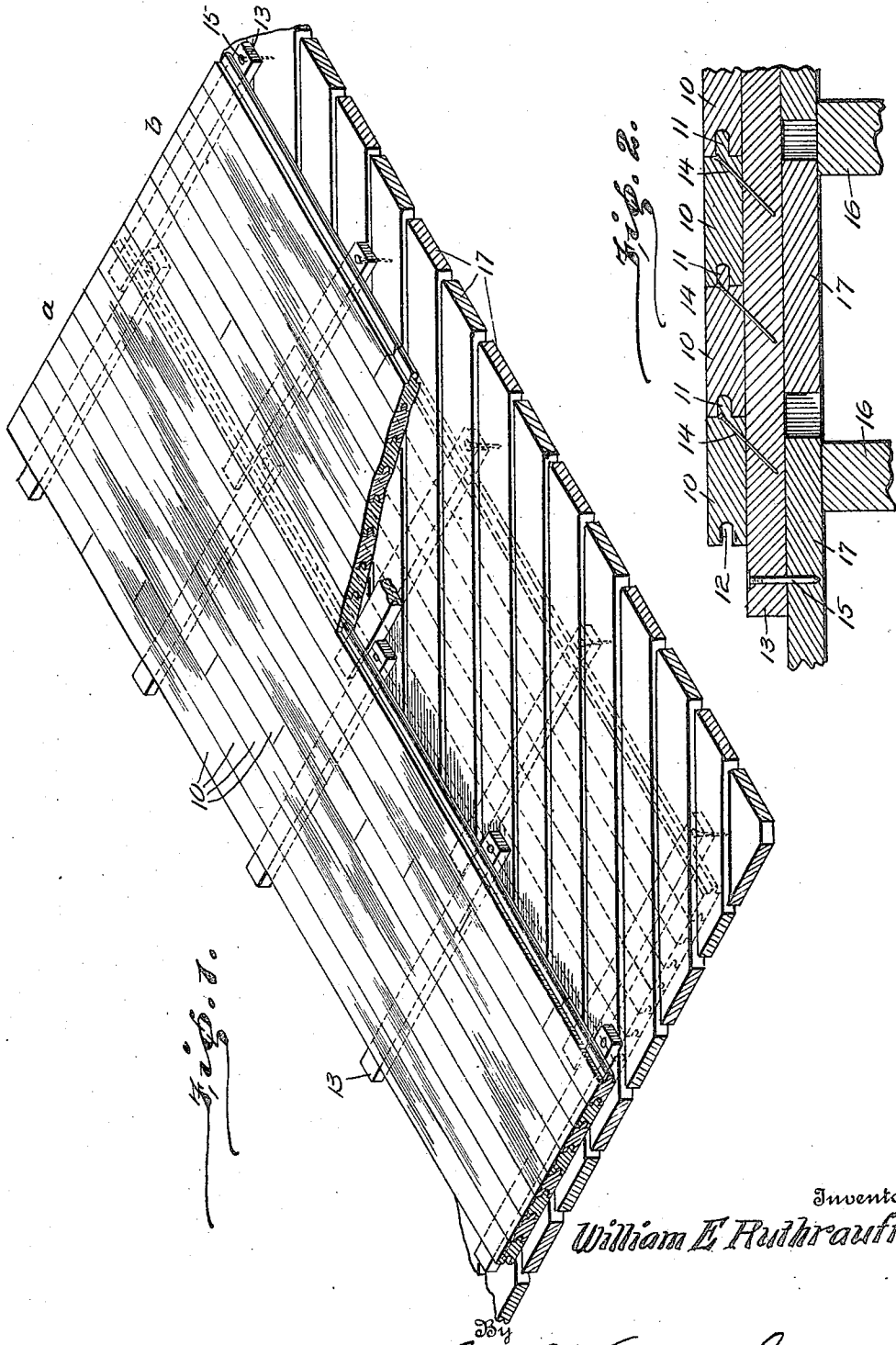


W. E. RUTHRAUFF.
FLOORING CONSTRUCTION.
APPLICATION FILED MAY 31, 1921.

1,407,679.

Patented Feb. 21, 1922.



Inventor
William E. Ruthrauff

Geo. Kimmel.

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. RUTHRAUFF, OF COFFEYVILLE, KANSAS.

FLOORING CONSTRUCTION.

1,407,679.

