

UNITED STATES PATENT OFFICE.

OTTO P. AMEND, OF NEW YORK, N. Y.

PROCESS OF MORDANTING FABRICS.

SPECIFICATION forming part of Letters Patent No. 512,264, dated January 9, 1894.

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To all whom it may concern:

Be it known that I, OTTO P. AMEND, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented a new and useful Improvement in Processes of Dyeing, of which the following is a specification.

My invention relates especially to the production of a fast mordant on fibrous substances, and consists of the features hereinafter set forth.

In carrying out my invention I first treat the fibrous substance, whether it be wool fiber, silk fiber or fiber of some other substance, with a cold solution of chromic acid in the presence of some other acid such as acetic or hydrochloric acid that will not produce a secondary oxidizing effect on the fiber. The resultant of this step of the process is a new chemical compound which may be described as an insoluble chromate of whatever fiber may have been so treated. I then subject the fiber to the action of a reducing agent in solution, as for example, protosulfate of iron, monochlorid of copper, the sulfites or bisulfites of soda, lime, or any other of the well known reducing agents. Both of these steps of the process are performed at the ordinary temperature and no boiling whatever is required. In carrying out the first of these steps I prefer to simply immerse the fiber in the liquid for a period of, say forty minutes or an hour's duration. The fiber is then taken out and the excess of the solution is removed by any of the well known ways, as by wringing, passing between rollers, by immersion in cold water or subjecting to the action of a centrifugal machine. In carrying out the second step the fiber is simply immersed in the solution of the reducing agent. The fiber is then taken out and the excess of the solution removed as before. The resultant is a mordant upon the fiber treated of great value and superior in every way

to those produced by the old and well known processes employing bichromate of potash, tartaric acid, acetate of chromium or fluorid of chromium, &c., all of which require the treated fiber to be boiled before the mordant is produced.

The mordant produced by my process admits of the formation of any of the metallic lakes upon the fiber. Compound metallic mordants in combination with chromium may thus be produced and the results obtained will be found infinitely superior to anything so far produced. Especially in connection with the alizarine series are the mordants of my process of great value, and I have thus succeeded in producing the much sought for copper lake of the alizarine blue. Again it will be found that logwood and other natural dye-stuffs, as well as artificial dyes which produce lakes with metallic compounds will produce much brighter, more permanent and in every way more desirable colors when used in connection with the mordant of my process than when used with the mordants of the old and well known processes.

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

The process of producing a mordant on fibrous substances which consists in first, treating the fiber with a cold solution of free chromic acid in the presence of another non-oxidizing acid, and second, in treating the thus prepared fiber with a solution containing one or more of any of the reducing agents, such as sodium sulfite, whereby the fiber is prepared for the reception of a color to be applied by any known process, substantially as set forth.

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Witnesses:

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