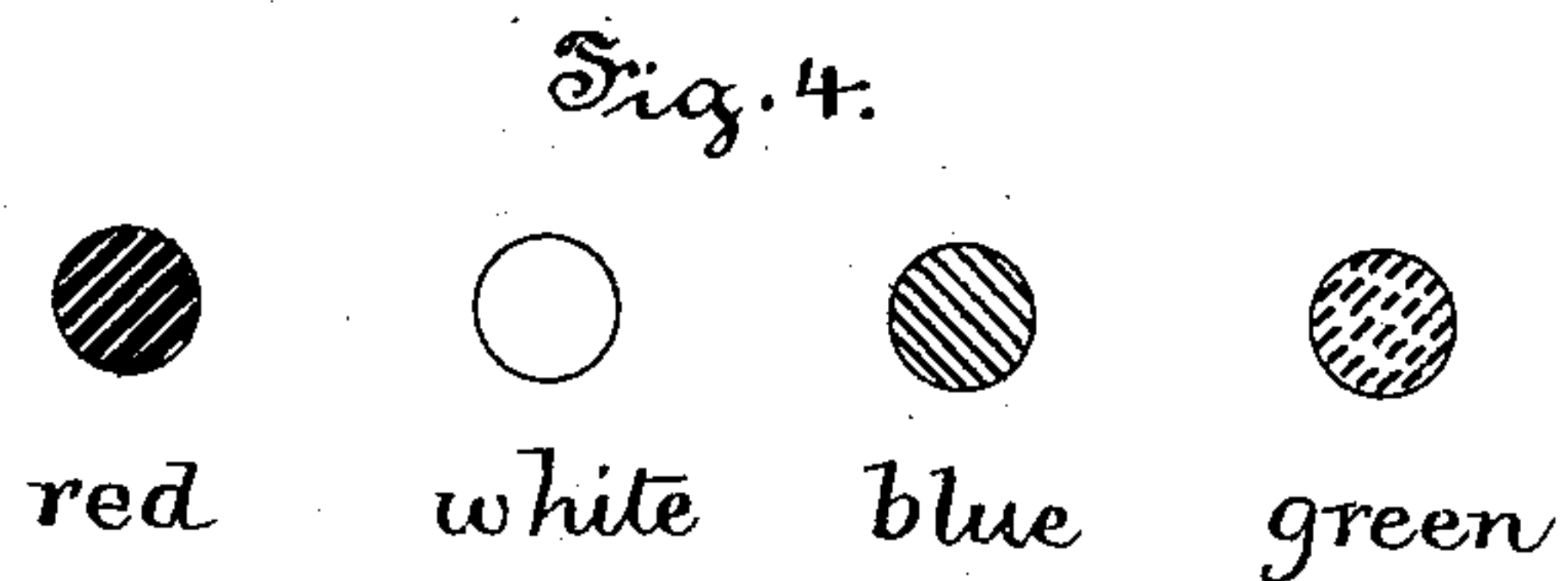
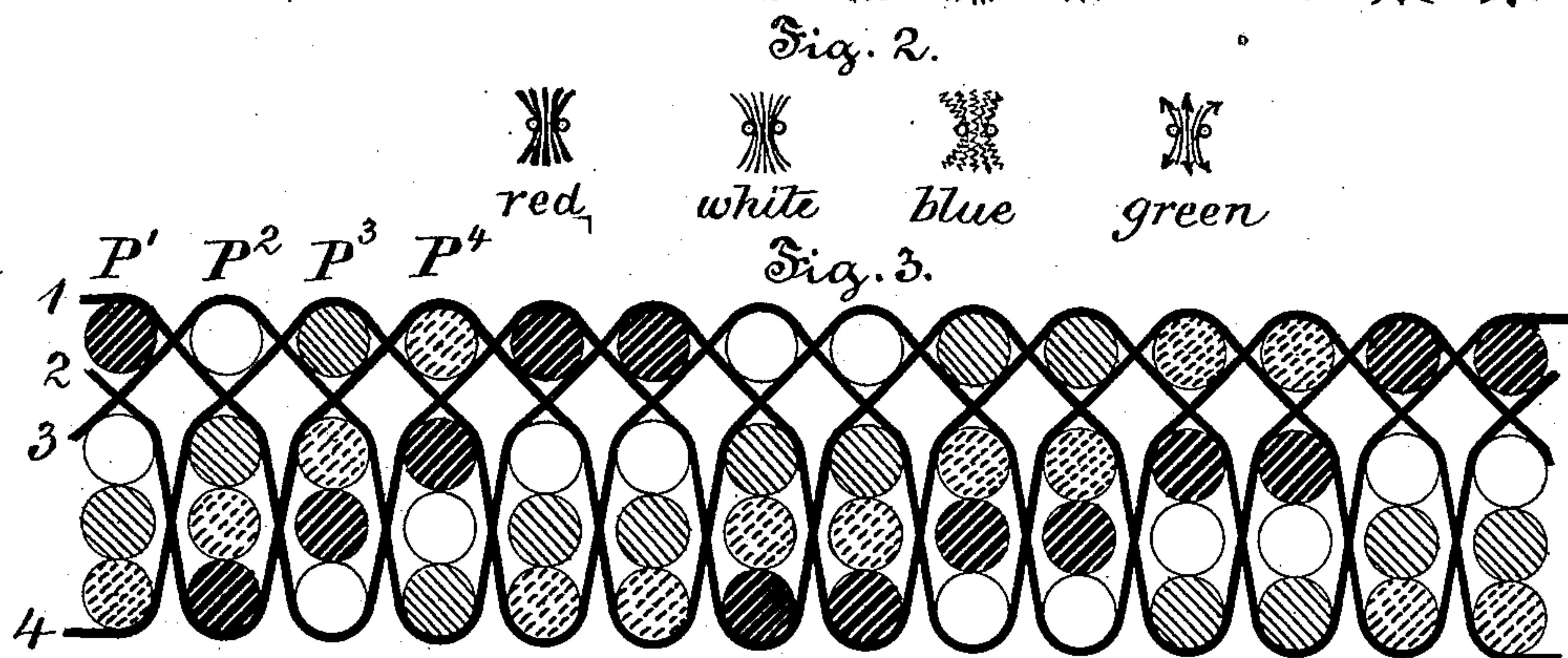
