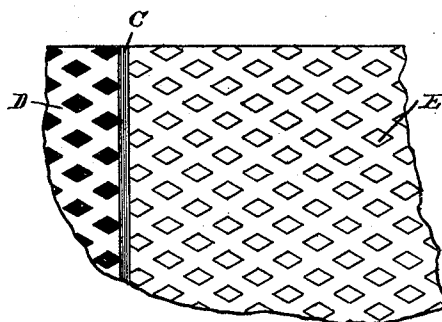
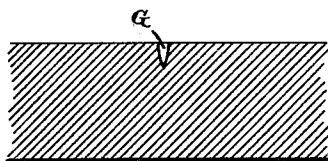
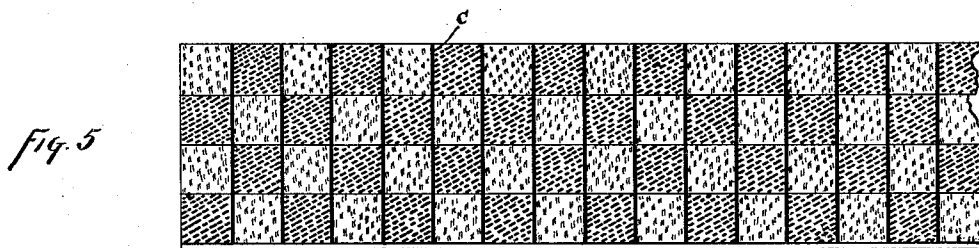
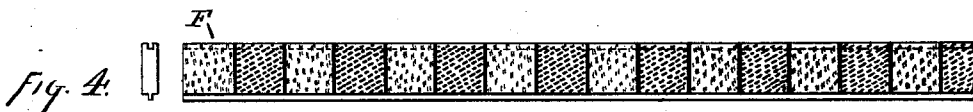
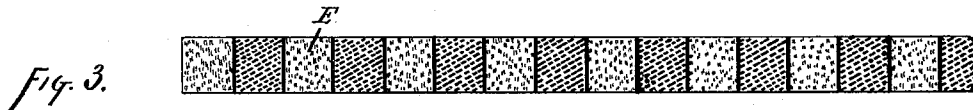
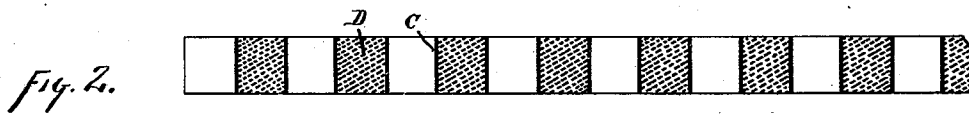
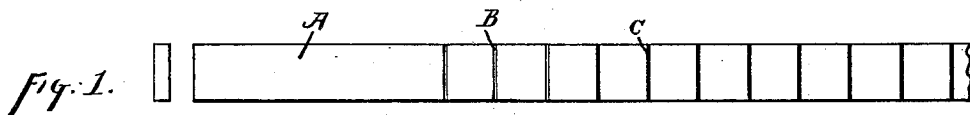


(No Model.)

J. W. SEE.
FLOORING.

No. 479,126.

Patented July 19, 1892.



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UNITED STATES PATENT OFFICE.

JAMES W. SEE, OF HAMILTON, OHIO.

FLOORING.

SPECIFICATION forming part of Letters Patent No. 479,126, dated July 19, 1892.

Application filed July 6, 1891. Serial No. 398,466. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. SEE, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Flooring, &c., of which the following is a specification.

This invention pertains to improvements in flooring, &c., designed to secure a handsome, cheap, and durable surface.

