

W. T. BARRATT.
 ART OF KNITTING STRING WORK FABRIC.
 APPLICATION FILED APR. 19, 1906.

999,734.

Patented Aug. 8, 1911.

2 SHEETS-SHEET 1.

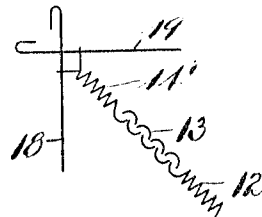
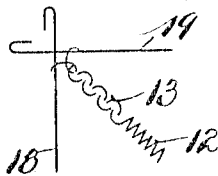
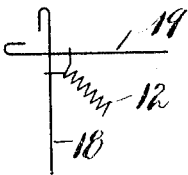
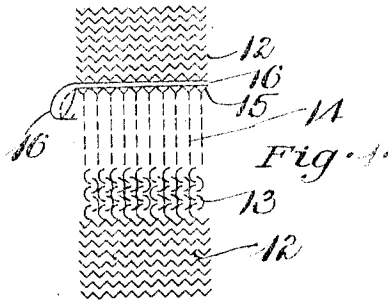


Fig. 2.

Fig. 3.

Fig. 4.

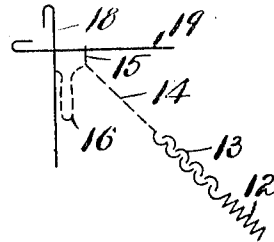
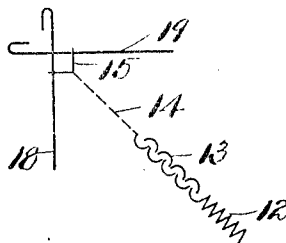
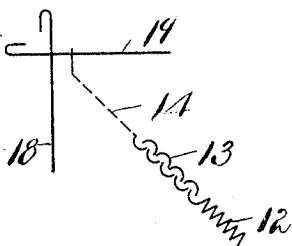


Fig. 5.

Fig. 6.

Fig. 7.

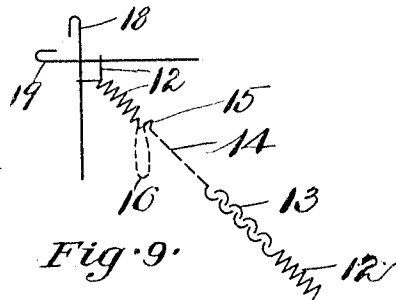
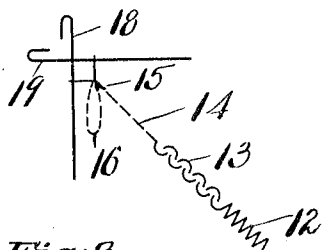


Fig. 8.

Fig. 9.

Witnesses:

William C. Glass
 Ernest A. Telfer.

Inventor:

William J. Barratt
 By his attorney, Paul S. Gooding.

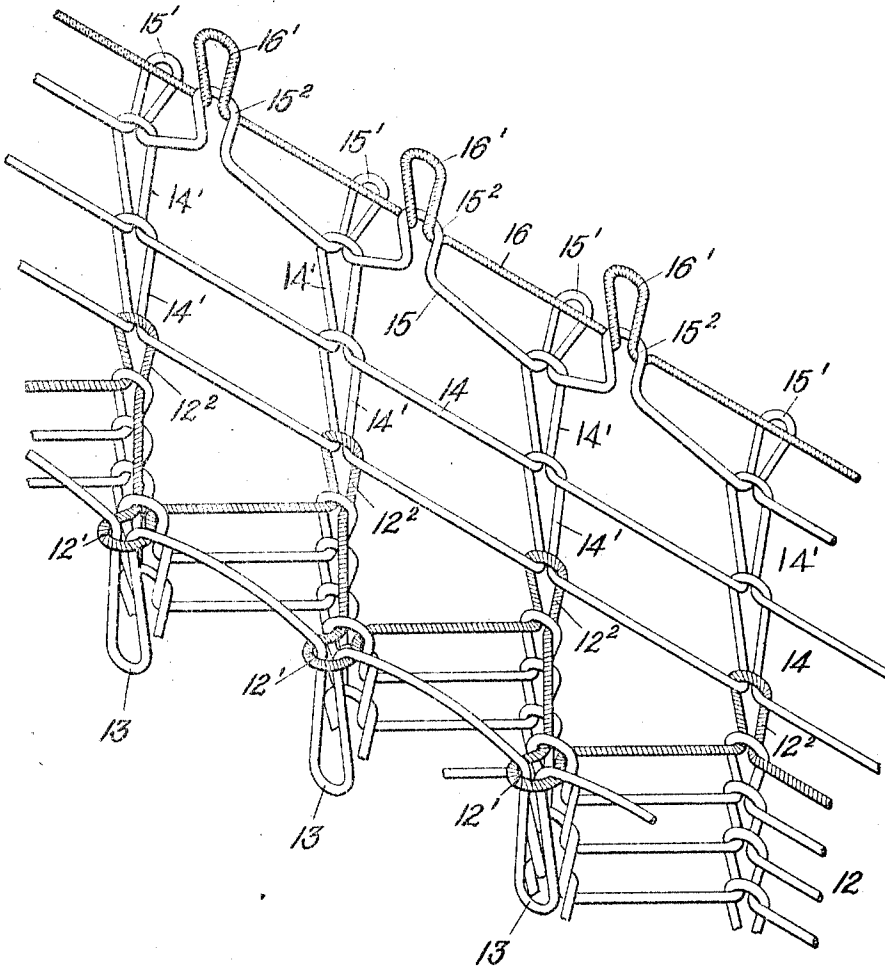
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2 SHEETS—SHEET 2.

