UNITED STATES PATENT OFFICE.

VICTOR G. BLOEDE, OF CATONSVILLE, MARYLAND.

PROCESS OF DYEING.

SPECIFICATION forming part of Letters Patent No. 588,387, dated August 17, 1897.

Application filed January 22, 1894. Serial No. 497,695. (No specimens.)

To all whom it may concern:

Be it known that I, VICTOR G. BLOEDE, a citizen of the United States, and a resident of Catonsville, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Dyeing Black and other Colors upon Fibers and Fabrics, of which the following is a specification.

Heretofore in the production of black, drab, and other colors from anilin and analogous or homologous compounds upon fibers or fabrics it has been customary to combine the oxidizer direct with the anilin composition, then causing the reaction with the anilin and oxidizer to take place by the process of aging or steaming the goods to be colored. The composition usually employed for the production of black and drab shades in this process consists of a salt of anilin or homologous or analogous substances and a chlorate of the alkalies with or without the addition of a metallic salt, and the process as substantially carried out to this present time is clearly described in patent to Lightfoot, No. 38,589.

My new process consists in applying the oxidizer separate from, instead of in combination with, the anilin composition, and in the form of a gas or vapor—that is to say, a volatile matter, such, for instance, as chlorin and its oxids, bromin, nitric acid, &c.

To carry out my invention I proceed as follows: I first saturate the fiber or fabric to be colored with a solution of anilin, toluidin, or homologous, analogous, or isomeric compounds. In practice I have found the chlorids of the compounds preferable; but other salts, such as the acetates, tartrates, &c., may also be used with success. For the production of black or deep shades the following proportions may be given as an example—viz., chlorid of anilin twenty-five parts, water seventy-five parts. To this composition various metallic salts, such as chlorid or nitrate of copper or iron, may be added to increase or modify the color or the process of oxidation, but good results may also be obtained without their presence.

A solution of the above description having been prepared, I saturate the fiber or fabric with the same in any convenient manner, and having removed the surplus liquor I subject the goods to the action of chlorin gas or other gaseous or vaporizable oxidizing substances and allow same to act until the anilin or analogous color-producing body has been oxidized or converted into color, which is evidenced by the uniform and permanent coloration of the fiber. The action of chlorin and most other gaseous oxidizers being too violent or sudden when used in concentrated form I have found it desirable to dilute the vapors with air, steam, or other gases before bringing same in contact with the fiber or fabric. From one per cent. of chlorin gas to ten per cent. (more or less) may be used, according to the character of the color desired or the nature of the composition operated upon—that is to say, one volume of the gaseous oxidizer combined with ninety-nine volumes of air, steam, or other diluent, up to ten volumes of gaseous oxidizer to ninety volumes of air or other diluent. After the oxidation of the coloring compound has been effected to the desired extent the goods are washed, soaped, chromed, or given such other auxiliary treatment as may be desirable. I do not confine myself to the precise details herein mentioned, nor to anilin or its salts alone, nor to any special gaseous oxidizer, as a number of these may be used with more or less satisfactory results in my process; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The process herein described for the production of colors upon fibers and fabrics consisting in first treating the fibers or fabrics with a composition of anilin, its homologues or analogues, then subjecting the fibers or fabrics so treated to the action of an oxidizer in gaseous form, until the desired coloring compound is produced.

VICTOR G. BLOEDE.

Witnesses:
RAYMOND M. GLACKEN,
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