No. 754,215. PATENTED MAR. 8, 1904.

M. A. HAYWARD.

FLOORING END JOINT.

APPLICATION FILED JULY 15, 1903.

NO MODEL.

Fig. 1

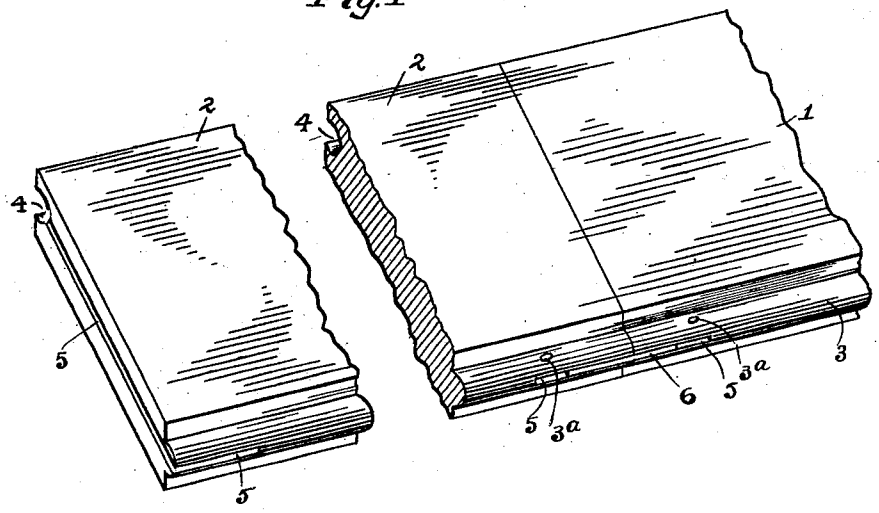


Fig. 2

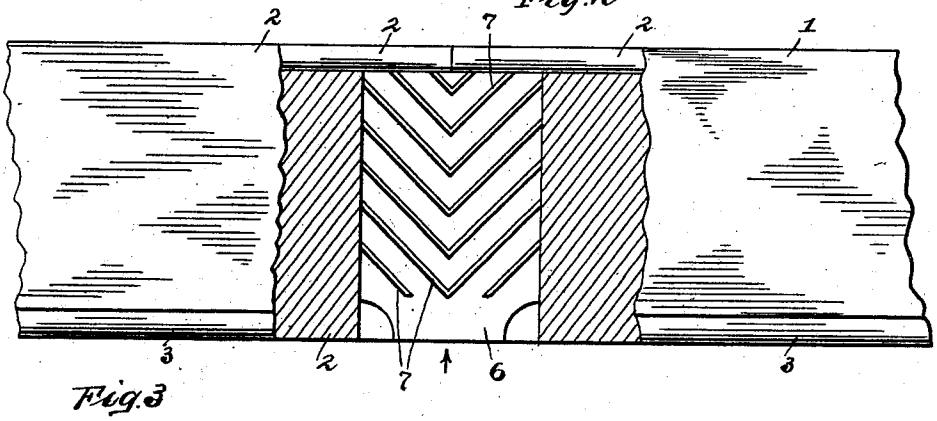


Fig. 3

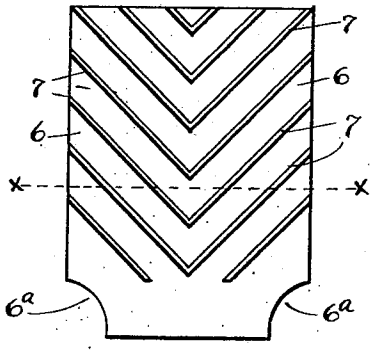
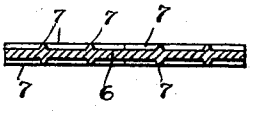


Fig. 4



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No. 754,215. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

MORRIS A. HAYWARD, OF COLUMBUS, OHIO.

FLOORING END JOINT.

