

No. 618,017.

Patented Jan. 17, 1899.

H. SWINGLEHURST.  
STRIPED KNITTED FABRIC.  
(Application filed Mar. 1, 1898.)

(No Model.)

FIG. 1.

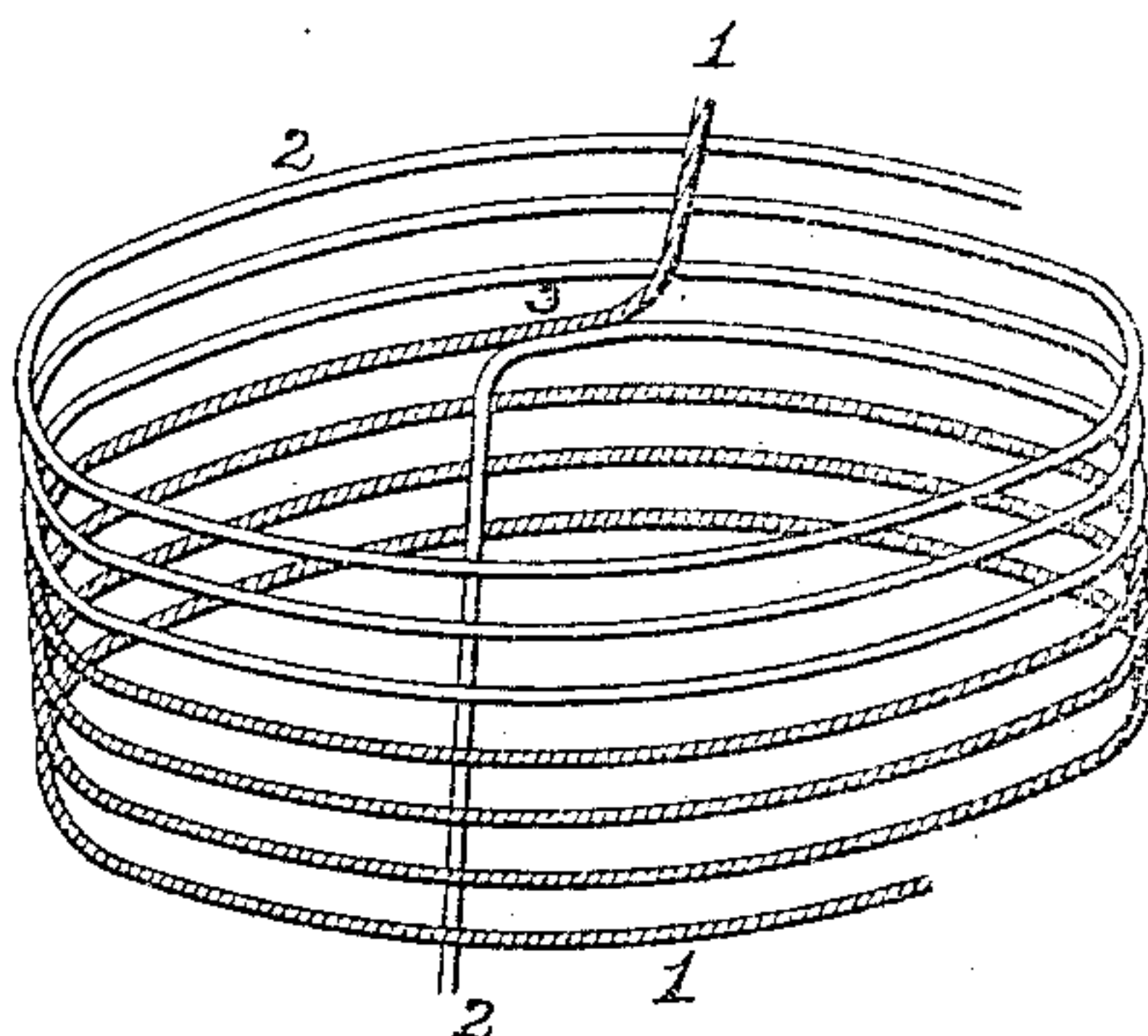
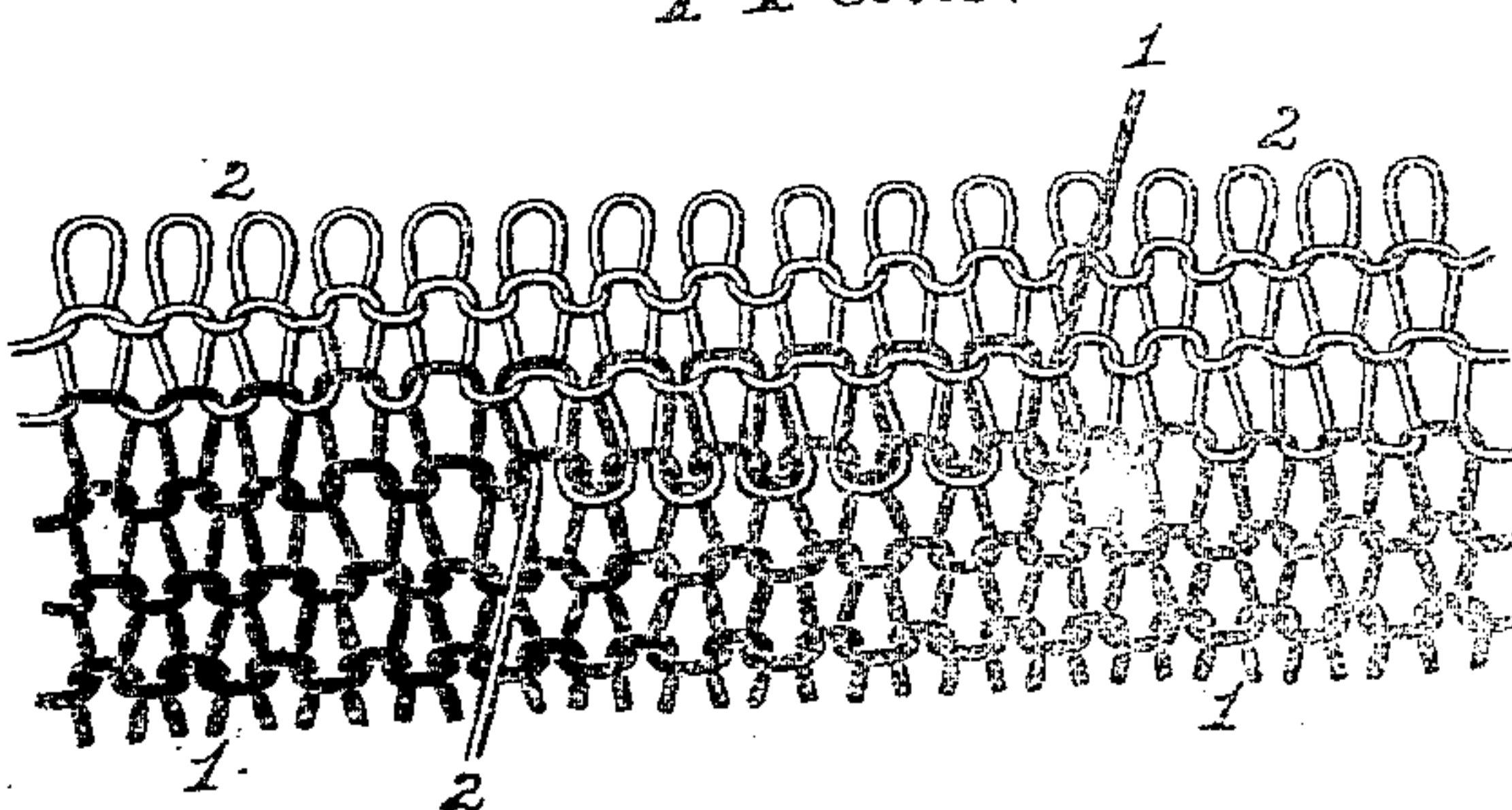


FIG. 2.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

HARRY SWINGLEHURST, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
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## STRIPED KNITTED FABRIC.

