

# UNITED STATES PATENT OFFICE.

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## POLYCHROMATIC-PRINTING BLOCK.

SPECIFICATION forming part of Letters Patent No. 386,859, dated July 31, 1888.

Application filed February 21, 1888. Serial No. 264,839. (No specimens.) Patented in England May 24, 1881, No. 2,274.

*To all whom it may concern:*

Be it known that we, WILLIAM GEORGE WHITE, residing at Thurlow House, Weighton Road, Anerley, in the county of Surrey, England, engineer, and ROBERT ALFRED ALBERT WHITE, residing at Crayford, in the county of Kent, England, subjects of the Queen of Great Britain, have invented certain new and useful Polychromatic Printing, (for which we have received Letters Patent in Great Britain, No. 2,274, dated May 24, 1881,) of which the following is a specification.

This invention relates to that system of color-printing known as the "polychromatic simultaneous system," in which the printing-block is built up of suitably-prepared materials containing the various colors which the design requires, and in which the printing-block so built up of coloring materials imparts a portion of its own substance to the fabric or surface to which it is applied.

Our present invention relates to the preparation of aniline dyes for use, in the manner above set forth, in polychrome printing-blocks. For this purpose we first dissolve the dye in a suitable solvent—such as methylated spirit or water—and add a solution of gum or albumen. We place the mixture in trays in a heated chamber and evaporate to dryness. The dye or color so treated and dried we then finely grind or pulverize and mix with fatty ingredients. The following are suitable: sheep's fat, one hundred parts; bleached beeswax, fifteen parts; sperm-wax, fifteen parts; paraffine, eight parts; Venetian turpentine, eighty parts; poppy or moss oil, ten parts; linseed oil, (boiled,) eighteen parts.

We sometimes mix china-clay, as well as gum or albumen, with the dye colors before combining them with the fatty ingredients.

We sometimes make use of pigment colors in the same composition with aniline colors.

We prefer to proceed as follows: We dissolve the coloring-matter in the solvent and add thereto well-washed china-clay and a so-

lution of gum-arabic or like gum. The proportions we use are: one ounce of the dye-color; two pounds of washed china-clay; one pound of gum; one gallon of water. After mixing these materials well together the mixture is placed in shallow earthenware trays, and in a heated chamber the moisture is evaporated. Other white inert pigment-like materials may be substituted for china-clay; but china-clay is preferred. The dry dye compound so obtained is ground fine in a granite-mill, and is then mixed with the fatty composition above given, in the proportion of two pounds of the former to one pound of the latter. The color so prepared is then ready for use in the production of the printing-block for polychrome printing, and the printing is conducted as is usual in this process. The color-block, being formed as described, is made to any suitable size or thickness—say one yard by six inches thick. It is then placed in a machine and cut or split into veneers or slabs of any required thickness, is then joined in one continuous sheet and bent round the cylinder of printing-machine, which is then ready for continuous printing, and, after printing, the finishing operations are those commonly employed in the polychrome process. The grease is extracted from the fabric by means of sawdust or like material saturated with naphtha or benzine spirit or other solvent. The goods are then steamed and afterward washed, all of which are well-known and usual operations.

What we claim is—

A mixture for blocks to be used in polychromatic printing, consisting of an aniline dye, fat, beeswax, sperm-wax, paraffine, turpentine, poppy or moss oil, and boiled linseed-oil, substantially in the proportions described.

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Witnesses:

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