10 The application of carpets or other floor-coverings to floors satisfies at once the desire for beauty, warmth of tone, and softness of tread; but such surface is expensive and is not durable and is not cleanly. Soft floor-
15 coverings are not at all adapted for use in the kitchen or the public store or the public office. Oil-cloths and linoleums are more cleanly, but are not durable and are very expensive. Parquetry flooring, while it satisfies the eye,
20 is very expensive and requires great care to maintain it in any condition of satisfactory appearance and is not adapted to the rough use of the kitchen and store. What is wanted is a surface which will stand hard knocks and
25 which will wear well and which will stand the scrubbing-brush and which is not expensive. The simple plain hard-wood floor is believed to more perfectly fulfill these conditions than anything heretofore devised; but such floors
30 are cold in tone, lacking entirely in beauty and cheerfulness, and they become disfigured by the joint-cracks as shrinkage takes place. Any attempt to improve the appearance of such floors by oiling or painting is idle, as the
35 effect is purely superficial and becomes soon removed in spots by ordinary process of wear and cleaning, leaving the floor more unsightly than if left with the raw wooden surface.

40 The object of my improvements is to produce a floor having the qualities of hardness, durability, and capacity to stand rough usage and cleaning as found in the raw hard-wood floor, and possessing, also, the qualities of
45 warmth of tone and pleasing beauty heretofore obtained only by means of expensive and perishable floor-coverings, the improved floor being also comparatively inexpensive.

50 Modern wood-filling composition—as, for instance, those containing silix—fill the surface grain of the wood and render the surface extremely hard; but it is the surface only

that becomes thus improved by the use of fillers and wear and scrubbing soon remove the hardened surface. I employ hardening-
55 fillers, but I so place them in the wood that their virtues remain until the floor is so far worn as to become too uneven for the uses of a satisfactory floor.

My improvements will be readily understood from the following description, taken
60 in connection with the accompanying drawings, in which—

Figures 1, 2, and 3 illustrate succeeding steps in the method of production chosen in the exemplification of my improvements; Fig. 65
4, a view of a finished floor-board resulting from the exemplifying method; Fig. 5, a plan of a section of flooring laid with such floor-boards; Fig. 6, a vertical section through one of the punctures of the surface of the floor;
70 and Fig. 7, a plan, upon an enlarged scale, showing more clearly the details of the design chosen for exemplification.

Let A in Fig. 1 represent a piece of dressed flooring-lumber of a good sort—say yellow
75 pine. I fill the upper surface of this board with filler of any desired shade applied upon the surface and filling the surface grain in the usual manner. The result is to give to the board a surface hardness and a desirable tone
80 of color; but this surface filling may, if desired, be omitted entirely. I then apply to the surface of the board a resist—paraffine, for instance—which would prevent the surface taking any more filler, and then in pro-
85 ducing the design chosen in the exemplification cut across the surface of the board the incised lines or cuts B, having about the cross-section indicated at G in Fig. 6—say, three-
90 sixteenths of an inch deep. These cuts may be produced by removing the wood by suitable cutting operation or by the mere impression of the edge of a proper cutter, the latter method removing no wood, but compressing the fibers endwise. In either case
95 these incisions are cuts cutting the fibers of the wood. The distance between the cuts B would in the design shown be equal to the face width of the finished flooring-board after it is tongued and grooved. I then fill these
100 cuts with filler, preferably dirt-colored filler, producing the cross-lines C of the design. The

