

UNITED STATES PATENT OFFICE.

HORACE PETRIE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DECORATING IN GILT UPON JAPANNE-METAL SURFACES.

Specification forming part of Letters Patent No. 121,410, dated November 28, 1871.

To all whom it may concern:

Be it known that I, HORACE PETRIE, of Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Process for Decorating in Gilt upon Japanne-Metal Surfaces; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to use the same.

My invention relates to a process for decorating in gilt upon japanne-metal surfaces; and the improvement consists in applying the gold-leaf directly to the japanne surfaces, and then removing parts or portion thereof so as to leave the figure or letter desired, either in gilt with the japanne ground, or of the color of the japanne surface with a gilt ground. It also consists in the process of matching the gold-leaf upon the metal surface.

In the process now in use for decorating in gilt upon japanne surfaces the letter or figure desired is first painted upon the japanne surface, and, before the paint becomes dry, gold-leaf is applied, which adheres thereto. The gold-leaf not adhering to said paint, figure, or letter is removed by slightly rubbing it with cotton, leaving such painted letter or figure gilded as desired.

In the process now known and used of decorating glass surfaces in gilt, such surfaces are first flowed with glue-water or size, and, before the same becomes dry, gold-leaf is applied, which adheres thereto. When the gold-leaf becomes dry it is burnished by slightly rubbing the surface thereof with cotton, and the letter or figure desired is then painted upon such burnished surface. The gold-leaf not painted upon is then easily removed or washed off by rubbing it with damped cotton, leaving the painted gold-leaf upon the glass, beneath the paint, of the letter or figure as desired, the gilded surface of which is seen upon the opposite side or surface of the glass. If the gilded surface should not be sufficiently bright, or is imperfect by reason of spots or holes therein, a "double lay" of gold-leaf is applied, previous to the painting, and which is burnished as aforesaid.

In my process for decorating in gilt upon japanne surfaces I first flow such japanne-metal surface with glue-water or size, and, before the same becomes dry, apply the gold-leaf, which ad-

heres thereto. When the gold-leaf becomes dry it is burnished by slightly rubbing the surface thereof with cotton. I then proceed to letter, print, or etch upon such surface as follows: If it is desired to show a letter of the color of the japanne surface I mark a paint the outlines of such letter upon the gold-leaf surface with varnish or other material that can be seen when applied to gold-leaf, and easily removed therefrom, or by stamping or printing thereon in colors the outlines of such letter, figure, or design desired to be produced, and, after such varnish or other material has become dry, wash out the gold-leaf within the said outlines by rubbing it with damp cotton. The varnish or other material is then removed from the gold-leaf by the application of alcohol, turpentine, or naphtha, as may be found necessary, having reference to the painting material used as aforesaid. Thus is formed the letter or figure of the color of the japanne surface, having a gilt or gold ground.

The best varnish to apply to the gold-leaf I have found to consist of asphaltum, or dammar mixed with zinc-white or whiting. The equivalents of these, however, may be used, the essential requisites being that the varnish shall resist the action of water, shall not injure the gilding, and shall be susceptible of removal under the action of alcohol or turpentine.

To make a gilt letter, figure, or design with a ground of the color of the japanne-metal surface the process last-above described is reversed—that is, the figure, letter, or design desired is painted or printed, as aforesaid, directly upon the gilded surface, and the gilt outside of such letter, figure or design is washed out, as aforesaid, and in such form as desired.

In etching upon a gilded japanne-metal surface I remove the gold-leaf or gilt by some suitable hard and sharp instrument, leaving the japanne background or surface exposed. For the purpose of fixing the gilt or gold-leaf upon the japanne surface permanently I varnish over the whole surface thereof.

The effect of regilding or double lay upon a japanne surface, and which improves the effect upon glass, is to make such places where the double lay is applied look dull and dark, showing where the leaf or lap has been applied; and to avoid such effect, and for the purpose of removing spots, holes, or other imperfections in the gold-

leaf after it has been applied to the japanned surface, I paint with varnish or other material, as aforesaid, upon the gold-leaf around the edge of the spot or hole upon or in the leaf, and, after the same becomes dry, remove the gold-leaf within the lines of the varnish by slightly rubbing the same with damp cotton; then apply new leaf to the open or exposed space as before; and then burnish and remove the varnish, as aforesaid, which makes a uniform and perfectly-gilded surface.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The process of lettering, printing, and etching upon gilded japanned-metal surfaces, substantially as specified.

2. The process of matching the gilding upon japanned surfaces, substantially as described, for the purpose specified.

The foregoing specification of my invention signed by me this 5th day of June, A. D. 1871.

HORACE PETRIE.

Witnesses:

JAMES SPRINGER,
JOHN A. BELL.

(54)