UNITED STATES PATENT OFFICE.

LOUIS GRAF, OF VAN BUREN, ARKANSAS.

PROCESS FOR PRODUCING COLORED PHOTOGRAPHS ON LINEN.

SPECIFICATION forming part of Letters Patent No. 229,694, dated July 6, 1880.

Application filed November 25, 1879.

To all whom it may concern:

Be it known that I, LOUIS GRAF, of Van Buren, in the county of Crawford and State of Arkansas, have invented a new and useful Improvement in the Process for Producing Colored Photographs on Linen or other Material, of which the following is a specification.

This invention relates to the production of colored photographs upon linen or other material; and it is an improvement on the process for which United States Letters Patent No. 220,435, dated October 7, 1879, were granted to Johannes Schumacher, of Roemische Posel, Saxony, Germany, which Letters Patent were assigned to me.

The invention consists in printing a copy of the photograph from the negative onto the prepared linen, making the same transparent by means of a light coat of varnish, and then painting the back of the picture with oil-colors.

In carrying out my invention the linen, cotton, or other material is first washed thoroughly until all the starch has been washed out, and is then mounted on a stretcher and dried. When perfectly dry the following solution is applied with a brush or in some other suitable manner.

The solution is prepared as follows: Seven grams (108.08 grains) of distilled water, eight grams (123.52 grains) of nitrate of silver, and fifty grams (1 ounce 4 drams 52 grains) of absolute alcohol are mixed to produce the solution No. 1. Thirty grams (7 drams 43.20 grains) of absolute alcohol and two grams (30.88 grains) of chloride of calcium are mixed to produce solution No. 2. Thirty grams (7 drams 43.20 grains) of absolute alcohol and two grams (30.88 grains) of citric acid are mixed to produce solution No. 3. About two hundred and fifty grams (8.81 ounces) of ordinary collodion are gradually added to the solution No. 1, which is shaken constantly during the mixing. To this mixture solution No. 2 is then added, drop by drop, under constant shaking, after which solution No. 3 is added in the same manner. The mixture is now ready for use in preparing the linen, cotton, or other material.

The proportions given above are preferred, but may be varied.

A strong copy of the photograph is now printed onto the prepared linen from the negative, and is fixed by a solution of one part of hyposulphite of sodium and ten parts of distilled water.

The picture or the entire linen is made transparent by means of a light coat of varnish or some other similar suitable material. The rear side of the picture is then painted with oil-colors in a light sketching manner. The picture need not be painted very accurately, nor with any special attention to shades or shadows, as they are shown by the photograph, which is not transferred onto the linen, but printed directly onto it, and is entirely embodied in the linen, cotton, or other material.

Any other kind of colors may be used, but oil-colors are preferable.

A picture made in the manner described above possesses all the accuracy and softness of a photograph, and at the same time shows all the vivid colors of an oil-painting. It is cheaper than an oil-painting and can be produced in a shorter time.

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

In the process of producing colored photographs on linen or analogous material, the employment of the collodion mixture described, consisting, essentially, of distilled water, nitrate of silver, absolute alcohol, chloride of calcium, citric acid, and ordinary collodion, in or about the proportions hereinbefore specified.

LOUIS GRAF.

Witnesses:
J. A. THAYER,
FRANK IBBOTSON.