

UNITED STATES PATENT OFFICE.

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METHOD OF PREPARING ARTIFICIAL SILK YARN FOR TEXTILE PURPOSES.

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This invention relates to a method of preparing a yarn of artificial silk in unthrown or untwisted condition, characterized by the fact that a number of filaments come out of a coagulating bath being passed through a solution of size and formed into a bundle of filaments or yarn, similar to a silk filament which consists of a number of raw silk fibres in unthrown condition closely adherent to each other by natural cericine. This invention has for its object to obtain artificial silk yarn which can be conveniently treated in textile working and can be glossed after it is woven or knitted.

To describe the process, viscose is first prepared and after pressing it out of capillary tubes into a coagulating solution filaments of artificial silk are obtained. The next step is to wash the filaments thus prepared in water, and to pass them, without having them thrown or twisted but in a bundle, through a solution of sizes such as gloiopeltis, gelatine, dextrine, or other suitable materials with or without some softening agents such as wax, fat or resin according to the requirements. The solution of size, for example, is made by boiling together, for a sufficient time, 1.6 oz. of gloiopeltis and dextrine respectively, 0.25 oz. of gelatin and 0.8 oz. of wax in one gallon of water. When the filaments are taken out of the solution of size, they are closely adherent together into a yarn, which is then reeled or wound on bobbins.

The yarns thus produced meet the requirement of some kinds of weaving and knitting, of which the weft or warp or both in unthrown state is required or preferred. They have the advantage of improving the efficiency in textile working on account of their being coated with size so that the handling is facilitated.

They are very like natural silk filaments in the following respects, that is, the coating material or size above described protects them from fluffs being produced in course of handling in the same way as the natural silk filament is protected by cericine, and secondly the coating material as well as stains made during the weaving or knitting step can be removed by desulphurating and bleaching after they are woven or knitted, just in the same way as cericine is removed by the process of glossing from the fabrics made of natural silk filaments so that lustre is developed. The artificial yarn hitherto known has been thrown or twisted in order to retain the strength and firmness as the natural thrown silk yarn has, so that it gives a rough and hard sensation to the touch and has the disadvantage of their becoming attenuated and soiled in the course of treating. These drawbacks due to throwing can be successfully obviated by this invention.

Claims:

1. The method of preparing artificial silk yarn, which consists in conducting separate groups of viscose fibres through a coagulating solution, then passing the grouped and coagulated fibres through a solution of size and thereafter consolidating them into yarns without throwing or twisting.

2. The method of preparing artificial silk yarn, which consists in conducting separate groups of viscose fibres through a coagulating solution, washing the coagulated fibres in water, and then passing the grouped fibres through a solution of size and thereafter consolidating them into yarns without throwing or twisting.

In testimony whereof I affix my signature.
SUEKICHI TODA.