April 29, 1930. B. W. CADWALLADER 1,756,583

EXPANSION AND SHRINKAGE TAKE-UP IN BLOCK AND PLANK FLOORING

Filed Oct. 24, 1928

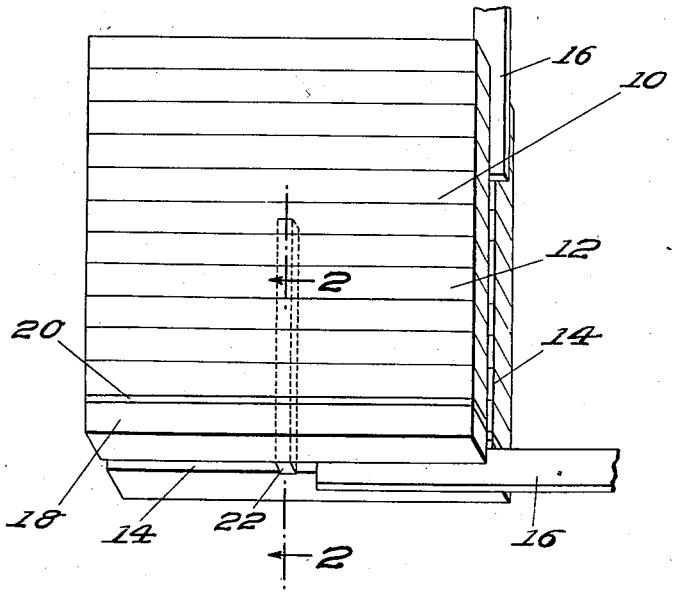


FIG. 1

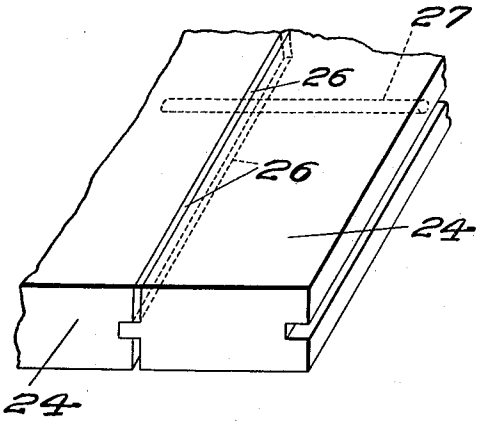


FIG. 3

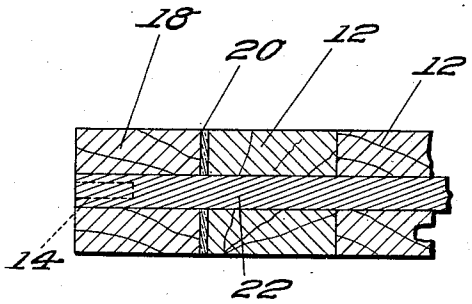


FIG. 2

BROOKE W. CADWALLADER
INVENTOR

PER Minnis & Pike

ATTORNEYS

Patented Apr. 29, 1930 1,756,583

UNITED STATES PATENT OFFICE

BROOKE W. CADWALLADER, OF LOS ANGELES, CALIFORNIA

EXPANSION AND SHRINKAGE TAKE-UP IN BLOCK AND PLANK FLOORING

Application filed October 24, 1928. Serial No. 314,765.

This invention relates to improvements in compression and expansion members for joined wood sections and has for one of its principal objects the provision of means for preventing cupping or buckling of a wood floor or the like by compensating for the expansion or shrinkage of the same.

One of the important objects of the invention is to provide an expansion and shrinkage take-up as applied to wood blocks of the longitudinally laminated type, solid blocks or planks, whether of the usual tongue and groove type or of the metal spline joined type, as shown in applicant's co-pending application, Serial Number 256,256. More particularly the invention comprises a plurality of expansible and compressible members interposed in the flooring at right-angles to the line of expansion or contraction of the same.

Another important object of the invention is the provision of means in a laminated or plank flooring for reinforcing the laminated or plank construction and at the same time provide an expansible joining means for each individual section.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a perspective top view of a laminated parquetry block, illustrating particularly the positioning of the pliable expansion and compression element.

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a perspective view of a section of plank flooring, showing the application of a slight modification of the invention.

As shown in the drawings:

The reference numeral 10 indicates generally a laminated parquetry block, with laminations 12 glued or otherwise suitably fastened to each other, the lines of juncture of the same being parallel to the grain of the wood composing the block.

As illustrated in Figure 1, the block 10 is provided with a groove 14 which traverses the four edges of the same. A metal spline 16 is adapted to be positioned in the said groove and join the various adjacent blocks comprising the floor to each other, as is more fully described in applicant's co-pending application, Serial Number 256,256.

In the preferable embodiment of this invention each block is provided with side lamina 18 separated from the next adjacent lamina by a strip of resilient material 20, which is preferably rubber, wool-felt or the like. This strip 20, as can be readily seen, compensates for any expansion which may occur in the block 10 and prevents the undesirable cupping or buckling of the same. Although the strip 20 is shown inserted between the outer lamina and the next adjacent lamina, the same result can be accomplished by inserting the strip between any pair of laminæ or inserting a plurality of strips between a plurality of pairs of laminæ.

The side lamina can be held rigidly to the block proper by means of a pin 22, driven through the laminations at right-angles thereto or inserted in an opening provided therein, or, as has been found successful in practice, by merely gluing the adjacent laminæ to the strip 20, this being sufficient for all practical purposes. In using the pin 22, the same may be positioned through all of the laminations or, as shown in Figure 1, may only be inserted through the end laminæ or any number of laminations.

A slight modification of the invention is shown in Figure 3, wherein planks 24 form a portion of a plank floor. The usual tongue and groove means for joining the same is shown, and adapted to be inserted at the juncture of the two abutting edges of the planks is a pliable member 26. This member is preferably constructed of rubber, wool-felt or the like and can be made in long strips the length of the planks and of a depth equal to or less than the distance from the upper portion of the tongue to the upper surface of the flooring. The preferable mode of reinforcing the plank construction comprises the use of a pin or the like 27 spaced at suitable intervals along the length of the floor

members and inserted therein at right-angles to the said members.

It is apparent that herein is provided a means for compensating for both expansion of the floor members and within certain limits, the shrinkage of the same, as both pliable members 20 and 26 will be under pressure to a certain extent when the flooring is applied, thus at all times providing a floor which has a pleasing appearance and which will not cup, buckle or warp.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

A parquetry flooring, comprising a plurality of rectangular blocks, each block composed of a plurality of parallel planks joined along their longitudinal edges, a pin passing transversely through aligned openings in the planks of each block to reinforce the same and comprise the unitary block, a groove extending around the periphery of each block adjacent the medial line thereof, splines adapted to be fitted in said grooves for joining adjacent blocks, and means in each block for absorbing horizontal compression and tensile strains in the floor, said means comprising a strip of resilient material inserted between two adjacent planks of each block.

In testimony whereof I affix my signature.

BROOKE W. CADWALLADER.