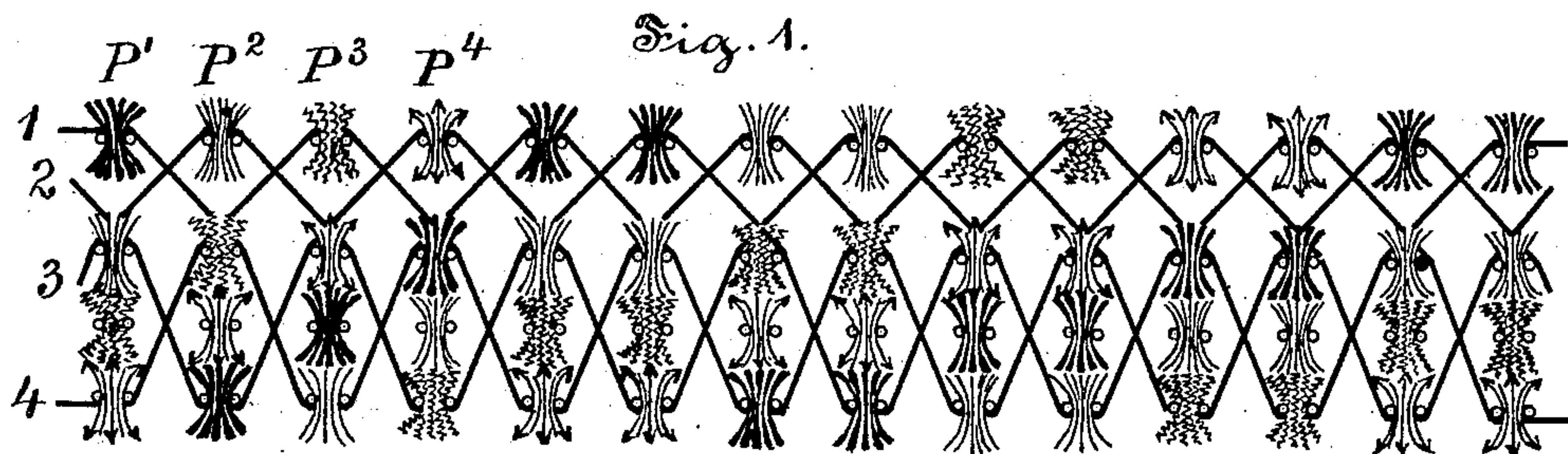


