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PROCESS FOR TREATING YARNS

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9 Claims. (Cl. 8—2)

When manufactured industrially, yarn is always boiled prior to being creamed and bleached, such boiling operation consisting in treating the yarns in the hot state in leaching apparatus in the presence of sodium carbonate and caustic soda. The yarn is then bleached by the known methods.

I have observed that it is possible to do away with this boiling operation and to prepare the yarns for bleaching by simply soaking them cold. Such soaking has the advantage of avoiding comber waste, of not weakening the yarns and of making them extremely soft and pliable. Furthermore, this operation gives fine creamy tints, without it being necessary to use chlorine.

The process according to the invention is applicable to all yarns whether hemp, flax, sisal, jute, cotton or others and may be applied in the same way for all.

The process is carried out in the following manner:—

A bath is prepared containing aluminum sulphate and a reducing salt derived from sulphur, such as bi-sulphite, sulphite, hyposulphite or metabisulphite of an alkaline base weakly concentrated. The yarns are immersed in this bath either in suitable known machines or in vats. The color soon turns to yellow and in the case of cotton it rapidly turns to a fresh butter cream. The yarn is then removed from the bath, rinsed in water and if a white color is desired, it is then bleached with chlorine or any other oxidizing agent.

The yarns thus treated lose approximately 1% in weight in the first bath and 2% in the bleaching bath. They are remarkably strong and cotton in particular after this treatment lends itself admirably to all dyeing, weighting and calendering operations. The like applies for all the other yarns.

Moreover, with the process according to the present invention, the yarns are efficiently degummed or scoured.

Example

Taking cotton by way of example: a bath is prepared containing for 100 litres of water, two kilograms of aluminum sulphate and two kilograms of sodium bisulphite. The cotton hanks are immersed in this bath being either placed in washing machines or directly soaked in vats. The cotton turns creamy at the end of a few minutes and takes on a clear and uniform tint. If it be desired to obtain only creamy cotton, it is removed from the bath, rinsed, strained and dried. If, on the contrary, it is desired to secure a white color, the cotton is bleached by one of the processes commonly used in bleaching. The cotton thus treated is readily bleached and a small quantity of chlorine may be used, for example, in a bath containing one or two per cent. The like applied in the case of other fibres.

I claim:

1. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a mixture of aluminum sulphate and a reducing salt derived from sulphur.

2. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a mixture of aluminum sulphate and one of the sulphites of an alkaline base.

3. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a mixture of aluminum sulphate and sodium bisulphite.

4. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a mixture of aluminum sulphate and sodium hyposulphite.

5. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a mixture of aluminum sulphate and sodium sulphite.

6. A process of treating yarns which consists in soaking the yarn in the cold state in a bath containing a sulphate of aluminum and an alkali salt of sulphurous acid.

7. A process of treating yarns which consists in soaking the yarn in the cold state in a solution of 2 parts aluminum sulphate, 2 parts sodium bisulphite, in 100 parts of water.

8. A degumming process for yarns which consists in soaking yarns in the cold state in a dilute solution of an aluminum sulphate and an alkali salt of sulphurous acid.

9. A degumming process for yarns which consists in soaking yarns in the cold state in a dilute solution of aluminum sulphate and sodium bisulphite in water.

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