F. Y. NISHIMURA.

TREATING WOOD.

APPLICATION FILED JULY 17, 1908.

922,026. **Patented May 18, 1909.**

Fig. 1.

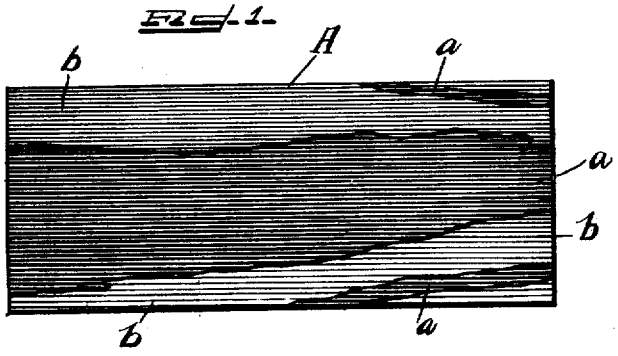


Fig. 2.



Fig. 4.

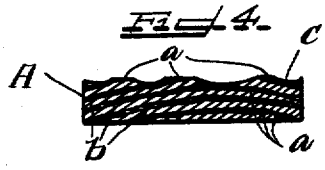


Fig. 3.

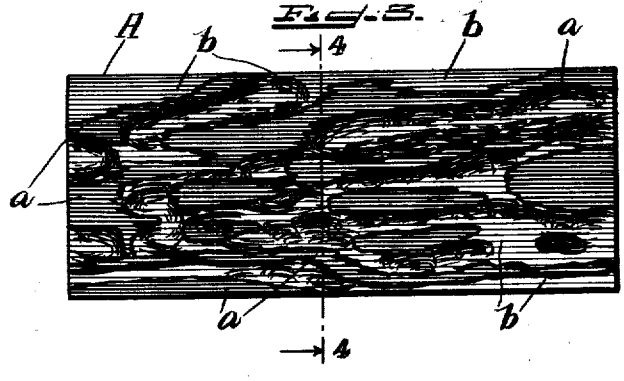


Fig. 5.

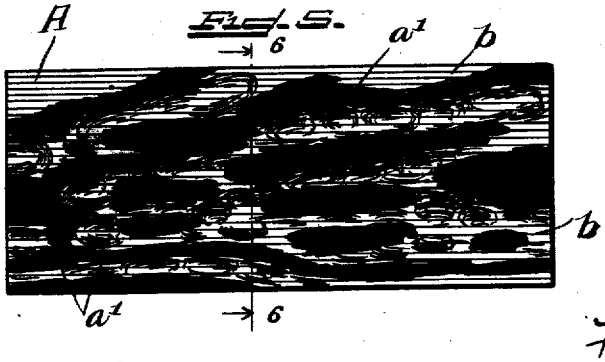
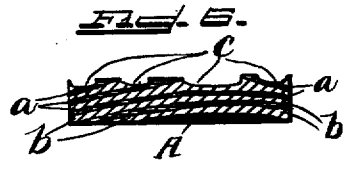


Fig. 6.



Frank Y. Nishimura

Inventor:

Attest:

E. Winkler

E. S. Ashley

by Wm. B. Whitney

Atty

UNITED STATES PATENT OFFICE.

FRANK Y. NISHIMURA, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO HENRY BOCKER, OF ATLANTIC CITY, NEW JERSEY, AND ONE-THIRD TO CHARLES BOCKER, OF BROOKLYN, NEW YORK.

TREATING WOOD.

No. 922,026. Specification of Letters Patent. Patented May 18, 1909.

Application filed July 17, 1908. Serial No. 443,992.

To all whom it may concern:

Be it known that I, FRANK Y. NISHIMURA, a subject of the Emperor of Japan, residing in the city of New York, county and State of New York, have invented certain new and useful Improvements in Treating Wood, of which the following is a specification.

This invention relates to a process of treating wood, and especially soft woods with straight regular grain such as California cedar or redwood, and the like, to give it an ornamental appearance, and to the resulting product, which is especially adapted for use for decorative purposes.

Heretofore various methods have been devised and used for treating wood for the purpose of bringing out in a distinct manner or into relief what may be called the natural pattern of the grain as it appears at the surface treated.

