Patented Mar. 15, 1932 1,849,535

UNITED STATES PATENT OFFICE

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LAUNDRY SOURING COMPOSITION AND METHOD

No Drawing. Application filed April 19, 1929. Serial No. 356,605.

In laundering clothes, the work is generally soured after washing with the usual soaps and alkalies. Without such souring the fabrics are apt to retain some of the alkali and to become yellow on ironing. The sour is added to neutralize the alkali and thus whiten the fabric. If too little sour is used the goods on subsequent ironing will not be perfectly white. If too much sour is used the laundered fabric is apt to have a harsh feeling. It is important to prevent this and to prevent the waste of sour. But no means have been available to the laundryman to determine, at the time he adds, the sour, whether he has added too much or too little.

I propose to use a souring composition which includes besides the sour an ingredient which indicates the proper acidity of the wash water by the color of the latter. Thus the laundryman can see when he has added enough sour.

I propose also to secure an additional advantage by using as the color indicator a blue. This is mixed with the sour in such proportions that it will not only turn the wash water blue when all the alkali has been neutralized, but will also blue the clothes to the proper blue-white color. A suitable blue for this purpose is what is known in the color industry as "rosaniline blue". The rosanilines are derived from the hydrocarbon, triphenylmethane, and are of various colors. The blue is triphenylrosaniline hydrochloride, produced by heating rosaniline with aniline and a weak acid whereby the amino-groups in the rosaniline are replaced by aniline groups. In the trade, the rosaniline blue thus derived is not used directly. The commercial "rosaniline blues" are the sodium salts of sulphonic acids of this product. Such salts are also called water blues and soluble blues. These salts are, for example, the sodium disulphonate or trisulphonate of the triphenyl, rosaniline blue. A suitable sour is sodium silicofluoride or other silicofluorides. Of course some of the color is absorbed by the fabric and colors the latter. But this is only the effect which ordinary blues have and is not that of a dye. The blue is only one per cent of the mixture, and only four to six ounces of the mixture are used for two hundred and fifty pounds of work, and merely enough to show that the water is acid.

An example of a specific composition is a mixture of sodium silicofluoride and rosaniline blue in the ratio of about one hundred to one. The mixture can be made by dissolving the rosaniline blue or other indicator, mixing it with the silicofluoride or other acid forming salt used as a sour, and then drying the whole.

Or a portion of the sour may be mixed with the indicator and dried, and the remainder of the sour added dry and mixed with the first batch. The product is a dry composition with the particles so coarse as not to be dusty. It can, therefore, be added to the goods or to the water without causing the spots of blue which occur sometimes with the use of the ordinary bluing.

For a load of two hundred and fifty pounds of work properly rinsed, four to six ounces of the specific composition above added dry on the wheel will generally serve to both sour and blue the clothes properly. The operator will, however, be guided by the color indication. Under alkaline conditions in the wash water rosaniline blues show practically no blue color. When enough has been added to render the water acid, the color of the rosaniline blue is developed, indicating to the washman that he has added enough to put the goods on the acid side which is necessary to get proper results.

Various modifications may be made by those skilled in the art without departing from the invention as defined in the following claims.

1. A laundry souring composition including a silicofluoride and an aniline blue.

2. A laundry souring composition including sodium silicofluoride and rosaniline blue in the ratio of about one hundred to one.

3. In laundering fabrics the method which consists in washing them and adding to the wash water a mixture of sodium silicofluoride and an aniline blue.

4. In laundering fabrics the method which consists in washing them and adding to the wash water a mixture of about one hundred parts of sodium silicofluoride and one part of rosaniline blue.

In witness whereof, I have hereunto signed my name.

ROBERT A. PHAIR.