

UNITED STATES PATENT OFFICE.

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MORDANTING TEXTILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 568,344, dated September 29, 1896.

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To all whom it may concern.

Be it known that I, ALBERT GANSWINDT, doctor of philosophy, chemist, of Aix-la-Chapelle, Prussia, Germany, have invented new and useful Improvements in Dyeing Textile Fabrics or Fibers, of which the following is a specification.

This invention relates to dyeing; and it consists, essentially, in the employment of lactate of zinc as a mordant in dyeing operations.

In mordanting by means of antimony tannin, as usual, the mordant employed is for the most part unutilized, so that a considerable portion is lost with the waste waters, whereas by the employment of lactate of zinc as a mordant this drawback is obviated, because the zinc is almost quantitatively precipitated by the fiber, and consequently the quantity of mordant required for mordanting a definite quantity of material can be easily determined beforehand, thus avoiding loss of useful materials.

In carrying out my process I mordant the material with lactate of zinc and subsequently dye the material so mordanted. The process may be variously practiced. For instance, cotton mordanted with lactate of zinc may be dyed with basic coloring-matters and also some acid diphenylmethane coloring-matters. Colors produced by these means are not, however, so "fast" as colors dyed with tannin and antimony salts, but are sufficiently fast for many purposes, especially as any white cotton that may be woven in does not become colored by the dye discharged in soaping.

Colors which are fast may be produced by placing the zinc-mordanted cotton subse-

quently to mordanting into a cold-tannin bath or into a cold decoction of any other tannin-containing substance, (for example, sumac, divi-divi, quebracho, and the like.) Cotton thus preliminarily mordanted is capable of fixing quantitatively an amount of tannin which is equivalent to the combined lactate of zinc. This is an advantage not possessed by the well-known process of mordanting with antimony tannin.

Cotton mordanted with lactate of zinc is also capable of fixing mordant coloring-matters, that is to say, all the wood dyes, the alizarin coloring-matters and the mordant coloring-matters related thereto (such as, for example, coerulein, gallein, alizarin-yellow, brilliant alizarin-blue, &c.,) in a boiling bath.

As the price of lactate of zinc is considerably less than the price of the antimony-tannin mordant, while loss of mordant can be completely avoided, the cost of mordanting with lactate of zinc can be reduced to about one-third of the cost heretofore necessary.

Now what I claim and desire to secure by Letters Patent is the following:

The process of dyeing cotton or other vegetable textile fibers which consists in mordanting the same with lactate of zinc and subsequently dyeing the fibers so mordanted.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT GANSWINDT.

Witnesses:

PHIL. REINKING,
JOHN JAMES RENDANT.