(No Model.)

I. McCALLUM.  
WOVEN FABRIC.

No. 453,289.

Patented June 2, 1891.



Witnesses  
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# UNITED STATES PATENT OFFICE.

IRVING McCALLUM, OF PHILADELPHIA, PENNSYLVANIA.

## WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 453,289, dated June 2, 1891.

Application filed April 24, 1891. Serial No. 390,228. (No specimens.)

*To all whom it may concern:*

Be it known that I, IRVING McCALLUM, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Woven Fabrics, of which the following is a specification.

The principal object of my present invention is to provide a cut pile carpet which shall be an improvement upon an ordinary four-ply carpet, composed of chenille weft-threads, in the following particulars: First, I produce a full cut pile fabric in which the center and ground wefts are tied or knit in one shed, and in which the face or figuring weft-threads are tied in a separate shed at each row of picks throughout both the plain and figured portions of the fabric, so that it is impossible in my fabric for the fur of the center and ground webs to protrude between the face wefts, thus avoiding the mottled effect which always occurs where the fur of the center and ground wefts projects between the face wefts so as to be visible upon the face of the fabric; second, I employ an ordinary two-ply warp—that is, a warp in four divisions—and, third, I produce the above color effect in a homogeneous fabric—i. e., one without pockets.

The nature and characteristic or distinguishing features of a fabric embodying my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a diagrammatical representation of a section of a portion of a fabric embodying my invention and taken in the direction of the warp-threads—that is, a section through the weft-threads—showing a fabric having chenille weft-threads arranged to produce an unmottled cut pile face. Fig. 2 is key-chart, showing a section of the wefts employed in Fig. 1, and also indicating the colors thereof; and Figs. 3 and 4 are similar views of a modification of my invention in which ordinary figuring wefts are employed.

A fabric embodying my invention may be woven upon an ordinary ingrain-carpet loom having four harnesses, a Jacquard machine, and journals adapted to operate once for four

shots of wefts instead of once for every shot of weft, as is customary.

Referring to Figs. 1 and 2, the rows of picks  $P'$ ,  $P^2$ ,  $P^3$ , and  $P^4$  comprise, respectively, a red chenille face weft and a white, a blue, and a green ground chenille weft, a white face chenille weft and a blue, a green, and a red ground chenille weft, a blue face chenille weft and a green, a red, and a white ground chenille weft, and a green face weft and a red, a white, and a blue ground weft; but it must be borne in mind that the invention is not limited to the employment of wefts of any particular colors, nor to any particular design. For example, at the right-hand side of Fig. 1 I have shown a single color at the face of two successive rows of picks. The warps may be of like or unlike color. In the present instance they are of like color, and are divided into four divisions, (indicated by the numerals 1 2 3 4,) whereof two 2 and 3 lie crosswise between the single face weft and the three ground wefts at every alternate row of picks  $P'$   $P^3$ , &c., and at the respective faces of every intervening row of picks  $P^2$   $P^4$ , &c., and whereof the other two 1 and 4 lie in a similar manner, but at the respective faces of the alternate rows of picks  $P'$   $P^3$ , &c., and crosswise between the single figuring and the three ground wefts of the intervening rows of picks  $P^2$   $P^4$ , &c., throughout the whole fabric.

The figure effect is produced in my fabric by causing the face weft to change places with one of the ground wefts—that is to say, by causing the face weft to go to the bottom or center of the row of picks, and by causing a ground weft to go from the center or back to the face. This result may be readily attained by causing the Jacquard machine to select and operate certain of the two divisions of warps lying between the single face and the three ground wefts, according to the requirements of the pattern, and before each shot of wefts comprising a row of picks is introduced.

The two divisions of warps lying at the respective faces of the row of picks are operated by the journals, preferably by separating them to form a shed and maintaining them in such position during the formation



of each row of picks. At pick P' the warps 1 and 4 are separated, so as to lie at the top and bottom of the row of picks, and are held in such position during the completion of the row of picks, and the warps 2 and 3 are operated by the Jacquard machine once for each shot of weft—that is to say, the warps 2 and 3 are down during introduction of the red weft and are jacked up during the introduction of the white, blue, and green wefts. At the pick P<sup>2</sup> the warps 2 and 3 are operated by the journals, and warps 1 and 4 are operated by the jacquard, in the manner above set forth, and so on throughout the fabric.

15 The fabric shown in Figs. 3 and 4 embodies a modification of my invention, and is exactly like the fabric hereinabove described with reference to Figs. 1 and 2, except that ordinary figuring wefts are employed instead  
20 of chenille fur.

Having thus described the nature and objects of my present invention, what I claim is—

A homogeneous cut pile unmottled figured

25 fabric having rows of picks comprising three ground chenille wefts and one face chenille weft, with warps in four divisions, whereof two lie crosswise between the single figuring weft and three ground wefts of every alternate row of picks and at the respective faces  
30 of every intervening row of picks, and whereof the other two lie in a similar manner, but at the respective faces of said alternate rows of picks and crosswise between the single  
35 figuring weft and three ground wefts of said intervening rows of picks throughout the fabric, and the face weft going to the back and one of the three ground wefts going to the face to produce the pattern, substantially  
40 as set forth and described.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

IRVING McCALLUM.

Witnesses:

A. B. STOUGHTON,  
HERMANN BORMANN.