No. 864,440. PATENTED AUG. 27, 1907.

L. N. D. WILLIAMS.

KNITTED WEB.

APPLICATION FILED JAN. 10, 1907.

Fig. 1.

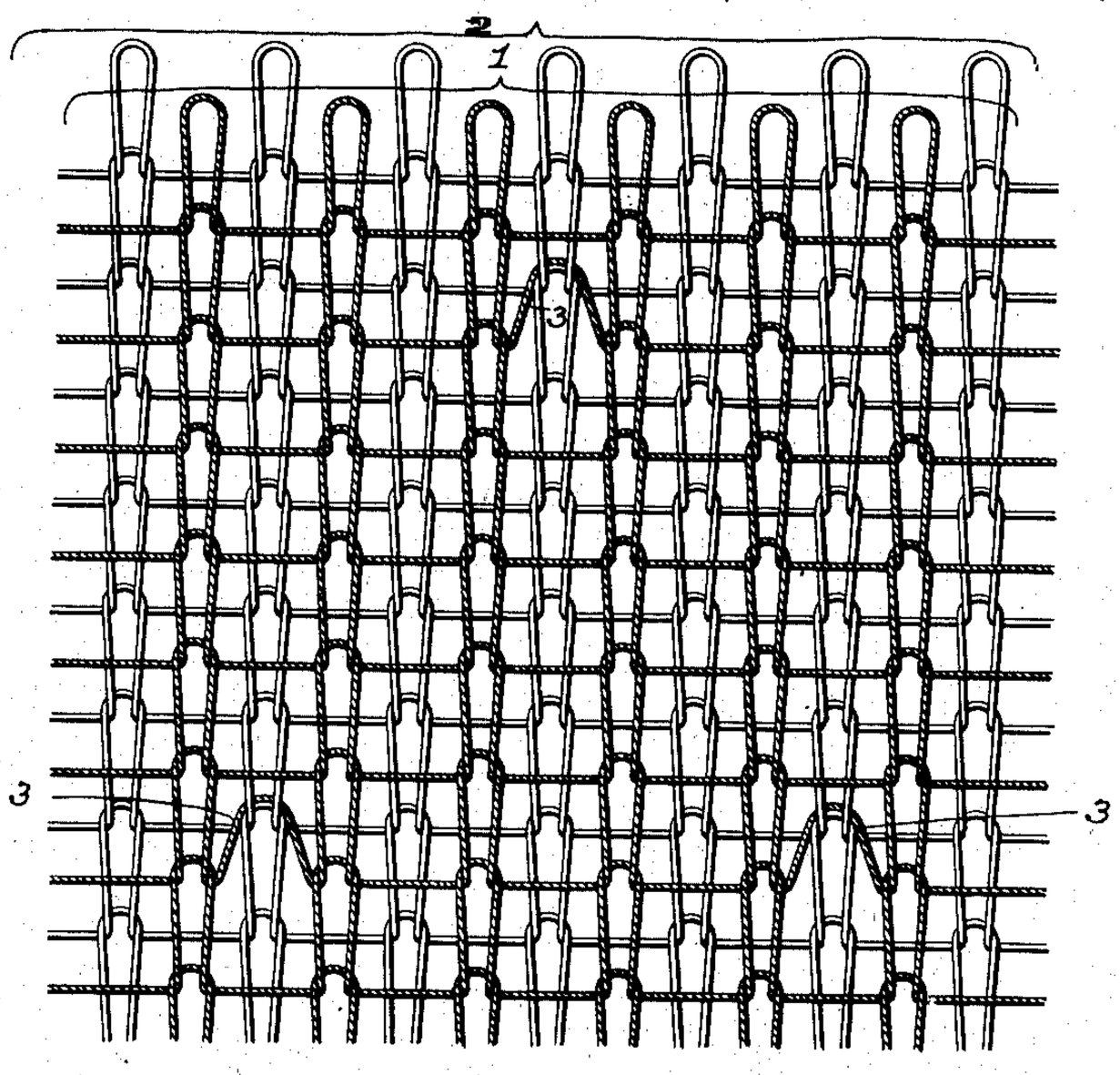


Fig. 2.

