No. 732,741. PATENTED JULY 7, 1903.

J. W. HEATON.

FLOORING.

APPLICATION FILED OCT. 23, 1901.

NO MODEL.

Fig. 1.

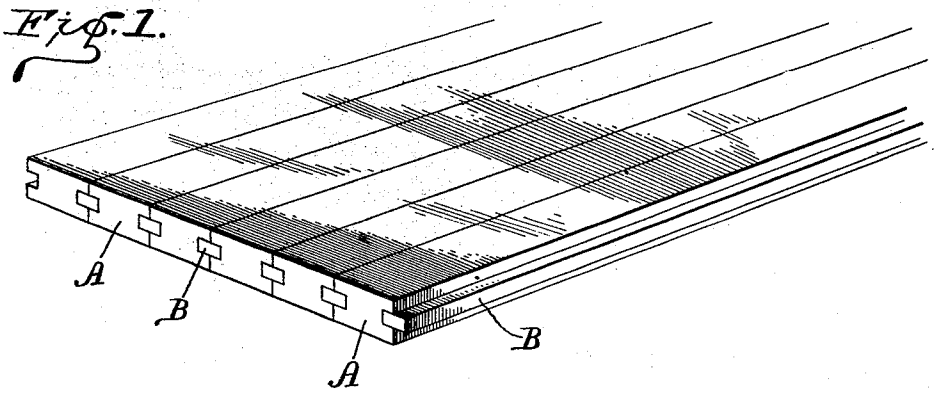


Fig. 2.

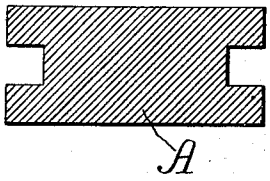


Fig. 3.

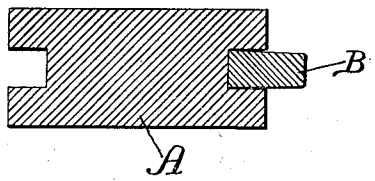


Fig. 4.

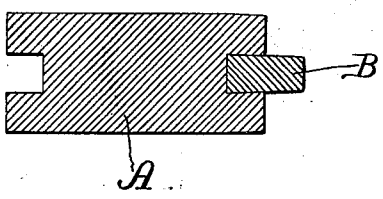
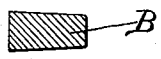


Fig. 5.



WITNESSES:

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No. 732,741. Patented July 7, 1903.

UNITED STATES PATENT OFFICE.

JOHN W. HEATON, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO AUGUSTIN BOICE, OF INDIANAPOLIS, INDIANA.

FLOORING.

SPECIFICATION forming part of Letters Patent No. 732,741, dated July 7, 1903.

Application filed October 23, 1901. Serial No. 79,664. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HEATON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Flooring, of which the following is a specification.

In the manufacture of tongue-and-grooved flooring the cutting away of the wood to form the tongue results in considerable waste, as is well known. In flooring of the thickness most commonly employed (seven-eighths of an inch) and thinner it is highly desirable that the tongue shall be either integral with the piece of flooring or secured so firmly thereto as that the effect shall be equivalent. Heretofore the making of the flooring and the tongues from separate pieces has not been considered practicable, for the reason above stated, nor has there been known any sufficiently inexpensive means of uniting the tongue to the flooring with sufficient firmness when so made.

It is the object of my present invention to produce flooring which when made shall be substantially like that commonly produced, but wherein the tongue shall be formed separately and afterward attached, thus saving the waste consequent upon making the tongue integrally with the remainder of the strip.

When a groove is formed in the edge of a strip of lumber, such as flooring, new surfaces are exposed to the air, and consequently a new shrinkage takes place at that point. The result is that the parts on each side of the groove are drawn slightly together at their outer or free edges, while the edge of the strip as a whole is at the same time made slightly concave. In other words, the extreme corners (which bound the newly-formed groove) are drawn both inward toward the bottom of the groove and also toward each other. I have discovered that this change of form, while very slight, is sufficient to enable the parts outside the groove to grasp a tongue-strip firmly enough to hold it in place in said groove if such strip is of the proper shape and size and is inserted immediately after the groove is formed and before the shrinking above described has had time to take place.

My invention therefore consists in the making of flooring in the manner above indicated and is based upon the discovery of the above-described result.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a perspective view of a portion of a floor the flooring wherein is made according to my invention; Fig. 2, a transverse sectional view of one strip of flooring just after the grooves have been made therein and before the tongue has been inserted in one of said grooves; Fig. 3, a similar view after the tongue has been inserted and before the shrinking has taken place; Fig. 4, a similar view after the shrinking operation has taken place, and Fig. 5 a sectional view of a tongue-strip of the form used by me separately.

In carrying out my invention I take ordinary flooring-strips and prepare them in substantially the ordinary manner by means of a suitable machine, except that instead of making a tongue upon one side and a groove upon the other I make grooves upon both sides, as shown. This results in the partially-formed flooring-strip A, as shown in Fig. 2. I then immediately insert a previously-prepared tongue-strip B into one of the grooves of each flooring-strip. This tongue is of a thickness at one edge sufficient to tightly fit into the groove into which it is inserted. It tapers very slightly from thence to the other edge, so that the last-named edge is somewhat thinner than the first named. This is shown (in somewhat exaggerated form) in Fig. 3. The freshly-cut wood alongside the groove in the strip A then shrinks, producing the effect shown in Fig. 4, when the flooring is complete. The result is an article of flooring quite equal to that which is produced in the ordinary manner, while the saving in the expensive lumber of which the flooring is made will run from ten to twenty-five per cent., according to the width, which, as will be readily seen, is a highly-important matter.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

That process of manufacturing flooring which consists in forming grooves in both edges of the flooring-strip, providing tongue-strips thinner on one edge than the other, the thicker edge being equal to the full width of the groove when first formed, inserting such tongue-strip in one of said grooves immediately after the same is formed, and then permitting those portions of the flooring outside the groove to shrink in onto and clamp the tongue-strip, whereby a tongue-and-grooved flooring-strip is produced, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 18th day of September, A. D. 1901.

JOHN W. HEATON. [L. S.]

Witnesses:

CHESTER BRADFORD,

L. H. COLVIN.