resist, which has been applied to the surface of the board, is for the purpose of preventing the discoloration of other portions of the board when applying the filler to the incisions. Then in each alternate space of the board I stab into the surface of the board the punctures D, which I fill with a colored filler—say blue. These punctures may consist, as shown, of closely-grouped diamond-shaped figures having about the cross-section shown at G in Fig. 6. This leaves the board in the condition shown in Fig. 2, with alternate blue squares and intermediate plain squares, the punctures D being so closely grouped as to give to their squares the virtual effect of a solid color. I then similarly stab the intermediate spaces E and fill them with another colored filler—say red—thus leaving the board, as shown in Fig. 3, with alternating squares of red and blue. I then tongue and groove the board, as shown in Fig. 4, producing the completed floor-board ready for laying. The object in deferring the tonguing and grooving till after the stabbing and filling is to guard against the possibility of the stabbing process splintering off the top member of the groove. I then lay the floor with such boards, alternating the position of the squares, as shown in Fig. 5. The floor may then be smoothed and is ready for use. It has whatever beauty is incident to the colors and pattern chosen; it has the hardness and durability of the raw lumber selected; it has the additional hardness due to the presence of filler; it will stand the rough usage of the raw wooden floor; it will stand the scrubbing of the raw wooden floor, and it will maintain its characteristics until the floor is so far worn as to be too uneven for satisfactory use. The designs and choice of color may of course be varied infinitely, and instead of the pattern being worked out upon a single board, as in the exemplification, any desired patterns, geometrical or floral, may be worked out by having part of the pattern on one board and part on another, &c. The designer may, if he pleases, execute in this kind of flooring the identical patterns which he would produce in carpeting or in oil-cloth; but floor-boards are liable to shrinkage, and the opening of the joint-cracks might in some designs seriously disfigure the beauty of the pattern; but in the exemplifying-pattern, as seen in Fig. 5, it will be noticed that the cross-lines C of dirt-colored filler are somewhat strong and accentuated, the longitudinal lines between the boards having effect only by reason of the difference in colors in the squares, the presumption being that the boards are tight together and the joint-cracks practically invisible; but as shrinking takes place these joint-cracks open and become filled with dirt and the effect is, instead of destroying the beauty of the pattern, to simply bring out more strongly the longitudinal lines of the pattern, until eventually they become as strongly emphasized as the cross-lines C; but

this floor is not as liable to shrinkage or to the effect of shrinkage as ordinary flooring. The stabbing has not removed the wood, but has simply displaced it and compacted the fibers sidewise. The elasticity of these fibers maintains the floor-surface in a state of tension, compensating largely for the effect of shrinkage. Thus the floor will have peculiar qualities of tightness. Again, ordinary flooring seasons and shrinks mostly at the top surface, where it is exposed, and the consequence is that the boards become concave upon their upper surface, subjecting the upper element of the grooves to serious wear and producing sharp shoulders, unpleasant to the foot. The improved flooring by reason of the expansive elasticity of its upper surface will compensate for shrinkage at that surface, while the under surface of the floor shrinks without compensation. Consequently the boards will eventually become slightly convex upon their upper surface, thus producing exactly the effect desired, an effect often produced in fancy floors by convexing the upper surface of the pieces of which it is composed. The result in the improved floor is to save the upper members of the grooves from excessive wear and to produce a surface pleasing to the foot.

The improved lumber may of course also be used for wainscoting and other purposes, as well as for floors; and, if desired, many of the characteristics of the improvements can be produced by dealing with the boards after they are laid, the stabbing and filling being done upon the completed floor instead of upon separate boards of which the floor is composed.

According to the dictionaries, incisions, punctures, holes, &c., may be veritable cuts, as produced by severing edges, or they may be mere displacements, as produced by a pointed tool, and the language seems lacking a word to express specifically the characteristic of the uncut puncture or uncut incision. I therefore employ the terms "puncture" or "uncut puncture" as meaning holes produced by a non-cutting fiber-displacing operation.

I claim as my invention—

1. As an article of manufacture, a board with one of its surfaces held under transverse strain by hard-filling composition seated in uncut punctures in one surface of the board and displacing the fibers sidewise.

2. As an article of manufacture, a board having closely-grouped uncut punctures in its surface filled flush with filling composition and having its surface fibers between the punctures compressed sidewise.

3. As an article of manufacture, a board having closely-grouped uncut punctures filled flush with colored filling composition, the fibers between said punctures being compressed sidewise.

4. As an article of manufacture, a board having a number of closely-grouped uncut

punctures filled flush with a colored filling composition, and having similar punctures similarly filled with filling composition of a different color, the fibers between said punctures being compressed sidewise.

5 5. The improved flooring consisting of tongued and grooved boards laid close together edgewise and having their upper surfaces provided with closely-grouped uncut
10 punctures filled flush with filling composition, the fibers between said punctures being compressed sidewise.

6. The improved flooring consisting of

tongued and grooved floor-boards laid close together edgewise and having their upper surfaces provided with transverse cuts filled flush with filling composition and provided, also, with closely-grouped uncut punctures filled flush with filling composition, the fibers between said punctures being compressed sidewise.

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