

UNITED STATES PATENT OFFICE.

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DYEING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 763,616, dated June 28, 1904.

Application filed January 4, 1904. Serial No. 187,693. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE McC. LAWTON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Dyeing Compositions, of which the following is a specification.

My invention pertains to dyeing, and its novelty and advantages will be fully understood from the following description and claims.

At times in the practice of finishing accidents to machinery and other causes necessitate leaving the materials being finished in the various baths or else in a wet state for an undue period, and frequently materials having different shades and colors, especially black and white, are laid together. In consequence of this the colors usually run together, stain and change the shades desired, and thereby occasion a very considerable loss.

The object of my invention is to provide means for effectually preventing the black in dyed materials from running into or staining other colors or shades when the materials are left in the baths or are laid together in a wet state.

In carrying out my invention I follow the ordinary well-known process of dyeing, with the exception that I add what I term "Comet" acid to the mordant and "Comet" developer and "Comet" fastener to the finishing-bath.

To produce a permanent and stainless logwood black, I employ a mordant consisting of bichromate of potash, oxalic acid, and "Comet" acid. These ingredients are combined in the proper proportions to give the shade desired, and the composition is boiled for about one and one-half hours. The "Comet" acid incorporated in the mordant composition described is a liquid and is composed of water, some suitable substance containing gluten, either cream of tartar or tartaric acid, or both, bichromate of soda, bicarbonate of soda, nitrate of soda, oxalic acid, pyroligneous acid, nitrate of iron, and sulfuric acid. The proportions of these ingredients may obviously be varied according to the depth of shades required.

The finishing-bath employed is composed of chip or extract of logwood, other dyes to give the desired cast of shade, and "Comet" developer. These ingredients are varied to give the shade desired. The said finishing-bath is boiled for about one and one-half hours and to it "Comet" fastener is added. The "Comet" developer incorporated in the finishing-bath is composed of bicarbonate of soda, ground sumac, ground nutgalls, ground orange or lemon flavin, and ground fullers' earth. The said developer is in the form of a powder, and the proportion of its ingredients is varied to suit the wishes of the user. The fastener which is added to the finishing-bath is a liquid, is boiled for about forty-five minutes, and is composed of water, sulfate of iron, pyrolignite of iron, and nitrate of iron combined in suitable proportions.

Experience has demonstrated that when my novel acid, developer, and fastener are employed there is no liability of the colors of the materials dyed running together or becoming stained or changed in shade when the materials are left in the baths for an undue period or are laid together in a damp or wet state. Experience has also demonstrated that materials dyed in accordance with my invention have an absolute fast color and one calculated to withstand the strongest sunlight.

I have entered into a detailed description of what constitutes the preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as limiting myself to any specific proportions of ingredients, as such changes may be made in practice as fairly fall within the scope of my invention as claimed.

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

1. The herein-described composition of matter consisting of bichromate of potash, oxalic acid, water, a substance containing gluten, cream of tartar, tartaric acid, bichromate of soda, bicarbonate of soda, nitrate of soda, pyroligneous acid, nitrate of iron and sulfuric acid.

2. The herein-described composition of matter consisting of water, a substance containing gluten, cream of tartar, tartaric acid, bichromate of soda, bicarbonate of soda, nitrate
5 of soda, oxalic acid, pyroligneous acid, nitrate of iron, and sulfuric acid.

In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

GEORGE McC. LAWTON.

Witnesses:

GEO. W. SPAULDING,
EDGAR L. SPAULDING.