

UNITED STATES PATENT OFFICE.

LEON LILIENFELD, OF VIENNA, AUSTRIA-HUNGARY.

COLORING-MATTER FOR PRODUCING SILK-LIKE OR PEARL-LUSTER EFFECTS.

No. 834,739.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEON LILIENFELD, a subject of the Emperor of Austria-Hungary, and a resident of Vienna, Austria-Hungary, have invented a new and Improved Coloring-Matter for Producing Silk-Like or Pearl-Luster Effects, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved coloring-matter for printing, painting, coating, or otherwise treating various articles made of wood, metal, paper, leather, textile fabrics, &c., to produce a silky or pearl-luster effect.

The coloring-matter consists, essentially, in a mixture of finely-pulverized mica with viscose.

The coloring-matter heretofore used for producing silk-like effects consisted, mainly, in a finely divided or pulverized metal suspended in a suitable binding substance; but this coloring-matter is faulty in two points—namely, it does not permit the production of a real white color, as the powdered aluminium usually employed as the metal part is grayish-blue, and consequently a white effect cannot be produced on a light fabric, on paper, white wood, or the like. The other fault is that it is almost impossible to produce any desired shade by the use of a metal powder, and consequently the user of a coloring substance is confined to the shades of the metal powders found in the market and colored by analine dyes or the like.

Coloring of the binding substance for such metal powders is not permissible, as the binding substances cannot very well be colored; but if they are colored the metal powder in suspension therein changes its color, and hence such coloring substance is very often rendered entirely useless for the desired purpose.

By using the improved coloring-matter above referred to it is possible to produce real white silk-like pear-luster effects on light materials, and in addition any desired hue or shade can be produced. It is understood that if a solution of viscose (cellulose xanthogenate) is used as a color then it is impossible to produce a silk-like effect, for the reason that the background appears through the transparent coating, and thereby prevents the desired effect, and by adding an opaque substance—for instance, a white pigment—this defect is not overcome, as the

white pigment does not reflect rays of light, is lusterless, and consequently dulls the luster of the viscose, and the coatings produced are not different from those in which a white coloring-body is combined with another binding substance.

In using finely divided or pulverized mica with gelatin, albumen, or carbon hydrates or resinous solutions and the like the desired silk-like effect is not forthcoming, as these binding substances eliminate the mica luster to a more or less extent.

By the use of mica in combination with dissolved viscose it is possible to produce a coloring-matter which has a silk-like pear-luster brilliancy.

It is expressly understood that the viscose is not exclusively used as a binding substance or fixing agent for the finely-powdered mica, as it is possible to bind the mica perhaps far better with other fixing agents—such as glue, albumen, resinous solutions, and the like—it being expressly understood that the main feature of the invention is to combine mica with viscose to cause the two substances to act collectively, each contributing its share to produce a coloring-matter of silk-like or pearl-luster brilliancy, especially as both the mica and the viscose have a silk-like or pear-luster brilliancy.

The binding substance (dissolved viscose) can be readily colored with a suitable pigment without influencing its own brilliancy or that of the mica and without the mica affecting the hue or shade desired, so that it is possible by the selection of the proper pigment for the binding substance to produce any desired hue or shade without loss of the silky or pearl-luster brilliancy.

In order to produce the coloring-matter, it is necessary to dissolve the viscose in a suitable dissolving medium, the resultant solution (in a colored or uncolored state) being then thoroughly mixed with finely-powdered (colored or non-colored) mica. If necessary, the coloring-matter produced can be run through sieves to insure an intimate mixing of the substances.

Viscose is used only dissolved in water. In case it is not desired to produce white, but other colors, then it is necessary to use a pigment capable of dissolving in water or preferably alkali-proof pigments.

The coloring-matter produced with the aid of viscose and mica, as above described,

requires fixing by a subsequent process employed for rendering the viscose insoluble—for instance, by the use of steam, dry heat, drying in the air, treating with acids, salts, &c.

5 The coloring-matter produced and used on the articles as described is characterized by a high silk-like luster, and this luster or brilliancy can be heightened by calendering or smoothing, &c—that is, by passing the article through ordinary or friction calenders, 10 presses, and the like or by embossing.

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

15 1. Coloring-matter for producing silk-like effects consisting of a mixture of finely-pulverized mica and viscose.

2. Coloring-matter for producing silk-like

effects consisting of a mixture of finely-pulverized colored mica, and viscose. 20

3. Coloring-matter for producing silk-like effect consisting of a mixture of finely-pulverized mica, viscose and alkali-proof pigments.

4. Coloring-matter for producing silk-like 25 effects consisting of a mixture of finely-pulverized mica, viscose and pigments soluble in water.

In testimony whereof I have signed my name to this specification in the presence of 30 two subscribing witnesses.

LEON LILIENFELD.

Witnesses:

WENZEL LINKFORD,
ALVESTO S. HOGUE.