F. GIFFORD.

GRAINING PROCESS.

APPLICATION FILED JUNE 5, 1919.

1,317,700. Patented Oct. 7, 1919.

Fig. 1

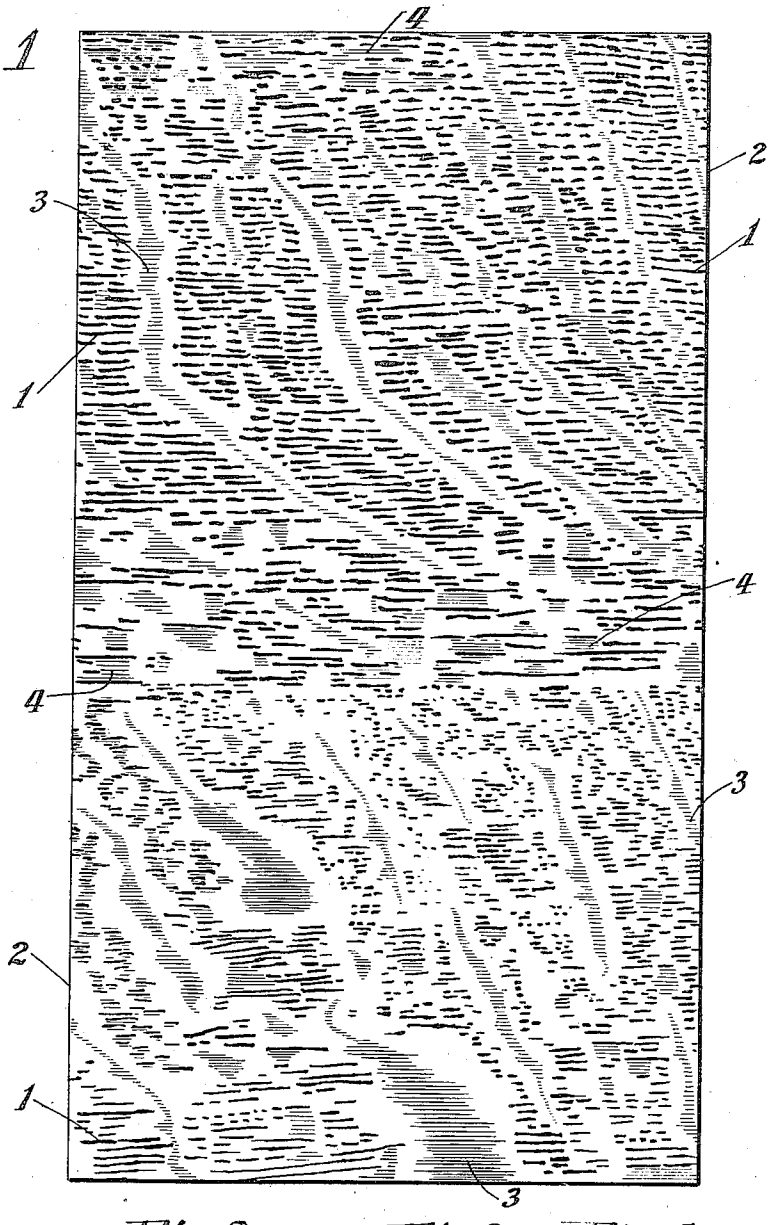


Fig. 2



Fig. 3

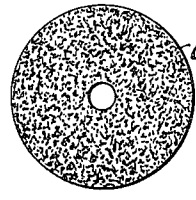


Fig. 4



Inventor
Frederick Gifford.
by Geyer & Popp
Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK GIFFORD, OF JAMESTOWN, NEW YORK.

GRAINING PROCESS.

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To all whom it may concern:

Be it known that I, FREDERICK GIFFORD, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented new and useful Improvements in Graining Processes, of which the following is a specification.

This invention relates to a method of producing imitations of wood graining, marble and the like upon furniture and other surfaces, and more particularly upon metal furniture, such as desks, cabinets, filing cases, &c.

The object of my invention is the provision of an improved method by which natural woods and other grained materials, including the shading and blending of the background, are closely and faithfully imitated, and which produces this desirable result with a minimum number of operations, thus expediting the work and effecting a material saving in cost.

In the accompanying drawings:

Figure 1 is a face view of a pattern-plate embodying the invention. Fig. 2 is a side elevation of one of the grinding tools which may be employed in carrying out the method. Fig. 3 is a side view of another form. Fig. 4 is an edge view of the last-mentioned tool.

Similar characters of reference indicate corresponding parts throughout the several views.

In practising the process, the pores or dark line 1 of the design or pattern to be imitated, say oak-graining for example, are cut in a plate 2 of brass or other suitable material by etching or otherwise. Preferably this is done by covering the plate with an acid-resisting color, as black-paint composition; drawing or painting the desired design upon the coated plate; scratching the pores in the plate, and finally etching them therein by pouring a suitable acid over the plate, in a manner common to that process. After the design has been etched to the required depth, the color-coating is removed from the plate by an appropriate solvent, as benzin or turpentine.

The background of the design, including the veins or flakes 3 and the shading or blending 4 is next produced on the plate by abrasion or grinding of its surface at the proper places and to a greater or less depth, as required. This is preferably accomplished by means of one or more small emery or grinding wheels, a pointed or conical wheel 5 being used for grinding the veining or other small work of the design, and a cylindrical or wider-faced wheel 6 for grinding the shaded parts of the background between the pores 1.

After removing the dust from the etched and abraded plate, the required shade of graining color is applied over its entire surface with a brush, or otherwise, and the surplus is removed with a leather or other suitable scraper, leaving the coloring matter only on the etched and abraded parts of the plate. For example, for reproducing oak, the plate is coated with a combination of yellow, brown and ocher; and for mahogany with a ground color of orange and red.

An ordinary printer's roller is next passed over the plate to take up the pattern, and this roller is then rolled over the surface of the article of furniture or other object to be grained which has previously received a priming coat of color of the desired shade, as usual. Finally, the grained work is dried and varnished.

After the taking of each impression the roller is washed with a solvent, as benzin, and the plate is re-coated with graining color.

By subjecting the pattern-plate to the above-described grinding or abrasive treatment, the edges of the high and low lights are shaded or blended into each other in close imitation to those of natural wood or other grained material. As the blending and shading are produced upon the pattern-plate itself and not painted by hand after the transfer of the design to the object, as hitherto practised, the entire design is transferred to the object by a single operation. Such hand-shading of the grained object is thus dispensed with, effecting an important saving in time and a material reduction in the cost of the work.

While the improved method is herein shown and described in connection with wood-graining, it is equally practicable for producing imitations of various other veined or variegated material, such as marble.

While I prefer to produce the desired de-

sign in the pattern-plate by etching, I do not wish to be limited to that particular means or process, as the design can, if desired, be cut by other suitable means, such as engraving.

I claim as my invention:

1. The hereindescribed method of preparing a pattern-plate for wood graining and the like, which consists in cutting the desired design in the plate and forming the background of the design by abrasion of the surface of the plate.

2. The hereindescribed method of preparing a pattern-plate for wood graining and the like, which consists in cutting the desired design in the plate and blending the high and low lights of the design by abrasion of the surface of the plate.

3. The hereindescribed method of preparing a pattern-plate for wood graining and the like, which consists in cutting the desired design in the plate and producing the background of the design by grinding of the surface of the plate.

4. The hereindescribed method of preparing a pattern-plate for wood graining and the like, which consists in etching the design in the plate, and producing the high and low lights and blending thereof by grinding of the surface of the plate.

FREDERICK GIFFORD.