

UNITED STATES PATENT OFFICE.

HELEN M. SNYDER, OF PINE BLUFF, ARKANSAS.

WATER-PAINTING UPON FERROTYPE AND OTHER PICTURES.

SPECIFICATION forming part of Letters Patent No. 245,881, dated August 16, 1881.

Application filed December 29, 1880. (No specimens.)

To all whom it may concern:

Be it known that I, HELEN M. SNYDER, of Pine Bluff, in the county of Jefferson and State of Arkansas, have invented a new and useful
5 Improvement in Water-Painting upon Ferrotypes and other Pictures, of which the following is a specification.

The process of coloring or painting photographs and other pictures to beautify them and
10 make them resemble oil-paintings, as now practiced, cannot be successfully applied to ferrotype pictures, and the gum preparations now known and used for painting photographs and like pictures are of such a character as to render the process of painting a picture a long
15 and difficult one, and, owing to the brittleness of such preparations when dry, and also their solubleness, durable and polished surfaces have not been obtained.

The object of my invention is a compound
20 for the preparation of the picture to be painted and the paint, and for finishing the picture, which can be easily and quickly applied, and which, when dry, will form a surface which
25 will not crack or scale off, and which will also resist all effects of heat, light, and moisture, and a surface which can be cleaned and washed with water.

My invention consists, first, of the compound
30 composed, namely, of a chromate, a gelatinous substance, and soap or sugar; also of a method or process of painting and finishing pictures.

The ingredients of the compound which I have invented or discovered for painting and
35 surfacing pictures are preferably isinglass, chromic acid, and soap, or, instead of soap, the sirup of sugar, or the two combined in equal proportion. These ingredients are combined as follows: Of a gelatinous substance—say isinglass—take twenty grains, together with one-half ounce of water. To this add two drops of the prepared soap or thick sirup of sugar, prepared as hereinafter described. This compound is used for the first coat.

The soap is prepared as follows: In one-half
45 tea-spoonful of alcohol and one tea-spoonful of water dissolve fifty grains of white castile-soap. To this add chromic acid burned with alcohol in this way: put fifteen grains of the acid in
50 an earthen or porcelain vessel, and pour the

alcohol on the acid with a spoon, so that nothing may be caught by the flame, more alcohol being added from time to time until the acid is all burned, and then add water to dissolve the brown portion, and then filter. This
55 added to the dissolved soap makes the prepared soap above mentioned. Enough of this should be added to the isinglass, if made in quantities or only as used, to give it a slightly yellowish tinge. The quantity will vary according to the amount of water put into the
60 burned chromic acid.

The chromic acid, when combined with the isinglass, makes a very insoluble compound, and the color not being bright when prepared
65 as described, the quantity necessary to use does not affect the color of the paints, the compound being perfectly transparent when applied.

A compound of the isinglass, chromic acid,
70 and soap or sugar being thus obtained, the picture to be colored or painted—say an unvarnished ferrotype portrait—is first coated with it, and then dried under a screen suitable to protect it from dirt, and the picture should
75 be kept as level as possible while drying. After it is dry it is ready to be worked upon with water and paint alone, and alterations may now be made, obscure places brought out, all blemishes covered or painted out, and, if desired, shadows and lights can be worked upon
80 this coat, using the proper shadow-colors for the coats to follow. After this is done each part is to be coated with the proper color or colors mixed with the compound of isinglass,
85 chromic acid, and soap, or soap and sugar. The face should be coated with Chinese white containing vermilion, or vermilion and Indian red, according to the complexion. So much should not be put on as to obscure the features
90 while the paint is wet. After all the parts are coated and dry the picture should be placed in a covered pan, and this placed over a vessel containing steaming water, (not boiling,) and allowed to steam about fifteen minutes. The
95 face can now be worked upon with water-colors alone, a coat of the compound afterward to be placed over it, and if it is desired to flow the color into the cheeks it can now be done in this coating.
100

In putting on the coat of colors, as soon as one color has set another may be put on, and when all are on all can be dried at the same time.

5 Before working the face as above stated the coating may be rendered much more insoluble without affecting the colors by soaking the picture in water containing a small quantity of chromic acid for about ten minutes.

10 When the coloring is finished and dried, if it is desired, a varnish coat of the compound of isinglass, chromic acid, and soap, or sugar, may be carried over the whole and then finally dried.

15 The above is the preferable mode of proceeding; but all of the steps named are not by any means necessary to my new process—as, for instance, the working of the face need not be done separately, but may be worked at the same time with the body of the picture, and it is not necessary to soak in chromated water, nor is it necessary to finally varnish the whole picture with the compound without colors, as a good gloss and the same durable surface result from painting the picture with this compound mixed with the colors.

For painting or coloring albumen pictures and pictures of that style, no preparatory coating with the compound is needed to be put on before working, the coats of color being put on at the first step. An engraving should be mounted on card-board and receive a coat of the compound, as in the case of ferrotype pictures, and finished with the compound.

35 For painting porcelain and glass the method described for painting the ferrotype is to be followed.

Many advantages are obtained by the use of this process and compound. Alterations may be made in the picture, shadows deepened, and lights heightened. The surface is so insoluble that one coat of paint can be put upon another as soon as set, and all finally dried at once without waiting for each coat to dry, thus ren-

dering the execution much easier and more rapid. Pencil sketches drawn on porcelain, glass, and other material may be painted and the pencil-marks erased or painted out, and the surface is given a glossy and beautiful finish, which is durable, which will not crack or scale off, which will not be affected by light or heat, and which can be cleaned and washed with water without disturbing the color or paint.

The color of the prepared chromic acid not being so bright, and the fact that it produces a much more insoluble compound when mixed with the isinglass than any of the salts thereof, its use is much preferred to bichromate of potash or other salts, though the salts might be used with good results.

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

1. The compound herein described, formed of chromic acid burned with alcohol, isinglass, and soap, or sugar, and paint or coloring-matter, in about the proportions specified.

2. The method herein described of coloring or painting a picture, consisting of first coating the picture with a compound composed of chromic acid burned with alcohol, isinglass, and soap and sugar, then applying the colors, either alone or combined with said compound, substantially as set forth.

3. The process of coloring pictures which consists in first coating the picture with a compound of chromic acid burned in alcohol, isinglass, and soap, then drying it under a screen, then coloring it with suitable water-colors, then coating with a color or colors mixed with the compound of burned chromic acid, isinglass, and soap, and finally drying the picture, substantially as described.

HELEN MARIA SNYDER.

Witnesses:

TOM W. RINUS,
M. K. HUNTER.