R. W. SCOTT.

KNITTED WEB.

APPLICATION FILED JAN. 14, 1910.

1,087,688. Patented Feb. 17, 1914.

Fig. 1.

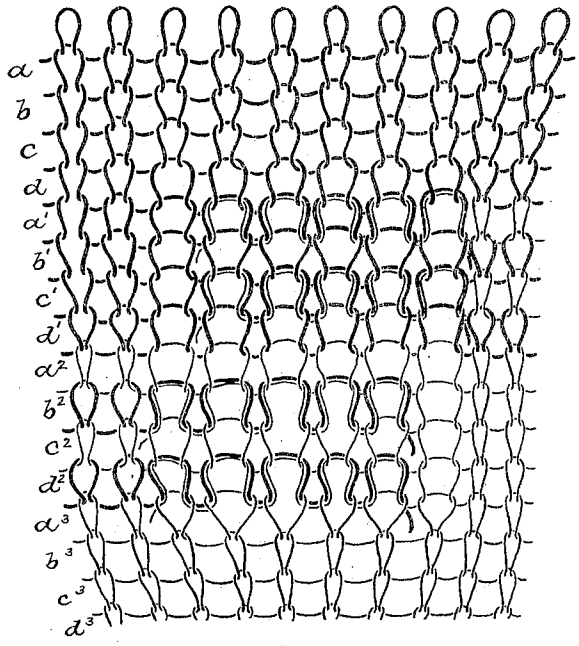
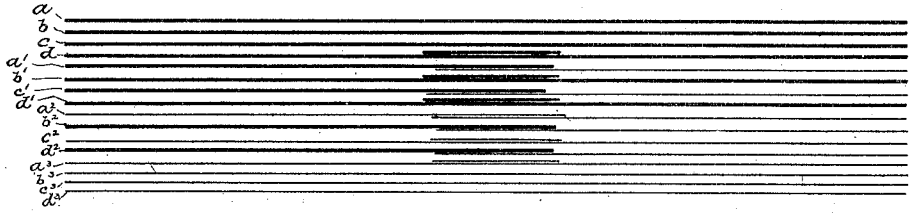


Fig. 2.



Witnesses
Hamilton D. Turner
Harry L. Smith

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 SCOTT & WILLIAMS, INCORPORATED, OF CAMDEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

KNITTED WEB.

1,087,688. Specification of Letters Patent. **Patented Feb. 17, 1914.**

Application filed January 14, 1910. Serial No. 538,125.

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 Knitted Webs, of which the following is a specification.

My invention consists of certain improvements in the knitted fabric constituting the subject of Letters Patent No. 618,017, dated January 17, 1899, the object of my invention being to adapt said invention to fabrics produced on machines having a plurality of yarn feeds, and consequently having successive courses knitted with different yarns.

In the accompanying drawing—Figure 1 is an exaggerated view of a piece of knitted web made in accordance with my invention, and Fig. 2 is a view illustrating, diagrammatically, a number of successive courses as they would appear in a piece of the improved tubular knitted web split and laid out flat.

In changing from one yarn to another in the production of knitted webs, there are, in each course in which the change is effected, a certain number of stitches which are knitted with double yarns, the new yarn being fed to and knitted by some of the needles before the old yarn has been withdrawn, and the invention of the above mentioned patent consisted in lengthening or slackening said double yarn stitches and those in the adjacent portions of the web, in order to prevent cutting of the stitches at the point where the two yarns were being fed to the needles. Where a number of yarn feeds are employed, however, and the successive courses of the fabric are knitted with independent yarns, even the lengthening of the stitches may fail to attain the desired result with certain kinds of yarn, if the change takes place in successive courses of stitches in substantially the same wales of the web. I therefore effect the change of yarns in courses between which intervene plain or single yarn courses, so that no double yarn portions of successive courses will be inter-knitted with one another.

In Fig. 1, I have shown my invention as applied to a fabric knitted with four feeds and producing four successive courses a, b, c, d, a', b', c', d', a^2, b^2, c^2, d^2, etc., each course knitted with its own yarn, the change of yarn being effected in courses a', c', b^2 and d^2, and the double yarn portion of the course a' being interknitted with single yarn portions of the courses d and b', the double yarn portion of course c' being interknitted with single yarn portions of the courses b' and d', the double yarn portion of course b^2 being interknitted with single yarn portions of the courses a^2 and c^2, and the double yarn portion of course d^2 being interknitted with single yarn portions of the courses c^2 and a^3.

All of the stitches in which double yarn is employed and all of the stitches with which said double yarn stitches are interknitted are, by preference, drawn longer or slacker than the stitches in the remainder of the fabric, and, in some cases, I also draw closer stitches in the body of the fabric with one yarn than with the other, for instance, one yarn, say that represented by heavy lines, may be a heavy yarn and the other represented by light lines may be a light yarn, and in order to shape as well as reduce the bulk of the web in which the light yarn is employed, I draw closer stitches of said light yarn than of the heavy yarn, as indicated in Fig. 1.

In the diagram shown in Fig. 2, the heavy lines represent the medium length stitches drawn with the heavy yarn, the light lines represent the close stitches drawn with the lighter yarn, and the double lines represent the long stitches, the double yarn stitches being indicated by the overlapping of the ends of the light and dark lines.

Any desired number of single yarn courses may intervene between the courses in which change is effected and double yarn stitches are produced.

The longer or slacker stitches in the double yarn portions of the change courses, and in the single yarn portions of the courses interknitted therewith, are produced by increasing the draft upon those needles of the machine upon which these stitches are being knitted.

The slackening of the stitches will not, in practice, occur only in those wales in which the double yarn stitches appear as this would involve an exactitude of operation of the machine not likely to be attained.

The term "yarn" as herein employed is not to be construed as meaning a single

strand as each yarn may, if desired, be composed of two or more strands.

I claim:

1. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated single courses of the web.

2. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated single courses of the web, the double yarn stitches being slacker than the stitches in the body of the web.

3. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated single courses of the web, the double yarn stitches and those interknitted therewith being slacker than those in the body of the web.

4. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated courses of the web, the yarns being alternately light and heavy and the light yarns forming closer stitches than the heavy yarns in the body of the web.

5. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated courses of the web, the double yarn stitches being slacker than the stitches in the body of the web, the yarns being alternately light and heavy and the light yarns forming closer stitches than the heavy yarns in the body of the web.

6. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated courses of the web, the double yarn stitches and those interknitted therewith being slacker than those in the body of the web, the yarns being alternately light and heavy and the light yarns forming closer stitches than the heavy yarns in the body of the web.

7. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated courses of the web, the double yarn stitches and those interknitted therewith being slacker than those in the body of the web, the yarns being alternately light and heavy, and some of the slackened stitches which are interknitted with the double yarn stitches being of the lighter yarn.

8. A knitted fabric having successive courses of stitches knitted with independent yarns, and having double yarn stitches due to changes of yarn effected at substantially the same wales, but in separated courses of the web, the double yarn stitches and those interknitted therewith being slacker than those in the body of the web, the yarns being alternately light and heavy, the light yarns forming closer stitches than the heavy yarns in the body of the web, and some of the slackened stitches which are interknitted with the double yarn stitches being of the lighter yarn.

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

ROBERT W. SCOTT.

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