

UNITED STATES PATENT OFFICE.

ARMAND JULIUS STIEGELMANN, OF LUDWIGSHAFEN, GERMANY, ASSIGNOR
TO BADISCHE ANILIN AND SODA FABRIK, OF LUDWIGSHAFEN, BAVARIA,
GERMANY, A CORPORATION OF BADEN.

PROCESS OF MAKING RESIST-WHITE UNDER INDIGO.

SPECIFICATION forming part of Letters Patent No. 699,033, dated April 29, 1902.

Application filed December 12, 1901. Serial No. 85,663. (No specimens.)

To all whom it may concern:

Be it known that I, ARMAND JULIUS STIEGELMANN, a doctor of philosophy and a chemist, a subject of the Emperor of Germany, residing at Ludwigshafen-on-the-Rhine, in the Kingdom of Bavaria, Germany, have invented new and useful Improvements in Production of Resist-White Under Indigo, of which the following is a specification.

This invention relates to the production of resist-whites under indigo. Hitherto such whites were made by first bleaching the material; secondly, printing thereon a resist; thirdly, drying the printed resist; fourthly, dyeing in a dip-vat; fifthly, rinsing and further preparing for the market. My new process does away with this previous bleaching and permits of dyeing upon either a dip or a continuous vat.

My new process consists, essentially, in printing a resist containing lead peroxid upon the unbleached material, dyeing the so-prepared material upon an indigo-vat and subsequently treating the dyed material with hydrochloric acid, and finally rinsing and otherwise suitably preparing the material for the market.

In the preferred embodiment of my process I employ a resist consisting of a thickening agent, glycerin, and lead peroxid. To insure success, it is recommended that the lead peroxid employed be in a very finely divided state.

I will further illustrate the nature of this my invention by means of an example illustrative of the preferred embodiment of my invention. The invention, however, is not limited to the conditions and proportions herein given. The parts are by weight.

Example: Grind four hundred (400) parts of finely-powdered lead peroxid with three hundred (300) parts of glycerin and add sufficient of a suitable thickening agent (for instance, gum-water) to bring the whole to one thousand (1,000) parts. The nature and the quantity of the thickening agent to be used is dependent upon the required consistence of the printing-paste, and this depends upon

the nature of the pattern, the nature of the material to be operated upon, and the engraving contained on the printing-rolls. Now print the so-prepared resist upon the material to be operated upon and dye the resist either in the air or at a temperature of thirty-five (35°) degrees centigrade and dye to shade upon an indigo-vat. After dyeing swill the goods in cold water. Then work the material in water of forty-five (45°) degrees centigrade, to every liter of which there has been added twenty (20) grams of hydrochloric acid containing from twenty-eight (28) to thirty (30) per cent. of hydrochloric acid (HCl) until the desired white has been obtained. Now rinse the material well with water.

What I claim is—

1. Process for the production of resist-white under indigo which consists in printing upon the material to be operated upon a resist containing a thickening agent, glycerin and lead peroxid, drying, dyeing with indigo, and then working in a bath containing hydrochloric acid all substantially as hereinbefore described.

2. Process for the production of resist-white under indigo which consists in printing upon the material to be operated upon a resist containing a thickening agent and lead peroxid, drying, dyeing with indigo, and then treating in a bath containing hydrochloric acid all substantially as hereinbefore described.

3. Process for the production of resist-white under indigo which consists in printing lead peroxid upon the material to be operated upon, dyeing with indigo, and then treating with hydrochloric acid all substantially as hereinbefore described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ARMAND JULIUS STIEGELMANN.

Witnesses:

ROBT. H. KNORRE,
E. F. KASTENHUBER.

It is hereby certified that in Letters Patent No. 699,033, granted April 29, 1902, upon the application of Armand Julius Stiegelmann, of Ludwigshafen, Germany, for an improvement in "Processes of making Resist-white under Indigo," an error appears in the printed specification requiring correction, as follows: In line 52, the word "dye" should read *dry*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 3d day of June, A. D., 1902.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.