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R. W. STORM

2,634,464

FLOORING ELEMENT

Filed July 23, 1948

Fig. 1.

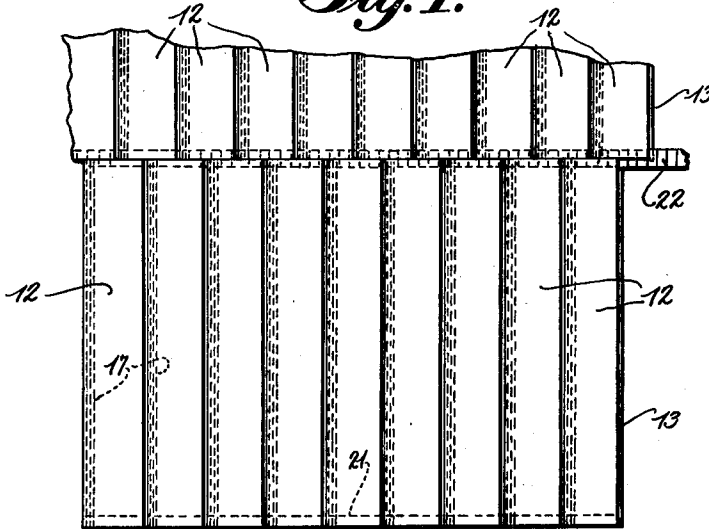


Fig. 2.

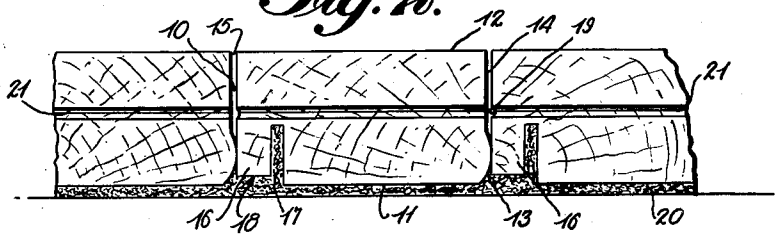
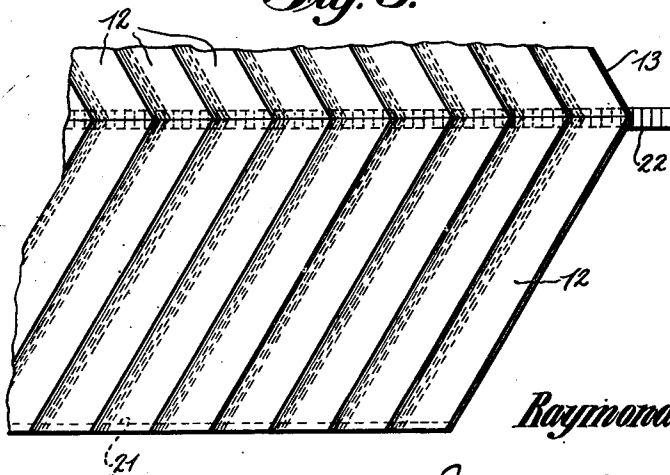


Fig. 3.



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UNITED STATES PATENT OFFICE

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FLOORING ELEMENT

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3 Claims. (Cl. 20—6)

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The invention relates to flooring of the type commonly laid in mastic, but also applicable to nailed floors.

It is an object of this invention to provide a flooring element of novel cross section adapted to preserve uniformity of spacing of the respective elements of a floor under changes of moisture content.

It is a further object of the invention to provide a form of floor element that will be self spacing when laid providing a floor, when assembled, that will have compressibility when swelling takes place, to avoid arching.

It is a further object to provide a form of floor element providing, in itself, means to cause a shrinking floor to return to a former condition of substantially equalized joints.

Further objects of the invention will appear from the following description when read with the accompanying drawings showing an illustrative embodiment of the invention laid in illustrative designs and wherein:

Figure 1 is a plan view of one pattern in which elements of the invention may be laid.

Fig. 2 is an end view of a course of the elements of Fig. 1 with the continuous spline omitted, and showing the cross sectional form of the elements of the invention; and

Fig. 3 is a plan view of a floor laid in accordance with another well-known pattern.

The elements of the invention having the cross sectional form seen in end view in Fig. 2 and their wearing surfaces running with the grain of the wood as shown and as is usual with the type of flooring illustrated may obviously be laid in any pattern, as herringbone, continuous courses (as in Fig. 1), in pre-assembled blocks, or they may be made in long lengths to be nailed down or laid in "mastic."

