

UNITED STATES PATENT OFFICE.

LEON LILIENFELD, OF VIENNA, AUSTRIA-HUNGARY.

PROCESS OF PRODUCING METALLIC OR LUSTROUS COLORS FOR PRINTING ON FABRICS.

No. 815,600.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed August 12, 1902. Serial No. 119,430.

To all whom it may concern:

Be it known that I, LEON LILIENFELD, a subject of the Emperor of Austria-Hungary, residing in Vienna, Austria-Hungary, have invented a new and useful Process of Producing Metallic or Lustrous Colors for Printing on Fabrics and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to make and use the same.

The production of metallic or lustrous printing effects on textile fabrics has hitherto presented apparently insurmountable difficulties in consequence of the want of suitable fixing media sufficiently impressionable for the purpose and at the same time capable of resisting physical and chemical influences. The principal advantage to be fulfilled is when the fabrics are brushed or beaten or washed with water, soap, alkalis, acids, &c., the metallic powders or pigments producing metallic or lustrous effects adhere sufficiently to the fabrics without the pliancy of the fabrics being affected.

The fixing media hitherto employed have not met this condition. They are, moreover, lacking in that they do not bring out the printing effects in clear, sharp outlines, require longer time than is desirable for drying, and can only be used on dark-colored fabrics, for when printed on light-colored fabrics differently colored patches stand out around the pattern, thus considerably reducing the market value of the goods.

Fabrics printed in accordance with the process described herein are found to meet all the requirements above enumerated and to have none of the disadvantages which have been hitherto so apparent.

The fixing media used in carrying out this process comprise a resinous substance, a vegetable-juice substance, and wood-oil. One or more suitable resinous substances are first melted, finely divided india-rubber or gutta-percha being introduced into the melted material and the heating continued until a uniformly-melted substance is produced. This melted substance or mixture is then at once or when cooled dissolved in a suitable solvent—such as benzin, chloroform, disulfid of carbon, turpentine-oil, &c. That very con-

siderable advantages are insured by melting the resinous substance and the india-rubber together is made clear from the fact that if the same quantities of resinous substance and the india-rubber be simply dissolved in the same solvent under the action of cold or heat printing solutions will be obtained which are unserviceable in every respect, while, on the other hand, the printing solutions obtained with the same quantities following the above-named procedure produce faultless printing effects, whence it is proved that in the melting of the india-rubber with resinous substances under heat a change in the one or the other is effected which is favorable to the intended purpose. The precise proportions for the mixture cannot be given, as they may be varied to the greatest extent. Next, I mix together wood-oil and a resinous substance, with the aid of heat to melt them, if desired. This mixture (sometimes commercially known as "rhusol") is then treated with a suitable solvent—such as turpentine, benzin, drier-oil, &c.—and then, being meantime filtered or not, mixed with the first-named mixture and the pigment. The result is a solution whereby more perfectly iron-fast metallic printing effects and greater quickness of drying result than by previous solutions known to me. Moreover, such solution produces a sort of film or skin on the fabric, whereby the printing effects stand out very sharp and clear.

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

The process of producing metallic or lustrous colors for printing on fabrics and the like which consists in mixing together a resinous substance and a vegetable-juice substance, combining with said mixture a mixture comprising wood-oil and a resinous substance, and then adding to the mixture thus formed the pigment, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of July, 1902.

LEON LILIENFELD.

Witnesses:

L. H. MUNIER,

HORACE LEE WASHINGTON.