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P. O. MORATZ

1,953,306

FLOORING STRIP AND JOINT

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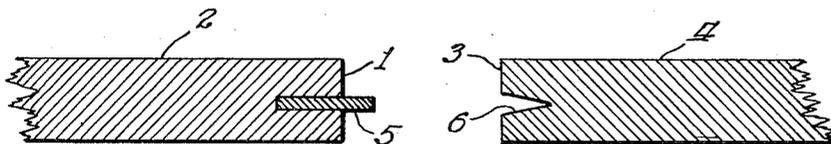


Fig. 1.

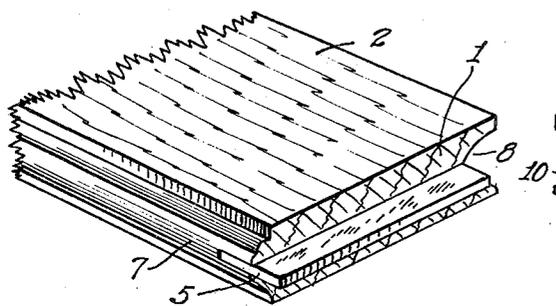


Fig. 2.

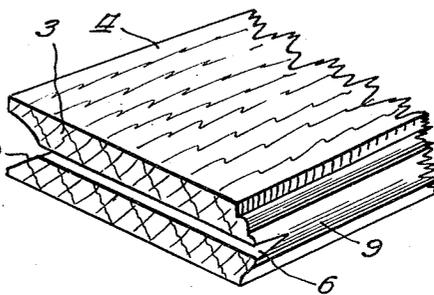


Fig. 3.

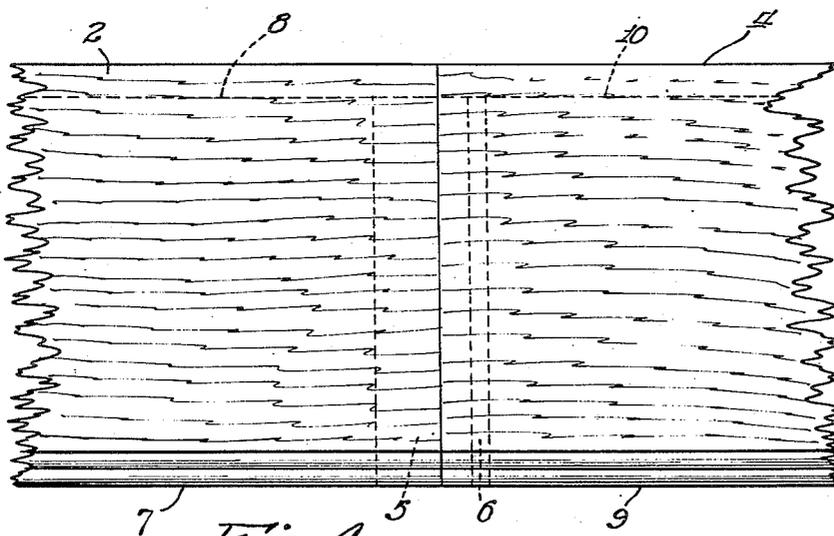


Fig. 4.

INVENTOR
PAUL O. MORATZ
BY *Raymond M. M.*
ATTORNEY

UNITED STATES PATENT OFFICE

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FLOORING STRIP AND JOINT

Paul O. Moratz, Bloomington, Ill.

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2 Claims. (Cl. 20—8)

This invention relates to improvements in hard wood flooring and more particularly to that type of hard wood flooring prepared in finished strips at the mill ready to lay and the flooring strip end joints therefor.

Hard wood flooring is customarily laid upon a sub floor in a new building or over the old floor in a dwelling or building that has been in use. The hard wood is customarily prepared in uniform strips of approximately one and one half inches in width and of varying lengths having interlocking tongue and groove engagement along their longitudinal edges.

In recent years the hard wood flooring strips have been finished at the mill, that is seasoned and provided with an upper surface which is filled, stained, and polished so that the floor needs no further treatment after it has been laid. Many improvements have been made to increase the speed of the laying of such floors in providing means to quickly engage the strips to the sub or old floor and insure the proper engagement of strips being laid with the edge of the laid strip to present a smooth even surface along the longitudinal meeting edges with no cracks or crevices to collect dust or dirt and no projection to catch the mops ordinarily used in cleaning. Inasmuch as the dimensions of the rooms and halls to be floored vary, it is not ordinarily possible to lay one continuous strip from wall to wall, so the mill cuts the strips in various uniform lengths convenient to be packaged for transportation. While many improvements have been developed for the tongue and groove interengagement of the horizontal edges of finished hard wood flooring strips, little or no improvement has been made in providing a similar smooth even surface at the transverse meeting edges when one strip is laid in prolongation of another.

It is an object of this invention to provide at the mill at the transverse edges of the opposite ends of each strip of finished hard wood flooring means for interengaging the ends of strips as well as the longitudinal edges. As far as generally known in this trade the ends are cut true at right angles to the edges and perpendicular to the upper surface of the strip at the mill and in some instances provided with a loosely fitting rectangular tongue and groove on the opposite ends. From the nature of the flooring, it is necessary that each strip lay perfectly flat upon the sub floor and be firmly secured thereto not only to provide a smooth surface, but also to prevent chattering or noise of vibration between the hard wood flooring and sub floor when walked over. This is

usually accomplished by nailing each strip through the tongued edge to the sub floor at approximately uniform distances which will also prevent any tendency for the strip so secured to curl longitudinally if it may have a tendency to warp after being laid. It is a further object of this invention to provide at the mill means for interengaging the transverse meeting edges of hard wood flooring strips that will prevent a transverse curling or warping as well as insure a smooth even surface between the adjoining strips and positively prevent chattering between the abutting ends.

