UNITED STATES PATENT OFFICE.

HERMANN SCHULZE-BERGE, OF ROCHESTER, ASSIGNOR TO HIMSELF, AND JESSE H. LIPPINCOTT, OF PITTSBURG, PENNSYLVANIA.

METHOD OF APPLYING FUSIBLE METALLIC COLORS TO CHINA AND GLASS WARE.

SPECIFICATION forming part of Letters Patent No. 296,226, dated April 1, 1884.

Application filed January 11, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, HERMANN SCHULZE-BERGE, of Rochester, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Methods of Applying Fusible Metallic Colors to China and Glass Ware; and I do hereby declare the following to be a full, clear, and exact description thereof.

I have in several previous specifications described methods of applying powdered substances for the purposes of etching or coloring the surface of glass or china ware on which any desired design or pattern has been previously applied by printing, stamping, or sketching with some sticky substance capable of receiving and retaining the powder without injury to the decorative effect.

My present invention relates to a new method of applying coloring-matter to the surface of glass or china ware, whereby a new and improved effect is produced.

In practicing my invention I first stamp, print, or sketch the design with some sticky substance—such as a fine resinous varnish or boiled linseed-oil—applying the varnish or oil of such consistency and in such quantity only as will receive and retain the powdered coloring-matter and leave a nearly dry surface. The coloring-matter, consisting of fusible metallic colors—such as are well known and used for painting on china or glass—is first reduced to an impalpable powder. If various colors are to be employed, the predominating color or ground may be first dusted all over the printed surface as evenly as possible, and is allowed to remain until it is absorbed by the varnish or oil. This being done, the other colors are applied carefully, one at a time, to the desired part of the pattern, and are rubbed in by means of a "stump" of leather, paper, or other suitable material, such as is used in crayon-drawing. The edges of the color may be made to shade into the first or ground layer of coloring, so as to leave no distinct line of demarkation between one color and another around the edges of the second layer. A third layer may then be applied over portions of the second, and so on until the desired effect is produced. When one color is applied on the top of the other, it is better to apply the lightest colors having the least body first, and afterward those which have a darker or more distinctly marked shade of color.

If preferred, instead of applying the colors in layers, one on top of the other, different colors may be applied to different parts of the pattern and rubbed in with a stump, and the lines separating the colors may be obliterated by rubbing, so that one color or shade of color may be made to run imperceptibly into another. By this means an effect is produced which is unattainable by tracing one portion of the pattern first and dusting its color on it, and then drawing a further portion of the pattern and dusting another color on it, or by drawing the whole of the design at once, and then applying the different colors to various parts by means of brushes. After applying the finely-levigated coloring-matter in the manner described, the china or glass ware is exposed to the requisite degree of heat to fuse the colors, and the effect produced is markedly different from any that can be produced by any other means heretofore known with which I am acquainted.

I am aware that it is not new to apply a single color to the surface of glass by first printing the design thereon with a sticky substance, and then dusting the coloring-matter thereon; but such method differs from mine, in that thereby only a single color is obtained in the glass, while by my method I can produce the pattern in shaded and blended colors.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The herein-described method of applying coloring-matter to the surface of glass or china ware for purposes of decoration, by first tracing or printing the design or pattern with a semi-fluid sticky substance—such as varnish or boiled linseed-oil—and then dusting a single ground color of fusible enamel in a dry and finely-powdered condition over the surface, and then, after the first or ground color has been absorbed, applying the other color or colors in the like pulverized condition to such parts of the surface as may be desired, and

rubbing them in, and, lastly, burning or fusing the colors in in the usual way, substantially as described.

2. The herein-described method of applying two or more colors to the surface of glass or china ware, by first tracing or printing the desired design or pattern with a sticky semi-fluid substance—such as varnish or boiled linseed-oil—and then applying the several fusible enamel colors in a finely-powdered condition to the printed surface and rubbing them, so as to blend the outer edge of one color into the adjoining color, and, lastly, burning or fusing the colors in in the usual way, substantially as described.

In testimony whereof I have hereunto set my hand this 15th day of December, A. D. 1883.

HERMANN SCHULZE-BERGE.

Witnesses:

W. BAKEWELL,

W. B. CORWIN.