SPECIFICATION forming part of Letters Patent No. 754,215, dated March 8, 1904.

Application filed July 15, 1903. Serial No. 165,565. (No model.)

To all whom it may concern:

Be it known that I, MORRIS A. HAYWARD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Flooring End Joints, of which the following is a specification.

My invention relates to the improvement of flooring-joints; and the objects of my invention are to provide an improved means for uniting the ends of flooring sections or boards, to so form the end joints between flooring-sections as to insure the formation of a neat and close joint and to impart thereto a desirable strength and rigidity, and to produce certain improvements in details of construction which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of portions of two flooring-boards united by my improved means. Fig. 2 is a plan view of the same with the upper portions of the united boards broken away about their joint. Fig. 3 is a view in elevation of the locking-key or connecting-plate, and Fig. 4 is a transverse section on line *x x* of Fig. 3.

Similar numerals refer to similar parts throughout the several views.

1 and 2 represent, respectively, portions of flooring-boards, these flooring boards or sections being shown with opposing side tongues and grooves 3 and 4 to facilitate the usual connection with adjoining parallel boards. In each end of each of the flooring-sections I form a central transverse saw-kerf 5, which extends to a desirable depth or distance into said board end.

6 represents a connecting device or key the body of which is in the nature of a flat metallic plate the opposing surfaces of which have formed thereon inclined ribs or corrugations 7, which extend from the longitudinal center of the plate to the sides thereof in diverging lines, as shown. It will be obvious that while these ribs 7 are shown on both of the otherwise flat surfaces of the plate said ribs may be omitted from one of said surfaces. At what we will term its "rear" or "driving" end the plate 6 has its corner portions cut away at 6^a, resulting in a reduction in the width of the driving-end portion. In the production of this connecting plate or key the body of the same is formed of a thickness which is equal to the height of the saw-kerfs 5, and in utilizing said key two flooring-sections, such as are indicated at 1 and 2, are laid with their vertical ends abutting one against the other, thus bringing the saw-kerfs of said sections into communication with each other. This being accomplished, the key is driven into the said saw-kerfs transversely of the boards and in the direction of the arrow indicated in Fig. 2. The width of the key is preferably the same or substantially the same as that of the united saw-kerfs of the two board sections, and in forcing the key transversely into these kerfs it is obvious that the diverging ribs will so enter the wood of the boards above and below the saw-kerfs as to result in a drawing toward each other of the two boards through the crowding or forcing action of the ribs on the wood fibers. By this operation it will be understood that the board ends will not only be drawn tightly together and an exceedingly close and neat end joint formed, but that the uniting plate or key will afford a rigid connection of the two board sections which will resist great pressure or strain.

Owing to the formation of the outer end recesses 6^a the usual operation of "secret nailing" or nailing the longer sides of the boards together, is not interfered with, inasmuch as the nails which are ordinarily driven at the points indicated at 3^a in Fig. 1 may pass through the corner recesses of the key or plate.

It will be observed that the improved joint herein described may be produced at a reasonable expense and that the same will be particularly useful in the construction of hardwood floors, where close end joints of the boards are especially desirable.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a flooring end joint, a connecting-key comprising a plate having formed on its sur-

face, ribs which incline forwardly and outwardly from the center of the length of said plate, substantially as specified.

2. In a flooring end joint, the combination with floor sections or boards as 1 and 2, said sections having saw-kerfs formed transversely in their adjoining ends, of a connecting-plate comprising a body 6 having projecting surface ribs 7 diverging from the center of said plate outward and forward, substantially as specified.

3. In a flooring end joint, the combination with flooring-sections as 1 and 2 having opposing end saw-kerfs, of a connecting device comprising a metallic plate having the corners of one of its ends cut away and having formed on its surface a series of diverging ribs as described, substantially as specified.

MORRIS A. HAYWARD.

In presence of—
C. C. SHEPHERD,
P. S. KARSHNER.