My improved process consists, broadly stated, in first giving what I call an artificial pattern to the grain by cutting away portions of the surface so as to expose the grain in accordance with the desired pattern and in then bringing out the pattern more distinctly by further treatment. I take a piece of wood with a smooth, flat or other shaped surface, preferably cut parallel or substantially parallel with the grain, and cut away or otherwise remove portions of this surface to form hollows or depressions therein, preferably with curved sides and rounded bottoms and of different depths, which depressions cut down through one and perhaps more of the layers of the harder and more compact fibers of the wood, thus exposing the edge of the layer or layers around the sides of the depressions and possibly the surface of the deeper layer at the bottom. This irregular surface may then be smoothed by sandpapering or otherwise. Having thus given to the grain of the wood the artificial pattern which is desired, I then bring out the grain more distinctly by slightly burning the surface, in a blue flame by preference, to blacken it, and then brushing it over with a stiff brush which will remove the blackened or charred surface from the softer and more porous fibers of the wood, cutting down somewhat abruptly along and so defining more sharply the edges of the harder portions, and leaving these softer portions to their natural color while the harder portions will retain the blackened effect. The wood may then be polished or given a glossy surface by rubbing it with alcohol or other polishing material.

The ornamental surface produced by the above process is very decorative, and the wood thus prepared is of great value in the manufacture of frames for pictures, lamps, and the like, and for many other purposes.

The main steps of the process and the resulting product are illustrated in the accompanying drawing, in which—

Figure 1, is a face view, and Fig. 2, an end view, of a piece of wood with a smooth plain surface showing the natural pattern of the grain; Fig. 3, is a face view, and Fig. 4, a section on the line 4—4 of Fig. 3, of the same piece of wood after the surface has been cut away so as to give an artificial pattern to the grain; and Fig. 5, is a face view, and Fig. 6 a section on the line 6—6 of Fig. 5, of the finished product after the piece has been finally treated to bring out into distinct relief the pattern thus given to the grain of the wood.

In this drawing, A represents a piece of wood composed of alternating layers of relatively hard and compact fibers *a a* and of softer or more porous fibers *b b*. The hollows or depressions formed in the surface of the wood to give the artificial pattern to the grain are shown at *c c;* and *a' a'* indicate (Figs. 5 and 6) the backened surface of the layers of hard compact fibers as they are in the finished product.

While I have found that, of all the woods with which I have experimented, California cedar or redwood is best adapted for treatment by my new process and produces the most decorative effects, I do not wish to limit myself thereto, since the process can be used with greater or less effect for the ornamentation of other woods. It will also be understood that after the surface of the wood has been prepared to give an artificial pattern to the grain, it can be treated in any known way, instead of by burning and brushing as described, for the purpose of bringing out into relief the grain of the wood without departing from the spirit of my invention or sacrificing the advantages thereof. Such other modifications may be made as come within the scope of the appended claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. The process of treating wood, which comprises the removal of portions of the surface to expose the grain according to the desired artificial pattern and the further treatment of the surface thus prepared to bring out more distinctly the grain of the wood.

2. The process of treating wood, which comprises preparing the surface so as to expose the grain according to the desired artificial pattern, burning the surface thus prepared, and then brushing the burned surface.

3. The process of treating California cedar or redwood, which comprises preparing the surface so as to give an artificial pattern to the grain and then treating the surface thus prepared to bring out the grain of the wood more distinctly.

4. The process of treating California cedar or redwood, which comprises removing portions of the surface to expose the harder and more compact fibers of the grain according to the artificial pattern desired, burning the surface thus prepared, and then removing the softer and more porous blackened portions of the burned surface.

5. The process of treating California cedar or redwood, which comprises removing portions of the surface so as to cut through and thus expose one or more of the layers of its harder and more compact fibers to give an artificial pattern of the grain, burning the surface thus prepared, and then brushing the burned surface to remove the blackened fibers from the softer and more porous portions of the wood.

6. As a new article of manufacture, a wood body comprising natural layers of different characteristics having an uneven surface whereby an artificial contour or pattern is given to the natural grain cell and fiber of the wood exposed therein.

7. As a new article of manufacture, a wood body having its surface cut away unevenly so as to give an artificial contour and pattern to the natural grain cell and fiber of the wood thus exposed and having the exposed edges and surfaces of the grain fiber blackened by fire.

8. As a new article of manufacture, a wood body which has been ornamented by forming an uneven surface thereon by cutting away portions both of its cell and fiber layers so as to expose the edges and surfaces thereof in different planes and thereby give the desired artificial pattern to said layers thus exposed and then treating the surface so prepared to emphasize the difference between the cell and fiber layers of the wood.

9. As a new article of manufacture, California cedar or redwood which has portions of its surface cut away so as to expose the edges and surfaces of its more compact fibers in different planes to produce an artificial pattern in the grain thus exposed and has then been treated by burning the surface so prepared and afterward brushing it to remove the blackened portions of the softened fibers.

In witness whereof, I have signed my name in the presence of two witnesses.

FRANK Y. NISHIMURA.

Witnesses:
WM. B. WHITNEY,
CHARLES BOCKER.