March 10, 1942. C. C. BISCH 2,276,148

LOCKSTITCH AND PATTERN TO PREVENT THREAD RUNS

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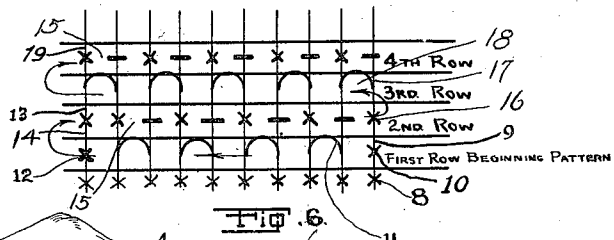


Fig. 6.

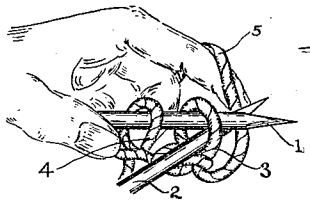


Fig. 1.

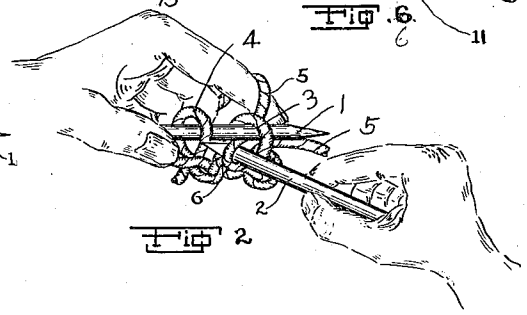


Fig. 2.

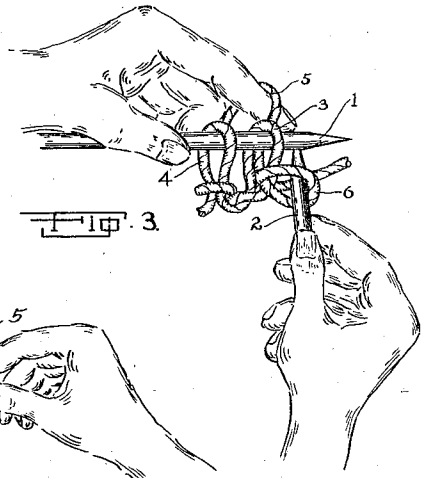


Fig. 3.

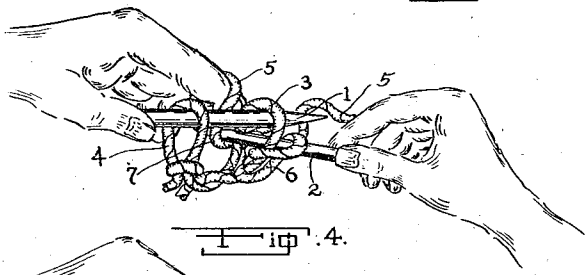


Fig. 4.

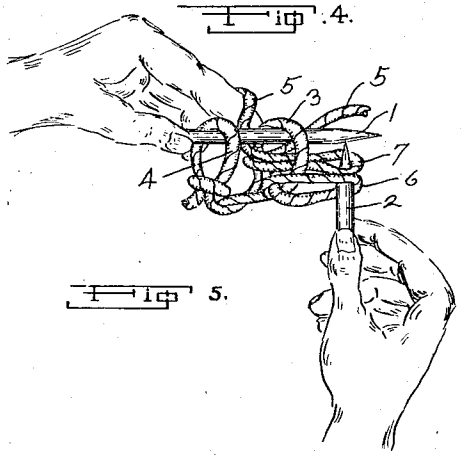


Fig. 5.

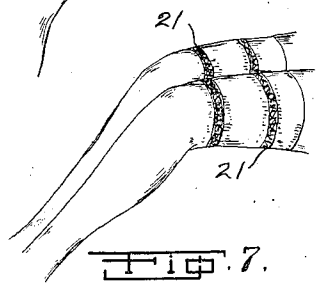


Fig. 7.

Correll Coffman Bisch
Inventor:

By:

A. B. McCall.
Attorney

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LOCKSTITCH AND PATTERN TO PREVENT THREAD RUNS

Correll Coffman Bisch, Springfield, Ill., assignor of fifty per cent to Morris R. Myers, Springfield, Ill.

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3 Claims. (Cl. 66—172)

My invention relates to knitting operations for making fabrics of different kinds and especially to the formation of stitches in such fabrics wherein the construction of the stitch is such that it will be impossible for runs to occur in the fabric through such stitches.

An object of my invention is to provide a lockstitch and a stitch pattern in knitted fabrics, with the pattern arranged in such a way that a line or a band of the fabric pattern may be formed by an interknitted and interconnected arrangement of stitches such that the resulting pattern will make it impossible for runs to occur in the fabric.

A particular object of my invention is to provide a lock-stitch and pattern for the fabric of which stockings are made, and to provide in the formation of the stocking the desired number of annular bands each defined by an interknitted and interconnected series of such specially arranged stitches in a manner that will prevent thread runs through the band formed by my novel pattern from either direction.

I not only desire to provide such a lockstitch and pattern in its effective operation in a fabric band but I desire to provide a novel and practical method of knitting the same by hand, which will accomplish the operation.

I have chosen to protect both the lockstitch and pattern and the method of knitting the same, in this patent application, for the reason that my novel lockstitch is so intimately associated with the method of forming the same that it seems impractical to attempt to distinguish one from the other.

I attain the objects of my invention by the lockstitch and pattern and process of knitting the same, as described in this specification, recited in the claims and illustrated in the drawing which comprehensively show the novelty of my invention.

