

UNITED STATES PATENT OFFICE.

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ORNAMENTAL VARNISHING.

SPECIFICATION forming part of Letters Patent No. 506,394, dated October 10, 1893.

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To all whom it may concern:

Be it known that I, BYRON BENJAMIN GOLDSMITH, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Ornamental Varnishing, of which the following is a specification.

My invention has reference to improvements in the process of ornamenting surfaces by varnishing, the object being to produce upon any given surface an imitation of marble, malachite, jasper and other like ornamental stones, or an imitation of costly woods, antique ivory or other materials having variegated veins, and to do this in a purely mechanical manner, not requiring the skill and judgment of an artist.

The principle which underlies my invention is the following: If two or more coats of different colors are superposed upon each other, without allowing the coats to dry sensibly; and if while the coats are still in the condition in which they will flow spontaneously, the article is given any kind of motion, the coats of color will flow upon the article with different speeds and in various directions, producing a great number of sluggish currents, which interfere with and react upon each other. The result of this is that the two or more colors will slightly blend along the edges of the various currents, while the main bodies of these currents will blend only slightly or not at all. The effect of this is the formation upon the surface of the article of devious lines of greatly variegated appearance both as to form and color, the total effect being similar to that of the surface of a richly veined ornamental material, such as marble, malachite, agate, jasper, onyx, wood, ivory, &c., according to the colors employed.

My process is applicable to the ornamentation of all kinds of objects made of any material that is ordinarily varnished or painted or can be varnished or painted, but the invention is particularly adapted to articles having plane or evenly curved surfaces, such as table tops, walking sticks, pen holders, and the like, but for the sake of simplicity of explanation, I shall describe my process as it is practiced in connection with a pen holder, with the understanding that it is not confined

to such article. I also desire it to be understood, that in the practice of my invention I am not confined to the use of any particular paint or varnish, and while in the following description I shall use the term "varnish" as designating the vehicle for carrying or adapted to carry the desired pigment or dye, I mean to cover by this term all vehicles that are or may be used in the ordinary practice of applying color, whether these vehicles be of a resinous, alcoholic, aqueous, or any other character.

Assuming that to a penholder stick is to be given the appearance of polished malachite, the procedure will be as follows: The pen holder is dipped into a green varnish, that is to say, into a varnish with which a proper amount of green pigment or dye, or a combination of both, is mixed; it is then withdrawn and is dipped into white varnish, so that there are two layers of distinctly colored varnishes upon the pen holder, and each layer in a condition in which it will still flow spontaneously. While in this condition the pen holder is secured in a horizontal or angular position in a lathe chuck and is slowly rotated. Immediately the two varnishes flow upon the surface of the holder and upon each other, forming a great number of currents of different speeds and directions, which, interfering with and reacting upon each other, cause an accumulation of green and of white varnish in variegated lines, which blend at their edges, but do not blend in a like degree, or not at all, within their edges. The effect thus produced is as stated above, that of richly veined and highly polished malachite. The movement of the pen holder is continued until the varnishes have dried sufficiently not to flow spontaneously, and the article is then removed from the chuck and is dried in the usual manner. It is not necessary that the pen holder or like object be given a rotary motion, since any kind of motion that will allow or cause the varnishes to flow, will produce a like effect, although the effect is varied with the variation of the motion. Thus, in the case of pen holders or walking sticks, a highly ornamental effect is produced by slowly inclining the object at different angles, without rotating. If rotated, the effect varies with the angle at which the stick is

inclined while being rotated. When the stick is secured in and rotated by a lathe chuck, the effect varies with the angle formed between the axis of the chuck and of the stick.

5 But whatever the nature of the movement given to the article may be, the effect produced is similar to that described.

The process of producing the effect of malachite may be slightly varied by first producing a green varnish upon the pen holder and allowing the same to dry, then dipping it into a transparent varnish, which may be tinted or colorless, and then immediately into a white varnish, and then giving to the article the requisite motion. In this case the veins are formed by the various interfering currents of the white and the transparent varnishes, the latter permitting the green base to shine through. A similar effect is produced by dipping the pen holder stick into the varnishes with the point foremost, and then simply reversing the stick vertically, so that the varnishes will flow toward the thick end. From these few examples, it will be seen that the variations or modifications to which the process is susceptible, are very numerous, but that the fundamental idea is always the same.

Whatever the article may be, the process will be practically the same; thus walking sticks or umbrella sticks, or other cylindrical objects may be manipulated precisely like pen holders, while in the case of articles having plane surfaces, the motion which is given to the article, after the varnishes have been applied, will ordinarily be somewhat different. In the case of table-tops for instance, the rotary motion given will be in the plane of the surface of the top, and it is not necessary that it be rotated about an axis passing through the center, but may be rotated about an eccentric axis; and it will be understood that to each kind of movement or rotation of the article correspond different forms of veins and different distributions of the veins, which are produced.

Any number of differently colored varnishes may be used, and with each different colors or different numbers of colors, the effect produced will be different. After the varnishes have dried, the article may be treated like other varnished articles for heightening the gloss, that is to say, they may be burnished and an additional coat or coats of colorless varnish may be applied.

Having now fully described my invention, I claim and desire to secure by Letters Patent—

1. The process of ornamenting articles, which consists in covering the whole surface of the same with superimposed layers of varnishes of such consistency that they may still flow spontaneously, and then so placing or moving the said article, that by their spontaneous flow the different varnishes are broken up into lines of variegated forms and shades, substantially as described.

2. The process of producing imitations of variegated veins upon an article, which consists in first covering the whole surface of the same with superimposed layers of spontaneously flowing varnishes of different colors, and then giving to the article a slow motion or motions, whereby the different colors are distributed in devious lines, substantially as described.

3. The process of ornamenting articles which consists in producing upon the same, by successive dipping, superimposed layers of spontaneously flowing varnishes, and then so placing or moving the article that by the flow of the varnishes, lines of variegated forms and shades are produced; substantially as described.

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

BYRON BENJAMIN GOLDSMITH.

Witnesses:

WILLIAM S. STULER,
MICHAEL J. CANNON.