C. J. CARTER.

FLOORING.

APPLICATION FILED MAR. 3, 1921.

1,412,506. Patented Apr. 11, 1922.

Fig. 1.

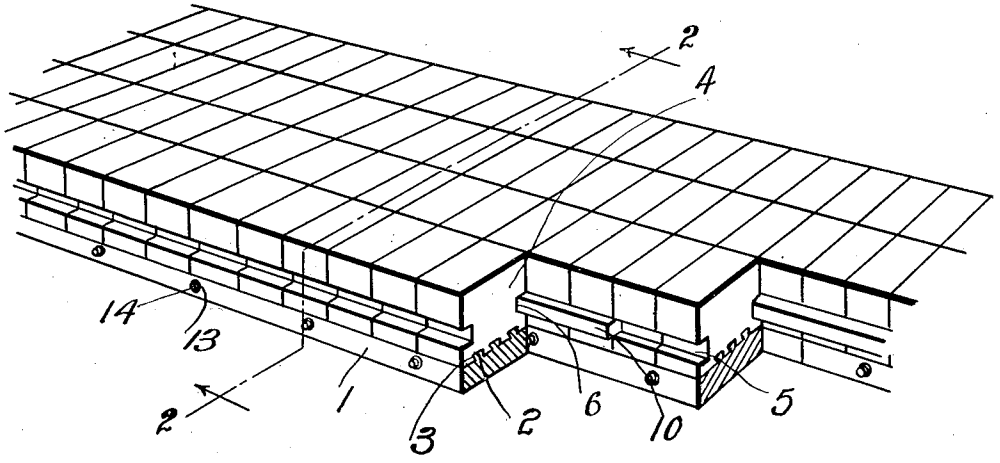


Fig. 2.

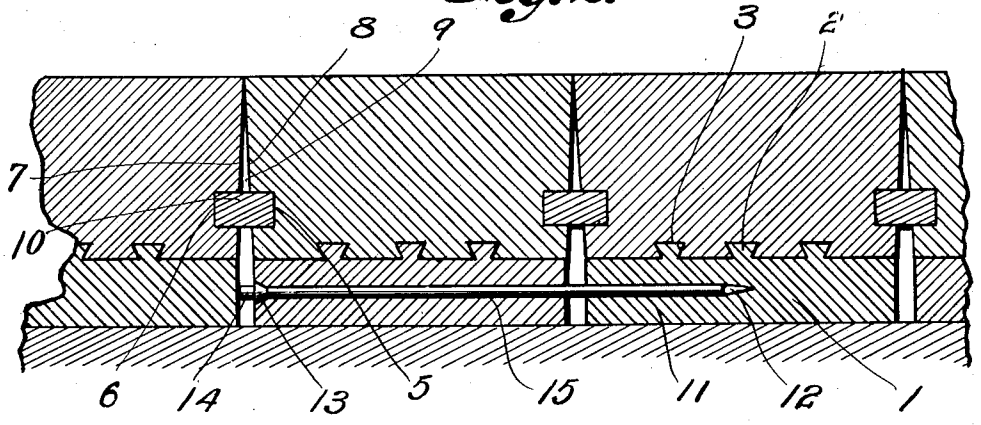


Fig. 3.

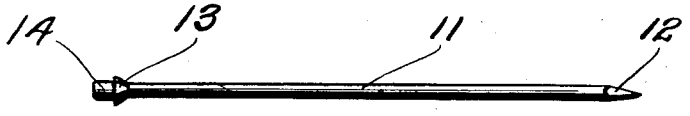
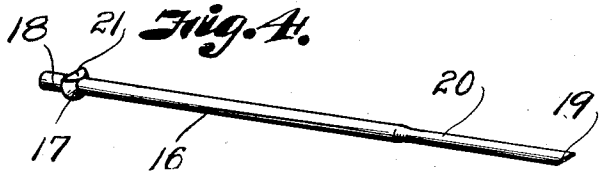


Fig. 4.



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FLOORING.

1,412,506. Specification of Letters Patent. Patented Apr. 11, 1922.

Application filed March 3, 1921. Serial No. 449,479.

To all whom it may concern:

Be it known that I, CHARLES J. CARTER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Flooring; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to a flooring including a nail comprising a combined fastening device, spacer and abutment for adjacent floor sections.

Certain types of wooden floors are laid down in units, each unit consisting of a base board to which is fastened a plurality of floor blocks. The base boards are generally laid down with their fibers running in the usual way, that is, from end to end. The floor blocks, however, have their fibers running vertically since they offer better resistance to wear and tear when the fibers are end on end than when they run longitudinally of the units. With such a construction, it is sometimes the practice to key the sections together with the side edges of the sections being inclined so that the adjacent edges of complementary units diverge toward the foundation. The purpose of this is to provide an expansion space between adjacent sections so as to reduce the liability of the floor warping. This method is well known.