SPECIFICATION forming part of Letters Patent No. 618,017, dated January 17, 1899.

Application filed March 1, 1898. Serial No. 672,179. (No specimens.)

*To all whom it may concern:*

Be it known that I, HARRY SWINGLEHURST, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Striped Knitted Fabrics, of which the following is a specification.

My invention relates to an improvement in that class of knitted fabrics in which transverse stripes are produced by the use of different-colored yarns controlled by movable guides, so that one knitting-yarn may be moved out of operative relation with the needles when another is brought into operative relation with the same, the object of my invention being to prevent cutting of the stitches at the point where the change of knitting-yarn is effected.

In the accompanying drawings, Figure 1 is a diagram illustrating the disposition of the yarns in a fabric of the character to which my invention relates, and Fig. 2 is an exaggerated view of part of the fabric illustrating my improvement.

In that class of knitted webs having transverse stripes formed by changing the color of the knitting-yarn it frequently happens that at the point where the change is effected both yarns will be fed to a few of the needles, and if the fabric is knitted very stiff or of very close texture these two yarns will overload the needles and will cause cutting of the stitches, so as to produce defective fabric.

In Fig. 1 of the accompanying drawings the successive courses of stitches in a tubular fabric of the character to which my invention relates are represented by simple convolutions of yarn, the four lower courses being composed of a dark yarn 1 and the three upper courses of a light yarn 2, the unused yarn floating from stripe to stripe on the inside of the fabric, and it will be noticed that where the yarn changes the two yarns lie together for a short distance, as shown at 3, and in the knitted fabric double stitches are produced throughout this portion of the course, as shown in Fig. 2.

If the fabric is very closely knitted or of very fine texture, the application of these two yarns to certain of the needles will put such

a strain upon said yarns as to break them or the yarn in the preceding course, which, being tightly knitted, cannot yield to the pull upon it, and in order to overcome this objection I form longer or slacker stitches upon those needles to which the two yarns are likely to be applied, this result being effected by drawing said needles down below the normal draw-down point while the two yarns are being applied thereto and also, by preference, at corresponding points in the preceding and following courses, so that not only are the double stitches themselves slackened, but there are slack stitches in the two adjoining courses, as shown in Fig. 2, thus providing in that portion of the fabric where the yarns are doubled the elasticity necessary to prevent breakage of the yarn.

The slackening of the stitches in the course following that in which the yarn is doubled may be omitted, if desired, as the stitches in which the double yarn is being knitted and the corresponding stitches in the preceding course are those upon which the strain is exerted.

It might even be possible to knit loosely only the stitches in the course preceding the double-stitch course, in which case the double-yarn stitches might draw through the stitches of said preceding course, so as to prevent breaking of the yarn; but I prefer in all cases to slacken both the double-yarn stitches and the corresponding stitches in the preceding course.

My invention is applicable to that class of fabrics in which the striping is effected by breaking off one knitting-yarn and running in another, as in such case, also, there is a lap of the two yarns at the point where the change is effected.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A knitted fabric having transverse stripes formed by the substitution of one knitting-yarn for another so as to produce double-yarn stitches at the point where the change is effected, and having in the course preceding that in which such change is effected,

stitches engaging said double-yarn stitches, and longer or slacker than the stitches in the body of the fabric, substantially as specified.

2. A knitted fabric having transverse stripes formed by the substitution of one knitting-yarn for another, and having at the point where the change of yarns is effected, double-yarn stitches longer or slacker than those in the body of the fabric, said double-yarn stitches engaging with long or slack stitches in the preceding course, substantially as specified.

3. A knitted fabric having transverse stripes formed by the substitution of one knit-

ting-yarn for another, and having at the point where the change of yarn is effected, double-yarn stitches longer or slacker than those in the body of the fabric, said double-yarn stitches engaging with long or slack stitches in the preceding and following courses, substantially as specified.

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

HARRY SWINGLEHURST.

Witnesses:

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