

UNITED STATES PATENT OFFICE.

GIULIO MARCHETTI AND HENRY NORMAN MELLOR, OF HALIFAX, ENGLAND.

WOVEN PILE FABRIC.

SPECIFICATION forming part of Letters Patent No. 436,368, dated September 16, 1890.

Application filed March 16, 1888. Serial No. 267,404. (No specimens.)

To all whom it may concern:

Be it known that we, GIULIO MARCHETTI and HENRY NORMAN MELLOR, subjects of the Queen of Great Britain, residing at Halifax, in the county of York, England, have invented a new and useful Improvement in Woven Pile Fabrics; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to the manufacture of a new kind of woven pile fabric composed of threads of various colors, suitable for carpets, rugs, and other goods, the new fabric having a novel and beautiful variegated or mottled and soft effect, such effect being durable and hitherto not obtained.

When cut-pile fabrics are woven with the pile warp or warps composed of ordinary dyed threads of worsted, mohair, or other suitable material, as long as the pile remains erect and the ends of the fibers composing the pile are exposed to the light there is very little luster to be seen on the face of the fabric; but when the pile is flattened and the sides of the fibers composing the pile become more exposed to the light more luster is visible on the face of the fabric, and the shade of color appears to be lighter than when the pile was erect; but in both cases any luster which there may be is equally diffused throughout the whole surface of the fabric.

In manufacturing our new fabric the pile is formed, as hitherto, by means of threads of different colors, the threads which have to be lifted to form the required pattern being selected and operated by means of the Jacquard or other similar machine or by healds, while those threads which are not required to form the pattern remain buried in the back of the fabric; but according to our invention, in order to obtain a variegated or mottled effect, in which shall be combined the appearance of the erect pile with the appearance and

color and luster of the flattened pile, we compose the warp forming the pile of threads of different colors of mohair, worsted, or other suitable material, which, in addition to their having been dyed, have also been so prepared as to produce a durable curl or wave of the yarn. The yarn may be rendered curly or wavy by any known method—such as by knitting or by plaiting or by twisting a number of threads together—and the curl or wave may be fixed by boiling or steaming or by subjecting to heat while in a damp state, or by any other suitable method, as is well known. By the use of such prepared yarn the curl or wave therein when the pile is cut exposes in some places the ends of the fibers forming the pile to the light and in other places the sides of the fibers forming the pile to the light, and in this way a beautifully variegated or mottled and soft effect is produced.

Although we have spoken of forming the pile warp or warps exclusively of wavy or curly yarn, we in some cases make use of such yarn to form the pile in some parts of the pattern and use ordinary yarn to form the pile in other parts of the pattern, and the pile may either be cut throughout the whole of the pattern or may be cut in some parts and uncut in other parts of the pattern.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

A cut-pile fabric in which the pile is formed from warp-threads which appear in succession on the surface, as required in the production of the pattern, and having such warp-threads composed in whole or in part of curly or wavy threads, as described, whereby the surface effects are varied, substantially as set forth.

GIULIO MARCHETTI.
H. NORMAN MELLOR.

Witnesses:

GODFREY B. BIRD,
J. BROOKE DEWHERSTY.