

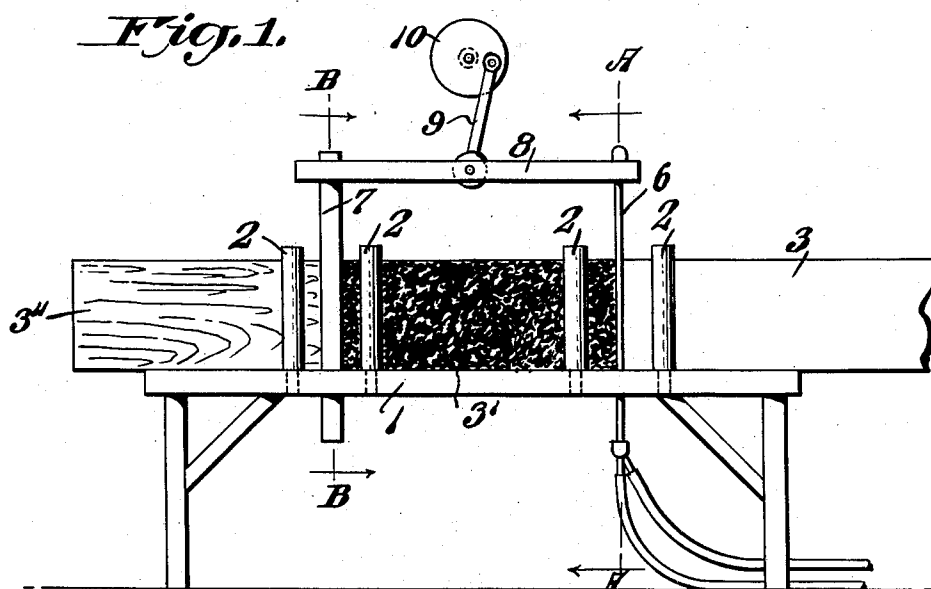
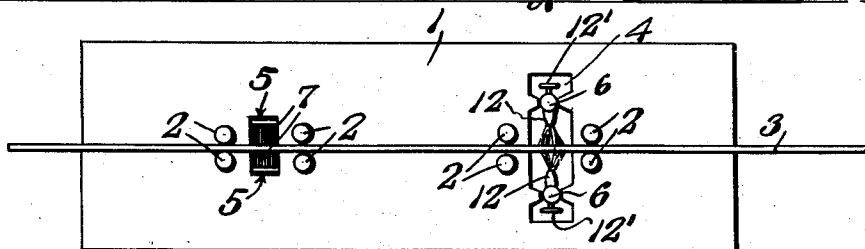
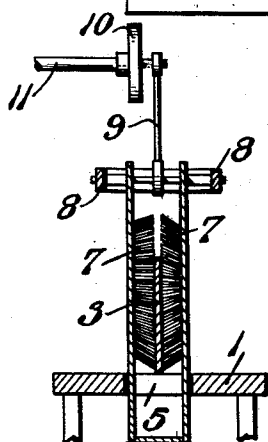
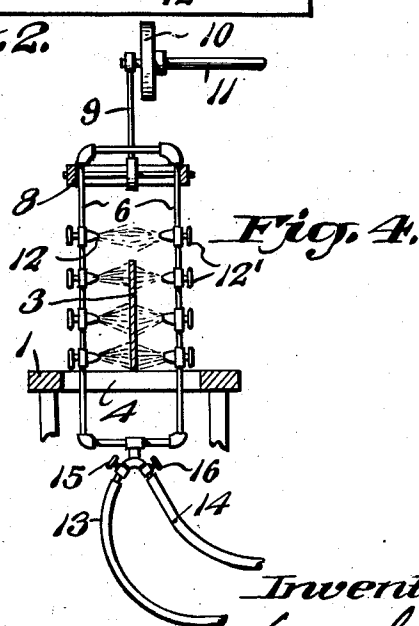
May 13, 1930.

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PROCESS FOR THE ORNAMENTAL TREATMENT OF WOOD

Filed Nov. 28, 1928



Inventor:
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UNITED STATES PATENT OFFICE

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PROCESS FOR THE ORNAMENTAL TREATMENT OF WOOD

Application filed November 28, 1928. Serial No. 322,386.

It is one object of my invention to produce on wood boards and panels a weathered, antique finish of highly ornamental effect.

Another object of my invention is a rapid and economical method of applying such treatment.

A further object of the invention is a process whereby laminated panels known to the trade as plywood may be treated in a manner preventing warping and cracking.

The invention also aims to produce a beautiful and artistic building material at a moderate cost.

Other objects will be disclosed as the description progresses in view of the drawing, to which I now refer.

Figure 1 is an elevation of a suitable apparatus for carrying out my process in the preferred form.

Figure 2 is a top view with the overhead structure left off.

Figure 3 is a sectional view at line B—B in Figure 1, and Figure 4 is a sectional view at line A—A in Figure 1.

Like character marks refer to like parts in all views.

Four pairs of vertical rollers 2 are mounted on table 1, for the purpose of guiding board 3 through the treating zones. 3' and 3'' indicate the stages of treatment of board 3. Table 1 has an aperture 4 and an aperture 5. Two connected blow torches 6 pass through aperture 4, and two connected wire brushes 7 pass through aperture 5. Suitable guides are provided to permit torches 6 and brushes 7 to move vertically in the apertures 4 and 5 respectively. The guides are not shown because they are no essential part of the invention. Torches 6 and brushes 7 are connected on their upper ends by frame 8, which is movably linked to the eccentric 10 by connecting rod 9. Eccentric 10 is rotated by shaft 11, driven by a convenient source of power.

