

# UNITED STATES PATENT OFFICE

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## PROCESS OF REPRODUCING WOOD GRAINS

Paul C. Schroeder, Minneapolis, Minn., assignor  
of fifty-one one-hundredths to Nairne W.  
Fisher, Minneapolis, Minn.

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My invention provides an improved process or method of reproducing, on plastic surfaces, duplicates or replicas of the grain of wood surfaces, and generally stated the invention consists of the novel manipulations or successive operations herein described and defined in the claims.

The plastic surface may be produced in different ways. In some cases, it may be a plastic material such as unhardened plaster of Paris, but in most instances, the plastic surface will be produced by applying slow drying paint, coating, or similar material on a background such as paper or smooth metallic or wood surface.

As the first step I take a sheet or surfaced piece of wood such as oak or walnut which has a grain design desirable for copying, and by the use of acid, such as a solution of hydrochloric or a weak solution of nitric acid or by a brushing operation or both increase the depth of the grain of such wood surface.

Second, I glaze the wood surface thus treated with a lacquer or the like which renders the surface harder and more impervious to moisture.

Third, I cast or press against the wood surface thus treated, a matrix or die, the cast surface of which will be a duplicate, in reverse, of the grained surface of the wood specimen. The die or matrix thus formed is preferably cast of synthetic rubber or material such as generally used in printers' rollers and which material is flexible so that it can be bent into cylindrical form.

Fourth, if the surface to receive the transfer grain is hard, it should be rendered plastic by the application of a rather slow drying paint or final coating, and such paint or coating should be allowed to dry to the extent of being soft or plastic and capable of receiving the transferred print.

Fifth, while the painted surface is still in plastic condition the cast surface of the matrix or die will be impressed against the same, thereby transferring to said painted or plastic surface an exact duplicate of the grained surface of the wood and in which imprint the deep or intaglio grain indicating lines will correspond to the grain of the wood from which the print was originally taken. If the surface to receive the final imprint is of a plastic material, such as unset plaster of Paris, or the like, the matrix or die will be pressed against the same, or the material may be cast directly against the grained surface of the die.

Sixth, after the printed surface has hardened and completely dried, it will be covered with a paint or stain that will usually be darker in color

than the imprinted surface; and then the soft paint or stain will be rubbed off from the high surface leaving the darker stain in the crevices or depressions to make the grain stand out just as it would appear in the original wood specimen or model, if the latter had been treated likewise with a stain or grain darkening material. By this improved process various other designs or configurations can be reproduced.

What I claim is:

1. The process of decorating plastic surfaces with grain designs of wood finishes in intaglio, which comprises removing the soft parts of a wood specimen being reproduced to increase the depth of the grain thereof, next forming a matrix against the surface of the wood specimen thus treated to provide in the matrix an impression surface the reverse of the grained surface of the specimen, next providing the plastic impression receiving surface to be decorated, and finally covering the impressed plastic surface with a coating composition and rubbing the coated surface to produce an ornamental finish resembling natural wood.

2. The process of decorating plastic surfaces with grain designs of wood finishes in intaglio, which comprises etching the surface of the wood specimen with a weak acid solution to remove the softer portions of the wood to increase the depth of the grain thereof, next forming a matrix with a relatively soft impression face against the etched surface of the wood specimen to provide in the face of the matrix an impression surface the reverse of the grained surface of the specimen, next providing the plastic impression receiving surface to be decorated, thereafter impressing said plastic surface with said matrix and allowing said surface to harden to provide therein a duplicate of the wood finish being reproduced and finally covering the impressed hardened plastic surface with a coating composition and rubbing the coated surface to produce an ornamental finish resembling natural wood.

3. The process of decorating plastic surfaces with grain designs of wood finishes in intaglio, which comprises etching the surface of the wood specimen with a weak acid solution to remove the softer portions of the wood to increase the depth of the grain thereof, next forming a matrix with a relatively soft impression face of elastic material which may be bent into cylindrical form and casting same against the etched surface of the wood specimen to provide in the face of the

matrix an impression surface the reverse of the grained surface of the specimen, next providing the plastic impression receiving surface to be decorated, thereafter impressing said plastic surface with said matrix and allowing said surface to harden to provide therein a duplicate of the

wood finish being reproduced, and finally covering the impressed hardened plastic surface with a coating composition and rubbing the coated surface to produce an ornamental finish resembling natural wood.

**PAUL C. SCHROEDER.**