

UNITED STATES PATENT OFFICE.

WOLF KRITCHEVSKY, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM CITRON,
TRUSTEE, OF CHICAGO, ILLINOIS.

DECOLORIZING SUBSTANCE.

No Drawing.

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To all whom it may concern:

Be it known that I, WOLF KRITCHEVSKY, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Decolorizing Substance, of which the following is a specification.

I am aware that numerous efforts have been made to produce a chemical compound that will decolorize fabrics and satisfactory results have been secured where the operation has been performed by skilled chemists or others who were carefully instructed in the performance of the steps of the process and in the handling of the necessary chemicals.

An object of my invention, however, is to provide a substance which may be handled and sold in a dry condition and which may be employed by the ordinary user with certainty of result without previous skill or experience.

When basic zinc sulphonylate-formaldehyde or the neutral zinc sulphonylate-formaldehyde, or sodium-sulphonylate-formaldehyde, or any other salt of sulphonylate-formaldehyde are mixed together in proper proportions with a solid organic or inorganic acid, an acid salt or a salt having an acid reaction, a product is obtained which, when boiled in water with aniline dyes or colored fabrics, will cause the dye to be chemically altered and lose its color and the fabric or material that is colored with this dye will turn either white or to its original color. This is true of dyes or articles colored with dyes, that on the treatment with hydrogen, are reduced to their components which are colorless, as azo dyes, azine dyes, some triphenylmethane dyes, some anthraquinone dyes, etc.

Satisfactory results may be secured by employing 8 ounces of sulphonylate-formaldehyde zinc and 8 ounces of sodium bisulphite. These are thoroughly mixed and produce one pound of the final product. It is in dry condition and may be sold direct to the user

in small packages. In the preferred use, assuming the garment to be decolorized weighs approximately a pound and is dyed a medium shade, sufficient water to cover the garment completely is boiled. To the boiling water is added approximately one ounce of the described mixture, which is stirred until dissolved. Thereafter the garment is immersed in the liquid and the boiling is continued for five to twenty minutes until the color is eliminated.

Instead of the compound described I may employ 5 ounces of sulphonylate-formaldehyde of zinc, or some other metal, with 11 ounces of aluminum sulphate. This product is practically entirely soluble in water. Or I may employ 8 ounces of any of the sulphonylate-formaldehydes with 8 ounces of tartaric, citric, oxalic, or some other organic acid. In any case the use is the same as that described.

The only condition in the selection of substances to be employed with the sulphonylate-formaldehyde salt is that the acid shall be in the form of a solid and shall be soluble in water. Upon entering into solution the acid which is released reacts with the metal salt to release free sulphonylate-formaldehyde and this substance reacts with and neutralizes the dye in the fabric.

As an alternative method of use I may dampen the substance, spread it evenly over the article to be decolorized, spread a second piece of fabric thereover and employ a hot iron. Other methods of use may possibly be devised in which the novel substance can be utilized. It will be understood, however, that the proportions specified may be varied without departure from the spirit of my invention.

I claim:

1. A water soluble dry mixture of a sulphonylate-formaldehyde salt, and a solid having an acid reaction in solution.

2. A water soluble dry mixture of a sulphonylate-formaldehyde salt, and an amount of a solid having an acid reaction in the presence of water which will release suffi-

cient acid to liberate the free sulfoxylate-formaldehyde when the mixture enters into solution.

3. A water soluble dry mixture, substantially equal parts of a sulfoxylate-formaldehyde salt, and sodium bisulphite.

4. A dry mixture of a sulfoxylate-formaldehyde salt, and an amount of a solid

having an acid reaction in the presence of water which will release sufficient acid to liberate the free sulfoxylate-formaldehyde when reaction occurs between the substances.

Signed at Chicago, Ill., this 7 day of July, 1924.

WOLF KRITCHEVSKY.