To provide for automatic and uniform spacing of the elements as they are laid, one edge 10 of the elements is made perpendicular to the bearing surface 11 which is parallel with the wearing surface 12. The remaining edge is formed with a nose 13 extending beyond a cut-back vertical surface 14, the nose 13 being adapted to come into contact with the vertical surface 10 of an adjacent element as the floor is laid, so as to provide uniform spaces between the blocks, as indicated at 15.

The spacing now preferred is substantially $\frac{1}{8}$ inch but may usefully vary from this dimension to approximately $\frac{1}{4}$ inch if desired. This spacing of the elements is provided to permit of expansion of the floor without causing the floor to

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arch as it would do if the edges of the floor panel were placed against fixed abutments. Even though there may be yieldable expansion joints at the edges of the panel, it is likely that there will be spots of arching in the floor. If the elements are laid originally in contact to permit of the swelling of the elements and the closure of the joints 15 a spring element 16 is shown formed by making a cut 17 up from the bottom surface 11 of the element. The spring element 16 is shown as shortened at its bottom edge 18 to prevent any possible drag of this element upon the supporting surface.

The result of this structure is that when the elements expand toward closure of the spaces 15 the members 16 will yield and when the flooring again shrinks the resilience of the elements 16 will again force the elements apart to keep the joints of the floor substantially uniform. The side edges 10 of the elements are shown as formed each with a shallow groove 19 for the purposes of allowing any mastic which is forced upwardly by stresses of service of the floor to expand and prevent the mastic coming to the surface of the flooring. In other words, the groove 19 serves as a "mastic trap."

The pressure upon the mastic layer 20 which tends to force the mastic to the surface of the floor in the joints is also relieved by the space below the shortened member 16 at 18 and by the escape of mastic into the grooves 17. As shown, the ends of the elements are formed with grooves 21 for receipt of splines 22 which are placed between courses, or the grooves 21 may be utilized for the splines which held prefabricated blocks in assembly.

The dimensions of the cuts providing the spring elements 16 at present preferred are a width of cuts 17 of approximately $\frac{3}{8}$ inch and a depth of the cuts 17 from the surface 11 upwardly approximately $\frac{1}{8}$ inch. The width of the spring element 16 combined with the width of the cut 17 desirably amount to approximately $\frac{1}{4}$ inch. The drawings illustrating these presently preferred dimensions show the same as applied to a flooring element of $\frac{3}{8}$ inch.

Minor changes may be made in the physical embodiment of the invention within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A flooring element comprising a strip of wooden flooring material formed with substantially parallel upper and lower surfaces running with the grain of the wood, edge surfaces each

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at least partially normal to said parallel surfaces, a spacing projection extending from at least one of said edge surfaces to contact an adjacent strip when assembled therewith in a floor, and a yieldable member partially freed from the body of the strip by a slot extending to the lower parallel surface of the strip, the lower edge of said yieldable member being cut away to terminate in a plane spaced above the said lower surface whereby to provide a mastic trap between adjacent elements in a floor, said spacing projection being located to contact the yieldable member of an adjacent like strip when assembled therewith in a floor whereby said yieldable member may yield when the strip expands in the floor.

2. A flooring element comprising a strip of wooden flooring material formed with substantially parallel upper and lower surfaces running with the grain of the wood, edge surfaces each at least partially normal to said parallel surfaces, a spacing projection extending from at least one of said edge surfaces to contact an adjacent strip when assembled therewith in a floor, a yieldable member partially freed from the body of said strip by a slot extending to the lower parallel surface of the strip, said slot being adjacent to one of the edge surfaces of the strip and the lower edge of the yieldable member being cut away to terminate in a plane spaced above the said lower surface of the strip whereby to provide a mastic trap between adjacent elements in a floor, said spacing projection being located between the yieldable member of one strip and the adjacent edge of the next strip when said strips are assembled

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in a floor whereby said yieldable member may yield when said strips expand in the floor.

3. A flooring element comprising a strip of wooden flooring material formed with substantially parallel upper and lower surfaces running with the grain of the wood, edge surfaces each at least partially normal to said parallel surfaces, a spacing projection extending from at least one of said edge surfaces to contact an adjacent strip when assembled therewith in a floor, a yieldable member partially freed from the body of said strip by a slot extending to the lower parallel surface of the strip, said slot being adjacent to one of the edge surfaces of the strip and said edge surface having a groove therein extending longitudinally of the strip, the lower edge of the yieldable member being cut away to terminate in a plane spaced above the said lower surface of the strip whereby to provide a mastic trap between adjacent elements in a floor, said spacing projection being located between the yieldable member of one strip and the adjacent edge of the next strip when said strips are assembled in a floor whereby said yieldable member may yield when said strips expand in the floor.

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