With these and other objects in view, reference is made to the accompanying sheet of drawings which illustrates a preferred embodiment of this invention, with the understanding that minor detail changes may be made without departing from the scope thereof.

In the drawing:

Figure 1 is a fragmentary vertical longitudinal sectional view of spaced apart meeting transverse edges of finished hard wood flooring strips embodying the improved joint.

Figure 2 is a fragmentary perspective view of one transverse edge shown in Figure 1.

Figure 3 is a similar view of the other transverse edge shown in Figure 1.

Figure 4 is an enlarged fragmentary plan view of the transverse meeting edges provided with this improved joint as it will appear when laid upon the sub floor.

In the embodiment of this invention as illustrated, Figure 1 shows a vertical transverse edge 1 of a finished hard wood flooring strip 2 spaced apart from the vertical transverse edge 3 of the adjacent finished hard wood flooring strip 4 as they appear before being joined in longitudinal protection of each other. Strip 2 is provided with a metal engaging member 5 and strip 4 with a V-shaped groove 6 to receive and firmly engage the member 5.

As shown in Figure 2, the metal member 5 preferably extends across the end 1 of the strip 2 from the outer edge of the longitudinal tongue 7 thereon to the innermost surface of the longitudinal groove 8 on the opposite longitudinal edge thereof. The metal member 5 extends preferably below the center line of the edge 1 which edge is formed in a plane at right angles to the upper finished surface of the strip and likewise at right angles to the longitudinal edges thereof, as customary. Preferably two thirds of the body of the metal member 5 is received within and securely engaged by the end of the strip 2 and the

outer transverse edge of the metal member 5 is parallel to the edge 1.

As shown in Figure 3, the V-shaped groove 6 preferably extends across the end 3 of the strip 4 from the outer edge of the longitudinal tongue 9 thereon to the innermost surface of the longitudinal groove 10 on the opposite longitudinal edge thereof. The intersections of the opposite surfaces of the groove 6 with the end 3 are parallel with the upper finished surface of the strip 4 and are spaced apart at a distance preferably slightly greater than the thickness of the metal member 5 so that the end thereof may be readily entered into the groove 6. It is preferable to construct the V-shaped groove with its apex at a greater distance from the edge 3 than the metal member 5 extends outward from the edge 1 of its strip 2, so that when the ends are faced together with the edges 1 and 3 in contact the V-shaped groove 6 firmly engages the metal member 5, as shown in dotted lines, Figure 4, from the outer edge of the tongues 7 and 9 to the innermost surfaces of the grooves 8 and 10, so that when the floor is laid, the end of the metal member 5 in the tongues 7 and 9 will be rigidly engaged in the groove of the contiguous strip on that side and on the opposite side will be firmly held by the entrance of the tongue on the contiguous strip entering the grooves 8 and 10.

The end 1 of the strip 2 is first cut on a machine which cuts all ends uniformly with a slot parallel to the upper finished surface and equidistant therefrom and then the metal member 5 is inserted in the cut slot by another machine and forced into the body of the end to uniformly be engaged in the end with its exterior edge parallel and equidistant from the surface of the end 1. The groove 6 in the end 3 is formed by a machine parallel to the upper finished surface and at a uniform distance therefrom and also extending a uniform distance with the body of the strip 4 from the transverse edge 3 thereof. By this means each strip is provided at each end with a uniform standard metal engaging member 5 and receiving V-shaped groove 6 therefrom.

This improved joint constructed and applied as above described provides the abutting ends of hard wood flooring strips with a joint that prevents warping of the meeting transverse edges as

long as the floor lasts, accurately keeps the finished surfaces even at all times, is much stronger than a wooden end match, the metal member fits tight in the V-shaped groove and prevents chatter, rattle or squeak, the groove is smaller than that required to receive a wooden tenon and lessens the danger of splitting or slivering, and increases the rapidity in laying.

What I claim is:

1. A continuous hard wood floor including a plurality of finished hard wood strips in prolongation of each other, each of said strips being of uniform width and having interlocking tongue and groove engaging members on each longitudinal edge, and at each abutting end a metal engaging member secured in one strip extending from the outer edge of its tongue to the innermost surface of its groove parallel to and uniformly equidistant from the upper finished surface and projecting uniformly equidistant from said end received within and firmly engaged in a complementary V-shaped groove in the end of the abutting strip of greater width and depth than the projecting metal engaging member, whereby the ends of the strips are joined and at the same time held against transverse warping.

2. A mill finished hard wood flooring strip of uniform width having an engaging tongue projecting from one longitudinal edge and a tongue engaging groove provided along the opposite longitudinal edge and ends having surfaces at right angles to both the upper finished and longitudinal edge surfaces, provided at one end with a metal engaging member forced into the strip for a majority of its depth parallel to the upper finished surface extending from the outer edge of the tongue to the innermost surface of the groove with the upper face of the member in the center line of the end and projecting uniformly therefrom, and provided at the other end with a complementary V-shaped groove of greater width and depth than the projecting engaging member adapted to receive the said member of an abutting strip without splitting the grooved end and firmly engage said member to hold the abutting ends together in prolongation of each other with their upper finished surfaces in the same plane and prevent transverse warping of the ends.

PAUL O. MORATZ.

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