

No. 792,317.

PATENTED JUNE 13, 1905.

W. H. COOLEY.

FLOORING.

APPLICATION FILED JUNE 9, 1904.

Fig. 1.

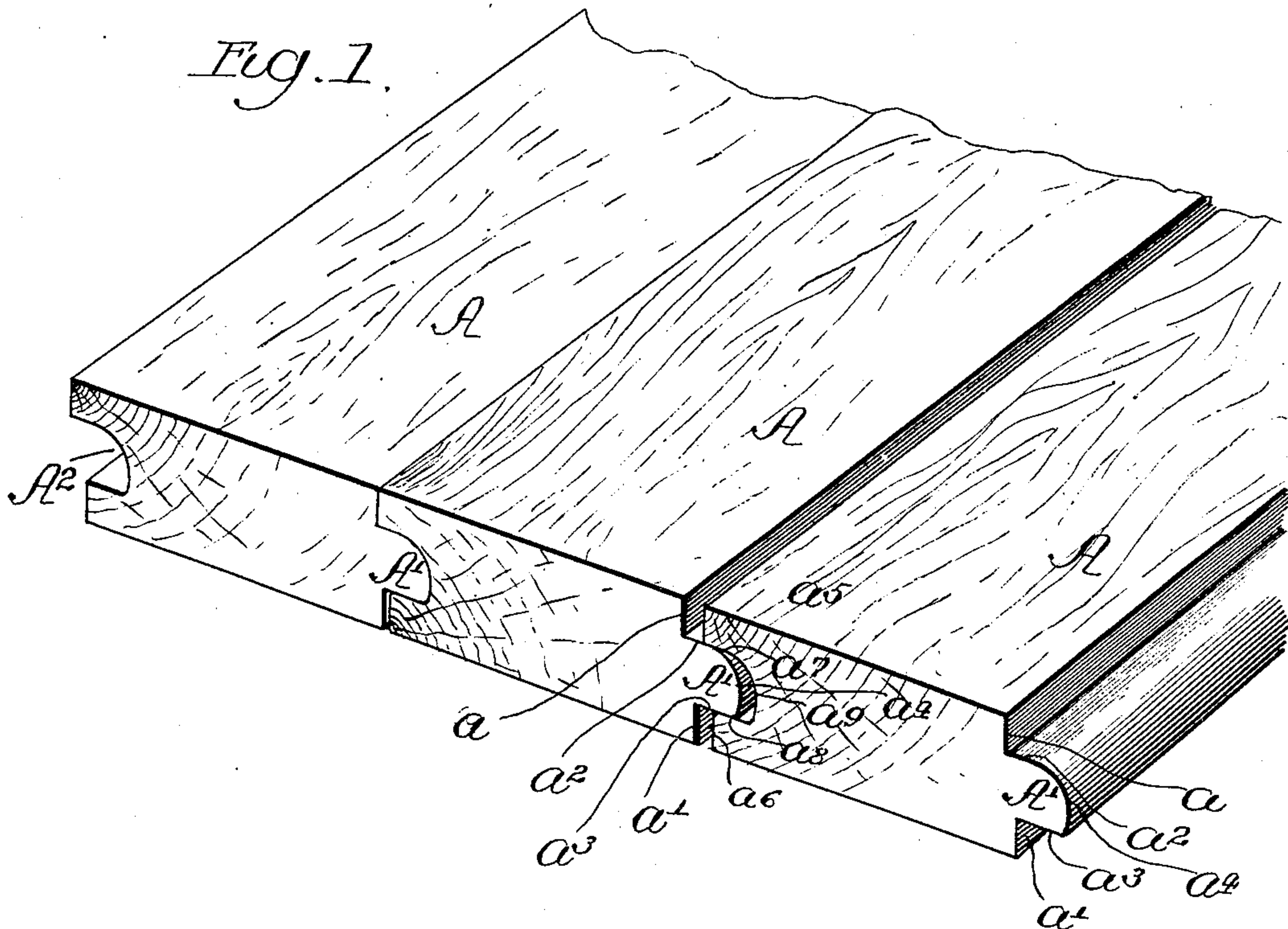
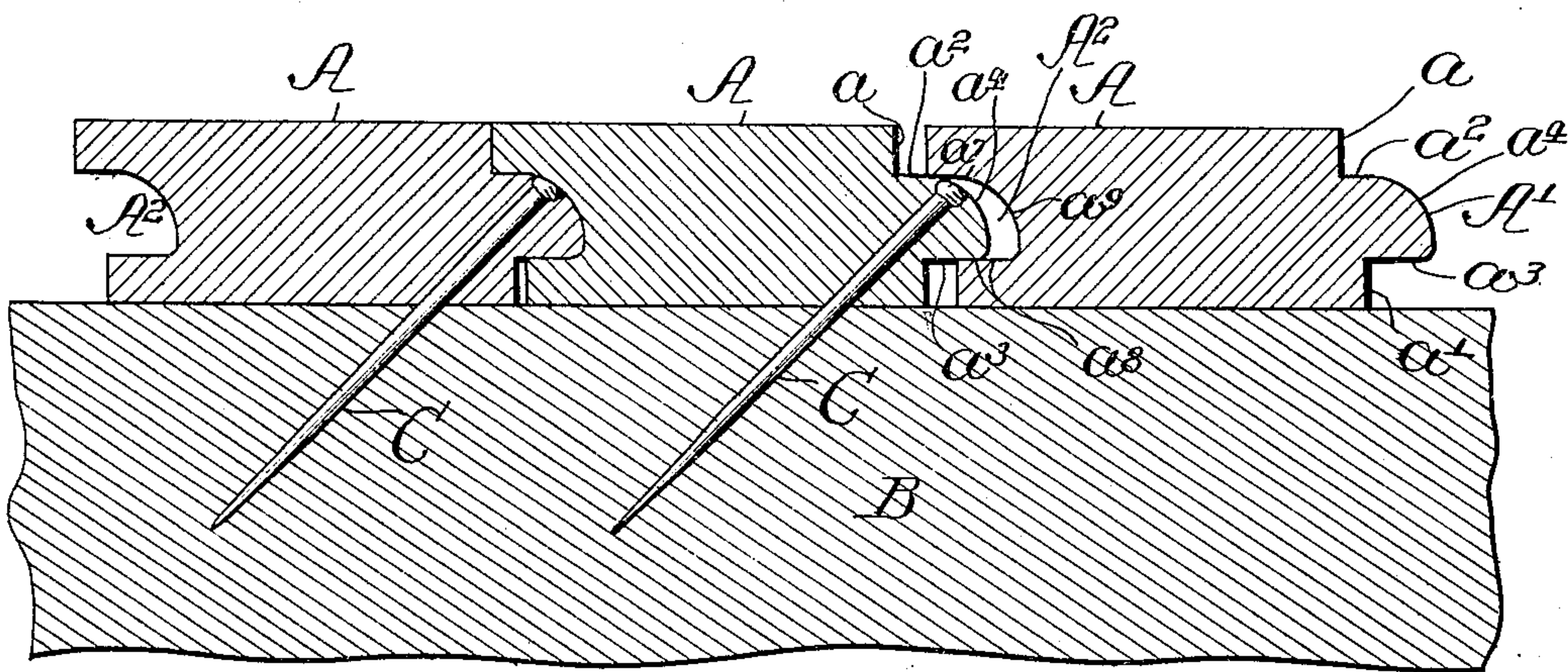


