

UNITED STATES PATENT OFFICE.

EDWARD SCHEPPERS AND EMILE SCHEPPERS, OF PHILADELPHIA, PA.

MANUFACTURE OF TEXTILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 362,318, dated May 3, 1887.

Application filed June 20, 1884. Serial No. 135,576. (No specimens.) Patented in England October 7, 1884, No. 13,274; in France October 7, 1884, No. 164,648, and in Belgium October 7, 1884, No. 66,523.

To all whom it may concern:

Be it known that we, EDWARD SCHEPPERS and EMILE SCHEPPERS, subjects of the King of Belgium, residing in Philadelphia, Pennsylvania, have invented certain Improvements in the Manufacture of Textile Fabrics, (for which we have obtained British Patent No. 13,274, French Patent No. 164,648, and Belgian Patent No. 66,523, all dated October 7, 1884,) of which the following is a specification.

The object of our invention is to produce a textile fabric having qualities of fullness, pliability, and softness due to the presence in the fabric of yarn having little or no twist, and this object we attain in the manner hereinafter set forth.

We first produce, by spinning and twisting in the ordinary manner, a strand of wool or other animal fiber, and then double the same, by a reverse twist, with a strand of cotton or other vegetable fiber, so that in the doubled yarn thus produced the first strand will have lost all or nearly all of the twist originally imparted to it. For instance, if the wool strand is originally given a right twist of fifteen to the inch, and is then doubled with the cotton strand by a left twist of twelve to the inch, the wool strand in the doubled yarn will have a twist of only three to the inch. All or any part of the original twist may thus be removed. The doubling twist may be in the same direction as the twist in the cotton strand, or in the reverse direction; but it must in all cases be the reverse of the twist in the woolen strand. The doubled strand is then used in the manufacture of a fabric, forming either the warp or weft, or both, if the fabric is woven, or it may be used in the production of a knitted fabric, if desired. The fabric is then subjected to a treatment which will destroy the cotton or other vegetable fiber without injuriously affecting the wool or animal fiber. The preferable treatment for this purpose is the carbonization of the cotton by subjecting it to the action of hydrochloric-acid gas or sulphuric acid, and as a result of the treatment the fabric is constituted wholly or in part of strands having little or no twist, but preserving the soft, full, and pliable character of the original

sliver. The twisted cotton strands are thus the means of permitting the removal of the twist from the woolen strands and of enabling these untwisted or slightly-twisted strands to resist the strains to which the doubled yarn is subjected during the process of manufacturing the fabric.

We have described our invention as applied to yarns made by twisting animal and vegetable fibers together; but these terms are intended to include any fibers so differing in character that one can be destroyed without affecting the other.

By the practice of our invention fabrics presenting a fine appearance can be produced from inferior stock, as the untwisted strands have none of the harshness or wiriness of ordinary twisted yarn.

We are aware that it is old to spin together two strands so as to remove or partially remove the twist from one of them; and we are also aware that the cotton strand has been eliminated from a compound cotton and wool thread by a sulphuric-acid treatment; hence we claim neither of these things separately considered, as neither of them is alone capable of attaining the result of our invention; but

We do claim as our invention and desire to secure by Letters Patent—

The mode herein described of producing textile fabrics, said mode consisting in first spinning a strand of wool or other animal fiber, then doubling the same with a strand of cotton or other vegetable fiber by a reverse twist, which wholly or partially untwists the wool strand, then producing a fabric containing such compound thread, and finally subjecting said fabric to the action of an agent which will destroy the vegetable fiber, leaving intact the untwisted or slightly-twisted strand of animal fiber, all substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD SCHEPPERS.
EMILE SCHEPPERS.

Witnesses:

JOHN E. PARKER,
HARRY SMITH.