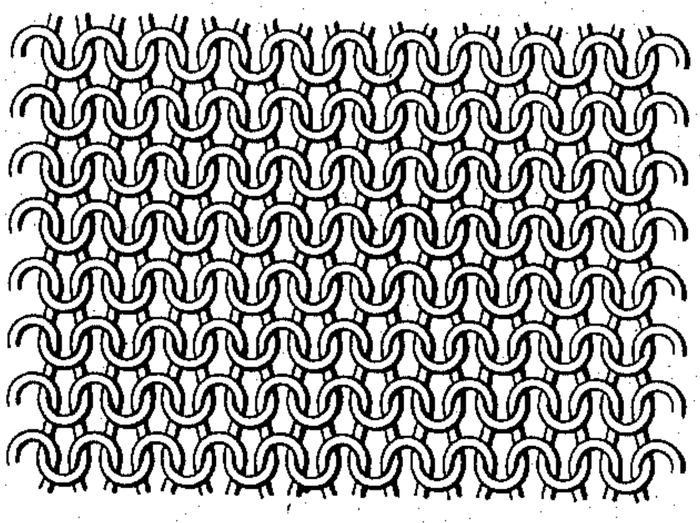


Fig. 3.

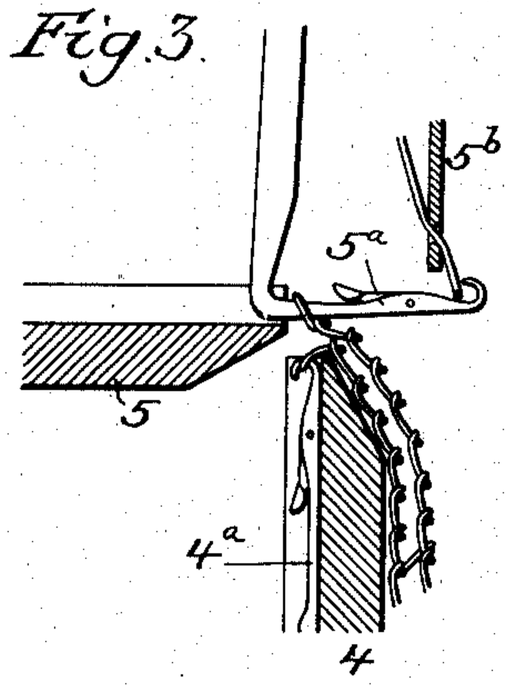
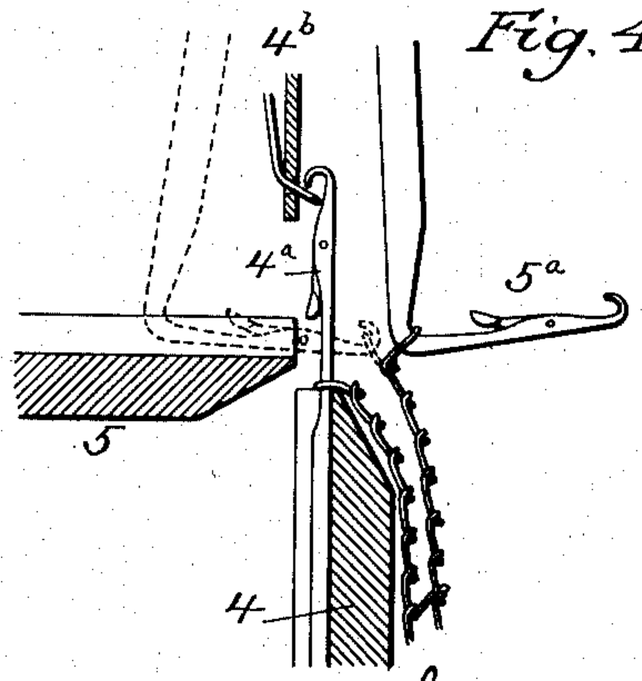


Fig. 4.



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Kate A. Beadle

Inventor
Louis N. D. Williams
by his attorneys
Smith & Frazier

UNITED STATES PATENT OFFICE.

LOUIS N. D. WILLIAMS, OF OGONTZ, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ROBERT W. SCOTT, OF LEEDS POINT, NEW JERSEY.

KNITTED WEB.

No. 864,440. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed January 10, 1907. Serial No. 351,678.

To all whom it may concern:

Be it known that I, LOUIS N. D. WILLIAMS, a citizen of the United States, residing in Ogontz, Montgomery county, Pennsylvania, have invented certain Improvements in Knitted Webs, of which the following is a specification.

