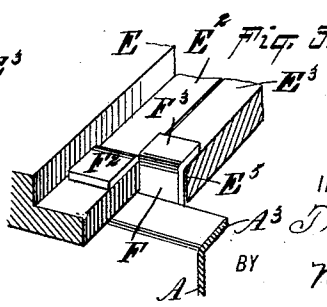
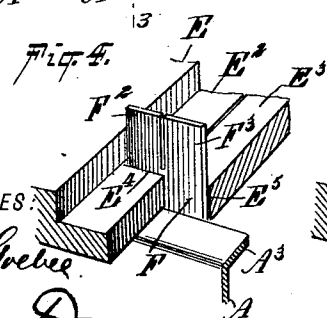
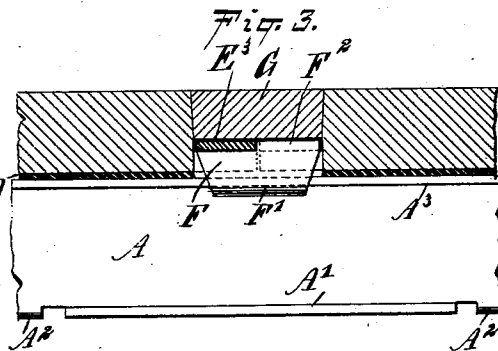
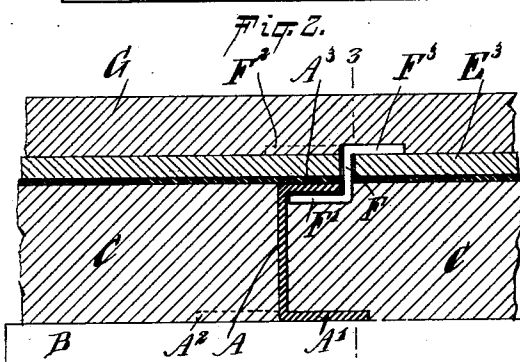
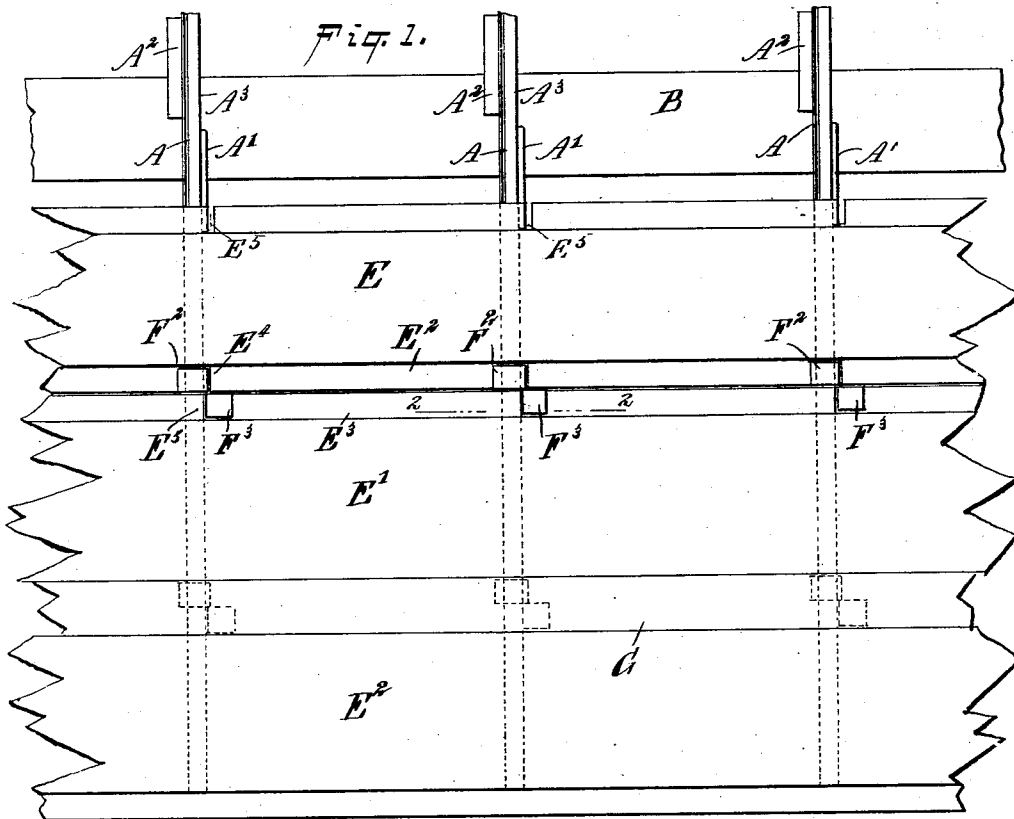


(No Model.)

