

# UNITED STATES PATENT OFFICE.

WILLIAM JNO. WILLIAMS, OF CAMDEN, NEW JERSEY.

## METHOD OF TREATING FIBERS OR YARNS.

SPECIFICATION forming part of Letters Patent No. 397,409, dated February 5, 1889.

Application filed May 24, 1888. Serial No. 274,960. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM JNO. WILLIAMS, a subject of the Queen of Great Britain and Ireland, residing at Camden, New Jersey, have invented a Method of Treating Fibers or Yarns, of which the following is a specification.

In the manufacture of fabrics of cotton, wool, silk, or other fibers considerable difficulty is experienced in keeping the fibers and the yarn made therefrom sufficiently moist to be properly operated on in the various machines through which they are successively passed in making the fibers up into yarns or threads and in knitting or weaving the yarns or threads into fabrics. If the fibers or yarns become too dry, they are apt to break, and more or less trouble is experienced by the electricity generated when the fibers or yarns become too dry.

Various means have been proposed for keeping the fibers and yarns moist—as, for instance, by the use of steam-sprays or by dampening the fibers or yarns with solutions of borax, Glauber's salt, or carbonate of soda, which solutions were intended to prevent the fibers or yarns losing their moisture. The use of borax, Glauber's salt, or carbonate-of-soda solutions is, however, attended with the disadvantage that it causes the wire-card clothing and combs, or any bright metal on the textile machinery, to become oxidized or rusty. I have discovered that this difficulty of the oxidizing or rusting of the bright metallic portions of the textile machinery may be avoided and the fibers or yarn kept moist, without danger of causing oxidation or rust, by moistening the fibers or yarn with a solution of a sodium

phosphate, preferably in the form of trisodium phosphate. The fibers or yarns may be moistened with this solution at any convenient stage in the manufacture of the fibers, yarns, or fabrics—as, for instance, previous to the passing of the fibers through the carding or combing machine. This solution keeps the yarn moist throughout the process, and in that way entirely prevents the difficulties which would otherwise arise from the generation of electricity and prevents the snapping or breaking of the fibers and yarns. At the same time the solution has the effect of keeping the wire of the card-clothing, the teeth of the combs, and other bright metal parts of the machinery with which the yarns come into contact perfectly clean, bright, and free from rust, so that the expense of cleaning, polishing, or renewing these bright metal parts is saved.

I claim as my invention—

1. The mode herein described of keeping fibers or yarns moist in textile manufactures, said mode consisting in subjecting the fibers or yarns to the action of a solution of phosphate-of-soda, substantially as set forth.

2. The mode herein described of keeping fibers or yarns moist in textile manufactures, said mode consisting in subjecting the fibers or yarns to the action of a solution of trisodium phosphate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. JNO. WILLIAMS.

Witnesses:

JOHN W. PRESTWICH,  
LOUIS B. HUMPHREYS.