

GEORGE CROMPTON.

Improvement in Pile Fabrics.

No. 125,026.

Patented March 26, 1872.

Fig. 1.

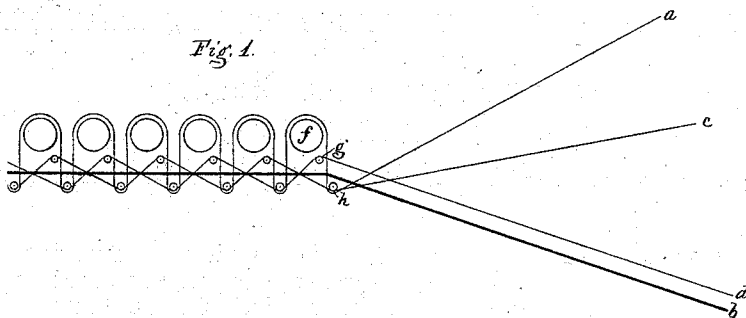
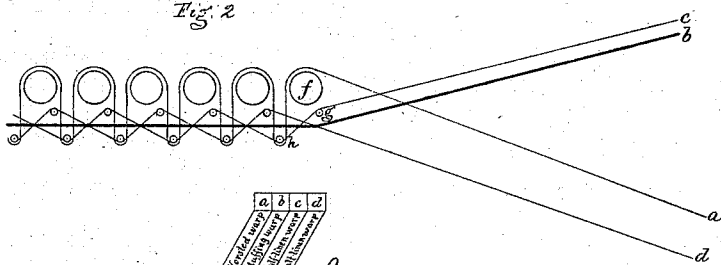


Fig. 2.



Insert pile wire & Shoot weft

Went wire	a	b	c	d
Shoot weft	o	x	m	o
Insert pile wire & Shoot weft	o	x	y	o
Shoot weft	o	x	o	m
Insert pile wire & Shoot weft	o	x	y	o
Shoot weft	o	x	o	m

A.

Fig. 3.

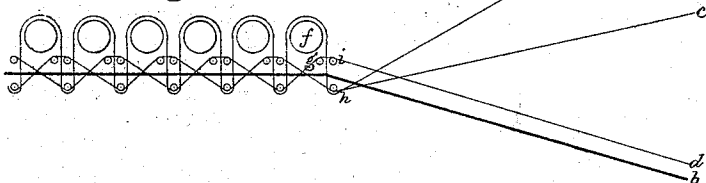


Fig. 4.

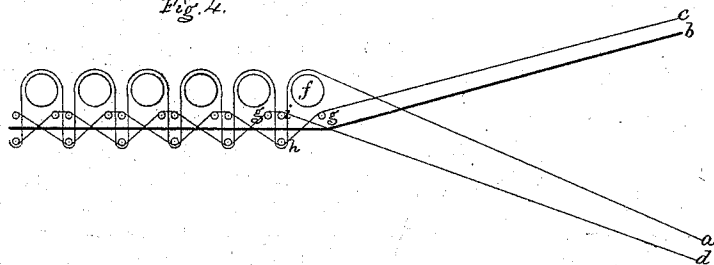
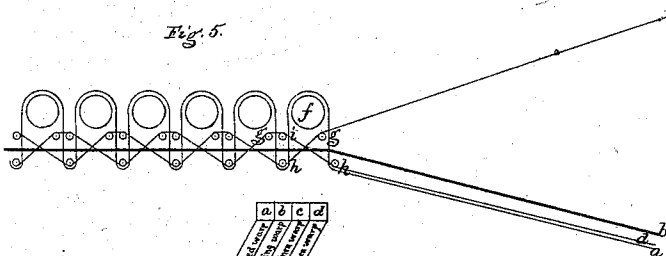


Fig. 5.



Insert pile wire & Shoot weft

Went wire	a	b	c	d
Shoot weft	o	x	y	o
Insert pile wire & Shoot weft	o	x	o	m
Shoot weft	o	x	y	o
Insert pile wire & Shoot weft	o	x	o	m
Shoot weft	o	x	y	o

B.

Witnesses.

No. W. Frothingham.

S. B. Kiddle.

George Crompton.

By his Atty.

Crosby & Gould.

UNITED STATES PATENT OFFICE.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN PILE FABRICS.

Specification forming part of Letters Patent No. 125,026, dated March 26, 1872.

