

UNITED STATES PATENT OFFICE

2,055,588

YARN WETTING AGENT

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No Drawing. Application July 24, 1934, Serial No. 736,804. In Germany July 17, 1933

2 Claims. (Cl. 252-1)

In the art of yarn wetting which serves for the purpose of imparting the prescribed legal degree of wetness to vegetable, animal and artificial spun or spinning fibers, it is of importance to use a wetting water having as high a wetting and penetration power as possible, in order to obtain a high working speed and avoid local overmoistening of the mass for instance when continuously working devices with sprinkling nozzles are used. Therefore, special wetting agents are added to the wetting water, which for textile-technical reasons should be as pure as possible (mineral-free condensed or distilled water) and also disinfectants are added, in order to avoid the formation of mould in the spinning fibers when the same are stored for a longer time in closed packages. The wetting of textile fibers and other materials was hitherto preferably performed with alkylated aromatic sulfonic acids and mineral oil sulfonic acids or the alkaline salts of the same, but it has been found, that in electrolyte-free solutions and particularly in solutions which are free from alkaline earths the capillary activity of such agents is highly reduced and frequently almost totally disappears. It is known to increase the wetting power of baths for textile treatments by adding alkali or magnesium salts to the said wetting agents, but in the case of yarn wetting this expedient can not be used, since the yarn fibers must be kept free from undesired mineral constituents.

It has now been found, that yarn wetting agents with a surprisingly high wetting power in pure water are obtained when the alkali salts (including the ammonium salts) of alkylated aromatic sulfonic acids and mineral oil sulfonic acids are replaced by salts of poly-amino bases (including diamino bases) and the said acids. It is of course for this purpose not possible to use amine bases which are difficultly soluble or easily decomposable or which on account of other properties, such as odor or color, are unsuited for use for textile treatments.

The novel yarn wetting agents can also be mixed with disinfectants of various kinds, for instance formaline, para-formaldehyde and chlorocresol or the like. Also in economical respect the novel wetting agents are advantageous, since cheap solvents can be used for the same.

Example 1

Commercial diiso propyl naphthaline sulfonic acid is in 20% aqueous dilution neutralized to litmus with ethylene diamine and mixed with 10% of commercial formaline (40%) and the finished mixture is dissolved in oil-free condensed water in an amount ranging between 1 and 1.5%.

Example 2

Commercial dibutyl naphthaline sulfonic acid is in 20% aqueous dilution neutralized to litmus with hexamethylene tetramine. 4% of para formaldehyde are dissolved in the liquid under heating and the mixture is used as disclosed in Example 1.

Example 3

A mineral oil sulfonic acid, obtained by extracting so-called acid resin with a solvent which is insoluble in water, is in 20% aqueous dilution neutralized with urea. 10% of chlorocresol are dissolved in the solution and the mixture is used as disclosed in Example 1.

It is of course also possible to use mixtures of the various substances named.

I claim:—

1. A composition of matter adapted for use as a yarn wetting agent and consisting of salts of polyamino bases and capillary active alkylated aromatic sulfonic acids.

2. A composition of matter adapted for use as a yarn wetting agent and consisting of salts of polyamino bases and capillary active mineral oil sulfonic acids.

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