UNITED STATES PATENT OFFICE.

LEON ORNSTEIN, OF BROOKLYN, NEW YORK.

PROCESS FOR PRODUCING COLOR EFFECTS.

1,410,344. Specification of Letters Patent. Patented Mar. 21, 1922.

No Drawing. Application filed May 17, 1921. Serial No. 470,437.

To all whom it may concern:

Be it known that I, LEON ORNSTEIN, a citizen of the United States, residing in Brooklyn, in the county of Kings, city of New York, and State of New York, have invented certain new and useful Improvements in Processes for Producing Color Effects, of which the following is a full, clear, and exact specification.

My invention relates to processes for decorating and refers particularly to processes for color decorating.

It is frequently desirable to produce artistic and unique color effects upon the surfaces of substances which are susceptible to the ordinary dyeing, or painting, processes, but upon which such dyeing and painting methods will not produce the desired results.

One object of my invention is a process for producing artistic color effects of a striated configuration.

Another object of my invention is a process for producing new and novel color effects which are practically fast to light, heat and water.

Another object of my invention is a process by which the desired results can be easily and economically obtained.

The above and other objects of my invention will be evident upon a consideration of my specification and claims.

One method of following the process of my invention is to apply the coloring matter to the surface of the material, in spots, streaks, or other forms, so that the entire surface is not covered thereby, allowing the coloring matter to dry, immersing the colored material into a bath of a liquid which will have a dissolving effect upon the coloring matter, withdrawing the material from the bath and allowing it to drain in such a manner that the dissolved color will run downwardly over the surface of the material, thus forming streaks, or lines, of color, or the finishing material may be flowed thereover in any other suitable manner.

The most effective results are obtained by placing the coloring matter upon the upper portion of the material face, as the dissolved colors, when passing downwardly, will intermingle forming compound shades of great attractiveness.

If the dissolving material be of the character of a finishing material, as shellac, varnish, enamel, caseine, pyroxyline, &c., a surface coating of considerable resistance to heat, light and wear can thus be formed at the same time, and the coloring matter will become a part of the finishing material and not simply a surface coating of color alone.

The result, therefore, has the qualities and properties of a colored finishing material, with all of the properties of the particular finish employed, and the appearance of the results will be of a character not obtainable by the use of finishing materials which have been colored before use.

The above described method is preferable, when the colors employed are soluble in the finish employed.

It frequently happens, however, that it is desirable to use colors, as, for instance, mineral pigments, which are not soluble in the finishing material, and an application of the process of my invention is then as follows:

A basic coating is applied to the material, and then with, or without, drying, the coloring matter, in admixture with a color vehicle, is applied thereto and dried. The material thus prepared is then immersed into a solution of a finishing material, in which the color vehicle is soluble, and removed and drained. By this operation, the coloring matter will be carried downwardly by the finishing material, producing results similar to those obtained by the color soluble process first described.

The finishing material may be flowed over the prepared material in any other suitable manner.

Either the basic coating, or the color vehicle, or the finishing material, or all, may be of a transparent, translucent, or opaque character, it thus being possible to retain a transparent body, as glass, in its transparent condition, or it may be converted into a translucent, or opaque, condition, as desired.

Solid colored effects can be produced by completely covering the material with the coloring matter, or, by applying sufficient of it to the material to cover the entire surface, when subjected to the flowing operation with the finish.

By the employment of hard finishing materials, the resulting surface will be of a hard durable nature and can be subjected to continuous, or rough, usage without marring, or changing, the condition of the surface thereof.

It is evident that by my process, colored effects of great fastness can be produced upon material to which the coloring matters themselves can not be fixedly attached, as, for instance, water-soluble colors upon glass, as the glass coloring matters are dissolved by the finish, thus becoming an actual part thereof, and the finish will become firmly attached to the material, thus preventing the coloring matter from being detached therefrom.

It is further evident that color effects produced by the following of my process, resulting from the intermingling of the various colors as their solutions in the finishing material combine during the flow of the finishing material, are different from those producible by employing colored finishing material alone.

By the words "finishing material" in my specification and claims, I mean those products, or materials, a solution of which will dissolve the colors employed, or will dissolve the "color vehicle" used with coloring matters which latter are insoluble in both the finishing material and the basic coating.

By the words "basic coating" in my specification and claims, I mean those products, or materials, a solution of which will act as a back ground for the coloring matters with which it is employed.

By the words "coloring matter" in my specification and claims, I mean both a single coloring matter and a plurality of coloring matters, these words being used for simplicity of expression.

Among the finishing materials, color vehicles and basic coatings, suitable for the following of my process, are shellacs, varnishes, lacquers, enamels, caseine, pyroxyline and other products, or materials, transparent, translucent, or opaque, which can be employed in my process for the production of the described results.

My process can be applied to any material which will allow of the described several steps of the operation, among which are glass, metals, leather, paper, textile fabrics, screens and other materials.

I do not limit myself to the particular chemicals, coloring matters, materials, or steps of procedure particularly described, all of which may be varied without going beyond the scope of my invention as described and claimed.

What I claim is:—

1. The process for producing colored effects, which comprises, applying coloring matter to a material and flowing thereover a solution of a finishing material in which the coloring matter is soluble.

2. The process for producing colored effects, which comprises, applying coloring matter to a material, drying the produced results and flowing thereover a solution of a finishing material in which the coloring matter is soluble.

3. The process for producing colored effects, which comprises, applying coloring matter to a material in a plurality of places and flowing thereover a solution of a finishing material in which the coloring matter is soluble.

4. The process for producing colored effects, which comprises, applying coloring matter to a material in a plurality of places, drying the produced results and flowing thereover a solution of a finishing material in which the coloring matter is soluble.

5. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material, applying a coloring matter with a color vehicle thereto and flowing thereover a solution of a finishing material in which the color vehicle is soluble.

6. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material, drying the produced results, applying a coloring matter with a color vehicle thereto and flowing thereover a solution of a finishing material in which the color vehicle is coluble.

7. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material, applying a coloring matter with a color vehicle thereto, drying the produced results and flowing thereover a solution of a finishing material in which the color vehicle is soluble.

8. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material, drying the produced results, applying a coloring matter with a color vehicle thereto, drying the produced results and flowing thereover a solution of a finishing material in which the color vehicle is soluble.

9. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material in a plurality of places, applying a coloring matter with a color vehicle thereto and flowing thereover a solution of a finishing material in which the color vehicle is soluble.

10. The process for producing colored effects, which comprises, applying a solution of a basic coating to a material in a plurality of places, drying the produced results, applying a coloring matter with a color vehicle thereto, drying the produced results and flowing thereover a solution of a finishing material in which the color vehicle is soluble.

Signed at New York city, in the county of New York and State of New York this 14th day of May, 1921.

LEON ORNSTEIN.