One of the difficulties of laying such a floor is that as the sections are applied, they must be driven into place by a relatively heavy hammer or by considerable pressure so that they align as perfectly as possible. Since the top edges of the sections or units lie close together and the lower portions of the sections or units are spaced apart, it will be apparent that there is always liability of the floor bulging or teetering of the sections under excessive pressure or heavy blows.

I have provided means whereby these disadvantages may be eliminated and the invention includes a fastening device which may comprise a nail which serves as a spacer and also as an abutment between adjacent sections. The nail may have a head with a projecting spacing terminal extending therefrom, substantially the length of the width of the expansion space between the adjacent sections so that when the sections or units are moved into place, the top edge of the unit being applied will rest against the previously laid unit and the lower portion of the complementary edge of the unit will abut against the spacing projection so that it affords an efficient abutment to maintain the sections in proper position and prevents bulging of the floor.

In the drawings,

Fig. 1 is a perspective view of a plurality of floor units in place, to which my invention is applied.

Fig. 2 is a cross sectional view through the same.

Fig. 3 is a detail view of a fastening device, and

Fig. 4 is a slightly modified form of fastening device.

The floor units are shown as each consisting of a base strip 1 having dove-tailed tongues 2 on the upper face thereof, engaging under-cut or dove-tailed grooves 3 in the floor blocks 4, which are adapted to be keyed thereto by the tongue and groove connections. The opposite edges of the blocks are provided with grooves 5 and 6 and they are inclined inwardly and downwardly, as shown at 7 and 8, the inclined edges of adjacent blocks constituting expansion spaces 9 and the grooves 5 and 6 receiving key strips 10, as clearly shown.

The elements just described per se constitute no part of my invention. The invention resides in the device shown in Fig. 3 and in its relation to the floor units.

The fastening device is shown as consisting of a shank 11, preferably provided with a pointed end 12 and of greater length than the width of the floor strip so that the projecting end of a fastening device, passing through one floor strip, may extend into an adjacent base 1 of a complementary flooring unit. The fastening device or nail is provided at one end of the shank 11 with a head 13, from which projects a spacing extension and abutment 14 so that the head 13 is between the shank 11 and the extension 14, as indicated in Fig. 3.

When the sections are being laid, the holes 15 are preferably drilled transversely through the floor strips so that those on one strip will alternate with those in an adjacent strip. The nail or fastening device is then driven through the opening so that the head

will lie substantially flush with the edge of the base strip 1. Then the next succeeding strip is put in place and pressed or hammered until the key strips 10 are received snugly within the grooves 5 and 6. The upper portions of the meeting edges of the floor strips will abut one against the other and the lower edge of one unit will abut against the spacing extension 14 of each of the nails or fastening devices in the complementary strips so that in forcing the floor sections into position, there will be no liability of bulging or warping of the floor.

The fastening devices in their alternate relation, projecting through successive floor units, will tie together the floor units so that they will be securely fastened in place.

It will, therefore, be apparent that the floor units may be easily and conveniently secured together without annoyance of the sections of the floor bulging as it is being laid. This is an important advantage in floor laying systems as will be apparent from the foregoing description in connection with the accompanying drawings.

Attention is directed to the fact that with the arrangement disclosed in the above description, the floor sections or units may be securely assembled directly upon foundations not penetrable by nails, such as concrete and the like, eliminating the expense of sleepers or nailing strips which are ordinarily required in the process of the installation of wood floors.

In Fig. 4 I have shown a slightly modified form of fastening device consisting of a shank 16 having a head 17 and a spacing and abutting extension 18. The point or end 19 of the nail is chisel-shaped; that is, chamfered from the bottom so that the upper face will be flat and the lower face will be chiseled. This construction of point for the nail is for the purpose of leading the point of the nail upward instead of downward, which eliminates liability of splitting the base board.

I also prefer to slightly draw down the portion 20 of the shank 16, as shown, to further eliminate liability of splitting the base.

In order to insure the point 19 entering the base with the chamfered portion underneath, I slightly flatten or cut away the top of the nail head, as at 21, so that the mechanic may contact the portion 21 with his finger to determine the correct position of the point of the nail as it is being driven into the floor.

What I claim and desire to secure by Letters-Patent is:

In combination with a plurality of floor units, adjacent units having inclined edges to form a space between them, a nail, the shank of the nail being of greater length than the width of the floor units, the nail being provided with a head on one end, and a spacing projection extending from the head bridging the space between the inclined edges of the adjacent units.

In testimony whereof I affix my signature.

CHARLES J. CARTER.