

# UNITED STATES PATENT OFFICE.

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## PROCESS OF MANUFACTURING VISCOSE-COATED FIBERS.

SPECIFICATION forming part of Letters Patent No. 791,385, dated May 30, 1905.

Application filed February 13, 1905. Serial No. 245,390.

*To all whom it may concern:*

Be it known that I, CHARLES N. WAITE, of Lansdowne, in the State of Pennsylvania, have invented certain new and useful Improvements in Processes of Manufacturing Viscose-Coated Fibers, whereof the following is a specification.

My invention relates to a product which may be termed "artificial horsehair," since its physical characteristics are in some degree comparable to those of natural horsehair.

In conducting the process of manufacture I proceed as follows: I take a suitable fiber—such as, for instance, cotton thread—and pass it through a bath of viscose, preferably in the condition which is technically known in the art as "unaged"—that is to say, in such condition that it still remains appreciably soluble in water alone. The time of immersion in the bath of viscose need only be sufficient for the application of an exceedingly thin coating thereof, and after such coating is thoroughly worked in, so as to insure as far as possible the filling of all the interstices of the thread, the coating is dried, preferably by artificial heat. This treatment is repeated until a sufficient number of viscose coats have been applied to give the desired weight. After the final coating of viscose has been allowed to dry the coated fiber is then passed through water, so as to redissolve the external surface of the viscose and is then immersed in a "setting-bath," which may consist of any of the well-known reverting agents ordinarily employed for setting viscose. After reversion the product is washed and dried.

A modification of the above process is as follows: Instead of employing for the final coating a bath of unaged viscose I may proceed as above set forth down to the point of applying the final coat and may then use for such final coating viscose in the aged condi-

tion. In such case it is not necessary to dry the final coat and redissolve the surface thereof before reversion, but the coated fiber is passed immediately into the setting-bath before the final coat is dried. After reversion the product is washed and dried.

Another modification of the process is as follows: I may employ aged viscose for all of the coatings, each of which except the final one is dried, as before stated. In this case the final coat is not dried, but the coated fiber is passed immediately into the setting-bath, and after reversion the product is washed and dried.

By the above processes I am enabled to produce a viscose-coated fiber having a good luster and hard surface, which is suitable for many applications in the arts.

Having thus described my invention, I claim—

1. The hereinbefore-described process of coating fiber with viscose which consists in applying a plurality of coats of viscose; drying each of the preliminary coats before the application of the next; and reverting the viscose after the application of the final coat, substantially as described.

2. The hereinbefore-described process of coating fiber with viscose which consists in applying a plurality of coats of unaged viscose; drying each of said coats; redissolving the surface of the final coat; and then reverting the viscose, substantially as described.

In testimony whereof I have hereunto signed my name at Philadelphia, Pennsylvania, this 31st day of January, 1905.

CHARLES N. WAITE.

Witnesses:

JAMES H. BELL,  
E. L. FULLERTON.