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H. T. KRAFT

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YIELDINGLY JOINED FLOORING

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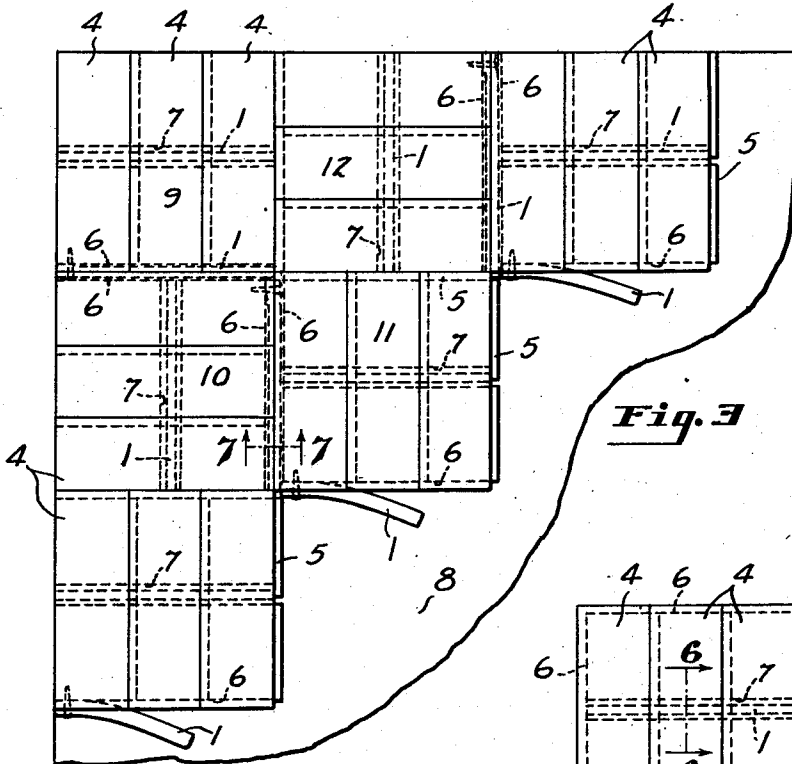
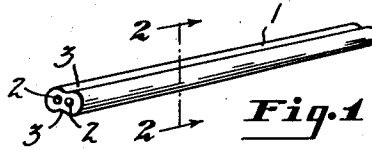
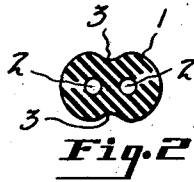


Fig. 3

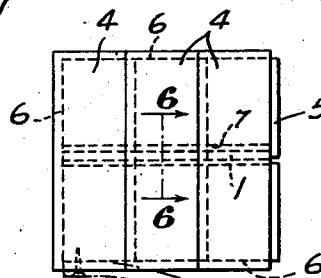


Fig. 4



Fig. 5

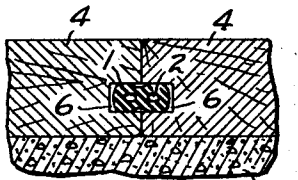


Fig. 7

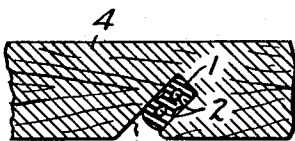


Fig. 6

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YIELDINGLY JOINED FLOORING

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5 Claims. (Cl. 20—6)

This invention relates to an improved floor construction comprising an assembly of individual boards to form a flooring square and a plurality of the flooring squares in the building of a parquetry floor and the like.

The objects and the advantages of the invention will be apparent from consideration of a typical embodiment of the invention as illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective of the rubber key strip that locks together the individual boards to form the flooring squares and that locks the squares together to build a parquetry floor;

Fig. 2 is a section taken along the line 2—2 of Fig. 1;

Fig. 3 is a plan view of a parquetry floor wherein some of the joints between the flooring squares are sealed by the key strips shown in Fig. 1;

Fig. 4 is a plan view of a flooring square wherein the boards are secured together by the key strip that is shown in Fig. 1;

Fig. 5 is an elevation of the flooring square that is shown in Fig. 4;

Fig. 6 is a section taken along the line 6—6 of Fig. 4; and

Fig. 7 is a section taken along the line 7—7 of Fig. 3.

The key strip 1 that forms a part of the subject matter of the present invention is made of elastic rubber. The strip has a substantially thick wall enclosing one or more apertures 2 that extend longitudinally of the strip and impart improved lateral resilience thereto. The longitudinally extending surface grooves 3 overlie the solid rubber part of the strip between the apertures 2.

