

R. W. SCOTT.
RIBBED KNITTED FABRIC.
APPLICATION FILED MAY 4, 1909.

933,673.

Patented Sept. 7, 1909.

Fig. 1.

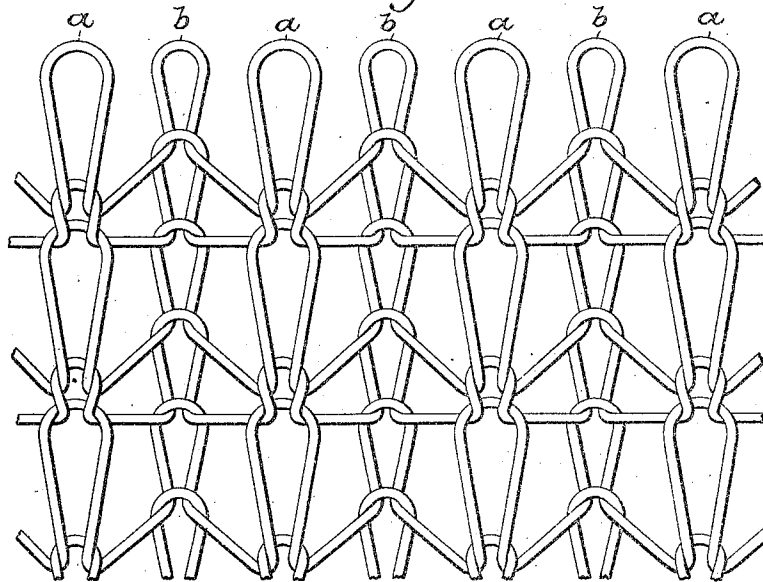
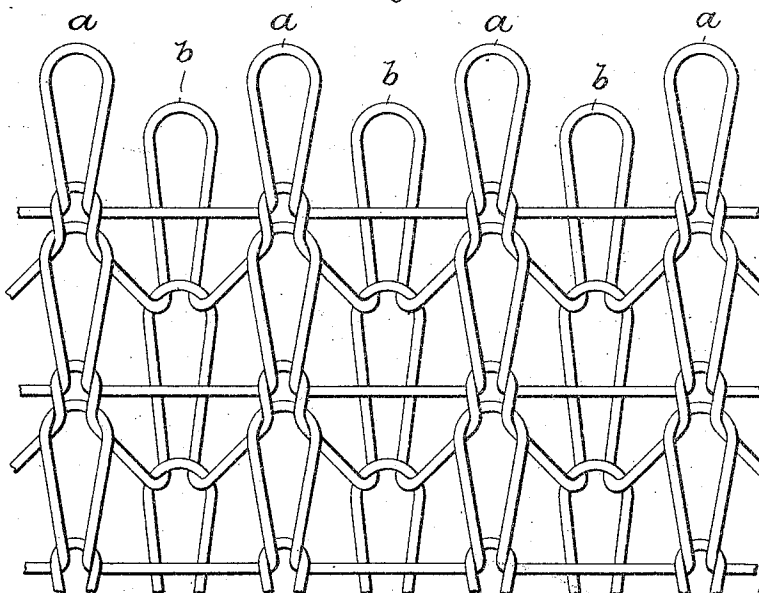


Fig. 2.



Witnesses
Kamilton J. Turner
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Inventor
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by his Attorneys
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UNITED STATES PATENT OFFICE

ROBERT W. SCOTT, OF LEEDS POINT, NEW JERSEY, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO GENERAL KNIT FABRIC COMPANY, OF UTICA, NEW YORK, A CORPORATION OF NEW YORK.

RIBBED KNITTED FABRIC.

933,673.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 4, 1909. Serial No. 493,830.

To all whom it may concern:

Be it known that I, ROBERT W. SCOTT, a citizen of the United States, residing in Leeds Point, Atlantic county, New Jersey, have invented certain Improvements in Ribbed Knitted Fabrics, of which the following is a specification.

My invention consists of certain modifications of and improvements in the ribbed knitted web for which I filed application for Letters Patent of the United States on the tenth day of November, 1908, Serial No. 461,983, the purpose of my present improvement being to produce in a simpler manner, or with the use of simpler machinery than before, fabrics possessing the mesh appearance, the stability, and the relatively light weight of the fabric forming the subject of my previous application.

In the accompanying drawing—Figure 1 is an exaggerated view of one piece of ribbed web produced in accordance with my invention, and Fig. 2 is a similar view of another piece of the ribbed web embodying a special feature of the invention.

The improved fabric is produced upon a rib knitting machine of the ordinary type having two needle beds, usually a cylinder and a dial, hereinafter referred to as such, the cylinder needles producing the stitches which constitute one side of the web, (hereinafter, for convenience, referred to as the "face") and the dial needles producing the ribbing stitches or those of the other side of the web (hereinafter, for convenience, referred to as the "back").

A distinguishing characteristic of both of my improved webs is that they present, on the face, needle wales having in alternation large and small stitches, and on the back needle wales in which all of the stitches are of substantially the same size, thus in the drawing *a* represents the needle wales of the face of the fabric and *b* the needle wales of the back of the same.