Fig. 2



Witnesses:

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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM H. COOLEY, OF EVANSTON, ILLINOIS.

FLOORING.

SPECIFICATION forming part of Letters Patent No. 792,317, dated June 13, 1905.

Application filed June 9, 1904. Serial No. 211,871.

To all whom it may concern:

Be it known that I, WILLIAM H. COOLEY, a citizen of the United States, and a resident of Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Flooring; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in matched flooring, and more especially in the construction of the tongues and grooves of flooring strips or boards.

The invention consists in the matters hereinafter described, and pointed out in the appended claim.

As shown in the accompanying drawings, Figure 1 is a perspective view showing three flooring-strips embodying my invention. Fig. 2 is a sectional view taken transversely through the flooring-strips and the joists on which the same rests, illustrating the position of the nails used for holding the flooring-strips to said joists.

As shown in said drawings, A A A designate flooring-strips, and B a joist to which the same are secured. Each of the flooring-strips A is provided on one side with a tongue A' and on its opposite side with a groove A'', adapted to receive the tongue of an adjacent strip.

a a' indicate the laterally-facing vertical or side faces of the flooring-strips above and below the tongue A'. These lateral faces a a' are arranged out of line with each other or in offset relation, the surface a above said tongue being located at a greater distance inwardly from the edge of the tongue than the surface a' below the tongue. The tongue is provided with a horizontal top surface a^2 adjacent to the upper vertical surface a . Said top surface a^2 is much narrower than the width of the tongue and is preferably made about as wide as the horizontal distance between the vertical surfaces a a' . The said tongue also has a flat horizontal bottom surface a^3 and a convexly-curved surface a^4 , extending from the outer edge of the flat surface a^3 downwardly to the outer margin of the flat lower

surface a^3 and giving a generally tapered form to the outer part of the tongue.

