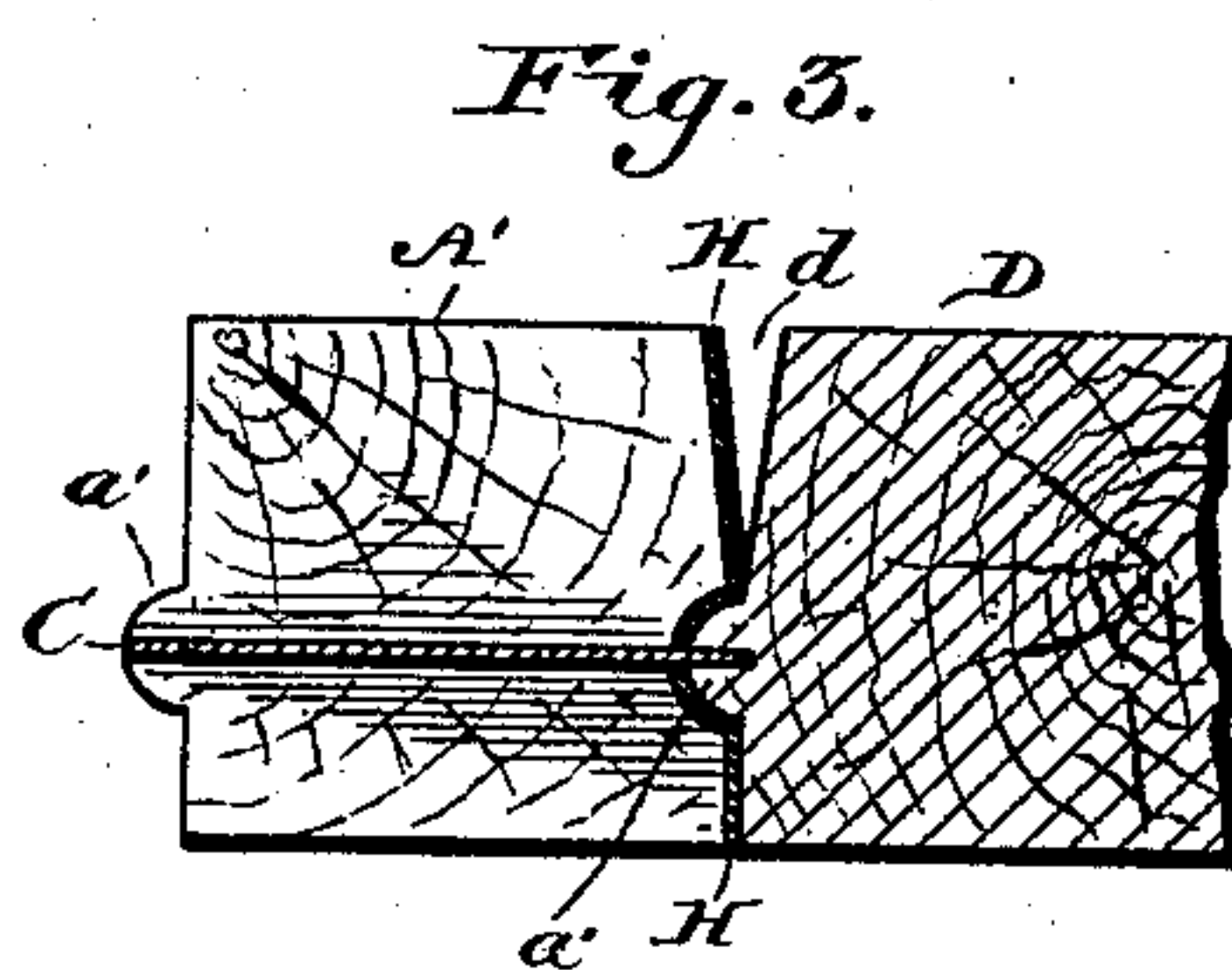
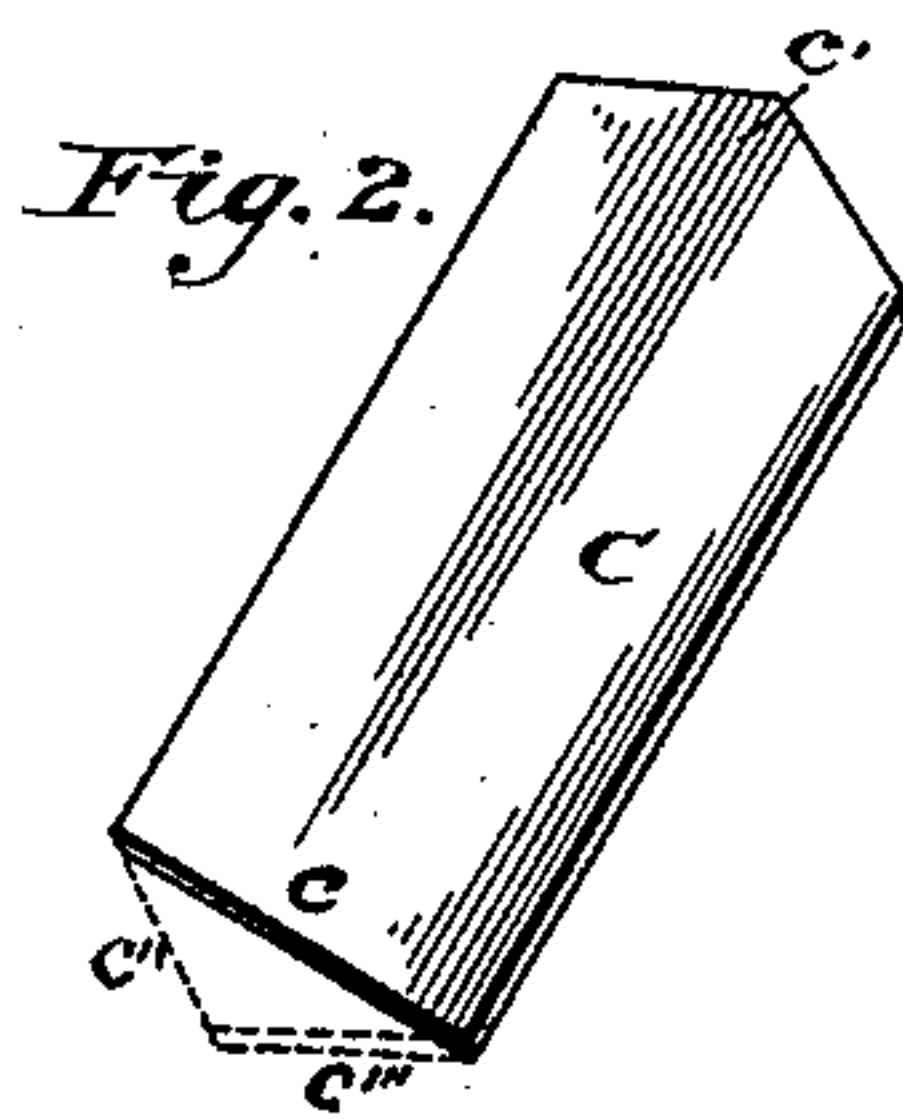