In the fabric shown in Fig. 1, there are as many courses of stitches in the back wales as in the face wales, while in the fabric shown in Fig. 2 there are only half as many courses of stitches in the back wales as in the face wales, the yarn being carried from the long stitches of the face wales across in front of the back wales, but the yarn be-

tween the short stitches of said face wales forming the stitches which constitute the wales of the back of the web.

In producing the fabric shown in Fig. 1, the cams for operating the dial needles which produce the stitches of the back wales of the web all have the same draft and all act in producing each course of the web. The cams which act upon the cylinder needles for producing the face wales of the web are alternately long and short draft cams, the long draft cams producing stitches of any length desired while the short draft cams produce stitches of much smaller size and, by preference, as short as they can be knitted, these cams retracting the needles only to a sufficient extent to knock over their stitches.

The fabrics are preferably produced upon a machine having a plurality of yarn feeds, and in producing the fabric shown in Fig. 1 the cylinder draft cams corresponding with every other yarn feed are long draft cams, while the cylinder draft cams corresponding with the alternate feeds are short draft cams, all of the dial draft cams being alike, and in producing the fabric shown in Fig. 2 the cylinder draft cams are the same as for producing the fabric shown in Fig. 1, but the projecting dial cams corresponding with the cylinder cams having the long draft are short cams which do not project the dial needles to such an extent as to receive the knitting yarn, the dial needles receiving the yarn and forming the stitches only in those courses in which the short stitches are drawn by the cylinder needles. A fabric of this character can be produced with less yarn than is required when stitches are formed in each course, in both the face and back wales.

Either of the fabrics can be produced with less change in the ordinary construction of the rib knitting machine than is required in order to produce a fabric such as forms the subject of my previous application, the production of the fabric shown in Fig. 1 requiring no change of the ordinary cams other than the proper adjustment of the cylinder draft cams and the production of the fabric shown in Fig. 2 requiring no additional change other than the adjustment of the projecting cams of the dial.

Both fabrics possess characteristics similar to the former fabric in that they permit of the production of a web which is relatively light in weight but which, because of the small or tightly drawn stitches possesses greater stability than an ordinary slack knitted fabric, the improved fabrics also presenting on the face a mesh appearance which was a characteristic of the previous fabric, and a machine of a given diameter producing a web of a greater diameter than it would if all of the stitches were of the same size, representing a medium between the long and short stitches of the face wales.

While I have shown my invention as embodied in a "one-and-one" ribbed web, having large and small stitches in successive courses, it may, as set forth in the specification of my former application, be embodied in webs having different types of ribs, and in webs in which the change from large to small stitches is not effected in successive courses.

I claim:

1. A ribbed knitted web having in its face wales alternations of large and small stitches, and in the back wales stitches of substantially uniform size.

2. A ribbed knitted web having in the face wales alternations of large and small stitches, and in the back wales stitches of substantially uniform size, said back wales containing a less number of courses of stitches than the face wales.

3. A ribbed knitted fabric having in the face wales alternations of large and small stitches, the knitting yarn in alternate courses of the face wales crossing from wale to wale and the knitting yarn in the remaining courses also forming stitches in the back wales.

4. A ribbed knitted web having, in the face wales, alternations of large and small stitches, the knitting yarn in alternate courses of the face wales crossing from wale to wale in front of the back wales, and the knitting yarn in the remaining courses also forming stitches in the back wales.

5. A ribbed knitted web having, in the face wales, alternations of large and small stitches, the knitting yarn which connects the large stitches of the face wales crossing from wale to wale and the knitting yarn which

forms the small stitches of the face wales also forming stitches in the back wales.

6. A ribbed knitted web having, in the face wales, alternations of large and small stitches, the knitting yarn which connects the large stitches of the face wales crossing from wale to wale in front of the back wales and the knitting yarn which forms the small stitches of the face wales also forming stitches in the back wales.

7. A ribbed knitted web having, in the face wales, alternations of large and small stitches and in the back wales stitches of substantially uniform size, the knitting yarn in alternate courses of the face wales crossing from wale to wale, and the knitting yarn in the remaining courses of the face wales also forming stitches in the back wales.

8. A ribbed knitted web having, in the face wales, alternations of large and small stitches and in the back wales stitches of substantially uniform size, the knitting yarn which connects the large stitches of the face wales crossing from wale to wale, and the knitting yarn which forms the small stitches of the face wales also forming stitches in the back wales.

9. A ribbed knitted web having in the face wales alternations of large and small stitches, and in the back wales stitches of substantially uniform size, the knitting yarn in alternate courses of the face wales crossing from wale to wale in front of the back wales, and the knitting yarn in the remaining courses of the face wales also forming stitches in the back wales.

10. A ribbed knitted web having in the face wales alternations of large and small stitches, and in the back wales stitches of substantially uniform size, the knitting yarn which connects the large stitches of the face wales crossing from wale to wale in front of the back wales, and the knitting yarn which forms the small stitches of the face wales also forming stitches in the back wales.

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

ROBERT W. SCOTT.

Witnesses:

HAMILTON D. TURNER,
KATE A. BEADLE.