To all whom it may concern:

Be it known that I, GEORGE CROMPTON, of Worcester, in the county of Worcester and State of Massachusetts, have invented an Improved Carpet; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to an improvement in that class of carpets known as tapestry, or carpets made with a pile, the loops of which, forming the figure, are parti-colored, the thread of worsted or figure-warp being printed or dyed with different colors before or after being woven.

In the manufacture of such carpets the line of loops of any one pick are held down upon the top of the stuffing-warp by and only by the upper filling-thread or shoot of weft, the color or pile warp and the stuffing being inclosed between the upper and under shoot weft or filling threads, the stuffing-threads being straight, and the color-warp projecting up in the form of loops. Carpets thus woven are weak in structure so far as concerns the pile or color warp, because the loops are only thus held down or in respective position, and the catching of any point or projection upon one loop easily pulls the adjacent loops down to the stuffing and destroys the pile, so that in using carpet-stretchers, or in walking upon such carpets with boots the nails of the heels of which slightly project, the loops are often caught and a succession of them pulled down to the stuffing-warp, destroying the figure, exposing the ground-threads, and ruining the beauty of the carpet. My invention is designed to obviate this defective construction by such disposition of the picks of weft with reference to the stuffing, linen, and figure-warps as shall securely fasten or bind the color-warp at the bases of the loops, so that each warp-thread, instead of passing simply under the adjacent upper shoots of weft-thread, shall extend over the upper shoots and under the under shoots, being thus fastened and interlocked with both shoots, thereby so binding the pile or color warp as to render it impossi-

ble to draw it up or ravel it to any extent beyond the loops next adjacent to the loop caught or pulled upon. It is in a tapestry carpet having such a formation that my invention consists.

The following is a technical description of the relation of the respective threads of my improved fabric.

In Figures 1 and 2, *f* denotes the pile-wires; *g h*, the weft or shuttle threads; *a*, the worsted warp; *b*, the stuffing-warp; and *c d*, the two halves of the linen warp. The sheds repeat themselves after four picks. At the first pick (see Fig. 1) the worsted warp *a* is up, the stuffing-warp *b* and half of linen warp *d* is down, and the half of linen warp *c* is at the middle, thus forming a double shed—the top one for the insertion of a pile-wire, *f*, and the bottom one for a pick of weft, *g*. At the second pick (see Fig. 2) the worsted warp *a* and linen warp *d* are down, and the stuffing-warp *b* and linen *c* are up, thus forming a shed for the insertion of a pick of weft, *h*. At the third pick the worsted warp *a* is up, the stuffing *b* and half of linen *c* are down, and the half of linen *d* is at the middle, forming a double shed for a pile-wire, *f*, and a pick, *g*, in the top and bottom sheds, respectively. At the fourth pick the worsted *a* and half of linen *c* are down, and the stuffing *b* and half of linen *d* are up, forming a shed for the pick of weft *h*. These last two picks are the same as the first two, with the exception that the half of the linen warp *d* is up and *c* is down, reversing their position shown in the first two picks.

The weaver's draft for the same is shown in the diagram A, in which *x* means in the top of the shed, *m* in the middle of the shed, and *o* in the bottom of the shed.

The disposition of the threads is shown as modified in Figs. 3, 4, and 5, the same letters referring to the same parts as in Figs. 1 and 2. The sheds repeat themselves after six picks. At the first pick (see Fig. 3) the worsted warp *a* is up, the stuffing *b* and linen *d* are down, and linen *c* is at the middle, forming a double shed for the insertion of a pile-wire, *f*, and a pick, *g*, in the top and bottom sheds, respectively. At the second pick (see Fig. 4) the worsted warp *a* and linen *d* are down, the stuff-

ling *b* and linen *c* are up, forming a shed for the insertion of the pick *h*. At the third pick (see Fig. 5) the worsted warp *a*, the linen *d*, and the stuffing *b* are down, and the linen *c* is up, forming a shed for the insertion of the pick *i*. For the three remaining picks the sheds are formed the same, except that the linen warp *c* is in the position of *d*, and *d* is in the position *c*.

The weaver's draft for the same is shown in the diagram B, in which, as before, *x* means

in the top of the shed, *m* in the middle of the shed, and *o* in the bottom of the shed.

I claim—

The improved pile fabric having the warp-loops bound by and interlocked with the weft-threads, substantially as shown and described.

GEO. CROMPTON.

Witnesses:

FRANCIS GOULD,

M. W. FROTHINGHAM.