

No. 640,137.

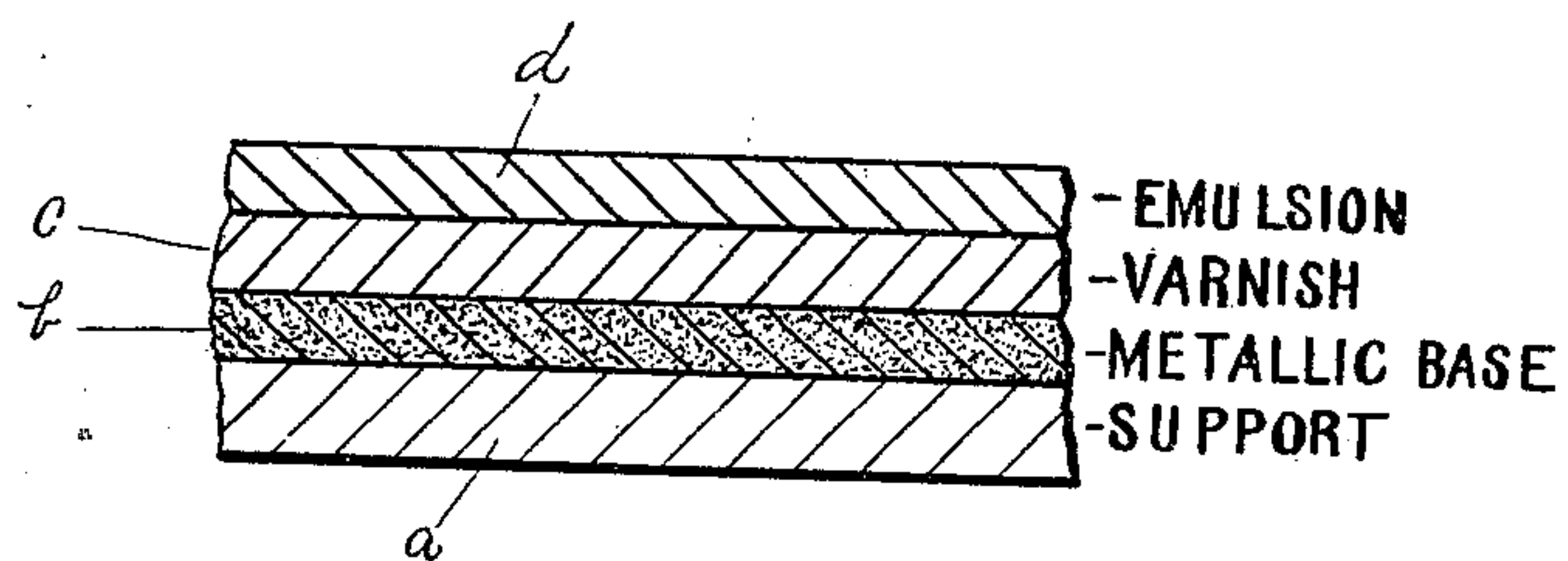
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H. KUHN.

SENSITIZED METALLIC COATED PHOTOGRAPHIC PAPER.

(Application filed Mar. 20, 1899.)

(Specimens.)



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY KUHN, OF ROCHESTER, NEW YORK.

## SENSITIZED METALLIC-COATED PHOTOGRAPHIC PAPER.

SPECIFICATION forming part of Letters Patent No. 640,137, dated December 26, 1899.

Application filed March 20, 1899. Serial No. 709,743. (Specimens.)

*To all whom it may concern:*

Be it known that I, HENRY KUHN, a citizen of the United States, residing at Rochester, in the county of Monroe, in the State of New York, have invented an Improvement in Sensitized Metallic-Coated Photographic Paper, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to an improved photographic paper prepared with an admixture of a metal or a metallic substance in the powdered condition, whereby when the print is finished it presents a striking and highly-ornamental metallic luster, which distinguishes these pictures from all others known to me.

My invention is fully described and illustrated in the following specification and the accompanying drawing, the novel features thereof being specified in the claims annexed to the said specification.

The accompanying drawing represents a section of my improved sensitized metallic fabric on an enlarged scale.

