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UNITED STATES PATENT OFFICE.

PAUL ONNERTZ, OF BERLIN-WILMERSDORF, AND ALFRED PETERS, OF BERLIN, GERMANY, ASSIGNORS TO ACTIEN GESELLSCHAFT FÜR ANILIN FABRIKATION, OF BERLIN, GERMANY.

PROCESS FOR DYEING ANIMAL OR MIXED FIBERS.

No Drawing. Application filed November 5, 1921. Serial No. 513,180.

To all whom it may concern:

Be it known that we, PAUL ONNERTZ and ALFRED PETERS, citizens of the German Republic, residing at Berlin-Wilmersdorf, Germany, and Berlin, Germany, our P. O. address being Düsseldorferstrasse 72, Berlin-Wilmersdorf, Germany, and Gröben-Ufer, 4, Berlin S. O. 33, Germany, have invented certain new and useful Improvements in a Process for Dyeing Animal or Mixed Fibers, of which the following is a specification.

Animal fiber usually is dyed in an acid bath and in order to preserve the textile fiber and its valuable properties it is not advisable to apply a neutral, much less an alkaline bath. But it is difficult to dye always in the presence of an acid, because many dyestuffs of different classes settle out under these circumstances.

Now it was found that by the addition of sulfite cellulose waste liquor to the dye bath the tendency of the dye-stuffs to settle out is diminished or fully avoided. If such an addition is made wool, half-wool, silk, etc., may be dyed in an acid bath with dyestuffs otherwise difficultly applicable in the presence of an acid. Hereby the greatest preservation of the fiber, for instance the elasticity, gloss and feel of the wool and even-dyeing are secured furthermore the addition allows the use jointly of dyestuffs of different character, for instance substantive and acid dyestuffs.

Instead of sulfite cellulose waste liquor the active substances contained therein (such as sodium lignin sulfonate, cell pitch, sugars) may be used.

In order to illustrate our invention the following examples are given:

1. The bath is prepared with 3% alkali blue 4B, 10% sodium sulfate cryst., 5% sulfite cellulose waste liquor of 28° Bé., 2% conc. sulfuric acid from the weight of wool. The wool being entered at about 80° C. it is raised to the boil and boiled for ½ hour.

2. The bath is prepared with 2% Zambesi black D, 10% sodium sulfate cryst., 5% sulfite cellulose waste liquor of 28° Bé., 3% acetic acid 30% from the weight of wool. The wool being entered at about 50° C. it is slowly raised to the boil and boiled for 1 hour.

3. The bath is prepared with 1% potassium chromate, 2% ammonium sulfate, 3% metachrom brown B, 5% sulfite cellulose waste liquor 28° Bé., 2% acetic acid 30% from the weight of wool. The wool being entered at about 50° C., during ½ hour it is raised to the boil and boiled for 1½ hours.

Having described our invention, what we claim is:

1. The process for dyeing animal or mixed fibers in an acid bath with dyestuffs easily settling out in the presence of an acid, characterized by the addition to the dye bath of sulfite cellulose waste liquor.

2. The process for dyeing animal or mixed fibers in an acid bath with dyestuffs easily settling out in the presence of an acid, characterized by the addition of active substances contained in sulfite cellulose waste liquor.

3. The process for dyeing animal or mixed fibers in an acid bath with dyestuffs easily settling out in the presence of an acid, characterized by the addition of sodium lignin sulfonate and sugars.

4. The process for dyeing animal or mixed fibers in an acid bath with dyestuffs easily settling out in the presence of an acid, characterized by the addition of sugars.

In testimony whereof we affix our signatures in presence of two witnesses.

DR. PAUL ONNERTZ.
ALFRED PETERS.

Witnesses:
KARL BARTH,
ALFRED SCHNEIDER.