T. CANTWELL.
FLOORING.

No. 564,820.

Patented July 28, 1896.



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THOMAS CANTWELL, OF NEW YORK, N. Y.

FLOORING.

SPECIFICATION forming part of Letters Patent No. 564,820, dated July 28, 1896.

Application filed March 24, 1896. Serial No. 584,592. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CANTWELL, of New York city, in the county and State of New York, have invented a new and Improved Flooring, of which the following is a full, clear, and exact description.

The invention relates to hard-wood or in-laid flooring for fireproof and other buildings; and the object of the invention is to provide a new and improved flooring which is simple and durable in construction, readily secured in place, and not liable to warp.

The invention consists principally of a board provided on its side with a rabbet for forming a bottom flange having a transverse slot, and a clamping-iron adapted to pass, with part of its body, into the slot, and having an arm extending from the body, said arm being adapted to be bent down over the board flange.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2. Fig. 4 is a sectional perspective view of the improvement, showing the clamping-iron applied and before bending its clamping-arms; and Fig. 5 is a similar view of the same with the arms bent in position.

The improved flooring is provided with a series of rails A, arranged parallel one to the other and formed at their lower ends with horizontal flanges A' and A², located alternately on opposite sides of the body of the rail A, as plainly illustrated in the drawings. The flanges A' A² are placed suitable distances apart, as indicated in Fig. 3, and said flanges rest on a suitable foundation B. The upper end of each rail A is formed with a continuous horizontal flange A³, and the several rails are securely embedded in a layer of cement or other suitable material C, resting

on said foundation B, and left to set and dry, so as to become hard.

On the top surface of the layer of cement is placed a thin coating D of tar or like binding substance, preferably applied in a hot state, and on the coating D are placed the boards E E' E², made either plain or inlaid and cut a suitable length. The adjacent sides of the boards are formed with rabbets for producing bottom flanges E² E³, formed with transverse slots E⁴ E⁵ in alinement with the outer edge of the flange A³ of the corresponding rail A, as indicated in Figs. 1 and 2.

The two alined slots E⁴ E⁵ are adapted to receive the body of a clamping-iron F, formed at its lower edge with a flange F', adapted to pass under the flange A³ of the adjacent rail A, it being understood that a suitable opening is made under this portion of the rail by a chisel or like tool to permit of inserting the flange F' after the cement has become hard.

The upper end of the body of the clamping-iron F is formed with two arms F² and F³, of which the arm F² is adapted to be bent upon the top of the flange E² and the other arm, F³, is adapted to be bent over the flange E³, but in an opposite direction to that in which the flange F² extends. (See Fig. 1.)

In laying the floor the board E', already in place against the board E², receives the clamping-iron F at the slot E⁵, with one-half of the body extending beyond the edge of the flange E³ and with the flange F' engaging the under side of the flange A³. Now the operator bends the arm F³ downward to fasten the clamping-iron and board E' in place, and then the board E is placed adjacent to the board E', and in such a manner as to engage with its slots E⁴ the projecting body portions of the clamping-irons F. When this has been done, the remaining vertically-disposed arm F² is bent downward upon the flange E² to fasten the board E in place at this side. The next board is then joined in the same manner to the other side of the board E, and the above-described operation is repeated until the floor is completed.

Into the groove formed by the two adjacent rabbets I place a covering-strip G, preferably cut out at its under side, so as to snugly re-

ceive the arms F^2 F^3 , bent down upon the flanges E^2 and E^3 , respectively. The top of the strip G is flush with the boards E E' E^2 , and this strip is preferably nailed or otherwise fastened to the adjacent boards.

It will be seen that by the arrangement described the several boards are securely fastened in place and are not liable to warp, and no fastening devices whatever are visible on the surface of the flooring.

