

UNITED STATES PATENT OFFICE.

HENRY W. KEARNS, OF ACCRINGTON, ENGLAND.

METHOD OF MANUFACTURING COTTON YARN.

SPECIFICATION forming part of Letters Patent No. 738,040, dated September 1, 1903.

Application filed September 15, 1900. Serial No. 30,137. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY WARD KEARNS, a subject of the Queen of Great Britain and Ireland, residing at Baxenden, Accrington, in the county of Lancaster, England, have invented certain new and useful Improvements Relating to the Manufacture of Cotton Yarns and Fabrics, of which the following is a specification.

In the production of a silky luster on cotton yarns or fabrics by the process of "mercerization" under tension it has been the custom to select such yarns or fabrics as have been made only from the long-stapled cotton grown in Egypt, known as "Egyptian" cotton, or from Sea Island cotton, which classes of cotton are comparatively costly.

The object of my invention is to enable yarns or fabrics made from certain other commercial varieties of cotton, which possess a less uniformly long staple and which are less costly than Sea Island or Egyptian—such, for instance, as that class of cotton known commercially as "American"—to be given a bright silky luster by submitting them to a "mercerizing" process while under tension, and such silky luster is equal or nearly equal in brilliancy to that hitherto obtained when yarns or fabrics made exclusively from Sea Island or Egyptian cotton are employed.

In effecting my invention I take cotton of the kind described (by preference American cotton) and in addition to carding it in the usual manner I comb it before spinning. The yarn produced from such combed cotton is

then gassed, so as to singe off the loose fibers or ooze, leaving the yarn with a smooth surface, or the fabrics made from the cotton yarns of the character described are singed before mercerization. I afterward submit such yarn (which may be either single or doubled) or fabrics to a mercerizing process under tension. By this combination of treatment I can impart to yarns or fabrics of the hereinbefore-described nature a silky gloss or luster equal or nearly equal to that hitherto obtained only with yarns or fabrics made from Sea Island or Egyptian cotton. To obtain the maximum effect of the mercerizing process under tension, it is advantageous to make use of yarns prepared as described which are not hard-spun or hard-twisted, the degree of twist or doubling being regulated according to the count and the purpose for which the yarn is intended to be used.

I claim as my invention—

The herein-described process of producing a silky luster on yarns and fabrics from ordinary short-stapled cotton, said process consisting in first carding the short-stapled cotton, combing it, then gassing or singeing it to remove the down, and then mercerizing under tension, as and for the purpose described.

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

H. W. KEARNS.

Witnesses:

JNO. HUGHES,

J. ERNEST HUGHES.