Specification of Letters Patent. Patented Feb. 21, 1922.

Application filed May 31, 1921. Serial No. 473,982.

To all whom it may concern:

Be it known that I, WILLIAM E. RUTHRAUFF, a citizen of the United States, residing at Coffeyville, in the county of Montgomery and State of Kansas, have invented certain new and useful Improvements in Flooring Constructions, of which the following is a specification.

This invention appertains to an improvement in flooring constructions, and more particularly to a method of laying hardwood floors either as the original floor of newly constructed buildings, or as hardwood flooring supplementing the usual and other forms of wooden floors of old buildings.

The principal object of the invention is to provide for a flooring construction of the class mentioned, and one wherein the usual nailing of the individual flooring strips in position is eliminated, such nailing often resulting in the damaging of the exposed edges of the flooring strips, or the tongue portions thereof, and otherwise resulting in the presence of unsightly cracks and crevices in the finished floor.

Another object of the invention is to provide for a flooring construction as characterized and one wherein a number of individual flooring strips are cut into suitable lengths for the assembling of the same into finished flooring sections, whereby to facilitate the actual laying of a floor free from all of the usual defects therein, as hereinbefore stated, and whereby to effect a marked saving in the total cost of hardwood floors, and in the laying of the same, and also in the time required for the laying operation thereof.

A further object of the invention is to provide for a flooring construction of the type set forth, and one wherein a number of individual flooring strips are cut and assembled into relatively wide sections capable of being easily handled, transported and laid, the tread portions thereof being finally finished before being laid in position, and the sections secured one to the other and to the supporting surface therefor.

With the foregoing and other objects in view, the invention resides in the certain novel and useful construction and arrangement which will be hereinafter more fully described, set forth in the appended claims and illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view, partly in section, of a section of flooring constructed

and arranged in accordance with the objects and purposes of the invention, and,

Fig. 2 is a fragmentary transverse vertical section showing the manner of application of a flooring section in position on its supporting surface and also the manner of assembling and securing of the several flooring strips together.

Referring to the drawing, *a* and *b* represent a pair of finished flooring sections constructed and arranged in accordance with the invention, and for the accomplishment of the objects and purposes thereof, and as shown, each section is made up of a plurality of individual flooring strips 10, which are preferably of hard wood and which may be in the form of whole lengths, or in short lengths one sliced in end to end relation with respect to the other, after the usual manner of floor constructions, and these strips 10 are formed with tongues 11 at one side edge thereof, and grooves 12 at the opposite side thereof, whereby the tongue of one strip will interlock with the groove of the adjacent strips, or vice versa. In the assembly of the strips 10, suitable cleats 13 are provided, and are spaced apart for desired or required distances, and extend transversely of the under side of the strips 10, and the first of the latter is laid on the cleats 13 at a slight distance inwardly from one of the ends thereof, preferably with the tongue of the strip facing inwardly therefrom, and this strip is secured in position by the driving of nails 14 diagonally inward from the point of junction of the upper side of the tongue with the body portion of the strip, one nail into each of the cleats 13. Glue or the like is now applied to the tongue side of the first of the strips 10, and a second strip 10 is laid on the cleats 13 and its grooved edge forced into snug engagement with the tongue edge of the first of the strips, when the blind nailing operation will be repeated thereon from the tongue side thereof. This gluing and nailing operation will be repeated until all of the desired number of flooring strips 10 have been assembled in position on the cleats 13, when the flooring section will be ready to have its tread surface smooth finished by the operation thereon of a planing machine or the like, after which the smoothed tread surface will be polished in natural finish, or otherwise stained, varnished, shellacked, or waxed, as the case may be or as desired. In the blind nailing of the

strips 10 in position on the cleats 13, it is preferred that the strips be subjected to a suitable clamping action whereby the joints between the adjacent strips or strip sections 10 will be reduced to the least possible visibility, and it has been found in practice that this can be readily accomplished with known devices so that a finished flooring section will have its tread surface of an appearance corresponding to that of a solid surface, or, as if the section were made up of a single width of wooden board or plank. It is to be here noted that the last of the strips or strip sections 10 to be laid and secured in position on the cleats is to be spaced inwardly of the complementary ends of the latter correspondingly to the spaces left between the outer edge of the first of the strips and the ends of the cleats 13 complementary thereto, also, that the cleats 13 of one flooring section or unit will be offset from alining relation with respect to the next adjacent flooring section to be abutted against the same, the purpose of which arrangement will be hereinafter more fully explained.