The groove A'' is shaped to correspond with the form of the tongue A', and the grooved edge of the strip is provided with upper and lower vertical faces a^5 a^6 , arranged in offset relation to each other in the same manner as are the vertical surfaces a a' . Said groove has a top horizontal surface a^7 , adapted to rest and fit upon the top horizontal surface a^2 of the tongue, and also has a horizontal bottom surface a^8 , corresponding with the bottom surface a^3 of the tongue, and a concave surface a^9 , corresponding with the convex surface a^4 of the tongue.

In nailing to the joists B the strips, provided with tongues shaped as described, nails, such as indicated in C C of Fig. 2, are driven obliquely through the upper convex surfaces of the tongues and downwardly through the adjacent marginal part of the strip into the joist. By reason of the fact that the lower vertical surface a' extends beyond or is in offset relation to the upper vertical surface a an ample quantity of wood is afforded through which the nails may be driven without liability of splitting the edge of the strip. The flooring-strips made as described may be easily and quickly joined or driven together in readiness for nailing, for the reason that the tongues being of rounded form on their upper surfaces have a generally tapered form and may therefore be readily driven or forced into the grooves.

A special advantage is gained by the employment of the horizontal top surface a^2 on the tongue, together with the horizontal downwardly-facing surface a^7 of the groove, for the reason that this construction affords a firm and solid support for the relatively thin overhanging part of the wood above the groove, not only when the flooring is first laid, but in case any shrinking of the flooring-strips occurs. In other words, the surfaces a^2 a^7 , which come in contact with each other above the tongue, being horizontal and the tapered part of the tongue being located substantially outside of the vertical line passing through the lower vertical surface a' of the strip, the tongue is not only caused to readily enter the

groove by reason of the tapered form of its outer part, but the overhanging portion of the grooved edge of the board above the tongue is not supported by the tongue itself, but by the surface a^2 , which is inside of the vertical line passing through the surface a' , so that a perfectly solid support is afforded for the said overhanging part at the tongued side of the strip, and such solid support is not affected in any way by such slight shrinking of the flooring-strip as may occur after it is laid, it of course being understood that the said surface a^2 will be made of greater width than any amount of shrinkage that could possibly occur in the flooring-strips.

It is essential in the construction of flooring in accordance with my invention that the tongued edge of the strip should be so shaped that the nails used to secure the strips to floor-joists or rough flooring should be driven through the convex surface a^1 of the tongue and should pass obliquely through the tongue inside of the vertical surface a' below the same, it being necessary that the nails should be driven through said convex surface a^1 and not through the horizontal surface a^2 in order that the latter may remain smooth and flat and free from any projecting nail-heads or roughness, such as might be caused by the driving of the nails therethrough, so that the thin overhanging part of the wood above the groove in the adjacent groove edge of the board will fit accurately to the said surface a^2 , and the latter will afford a smooth and flat bearing-surface for said overhanging part. It is therefore a distinguishing feature of the flooring-strips embodying my invention that the vertical surfaces a a' above and below the tongue should be offset only a short distance

laterally from each other and to such extent only that a nail driven obliquely through the tongue and marginal part of the board below the same will enter through the curved surface of the tongue and pass at some distance inwardly from the said lower vertical surface a' .

I claim as my invention—

A flooring board or strip provided at one edge with a tongue and at its opposite edge with a groove, said strip having its lateral surface above the tongue offset inwardly from its lateral surface below the tongue, and its lateral faces above and below the groove on its opposite edge correspondingly located in offset relation, the upper surfaces of the tongue being convexly curved to give tapered form to the tongue, and the upper surface of the groove being correspondingly shaped, the top surface of the base of the tongue being horizontal, and the downwardly-facing surface of the groove adjacent to its outer margin being correspondingly horizontal to rest upon the horizontal surface of the base of the tongue, the vertical lateral surface below the tongue being offset to such a short distance from the lateral vertical surface above the tongue, that nails may be driven through the convexly-curved surface only of the tongue and that when so driven through said convex surface, will pass inside of said lateral surface below the tongue.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 6th day of June, A. D. 1904.

WILLIAM H. COOLEY.

Witnesses:

C. CLARENCE POOLE,
GERTRUDE BRYCE.