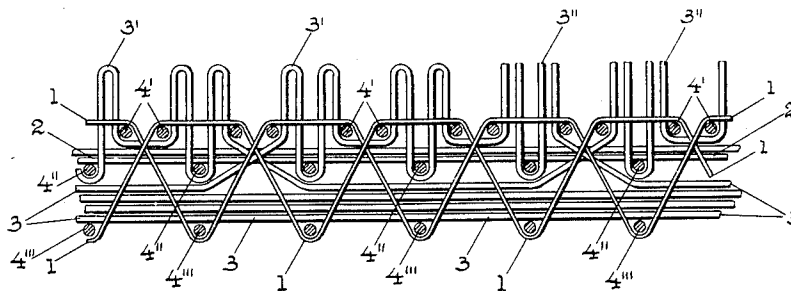


G. CROSSLAND.
WOVEN PILE FABRIC.
APPLICATION FILED MAR. 30, 1912.

1,038,532.

Patented Sept. 17, 1912.



Witnesses
M. Bredt.
W. C. Case

Inventor
George Crossland.
By John C. Dewey
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE CROSSLAND, OF LONG ISLAND CITY, NEW YORK, ASSIGNOR TO CROMPTON & KNOWLES LOOM WORKS, A CORPORATION OF MASSACHUSETTS.

WOVEN PILE FABRIC.

1,038,532.

Specification of Letters Patent.

Patented Sept. 17, 1912.

Application filed March 30, 1912. Serial No. 687,329.

To all whom it may concern:

Be it known that I, GEORGE CROSSLAND, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Woven Pile Fabrics, of which the following is a specification.

My improvement relates to woven pile fabrics, and particularly to an improved weave for carpet fabrics, and the object of my invention is to provide an improved weave for woven pile fabrics, and particularly carpet fabrics of the class ordinarily termed "Brussels," and "Wilton" carpet.

In my improved weave I have four filling threads or wefts within each crossing of the binder warps, and the filling threads or wefts extend in three planes. Two wefts are in the upper plane, above the stuffer warp or warps, and just below the binder warps, when the binder warps are in their highest position. One weft is between the stuffer warp or warps and the pile warps, when the pile warps are carried in the body of the fabric, and said weft binds the pile warps which pass under said weft, and forms the pile on the surface. The fourth weft is below all the pile warps, and just above the binder warps, when they are in their lowest position, and is held by the lower binder warps. The pile warp on the surface of the fabric is formed as usual, into loops for Brussels carpet, or cut into tufts, by pile wires, for Wilton carpet. By my arrangement of the filling threads or wefts, the pile tufts stand out firmly from the face of the fabric, and in such a manner as to prevent their staggering.

In the drawing is shown, on an exaggerated scale, a sectional view of a woven fabric of both the Brussels, and Wilton class, embodying my improvements.

In the accompanying drawing, 1 are the two ordinary binder warps, 2 are the stuffer warps, in this instance two in number, and 3 the pile warps, in this instance five in number, which are formed into loops 3', through longitudinally extending stationary pile wires, not shown, to make a Brussels carpet, or cut into tufts 3'', shown at the right in the drawing, to make a Wilton carpet.

The filling threads or wefts 4', 4'', and 4''', are arranged in three different horizontal planes, in groups of four filling threads

or wefts within each crossing of the binder warps 1. In the upper plane, two wefts 4' are inserted below the upper binder warps 1, and above the stuffer warps 2. In the middle plane, one weft 4'' is inserted below the stuffer warps 2, and between said stuffer warps 2 and the pile warps 3, when said pile warps are carried in the body of the fabric. In the lower plane, one weft 4''' is inserted below the pile warps 3, and above the lower binder warps 1.

The pile warps 3 are bound in part around the two upper plane wefts 4', and extend under the weft 4'' in the middle plane, so that the two loops 3', or the two tufts 3'', thus formed, always extend between two wefts 4' of the upper plane, and in part between two stuffer warps 2, which are carried between the upper and the middle weft plane. It will thus be seen, that the pile tufts are very firmly bound, and their edges, both longitudinally and transversely of the fabric, are firmly supported, resulting in a very clear line figure on the face of the fabric, without any staggering.

It will be understood that the details of construction of my improved weave may be varied if desired. More or less stuffer warps may be used, and more or less pile warps may be used, according to the depth or thickness of the fabric desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A woven pile fabric having four filling threads or wefts within each crossing of the binder warps, said filling threads or wefts extending in three planes, two wefts in the upper plane above the stuffer warp or warps, a third weft between the stuffer warp or warps and the pile warps carried in the body of the fabric, and a fourth weft below all the pile warps.

2. In a woven pile fabric, the combination with the binder warps, of four filling threads or wefts within each crossing of the binder warps, and extending in three planes, two wefts in the upper plane above the stuffer warp or warps, a third weft between the stuffer warp or warps and the pile warps carried in the body of the fabric, and a fourth weft below all the pile warps.

3. A woven pile fabric, having four filling threads or wefts within each crossing of the binder warps, said filling threads or

wefts extending in three planes, and pile warps looped around the filling threads or wefts in the upper plane, and looped around the filling threads or wefts in the middle plane.

5 plane.
4. A woven pile fabric, having four filling threads or wefts within each crossing of the binder warps, said filling threads or wefts extending in three planes, and pile
10 warps looped around the filling threads or wefts in the upper plane, and pile warps looped around the filling threads or wefts in the middle plane.

5. A woven pile fabric, having filling threads or wefts in three planes, within each crossing of the binder warps, stuffer warp or
15 warps extending between the filling threads of the middle plane and one of the outer planes, and pile warps extending between the middle plane and the other outer plane,
20 said pile warps looped around the filling threads in one or more planes.

GEORGE CROSSLAND. [L.S.]

Witnesses:

F. S. OHLE, Jr.,
HENRY KOERNER.