

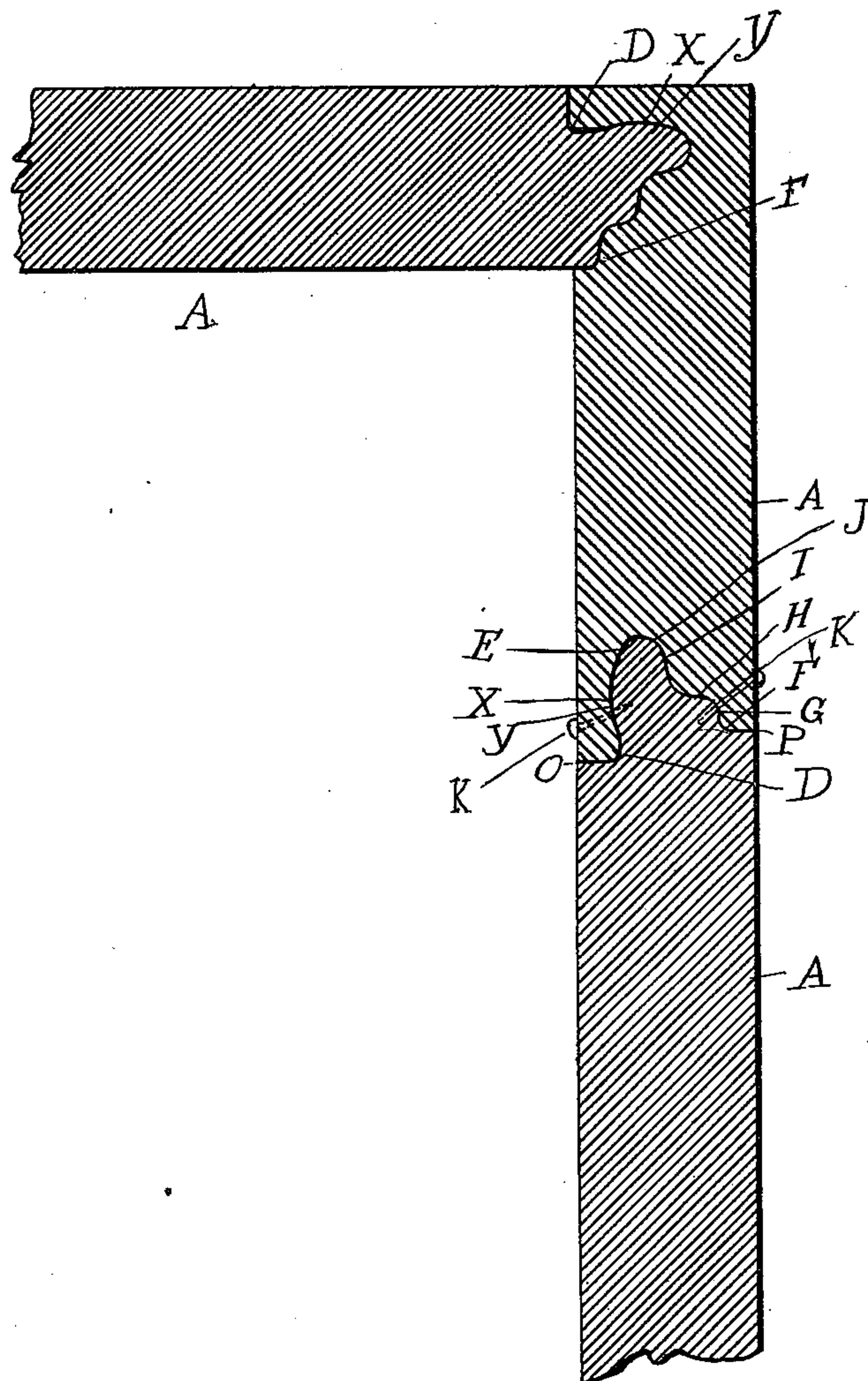
No. 671,954.

Patented Apr. 16, 1901.

M. B. EATON.  
LUMBER JOINT.

(Application filed July 21, 1900.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

MATTHIAS B. EATON, OF BOSTON, MASSACHUSETTS.

## LUMBER-JOINT.

SPECIFICATION forming part of Letters Patent No. 671,954, dated April 16, 1901.

Application filed July 21, 1900. Serial No. 24,348. (No model.)

*To all whom it may concern:*

Be it known that I, MATTHIAS B. EATON, a citizen of the United States, residing at Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Lumber-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in lumber-joints; and it consists in a new and improved method of constructing a tongue-and-grooved joint, whereby the joint can be made to fit more closely and to be less liable to injury in handling, especially lessening the liability of breaking the tongue and the sides of the groove. It also makes a good lock-joint.

In the drawing a transverse section of boards joined together is shown to illustrate my invention.

In said drawing, A represents boards provided with tongues and grooves. The groove is formed in the edge of one board and the tongue on the edge of another board, except when the boards are to be joined together angularly, in which case the groove will be made in the face of the board. The groove starts in the edge of the board at a suitable distance D from the side and extends into the board in a direction inclined outwardly and near the bottom of the groove terminates in a curve E instead of an angle. On the opposite side it begins a suitable distance F from the side of the board, extends inwardly a short distance G, thence curving into a substantially transverse direction H, and thence into a substantially parallel direction I, terminating in a curve J at the bottom, thus forming a groove deeper on one side than on the other. This arrangement of the outlines of the groove obviates all right angles and lessens very materially the tendency to break at the apexes of the angles, the ordinary tongue and groove being especially weak at these points. The tongue is made on lines the reverse of those of the groove and is adapted to completely fill the groove in the opposite member and

make a close joint. It is consequently at the base considerably wider than at the end. The widest portion of the tongue on one side bears on the raised portion of the bottom of the groove, raising the point of leverage above the bottom of the groove, thereby lessening the tendency to break the tongue. This arrangement is also advantageous in affording a stronger hold for the nail which holds the boards together. Nails K are driven through the sides of the groove into the tongue from one side into the long side of the tongue and from the other side into the opposite side of the tongue.

To make the joint lock, I curve the long side of the groove outwardly, as seen at X, and make a corresponding bulge Y on the long side of the tongue. This construction prevents the two from drawing out of the groove in a direction parallel with the sides of the boards and makes a water and air tight joint. The edges of the board on different sides of the tongue or groove are not in the same line, as seen at O and P. This enables the bulging portion of the tongue to be more readily inserted in the groove and renders the tongue less liable to be broken.

Having thus described my invention and its use, I claim—

1. In a lumber-joint, one member having a tongue with an offset on one side and with one or more steps on the other side and a second member having a groove adapted to receive and conform closely to the surfaces of said tongue.

2. In a lumber-joint, one member having a tongue with an offset on one side and one or more steps on the other side, said tongue being bounded by a series of convex and concave surfaces, and a second member having a groove adapted to receive and conform closely to the surfaces of said tongue.

In testimony whereof I affix my signature, in presence of two witnesses, this 16th day of June, 1900.

MATTHIAS B. EATON.

Witnesses:

J. H. RUSSELL,  
J. S. KETCHAM.