In the manufacture of my improved metallic photographic paper I take any suitable paper *a* and coat it with a layer of gelatin *b*, having the metal or metallic substance suspended therein in the condition of a fine powder. This coating may be done by hand or in any suitable machine, care being taken to secure the requisite uniform distribution of the powder. The gelatin is dissolved in water to a consistency which will keep the powder in suspension, and the powder is thoroughly disseminated through the liquid by agitation. Alcohol and glycerin may be added to the gelatin in suitable proportions, and chrome alum or an equivalent chemical is employed to render the gelatin insoluble when dry. I also usually employ a small quantity of tartaric or other acid having analogous properties to maintain the gelatin in the liquid state for the coating, about sixty grains to the gallon being usually sufficient for this purpose. It is not necessary to use photographic paper for the base, as any ordinary paper of sufficient strength may be employed. In fact, my invention may be practiced with cloth, leather, or any other suitable fabric which renders it applicable to many kinds of ornamental work. The paper or other fabric

*a* being thus coated with a layer of dried insoluble gelatin *b* sustaining a powdered metallic substance, the next step is to coat the gelatin layer with a suitable varnish *c*, preferably a camphorated collodion varnish rendered pliable by amyl acetate. Any other suitable varnish may, however, be employed, and I may use for this purpose a coating on the metallic layer of a solution of plain gelatin rendered insoluble.

The next step in the manufacture of my improved sensitized paper is to apply the sensitive coating *d*, which may be any ordinary chlorid emulsion. If the paper is to be used immediately after coating, a bromid emulsion may also be employed, and under some circumstances other sensitive compounds—such, for instance, as the blue-print materials, if desired. I prefer, however, to use an emulsion composed of sixteen ounces of water, one hundred and twenty grains of ammonium chlorid, one hundred and fifty grains of potassium chlorid, eight hundred grains of gelatin, seven hundred and fifty grains of silver nitrate, fifteen grains of citric acid, fifteen grains of potassium bromid, and one-half grain of potassium iodid. These are mixed together with the silver in the salted gelatin. The emulsion is then allowed to set. It is then ground up, washed so as to remove the free silver, and remelted and coated on the metallic base. This emulsion produces a paper which is sensitive enough to be used under negatives exposed to ordinary gas-light. A sensitive collodion emulsion may also be employed.

Any ordinary developer may be used—such as amidol or hydrochinone, for instance—according to well-known formulas.

In preparing my metallic base I employ any of the metals in the condition of a very fine powder or dust, and I may also employ many of the alloys in a similar condition. Very beautiful prints are made by the use of silver or gold. The high lights glisten with a shining metallic luster, which presents a very striking appearance, unlike any photographic prints which have been heretofore produced. The prints are also exceedingly permanent on account of the use of the metallic base.

Prints in various colors may be made by the use of suitable metallic pigments, preferably



of a light shade, such as light blue or light green.

In a modification I may produce the metallic base by blowing or dusting or otherwise spreading it over the gelatin layer before it becomes dry.

I claim—

1. The herein-described photographic-printing material, consisting of a fabric serving as a support, a sensitive surface, and having beneath the sensitive surface a layer containing a metallic base in a finely-divided condition; substantially as described.

2. The herein-described photographic-printing material, consisting of an insoluble layer, a support therefor, a metallic base in a finely-divided condition above said support, and a layer of sensitive material on the insoluble layer; substantially as described.

3. The herein-described photographic-printing material, consisting of a fabric acting as a support, a layer of gelatin applied thereto, said layer containing a metallic base in a finely-divided condition, an insoluble

coating on said gelatin, and a sensitized layer on the insoluble coating; substantially as described.

4. In a photographic-printing material, the combination with the fabric acting as a support, of a layer of gelatin applied thereto, containing a metallic base in a finely-divided condition, an insoluble coating on said gelatin, and a sensitized gelatino-chlorid emulsion on the insoluble coating; substantially as described.

5. In a photographic-printing material, the combination with a fabric, of a layer of gelatin applied thereto, containing a metallic base in a finely-divided condition, a layer of hardened gelatin on said first-named layer of gelatin, and a sensitized gelatino-chlorid emulsion on the hardened gelatin; substantially as described.

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Witnesses:

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