

UNITED STATES PATENT OFFICE.

SUSAN M. H. PENNINGTON, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN PROCESSES OF COLORING PHOTOGRAPHS.

Specification forming part of Letters Patent No. **205,807**, dated July 9, 1878; application filed May 3, 1878.

To all whom it may concern:

Be it known that I, SUSAN M. H. PENNINGTON, of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and Improved Process of Coloring Photographs and Engravings, of which the following is a specification:

My invention relates to a novel process of coloring photographs and other pictures; and it consists in clearing the picture by saturating it with a varnish or clearing solution, and afterward painting it with oil-colors or water-colors.

In carrying out my invention, I first prepare a varnish by saturating turpentine with common white rosin, which is selected for clearness, and to facilitate the process I pulverize the rosin and shake or stir the solution from time to time as the rosin is added. When the turpentine has cut as much of the rosin as it will contain I allow it to settle and pour off the clear varnish, which I will call "solution No. 1." I then saturate turpentine with uncolored paraffine, which is scraped in thin shavings. When this mixture, after frequent shaking, remains very milky or cloudy I consider it finished. This mixture I call "solution A." To one part, by measure, of solution A, I add three parts of turpentine and shake them well. If, after settling, the solution does not become clear I cautiously add enough turpentine to clear it. This mixture I call "solution No. 2." I now prepare a clearing solution by mixing three parts, by measure, of solution No. 1 with one part of solution No. 2.

Although I have mentioned turpentine as a solvent for the resins or gums I do not confine myself to that alone, as I may use ether, chloroform, or any of the light hydrocarbons.

To prepare the varnish used in preparing and finishing the photographs, I saturate alcohol with powdered rosin, and allow it to settle. I then add alcohol enough to make the varnish dry quickly. To test the varnish I apply a little of it from time to time to bits of prepared paper until it acquires the required thinness.

To prepare a drier, I dissolve powdered rosin in a light hydrocarbon, and until it holds just enough rosin to dry quickly on paper. I place the clearing solution in a large wide-

mouth jar, and drop into it the photographs or other pictures, which are allowed to remain until they become transparent, and they may remain longer without injury.

When the pictures become cleared I remove them from the clearing solution and scrape off the superfluous solution by drawing the paper between two perfectly straight smooth edges of ivory, card-board, or other suitable material, and allow it to become partly dry, so that it becomes sticky, when I apply to its face with a soft camel's-hair brush well filled with varnish a coat of the varnish above described, and with another brush I coat the back of the picture with a thin coating of the clearing solution. I now allow the picture to dry in a warm room, but not before the fire.

After the picture becomes dry it may be kept for any length of time in this condition, as it does not lose its transparency, and becomes more seasoned and in a better state to handle, and, should it be disposed to curl up, a card may be placed in the roll to prevent the surfaces from coming together.

The picture must always be handled by its edges.

When the picture is painted it is laid face downward on a glass, the glass being laid upon or near a white surface, so that the light will be reflected through the picture.

Common oil-colors are applied to the back of the picture in the usual way, and, if it is desired to hasten the drying of the colors, soft pastels or crayons of appropriate colors may be pulverized or scraped and dusted over the oil-colors or the crayons, or powdered white lead, or zinc-white, or even prepared chalk may be mixed with the colors before they are applied to the picture. To further facilitate the drying the brush may be frequently dipped in the drier.

When the pictures are too large to be readily cleared in a jar the clearing solution may be applied with a brush.

Pictures may be cleared by applying a hot mixture of paraffine and rosin to the back of the picture. The picture may be mounted by employing a paste composed of soluble glass and prepared chalk.

The advantages claimed for my improved process are, that the work may be expeditiously

done, is permanent when done, and it may be accomplished by a person inexperienced in art, and is comparatively inexpensive or cheap.

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

The process for preparing photographs for coloring, consisting in first immersing the photograph in a clearing solution of rosin and paraffine, each previously dissolved in turpen-

tine, and then applying to the face a coat of rosin dissolved in alcohol, and to the back a coat of the clearing solution, substantially as set forth.

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Witnesses:

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CHARLES LAVOE.