member.

2. A dovetail joint comprising two members each provided with dovetail tongues and intervening dovetail grooves of the same pattern, the corners of the tongues of one of said members being removed to permit said tongues to be inserted endwise into the dovetail grooves of the opposite member in a transverse direction.

3. A dovetail joint presenting unbroken exterior and interior faces and comprising two members each provided with dovetail tongues and intervening dovetail grooves, the corners of the tongues of one member being cut away to permit said tongues to be inserted endwise into and to interlock with the dovetail grooves of the opposite member.

4. A dovetail joint presenting unbroken exterior and interior faces and having concealed pockets to receive and hold a portion of the glue employed to lock the joint, said joint comprising two members each provided with dovetail tongues and intervening dovetail grooves, the corners of the tongues of one member being cut away to permit said tongues to be inserted endwise into and interlock with the dovetail grooves of the opposite member.

5. A dovetail joint comprising a member having dovetailed notches defining intervening dovetailed tongues, and a member having notches and tongues presenting a dovetailed outline at one plane face and a rectangular outline at the other plane face of said member, the change from one outline to the other being effected by two faces at an oblique angle to each other and meeting at a line leading diagonally from the base of each tongue to the outer end thereof.

6. A dovetail joint comprising a member provided with dovetail notches and intervening dovetail tongues, and a member provided with dovetail notches and intervening dovetail tongues each having one set of corners removed to enable said members to be assembled by inserting the tongues of one member in a transverse direction into the notches of the other member to provide a joint with an unbroken surface and concealed glue pockets.

7. The method of forming dovetail joints which comprises cutting dovetail grooves with intervening dovetail tongues in both members of the joint, removing the corners of the dovetail tongues on one member, and inserting the tongues of said member endwise in a transverse direction into the dovetail grooves of the opposite member.

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

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Witnesses:

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