It will be seen that by the arrangement described the floor-boards are drawn very firmly down upon their supports, mainly on the rails A , so that the boards are prevented from warping, and longitudinal shifting of the boards is prevented owing to the transverse clamping-irons extending into the adjacent side flanges of the adjoining boards.

The flanges A' A^2 are placed suitable distances apart to permit the cement to pass into the space under the web of the rail between adjacent flanges.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A floor, provided with a series of boards each provided on its side with a rabbet for forming a bottom flange having a transverse slot, and a clamping-iron adapted to pass with part of its body into the slot and having an arm extending from the body, said arm being adapted to be bent down over the board flange, substantially as shown and described.

2. A flooring, provided with a clamping-iron having a body formed with a flange extending approximately at right angles from the lower end of the body, and arms extending from the upper end of the body and adapted to be bent at right angles thereto, substantially as shown and described.

3. A flooring, provided with a clamping-iron having a body formed with a flange extending approximately at right angles from the lower end of the body, and arms extending from the upper end of the body and adapted to be bent at right angles thereto, and in opposite directions, substantially as shown and described.

4. A flooring, comprising rails placed parallel to one another and formed at their upper and lower ends with flanges, floor-boards supported on said rails and extending at right angles thereto, each board being formed on its sides with rabbets for forming bottom flanges, each flange having a transverse slot, and a clamping-iron formed at its lower end with a flange adapted to engage the rail-flange, said clamping-iron being adapted to pass with its body into alined slots of the adjacent bottom flanges, the clamping-irons being formed with arms adapted to be bent upon the top of said bottom flanges, substantially as shown and described.

5. A flooring, comprising rails placed parallel to one another and formed at their upper and lower ends with flanges, floor-boards supported on said rails and extending at right

angles thereto, each board being formed on its sides with rabbets for forming bottom flanges, each flange having a transverse slot, and a clamping-iron formed at its lower end with a flange adapted to engage the rail-flange, said clamping-iron being adapted to pass with its body into alined slots of the adjacent bottom flanges, the clamping-iron being formed with arms adapted to be bent upon the top of said bottom flanges, with the arms standing in opposite directions, substantially as shown and described.

6. A flooring, comprising rails placed parallel to one another and formed at their upper and lower ends with flanges, floor-boards supported on said rails and extending at right angles thereto, each board being formed on its sides with rabbets for forming bottom flanges, each flange having a transverse slot, a clamping-iron formed at its lower end with a flange adapted to engage the rail-flange, said clamping-iron being adapted to pass with its body into alined slots of the adjacent bottom flanges, the clamping-iron being formed with arms adapted to be bent upon the top of said bottom flanges, and a closing or filling strip fitted into the groove formed by adjacent rabbets, substantially as shown and described.

7. A flooring, comprising rails placed parallel to one another and formed at their upper and lower ends with flanges, floor-boards supported on said rails and extending at right angles thereto, each board being formed on its sides with rabbets for forming bottom flanges, each flange having a transverse slot, a clamping-iron formed at its lower end with a flange adapted to engage the rail-flange, said clamping-iron being adapted to pass with its body into alined slots of the adjacent bottom flanges, the clamping-iron being formed with arms adapted to be bent upon the top of said bottom flanges, and a closing or filling strip fitted into the groove formed by adjacent rabbets, said strip being formed on its under side with recesses for said arms, substantially as shown and described.

8. A flooring, comprising rails formed at their lower ends with flanges adapted to rest on a suitable foundation, the upper end of each rail being formed with a flange, a binding material such as cement for embedding said rails, floor-boards supported on said rails, and clamping-irons for holding said floor-boards in position on the rails, substantially as shown and described.

9. A flooring provided with parallel rails each formed at its lower end with horizontal flanges extending alternately in opposite directions, and resting on a suitable foundation, the adjacent flanges being spaced apart, the upper end of each rail being formed with a continuous flange, and a binding material such as cement for embedding said rails and holding the latter in position, as set forth.

10. A flooring, provided with parallel rails each formed at its lower end with horizontal

flanges extending alternately in opposite directions and resting on a suitable foundation, the upper end of each rail being formed with a continuous flange, a binding material,
5 such as cement, for embedding said rails and holding the latter in position, floor-boards supported on said rails, and clamping-irons

for holding said floor-boards in position on the rails, substantially as shown and described.

THOMAS CANTWELL.

Witnesses:

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JNO. M. RITTER.