My invention consists of an improvement in the knitted fabric forming the subject of Letters Patent No. 709,734, granted September 23, 1902, to Robert W. Scott and myself as assignees of David C. Bellis, the object of my present invention being to produce a backing web which is better adapted for the production of a fleece than is the backing web of the patented fabric.

In the accompanying drawing:—Figure 1 is an exaggerated view of a piece of my improved fabric looking at the face side of the same; Fig. 2 is a view illustrating the appearance of the exposed face of the back web of the fabric, and Figs. 3 and 4 are views illustrating the manner in which the fabric is produced.

The fabric forming the subject of the aforesaid Letters Patent No. 709,734, comprised two webs, one overlying the other and united at intervals by a loop of the yarn of one web engaging the other web, and the fabric forming the subject of my present invention is of a similar character, thus in Fig. 1 of the drawing, 1 represents the face web and 2 the back web, the stitches of the face web being shaded in order to more clearly distinguish them from the stitches of the back web, which are unshaded. The two webs are connected at intervals, as shown at 3, by loops of yarn of the face web engaging with wales of the back web, although any of the other modifications of the tying structure, such as illustrated in said Bellis patent, may be used, if desired. The distinction between the fabric forming the subject of my present invention and that of the Bellis patent is that in my improved fabric the stitches of both webs are drawn in the same direction, whereas in the Bellis fabric the stitches of the face web were drawn to the front face and the stitches of the back web were drawn to the back face of the fabric. The exposed face of the back web of the Bellis fabric therefore did not lend itself readily to the production of a fleece by brushing or gigging the yarn of which the said back web was composed, but when the stitches of the back web are drawn towards the front face of the fabric, in accordance with my invention, the exposed face of said back web presents a surface composed wholly of loops, as shown in Fig. 2, and the brushing or gigging of the same to form a fleece can be readily effected.

In the production of my improved fabric I employ a knitting machine having two needle beds 4 and 5, provided with needles 4^a and 5^a which are intended to be combined with the usual cams for reciprocating the same for knitting purposes, and with one or more yarn feeds for each set of needles, the yarn feed for the needles 4^a being represented at 4^b in Fig. 4, and the yarn feed for the needles 5^a being represented at 5^b in Fig. 3.

Although my invention is applicable either to straight or to circular machines I will, for convenience, refer to the needle carrier 4 as a "cylinder" and to the needle carrier 5 as a "dial".

Owing to the fact that both the cylinder and dial needles draw their stitches in the same direction the web produced by the dial needles overlies that produced upon the cylinder needles and it is necessary to get this overlying web out of the way in order that the cylinder needles may rise to receive the yarn from the yarn guide 4^b. For this reason the dial needles are projected clear of the dial 5 and to a point beyond the cylinder needles 4^a wherever one of the yarn feeds 4^b occurs, as shown in Fig. 4. This may be readily accomplished if the needles are of the character of those in the machine shown in R. W. Scott's Patent No. 834,763, October 30, 1906, by use of a special cam for effecting abnormal projection of the needles or if the needles are of the ordinary type having butts for the action of the knitting cams. They may, by the action of suitable jacks, such as those shown in Patent No. 577,789, dated Feb. 23, 1897, be projected, before they reach each feed 4^b, into a special dial on the inside of the needle carrier 4 and returned by another set of jacks after they have passed the yarn feeding device.

In order to effect the tying of two webs together selected dial needles may be only partially projected, as shown by dotted lines in Fig. 4 instead of being fully projected as shown by full lines in said figure, whereby said partially projected dial needles will receive the knitting yarn fed to the cylinder needles and will form loops of said yarn which will be cast off from said special needles with their stitches at the next dial yarn feed 5^b.

I claim:—

1. A knitted fabric comprising two webs, one overlying the other and united at intervals by yarn of one web engaging the other web, both webs having their stitches facing in the same direction.

2. The mode herein described of producing a knitted fabric, said mode consisting in knitting two webs by two sets of needles, both of which draw stitches in the same direction, and displacing the overlying web when the needles are being operated to knit the other web.

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

LOUIS N. D. WILLIAMS.

Witnesses:
HAMILTON D. TURNER,
KATE A. BEADLE.