Fig. 10.



Witnesses:

Walter C. ...

Francis H. Bishop

Inventor:

William T. Barratt.

by his attorney, Charles S. Gooding.

UNITED STATES PATENT OFFICE.

WILLIAM T. BARRATT, OF BENNINGTON, VERMONT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ANNIE COOPER, ALEXANDER J. COOPER, AND CHARLES S. KEHOE, OF BENNINGTON, VERMONT, EXECUTORS OF CHARLES COOPER, DECEASED.

ART OF KNITTING STRING-WORK FABRIC.

999,734.

Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed April 19, 1906. Serial No. 312,612.

To all whom it may concern:

Be it known that I, WILLIAM T. BARRATT, a citizen of the United States, residing at Bennington, in the county of Bennington and State of Vermont, have invented new and useful Improvements in Art of Knitting String-Work Fabric, of which the following is a specification.

This invention relates to an improvement in the art of knitting string-work fabric.

The object of the invention is to produce a knitted fabric either in flat or tubular form which consists of a series of pieces or sections of fabric; each piece terminating in a welt which is joined to the adjacent piece in such a manner that it can be easily separated without injury to either piece by cutting the same transversely thereof, or by withdrawing a course of plain fabric uniting the two pieces each of said sections or pieces having a welt at one end thereof such as may be used in cuffs and the like for underwear.

The invention consists in a knitted fabric constructed as described in the following specification and particularly as set forth in the claim.

Referring to the drawings: Figure 1 is a diagram view of my improved knitted fabric. Figs. 2 to 9 inclusive are diagram views showing two needles and a diagram view of the fabric illustrating the manner in which said fabric is manufactured. Fig. 10 is a perspective view of a portion of my improved fabric; illustrating particularly the plain fabric courses which connect one piece of the fabric to the other.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, the fabric is shown in Figs. 1 and 9 in diagram view in its complete form, and consists of a series of sections joined together in the following order: First, a section of ribbed work 12, which may be made by knitting with two sets of needles a one-and-one, two-and-one, or any form of ribbed knitted fabric. The next section 13 is formed by a tuck-stitch or it may be formed by a pull-down slack course

knitted on the primary needles and forming a lock-stitch for the purpose hereinafter described. The next section 14 is formed by a plain stitch which is joined by a single course 15 of one-and-one to a welt 16, the next course being the commencement of a new ribbed section 12.

My improved fabric is knit upon two sets of needles, either on a flat machine or on any of the different forms of circular machines, such as latch needle dial machines and spring needle two cylinder machines. In the following description of the manner in which my improved fabric is knit, the diagram views, Figs. 2 to 9 inclusive, illustrate two needles which may be either spring or latch needles and the different stitches are indicated in diagrammatic form. Referring, now, to these figures of the drawings 2 to 9, inclusive, only two needles will be considered, a primary and a secondary needle, it being understood that the operation hereinafter described applies equally to the operation of all the needles in the two different sets. The needle to which the thread is first fed is referred to as the "primary" needle and the needle to which the thread is carried by the primary needle is indicated as the "secondary" needle. The relative positions of the primary and secondary needles in the drawings, Figs. 2 to 9, inclusive, may be varied to stand at different angles to each other and the yarn may be fed to either the vertical or to the horizontal needle first without departing from the spirit of my invention. I have, however, illustrated and described the vertical needle 18 as the primary needle and the horizontal needle 19 as the secondary needle. The yarn is fed to the primary needle by any of the well known means and the two sets of needles are first operated to knit a section of ribbed work (Fig. 2). Said needles are next operated to knit a lock-stitch section 13, which may be formed either by a tuck-stitch or by a pull-down slack course (Fig. 3), the secondary needles being held back out of operation and the locking course knitted on the primary

