

UNITED STATES PATENT OFFICE.

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WATERBURY CLOCK COMPANY, OF WATERBURY, CONNECTICUT.

METHOD OF FINISHING METALS IN IMITATION OF FAIENCE.

SPECIFICATION forming part of Letters Patent No. 530,342, dated December 4, 1894.

Application filed September 7, 1894. Serial No. 522,330. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN HOPSON, JR., of New London, in the county of New London and State of Connecticut, have invented a new and Improved Method of Finishing Metals in Imitation of Faience; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improved method of finishing metals in imitation of that kind of pottery known in the fictile art as faience; the object being to produce, at a low cost for manufacture, faience effects of marked artistic value, in metal.

I particularly design to utilize my invention in the production of ornamental cast-iron clock cases, but obviously, my method may be used in the production of other ornamental articles.

With these ends in view, my invention consists in a method having certain steps and details as will be hereinafter described and pointed out in the claims.

In setting forth my improved method, I shall associate it with the production of a clock-case, though, as I have before said, it is not limited to that class of goods.

In carrying out my invention in the production of clock-cases finished in imitation of faience, I first produce the body of the case, which may be cast in any approved manner and in a great variety of patterns. What I wish to call particular attention to at this point is that I provide the said body with a granular or roughened surface, which may be secured either in the process of casting it or produced afterward. The best results are secured by casting the granulated surface, so to speak, into the body of the case, but I may cast the body of the case plain, and then apply some granular substance to it, by means of securing a firm adherence of the substance to the case, or I may secure the granulated or roughened surface in still other ways, as will appear later on.

To make myself clear, I will here explain that I have used the term "granulated" to describe that roughened or uneven surface which characterizes much pottery, and discloses the fact that it was made by hand from a plastic material. I do not, therefore, mean

to describe, by the use of the term "granulated," a surface necessarily of uniform roughness, for by preference the granular surface which I propose to produce will simulate the uneven surface produced by modeling soft clay by hand.

Over the granulated surface of the body I preferably apply a preparatory coating of japan or equivalent material, which is baked on under a high temperature, say at about a temperature of 300° Fahrenheit. I do not necessarily employ this preparatory coating, but I prefer to employ it, because it checks the iron from rusting and the rust, if any rusting takes place, from striking through into the finishing coats. I may secure a granulated or roughened surface by "stabbing" the preparatory coat on to the body of the case. Over the preparatory coating I apply one or more primary coats of pigment, securing a resulting surface which is by preference light, but may be dark. Whether it is light or dark will depend on the color or shade of the secondary coat or coats, with which it is designed to contrast. I secure very fine results by employing a white or nearly white primary coat, which will show through the secondary coat. The primary coat or coats are preferably baked on separately at a temperature of about 220° Fahrenheit. I then apply one or more secondary color coats of lake or other transparent pigment, of a color or shade which will contrast with the color or shade of the primary coats. The coaction of the granulated or roughened surface with these primary and secondary color coats produces a very pleasing variegated effect, simulating the play of color in the glazes of faience. This results from the fact that the high points of the granulations take less color than the lower points thereof, so that the colors are thinner in some places than in others, whereby variation of depth of color is produced. Thus, on the tops of the high points of the granulations the secondary color coat will be so thin that the primary coat will show through it more than at the bottoms of the spaces between the granulations, where the secondary color coat will gravitate in larger amount, and so mask or conceal the primary coat to a greater extent, and between the

minimum and maximum thicknesses of the two color coats there will be a great variety of thickness in the outer coat, so as to produce several shades intermediate between the lightest and darkest. The granulations, therefore, in this way give a great deal of life to the finish. The secondary coat is, as aforesaid, a transparent, or substantially transparent coat, and is by preference baked on.

10 I may mention here that the temperatures to which the case is subjected for baking on the several coats will progressively decline, for it is desirable that the baking of subsequent coats shall not disturb the preceding coats. After the secondary color coat is put on the clock case is by preference varnished and baked again, and after varnishing, portions of the surface may be gilded. The resultant surface has the transparency, the play, and the brilliancy of the well-known glazes of faience. This is due, as aforesaid, to the employment of the granulated groundwork, and also to the use of a lake or transparent pigment for the secondary coat. Of course a variety of contrasting pigments may be used in finishing, and variations of effect may be secured. Thus a clock case for the most part treated in shades of blue might be relieved with panels of white, with pleasing effect.

30 The pattern of the case and the colors or shades of the pigment chosen may be infinitely varied, as is apparent.

I have described the method which I prefer to employ, and by the practice of which I secure the best results. If desired, however, I may carry out the method without baking the preparatory or pigment or varnish coats on to the clock, for the coats might be allowed to dry in the air, instead of exposing them to heat in an oven. Furthermore, instead of employing an independent varnish coat, I

might add a suitable quantity of varnish to the secondary or finishing color coat, and still secure a surface of the required glossiness.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein described method of finishing metal in imitation of that kind of pottery known as faience, the said method consisting in producing a body in the pattern required and with a granulated or roughened surface, then applying one or more primary color coats to the said body and then applying one or more secondary color coats of lake or transparent pigment contrasting in color or shade with the color or shade of the primary coat or coats, substantially as and for the purpose set forth.

2. The herein described method of finishing metal in imitation of that kind of pottery known as faience, the said method consisting in producing a body in the pattern required and with a granulated or roughened surface, then applying one or more primary color coats to the said body and baking on the said coat or coats, then applying one or more secondary color coats of lake or transparent pigment contrasting in color or shade with the color or shade of the primary coat or coats, then baking on the secondary color coat or coats, and finally applying a coating of varnish over the secondary coating, and baking on the varnish, substantially as and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN HOPSON, JR.

Witnesses:

FRED. C. EARLE,
GEO. E. HALL.