

UNITED STATES PATENT OFFICE.

ABRAHAM MITCHELL, OF BRADFORD, COUNTY OF YORK, ENGLAND.

METHOD OF MANUFACTURING WOVEN FABRICS.

SPECIFICATION forming part of Letters Patent No. 346,673, dated August 3, 1886.

Application filed November 19, 1885. Serial No. 183,367. (Specimens.)

To all whom it may concern:

Be it known that I, ABRAHAM MITCHELL, a subject of the Queen of Great Britain and Ireland, and residing at Bradford, county of York, England, have invented certain Improvements in the Method of Manufacturing Woven Fabrics, of which the following is a specification.

The object of my invention is to produce, by an economical method, woven fabrics the surfaces of which have a wavy or undulating appearance; and this object I attain in the manner which I will now proceed to describe.

For weaving the fabric, I make use of a specially-prepared yarn or weft of any suitable fiber, the special feature of this yarn or weft being that in the spinning operation it has been drawn or stretched to a greater extent than it otherwise would be. For instance, a yarn or weft of what would be termed a "twelve length" of fiber is drawn or stretched to, say, twelve and a quarter or twelve and a half. Such yarn or weft would under ordinary circumstances be considered as bad yarn; but I designedly produce this yarn drawn or stretched to an unusual length. With such weft or yarn the piece is woven in the ordinary way in an ordinary loom, and what is termed a "straight" piece is produced, having only a slightly different appearance from a piece woven with straight yarn, or yarn drawn to the usual length. The piece thus woven with stretched weft or yarn is subjected to the action of moisture, and is preferably

immersed in water, with the result that the stretched weft or yarn shrinks, and a crimp or wavy or undulating effect is produced in the fabric, and with the further effect that it is next to impossible to follow the direction of the weft.

In the case of mohair weft and cotton warp the fabric produced in the manner described has all the appearance of silk, due, no doubt, to the light and shade caused by the surface undulations.

I am aware that it has been proposed to produce crape or crimped fabrics by imparting an extra twist to the weft, as described, for instance, in the British Patents No. 4,714 of 1822 and No. 436 of 1855; but in such case two sets of wefts had to be used, twisted in opposite directions.

I claim as my invention—

The herein-described method of making fabrics having a wavy or undulating appearance, said method consisting in first stretching or drawing the yarn to an unnatural length during the operation of spinning, then weaving a fabric with this stretched yarn, and finally subjecting the fabric so woven to the action of moisture, substantially as described.

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

ABRAHAM MITCHELL.

Witnesses:

JOHN VAUGH,
RD. B. NICHOLLS.