needles alone. The next section above the lock-stitch 13 is first formed by knitting a one-and-one ribbed section 14' with both sets of needles in operation. The stitches at the upper end of this section are then pressed off of the primary needles 18, leaving the stitches or loops on the secondary needles. This allows the primary loops to immediately ravel back on account of the pull of the take-up to the lock-stitch section 13, thus leaving the section 14 a plain stitch fabric in the same relative position to the needles as if it had been knit on the secondary needles, as illustrated in Fig. 5, with the closed ends of the loops extending toward the finished face of the fabric. In the next operation of the machine the primary needles are again thrown into operation, as illustrated in Fig. 6, and a single course 15 of one-and-one is knit. After the single course 15 of one-and-one has been knit on both sets of needles, the secondary needles are held out of operation, but with their loops thereon and several courses of a plain fabric are knit on the primary needles to form the welt 16, Fig. 7. After the welt has been knit the secondary needles are again thrown into operation and both sets of needles knit a one-and-one section 12, the one-and-one course 15 thus looping the plain course 16, which forms the welt, and attaching said welt to the following rib section 12 at the lower end thereof.

In order to still more clearly illustrate the construction of applicant's fabric it will be understood, by reference to Fig. 10, that applicant's fabric consists of a section of ribbed fabric 12, the loops 12' on the primary needles being locked by the loops 13 of the locking course. The loops 12² are on the secondary needles and through these loops extend the loops 14', 14' of one of the courses of plain fabric. The loops 14' of the final course of the plain fabric 14 are connected to the loops 15' of the single course 15 of one-and-one fabric, which loops 15' are held upon the secondary needles, while the primary needles are knitting the welt 16, consisting of loops 16', 16', the loops of the first course of which extend through the loops 15² of the single course 15 of one-and-one. It will be seen that in applicant's fabric, therefore, the loops 12² of the final one-and-one course of one section of the fabric are joined by the loops 14', of the plain course 14 to the loops 15' of the single course 15, and it will be particularly noted that these loops 14' extend toward the finished face of the fabric as though knit on the secondary needles. It will also be clearly seen that any one of the plain courses 14 can be withdrawn because the same are not locked, or said courses, any one of them, may be cut it being preferable to have a plurality of plain courses in order to render this cut-

ting an easy matter and without endangering the cutting of the welt. For the sake of clearness of illustration the yarn composing the final course of the ribbed fabric 12 of one section is shaded.

The advantages of the improved fabric hereinbefore described consist in the fact that yarn of the ordinary strength can be used for the knitting of the fabric as a whole and employed throughout the different sections of fabric, said sections of fabric being preferably separated one from the other by a sufficient number of courses of plain fabric to allow one piece of fabric terminating in a welt to be separated from the other piece which also terminates at its lower end in a welt by cutting these plain fabric courses 14 preferably along the course adjacent to the welt transversely across the fabric. The space formed by the plain fabric 14, being preferably of several courses of plain stitches, is sufficient to allow a cutter and guide to be introduced between the lock-stitch section 13 and the welt while the cutting operation is being performed. In this manner a very close adjustment of the cutter by which the lock-stitch section is separated from the welt can be obtained, and as only a single thickness or a thickness of plain fabric with a single thread is to be cut, a very smooth finished edge is secured, resulting in a much more desirable and cheaper method of separating two sections of fabric than has heretofore been obtained by means of cutting. When the pieces of fabric are separated one from the other, the welt forms a perfect finish which will not ravel at one end of said piece of fabric, while the plain fabric 14 is prevented from raveling by stitching the same laterally across the fabric. This plain fabric 14 in the finished garment is turned in as a hem, thus making a neat finish. It is evident that, if desired, the plain fabric 14 may consist of a single course of plain stitches, with the closed ends of the loops extending toward the finished face of the fabric, without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

The art of knitting string-work fabric containing a series of separated ribbed sections comprising the following steps: first, knitting a series of courses containing loops drawn to each face of the fabric, then suspending the knitting on one face of the fabric, then knitting a locking course drawn through the loops of the other face only, then knitting a plurality of courses having loops drawn to both faces, then dropping the stitches upon that face upon which the locking course was knit and subsequently

knitting in continuation of said courses the beginning of another section having the loops of its primary course drawn to each face of the fabric, whereby the dropped stitches will ravel out between said primary course and the course locked by the locking course, forming an intervening section of loose plain knitting.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 10

WILLIAM T. BARRATT.

Witnesses:

CHARLES S. KEHOE,
EARL A. SMITH.