

UNITED STATES PATENT OFFICE.

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PROCESS OF DYEING.

1,006,097.

Specification of Letters Patent. Patented Oct. 17, 1911.

No Drawing.

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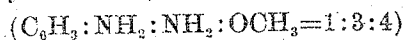
To all whom it may concern:

Be it known that we, MYRTIL KAHN and ANTON OSSENBECK, doctors of philosophy, chemists, citizens of the German Empire, residing at Elberfeld, Kingdom of Prussia, Germany, have invented new and useful improvements in Processes of Dyeing, of which the following is a specification.

The present invention relates to the production of fast brown shades on the vegetable fiber which are obtained by padding the fiber with acid chrysoidins, such as the sulfonic- and carboxylic acids of chrysoidin, especially chrysoidin monosulfonic or monocarboxylic acids and then treating it with diazotized nitranilins. Bright brown shades are thus obtained which are very fast to washing and can be readily discharged.

In order to illustrate the new process more fully the following example is given, the parts being by weight:—One kilo of the sodium salt of the dye (*e. g.* para-sulfanilic acid-azo-meta-phenylenediamin) is dissolved in 100 liters of water and 4 kilos of sodium sulfate are added to the solution. After all is dissolved the cotton goods are padded with this cold solution, dried and passed through a solution of diazotized para-nitranilin (12 grams of para-nitranilin per liter), rinsed, soaped, again rinsed and then dried. A full brown of excellent fastness to washing is thus obtained which can be readily discharged.

Instead of the dye mentioned in the example, other chrysoidin sulfonic or carboxylic acids can be used which contain on the one hand instead of meta-phenylenediamin other diamins *e. g.* toluylenediamin, chlorophenylenediamin, diaminoanisol



and instead of sulfanilic acid other sulfonic or carboxylic acids *e. g.* toluidin-sulfonic acid, or meta-aminobenzoic acid, etc. However we do not wish to include in our process the use of aminonaphthol derivatives such as aminonaphthol sulfo acids, etc. Light yellowish-brown to full black browns are obtained. Other nitranilins such as meta- or ortho-nitranilin may be used.

We claim:—

1. In the art of producing brown shades fast to washing which can be readily discharged the process consisting of first padding the fabric with a solution of an acid chrysoidin and then passing the goods through a bath containing a diazotized nitranilin, substantially as described.

2. In the art of producing brown shades fast to washing which can be readily discharged the process consisting of first padding the fabric with a solution of a chrysoidin-sulfo-acid and then passing the fiber through a bath containing a diazotized nitranilin, substantially as described.

3. In the art of producing brown shades fast to washing which can be readily discharged the process consisting of first treating the fabric with a solution of the dye: para-sulfanilic acid-azo-meta-phenylenediamin and then passing the goods through a bath containing diazotized para-nitranilin, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

MYRTIL KAHN. [L. S.]
ANTON OSSENBECK. [L. S.]

Witnesses:

ALFRED HENKEL,
WALTER VONNEGUT.