Suitable flooring members, such as the boards 4, that have interfitting tongues 5 and grooves 6 on their opposite edges, are assembled to form the squares shown in Figs. 4 and 5. The boards 4 that form the individual squares are each provided with a transverse groove 7 that is aligned with the corresponding grooves in the other boards making up the square and the boards of each square are secured together by a key strip 1 that is tensioned and inserted in the grooves 7 in the under sides of the boards 4.

The grooves 7 preferably extend inwardly at an angle from the under side of the boards as shown in Fig. 6 and are sufficiently narrow so that the key strip 1 must be materially elongated when it is inserted into the grooves and released to hold the boards together. The lateral expansion of the key strip 1 applies pressure to the

walls of the groove 7 and resiliently secures the boards together. The groove 7 may be normal to the surface of the board or be inclined thereto to minimize the weakening of the board, as desired. The resilient connection of the boards permits them to expand and contract from changes in moisture content without loosening of the securing means and so distributing the movement that unsightly gaps do not appear after they become moist and dry out.

A plurality of the squares so made are placed next to each other on a floor foundation 8 of wet mastic, cement or the like, and tamped or otherwise pressed well into the plastic material, and leveled to provide a smooth and level floor on the setting of the foundation material.

In the illustrated example, each flooring square has one wooden tongue 5 and three edge grooves 6. In one of the edge grooves is mounted a short length of key strip 1 by securing one end of the strip near one end of the groove and stapling or nailing it in place so that the workman may stretch the rubber strip beyond the square to reduce its size enough to have it received within the two opposed grooves 6 of the assembled squares and releasing the strip which binds the squares together.

The resilient connection between the flooring boards of the individual squares may be sufficient to accommodate the expansion and contraction of the smaller or medium floor areas but in the larger floor areas it is desirable to employ the resilient rubber strips to yieldingly bind the flooring squares together along one or more edges. In the floor area shown in Fig. 3, the resilient rubber strips 1 are positioned as shown in the oppositely opening grooves 6 between the flooring squares to follow a zig-zag course that extends between the flooring squares 9 and 10; 10 and 11, etc., as indicated in the drawing. Likewise, the wooden tongue and groove joint follows a zig-zag course that extends continuously between the flooring squares 9 and 12; 11 and 12; etc., as shown in the drawing.

Many other arrangements of the rubber strips 1 may be employed for yieldingly connecting the flooring squares together. In each instance, however, the rubber strips are tensioned, the adjacent floor square is laid and the rubber strip is released so that it yieldingly binds the flooring squares together.

For example, the workman may employ long rubber strips to secure groups of four or five squares together along parallel lines in one di-

rection and extend the lines of connection of the rubber strip at right angles in the next group, using the wooden tongue and groove connections for the lines of squares between the strips 1. For such assemblies half of the boards have the tongue at the end of the boards instead of at the side.

The mechanically rigid tongue and groove joints, in this manner, alternate throughout the structure with the joints that contain the key strip of rubber. This construction results in a floor that combines both the rigidity advantages of the tongue and groove joint with the resilience of the extensible rubber key strip with which the tongue and groove joints alternate throughout the floor. In this construction a rubber key strip may be continuous throughout the width of the finished floor.

It is to be understood that the key strip and the floor assembly that are disclosed and described herein are presented for purposes of explanation and illustration and that modifications may be made in the resilient connection of the flooring elements without departing from the invention as defined in the appended claims.

What I claim is:

1. A reversible key strip for joining grooved flooring elements together comprising a rubber composition body portion of substantially symmetrical section and having a smooth and unapertured surface and having a pair of spaced apertures extending longitudinally therethrough and providing side walls of substantially uniform thickness for imparting radially substantially uniform resilience and collapsibility to said strip around each of said apertures and a reduced section between the apertures.

2. In combination, a plurality of boards having interlocking portions, and a distended rubber strip in a confining slot extending across said boards and yieldingly maintaining said boards in interlocking engagement.

3. A flooring unit, comprising in combination, a plurality of boards having tongue and groove interfitting portions therebetween, and a stretched rubber strip confined laterally in a slot extending laterally across said boards.

4. A parquetry floor, comprising in combination, a plurality of flooring squares in edge abutting relation with each other, a tongue and groove interfitting substantially rigid edge engagement therebetween extending in substantially zig-zag direction across said floor, and a longitudinally tensioned and laterally compressed rubber strip resiliently disposed in opposed edge grooves of abutting flooring squares and that extends in a substantially resilient strip in substantially continuous zig-zag direction across said floor in alternate order with said rigid tongue and groove engagement.

5. A parquetry floor, comprising in combination, a plurality of flooring members making a substantially rigid tongue and groove engagement with each other along the abutted edges of one pair of two adjacent members, and a distended rubber strip confined in mated grooves in the abutted edges of one member of said pair and a third member and for imparting resilience to the edges of said flooring members that are joined by said strip and said strip extending continuously among a plurality of pairs of said flooring members.

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