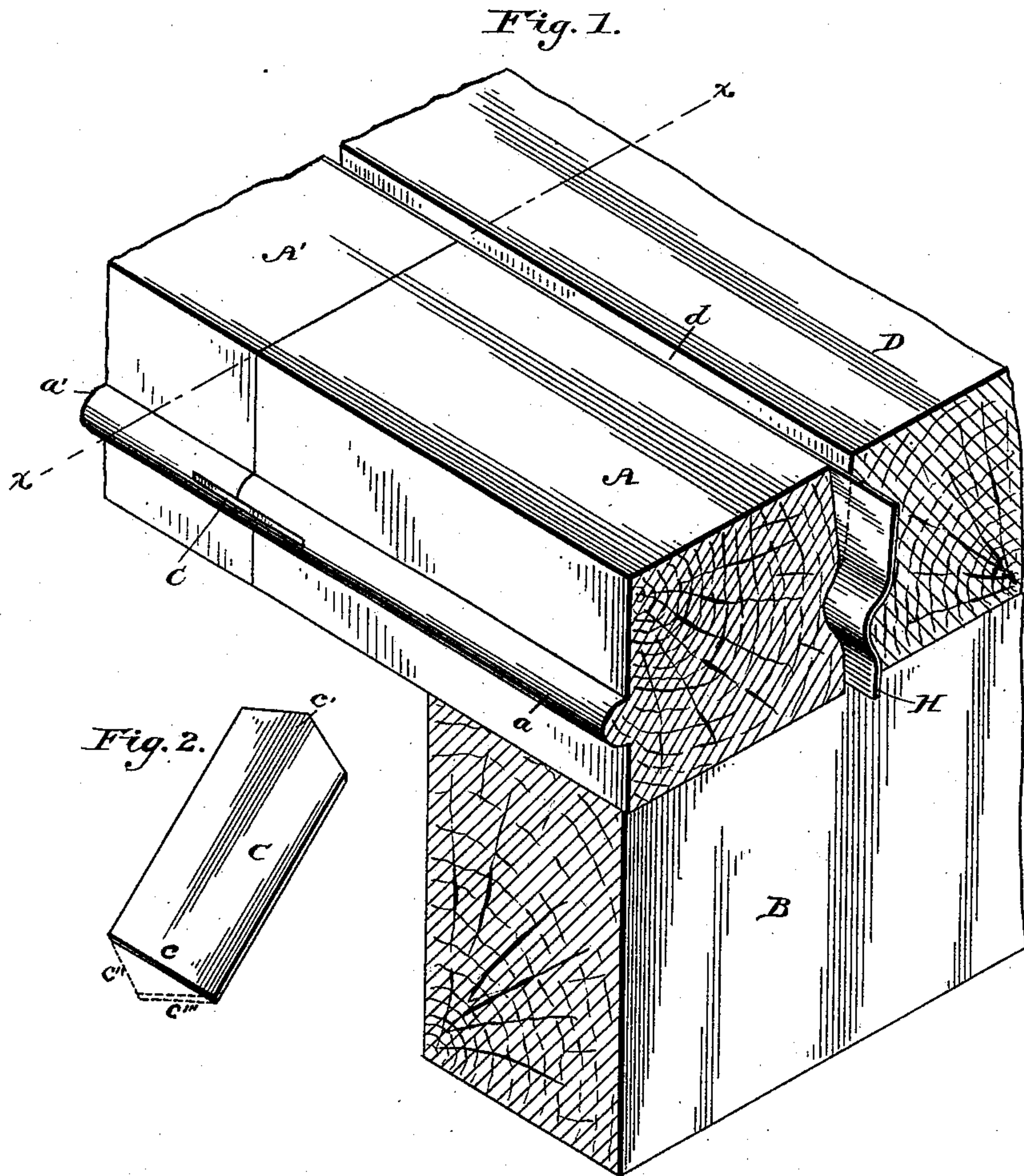