In the laying of the entire floor of a room, the flooring sections *a*, *b* will be cut correspondingly for the entire length or width of the room, depending upon the desired direction of run of the same therein, and flooring sections laid onto the supporting surface with the cleats thereof facing downwardly. In the laying of the flooring section, the first of the same will be laid at one side of the floor space and secured in such position by the driving of nails 15 downwardly through the outer projecting ends of the cleats 13, the inner free ends of the latter being either cut off on the line of the grooved edge of the first of the flooring strips 10 thereon, so as to fit closely against the adjacent side wall of the room, or the same can be projected inwardly of the unfinished wall between the studding thereof. After the securing of the first of the sections in position, a second section is laid in position with its inner cleat ends projecting under the forward edge of the secured section, and glue is then applied to the adjacent tongue and groove of the section, when the second section will have its grooved edge moved into engagement with the tongue of the first section, a suitable clamping means being preferably used for the purpose, whereby a tight joint will be effected therebetween. Upon the tightening up of the joints between the sections, nails or other similar fastenings 15 will be passed downwardly at the outer exposed ends of the cleats 13 of the second section, substantially as is shown in Fig. 4. The remaining flooring sections will be similarly laid and secured in position successively until the entire floor has been completed.

In newly constructed buildings, when the

floor joints 16 are covered with a sub-flooring of sheathing 17 or the like, as shown in the drawing, the flooring sections *a*, *b* will be laid on the sheathing 17 and the cleats 13 nailed directly thereto, and correspondingly, in the re-flooring of old buildings, the flooring sections *a*, *b*, will be laid directly on the tread surface of the old flooring and secured thereto.

In accordance with the invention, by manufacturing the flooring sections directly at a mill, the flooring strips 10 and the cleats 13 can be cut to a desired or proper length for a given sized floor, and with a minimum amount of waste in the lumber used; the nailing of the flooring strips 10 to the cleats 13 can be more readily accomplished and with a least possible chance for the damaging or scarring of the edges of the individual flooring strips; and the flooring sections can have their flooring surfaces finely finished before the laying of the same, so that a more finely finished floor will be provided, and time required for the actual laying and securing of the same be reduced to a minimum.

It is well understood that, while the preferred embodiment of the invention has been described and illustrated herein in specific terms and detail, various changes in and modifications of the same may be resorted to without departing from the spirit of the invention, or from the scope of the claims appended hereto.

Having thus fully described the invention, what is claimed, is:—

1. In a flooring construction, a plurality of individual flooring strips having their opposite side edges engaged and glued one to the other to form a relatively wide finished floor tread section, a plurality of spaced cleats extending transversely of the under sides of the sections and having the said flooring strips individually secured thereto, the opposite ends of said cleats being arranged to project from the outer opposite side edges of the section, and fastening means adapted to engage the cleats of several of said sections at one end thereof only for securing the said sections in close edge to edge abutting position, whereby to form a finished floor tread surface, the projecting ends of said cleats being adapted to underlie the flooring sections adjacent thereto.

2. In a flooring construction, a plurality of flooring sections each consisting of a plurality of individual flooring strips having their tongued and grooved edges snugly fitted and glued together, a plurality of spaced cleats extending transversely of the under sides of the sections and having the individual flooring strips thereof blind nailed to the same, said sections being adapted to be laid in side to side relation

and to have their adjacent tongued and grooved edges snugly fitted and glued together, and fastening means adapted to engage said cleats at one end only for securing said sections in position, the ends of said cleats being projected beyond the opposite sides of the sections and adapted to underlie the sections adjacent thereto, when in position.

5 3. In a floor construction, the combination with a sub-flooring, of a plurality of flooring sections of hard wood adapted to be laid on the sub-flooring, each of said flooring sections consisting of a plurality of individual flooring strips having their oppositely tongued and grooved side edges snugly fitted and glued together, a plurality of spaced cleats extending transversely of the under faces of the said flooring sections and having the individual flooring strips blind nailed thereto, the ends of said cleats being arranged to project beyond the opposite side edges of the sections and to underlie the edges of the adjacent sections, when in position.

10 25

In testimony whereof I affix my signature hereto.

WILLIAM E. RUTHRAUFF.