Burners 12 are mounted in pairs opposite each other on torches 6, so as to form a heating zone and may be regulated or cut off by cocks 12'. Gas and air or other suitable disintegrating mediums are fed to torches 6 through hoses 13 and 14, which have

the usual valves 15 and 16. Means are also provided to adjust brushes 7, torches 6 and rollers 2 in relation to the thickness of board 3, but since the means of adjustment form no essential part of the invention they are not shown in the drawing.

In operation, a number of burners corresponding to the width of board 3 are lit and flames are adjusted to burn evenly thus forming a heating zone between the burners 12. Power is then applied to shaft 11, which causes frame 8 to oscillate vertically, imparting the same movement to torches 6 and brushes 7. Board 3 is then passed between rollers 2 and torches 6, where both of its surfaces are charred simultaneously and evenly. The oscillating movement of torches 6 prevents burning of the wood in spots, and the flames being applied simultaneously at both surfaces causes the wood to contract evenly, thus effectively preventing warping and cracking of the wood, in which rollers 2 also assist. Board 3 is moved at a speed corresponding to the required degree of charring toward brushes 7 and passes between the same, again guided by rollers 2. The brushes 7 remove the charred portions of the surfaces of board 3, and owing to the fact that the grain is harder than the intervening fibre the latter is disintegrated deeper, leaving the grain standing out in relief. The effect is highly artistic, especially with richly grained coniferous woods such as cypress or fir. It is thus seen that I have provided a method wherein the board is supported and held with its opposite faces substantially vertical. The burners are of the blow-torch type and hence produce flames of intense heat which quickly char the surfaces of the board, provided sufficient oxygen is present at the exposed faces of the board. The flames from the two sets of burners arranged upon opposite sides of the board are directly projected upon the opposite substantially vertical faces of the board, while these faces are in free access to the atmosphere, as the portions of the faces being charred are completely uncovered, as shown in the drawings. The arrangement of the board upon edge produces the vertical arrangement of the opposite faces, which

is highly advantageous. This causes the working conditions upon the vertical faces to be identical, and renders it possible to apply substantially the same degree of heat to the opposite vertical faces, since the heated gases will escape from the two vertical faces at substantially the same speed, which would not be possible if the faces of the board were horizontally arranged or inclined. However, some degree of success may be obtained by arranging the board with its faces horizontal.

When wood of uneven surfaces is to be treated, as in mouldings or carvings, sand blast may be used instead of wire brushes. Different means of disintegrating the surfaces may be used, and in some cases it may be preferable to carry out the process in two separate operations. I reserve the right to make such modifications which come within the spirit of my invention as set forth in the appended claims.

I claim as my invention:

1. In the hereindescribed method of treating lumber for producing a weathered or antique appearance, the steps of holding and supporting a board so that its opposite faces are substantially vertical and portions of such opposite faces are uncovered and in free access to the atmosphere, simultaneously directly projecting hot flames upon both uncovered portions of said opposite faces in free access to the atmosphere for producing charred surfaces upon the same while effecting the longitudinal travel of the board.

2. The hereindescribed method of treating lumber for producing a weathered or antique appearance, comprising holding and supporting a board so that its opposite faces are substantially vertical and portions of such opposite faces are uncovered and in free access to the atmosphere, simultaneously directly projecting hot flames upon both uncovered portions of said opposite faces in free access to the atmosphere for producing charred surfaces upon the same while effecting the longitudinal travel of the board, and simultaneously subjecting both charred faces of the board to a brushing action for removing the charred surfaces while the board is being moved longitudinally, the steps in the method being so co-related that the method is continuous.

3. In the hereindescribed method of treating lumber for producing a weathered or antique appearance, the steps of holding and supporting a board so that portions of its opposite faces are uncovered and in free access to the atmosphere, and simultaneously directly projecting flames upon both uncovered portions of said opposite faces in free access to the atmosphere while effecting a relative longitudinal movement between the board and flames whereby the opposite faces

are charred and the board prevented from warping.

4. In the hereindescribed method of treating lumber for producing a weathered or antique appearance, the steps of holding and supporting a board so that portions of its opposite faces are uncovered and in free access to the atmosphere, and simultaneously directly projecting flames upon both uncovered portions of said opposite faces in such a manner that the flames engage at one time substantially the entire transverse areas of the uncovered faces and only relatively short lengths of the longitudinal areas of said faces, and effecting the longitudinal movement of the board during the flame treatment.

5. In the hereindescribed method of treating lumber for producing a weathered or antique appearance, the steps of holding and supporting a board so that portions of its opposite faces are uncovered and in free access to the atmosphere, simultaneously directly projecting flames upon both uncovered portions of said opposite faces and shifting the flames back and forth transversely of the board so that the flames engage at one time substantially the entire transverse areas of said faces and only relatively short lengths of the longitudinal areas of said faces, and effecting the longitudinal travel of the board during the flame treatment.

6. The hereindescribed method of treating lumber for producing a weathered or antique appearance, comprising holding and supporting a board so that portions of its opposite faces are uncovered and in free access to the atmosphere and simultaneously directly projecting flames upon both uncovered portions of said opposite faces in free access to the atmosphere while effecting a relative longitudinal movement between the board and flames whereby the opposite faces are charred and the board prevented from warping, and treating the board for removing the charred portion.

7. The hereindescribed method of treating lumber for producing a weathered or antique appearance, comprising holding and supporting a board so that its opposite faces are substantially vertical and portions of said opposite faces are uncovered and in free access to the atmosphere, simultaneously directly projecting hot flames upon both uncovered portions of said opposite faces in free access to the atmosphere for producing charred surfaces upon the same, while effecting a relative longitudinal movement between the board and the flames, and brushing the board to remove the charred portion.

In testimony whereof I affix my signature.
EMIL SCHMID.