(No Model.)

J. D. FINLEY.
FLOORING, &c.

No. 422,584.

Patented Mar. 4, 1890.



Witnesses

H. W. Elmore,
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UNITED STATES PATENT OFFICE.

JAMES D. FINLEY, OF CHICAGO, ILLINOIS.

FLOORING, &c.

SPECIFICATION forming part of Letters Patent No. 422,584, dated March 4, 1890.

Application filed January 30, 1889. Serial No. 298,129. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. FINLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Flooring, &c., of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to the construction of flooring for packing-houses, breweries, ice-houses, chill-rooms, stables, laundries, or wherever an air or water tight floor is desired; and it relates also to making sidewalks, roofs, or the floors and walls of cisterns, tanks, vats, &c.

The objects of my invention are, first, the saving of lumber used in flooring, walls, &c.; second, facilitating and cheapening the construction of the same by way of completing the work at the time of laying the floor or putting the wall in position with the sole exception of the cementing or applying pitch to the seams and joints where such is required as a means of completing the piece of work.

The invention consists in the construction hereinafter described, and specifically embraced in the claims.

Figure 1 is a perspective view of a section of flooring broken away in part, showing the relative arrangement of flooring-planks with respect to a joist and to each other, the position of key in fastening the butts or joints of the planks, and a packing between the planks of the strip order. Fig. 2 is a representation of a flat steel key of the kind used in fastening the butts or joints of the flooring-planks. Fig. 3 is a sectional view on line *xx* of Fig. 1.

In Fig. 1 of the drawings is shown a sectional part of flooring indicating the principal form of a floor constructed according to my invention.

I use flooring-planks of the tongue-and-groove order—such as is represented in plank A—nailing the same to the joists B in the ordinary manner, as by toe-nailing, or by nailing from the top, the butts or joints being secured in position by a flat steel key or tree-nail or tongue C, preferably, or by using a

round tenon as a modified form of key, said key C being forced into its position, as shown in Fig. 1. In each of the flooring-planks at the joint or butt is provided a saw-cut or groove of sufficient depth to admit one-half of the key C, taken on a line passing longitudinally thereof through its center—that is, half of one side of the key C will rest in the saw-cut or groove in one end of plank A, and the other half in the other saw-cut or groove in the adjacent end of the other abutting plank A', the key being of sufficient length to extend, when its rear portion is driven up flush with the tongues *a a'*, into the side of the opposite or rear plank D. In this manner the abutting ends of the planks A A' are held together by the key C, its entering or pointed or sharpened end having a secure bearing in the flooring-plank D, while the other or rear end of the key C is firmly held by the next plank that is secured in position on the joist B. The groove of each subsequent plank added to the flooring thus serves to hold the rear ends of the keys C because of snugly fitting over the tongues through which the keys are passed, the rear ends of the keys remaining, preferably, flush with the outer surfaces of the tongues, as shown in Fig. 1.

In some cases the key could be of greater length than that shown in Fig. 2, so that its two ends *c c'* (shown in full lines) would project farther in each direction, and both ends might be pointed, the dotted lines *c'' c'''* in said Fig. 2 indicating such construction in connection with the full lines at the other end. When such longer keys are used than that shown, the rear end of the key where said key is driven up into holding position would not leave its rear end flush with the outer surface of the tongues *a a'*, but would project still beyond, and hence the subsequently-laid flooring would be driven thereon in placing it in position for nailing.

In some cases the key might be driven farther in than simply to the point of having its rear end flush with the outer surface of the tongues *a a'*.

I usually place a base-board in position against the wall of the room, and I lay or

tack on a strip of felt or canvas or rubber or other suitable packing substance to the base-board all around the room and of a width according to the thickness of the flooring. I
 5 lay down a streak of flooring abutting at one edge and at its ends against the packing to make a tight joint, driving the keys through the saw-cuts in the abutting ends of the flooring-planks, so that their front pointed ends
 10 project into the base-board, their rear ends remaining flush with the surfaces of the tongues *a a'*. Against the exposed edge of this streak of flooring I place another strip of packing, and then put down another streak
 15 of flooring until the floor is completed, strips of packing being put all around the base-board to fit against the adjacent edges of the flooring.

In some cases the meeting top edges of the
 20 flooring-planks are beveled, as shown at *d*, when it is desired to use pitch to fill into the flooring-joints, as in the common calking flooring. When the edges of the flooring are so beveled, the strips of packing *H* are so placed
 25 that their upper edges do not come quite up to the top of the flooring, their lower edges extending down or nearly down to the lower surface of the flooring.

The grooves in the edges of the flooring-planks are somewhat larger than the tongues
 30 on the opposite edges of said planks to admit of the packing suitably fitting therein, and yet allowing the flooring-planks to be driven closely up against each other in laying and
 35 nailing them down.

Instead of joists *B*, any suitable supports may be used. The flooring may be laid also directly over what is known as "inch surface flooring."

The object of the yielding packing above 40 described is to form an air and water tight joint, and yet allow for the expansion and contraction of the planks.

Having thus fully described my invention, what I claim, and desire to secure by Letters 45 Patent, is—

1. A flooring or wall formed of planks, each having a semicircular tongue on one edge and a semicircular groove in the other edge, and secured edge to edge upon a suitable support, 50 the grooves being somewhat larger than the tongues and having a yielding packing held between the meeting edges, substantially as set forth.

2. A flooring or wall formed of planks, each 55 having a semicircular tongue on one edge and a semicircular groove in the other edge, and secured edge to edge upon a suitable support, the grooves being somewhat larger than the tongues and having a yielding packing held 60 between the meeting edges, and keys passing through the butts or joints, substantially as set forth.

3. A flooring or wall formed of tongue-and-groove planks secured edge to edge upon a 65 suitable support, the grooves being somewhat larger than the tongues and having yielding packing held between the meeting edges, the planks on one side of the tongues and grooves being beveled, and keys passing through the 70 butts or joints, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES D. FINLEY.

Witnesses:

WILLIAM H. CHADSEY,
 FRANK O'NEIL.