Referring to the drawing:

Fig. 1 is a perspective illustrating the first knitting movement required in the respective steps in the formation of my lockstitch.

Fig. 2 illustrates the second knitting operation required in producing my lockstitch when forming the same by hand utilizing knitting needles.

Fig. 3 illustrates the third knitting operation in forming by hand one of my novel lockstitches.

Fig. 4 illustrates the fourth knitting movement required to form one of my lockstitches.

Fig. 5 illustrates the fifth and final knitting operation needed in forming one of my lockstitches where the same is knitted by hand.

Fig. 6 is a diagrammatic illustration showing the order in which the respective rows of stitches are connected and showing also how the respective adjacent rows are alternated in their tie-up together.

Fig. 7 is a perspective illustrating a pair of stockings showing approximately the desired position of my lockstitch when formed in spaced bands above the knee of the stocking.

I have chosen to illustrate my invention in the drawing in a manner showing how the lockstitches and pattern thereof would be formed by a hand knitting operation.

In a study of the form and novel arrangement of my lockstitch and pattern it will be noted that when this stitch is used, as is intended as an integral part of a fabric pattern from which stockings are made, as well as other fabric articles, this novel lockstitch and pattern utilized in such fabrics will very definitely prevent thread runs.

In a lockstich and pattern which may be practical as a part of an article of wearing apparel, there must be a construction thereof which will prevent runs in the fabric of which it is to be an integral part, and numerous attempts have been made to provide lockstitches for this purpose, some of which attempts, to some extent, have been more or less successful.

I am therefore aware of the existence of some types of lockstitches now available on the market and I am familiar with the details of construction of some of them.

However, it is my purpose in this invention, to provide a novel lockstitch and pattern which will positively prevent thread runs, especially which are so common to stockings, when my lockstitch and pattern are applied in the making of the fabric, from which stockings are made.

I have shown in Fig. 7 approximately the location in which my lockstitch and pattern may preferably be used in the making of stockings, although it is obvious that bands may be formed of a pattern woven into the stocking in any desired position from one end of the stocking to the other.

I shall now describe in comprehensive detail the novel and salient features of my lockstitch and pattern as I refer to the drawing and the successive steps required in producing it.

Referring now to the several steps in a hand knitting operation which will produce my lockstitch and pattern it will be observed that I pre-

fer to utilize a pair of knitting needles 1 and 2 and I prefer to use for this disclosure a pair of adjacently spaced stitching loops 3 and 4 supported on knitting needle 1 while in the production of my lockstitch, I use in the operation a thread strand 5.

Thus, in my first knitting operation producing my lockstitch and pattern, I insert the point of knitting needle 2 through loop 3 from the bottom side making this point reach around strand 5, pulling this strand through loop 3 in a manner forming a loop 6 in strand 5 after it is pulled through stitch loop 3. Just at this point, in the formation of my lockstitch, I give loop 6 of strand 5 a twist as is shown in Fig. 3.

I then extend the point of needle 2 through loop 3 from its top side in order to reach around needle 1 with this point of needle 2 and pull a second loop of strand 5 through loop 3 from the opposite direction. Fig. 4, for instance, shows needle 2 hooked in back of the second loop 7 of strand 5 just ready to pull loop 7 through loop 3.

After the second loop 7 of strand 5 is pulled through loop 3, from the top of loop 3 which is the opposite direction from which loop 6 was pulled through it, then loop 3 of strand 5 is cast off of needle 1, completing my novel lockstitch as is shown in Fig. 5.

In a careful analysis of the formation of my lockstitch, it will readily become obvious that the same will very effectively prevent thread runs in the fabric from which stockings and the like are made when this stitch is set up in a pattern of my novel formation.

I have found in my experience that in the formation of a lockstitch band about stockings (Fig. 7), that my lockstitch and pattern will most effectively prevent thread runs through such bands when my lockstitches have been knitted across the fabric from which the stocking is made, in four successive rows, so that the knitting operation may run from one end of the band to the other in one direction in a manner which will effectively tie together the individual stitches in each row and alternating the order of connected stitches in each successive row providing a very effective barrier against running of a thread through such a band, on account of the alternated lockstitch tie between stitches of the successive rows.

In order to properly explain the merits of my invention, in terms that are comprehensive to experienced operators in the knitting art, it will be well to state here what is meant by certain terms which will be used in this description.

For instance, the expression "increase" means to "knit one stitch in the regular way, but without slipping the stitch off the left needle, then knit another stitch through the back of the same stitch and slip the stitch off of the left needle." The expression "decrease" means "knit two stitches together or purl two stitches together." To decrease at the edges "knit the second and third stitches together." This makes an even edge.

I shall refer to the pattern in this description, which constitutes the novel arrangement of stitches in my invention and this pattern is composed of a series of four rows of stitches arranged to define a very effective barrier against thread runs through any lockstitch band that is knitted according to my pattern.

I shall now refer to the stitches that are essential in the formation of my novel pattern utilizing my novel lockstitch therein in conjunction with certain regular stitches, the combination of which will define my lockstitch pattern which may be so effectively used in a fabric band to prevent thread runs.

The arrangement of my novel pattern is illustrated in diagrammatic form in Fig. 6.

For instance, as is shown in Fig. 6, when utilizing my lockstitch in a pattern of my design in a hand knitting operation the one who is knitting will start the pattern with a series of regularly knitted stitches 8 and I prefer to use four rows of stitches arranged in the following novel manner in each pattern to achieve my purposes:

This row 8 of regular stitches thus serves as a hemline for my novel lockstitch pattern.

I then prefer to start my pattern by knitting from right to left on the first row 9 thereof.

My first stitch 10 is made alone in regular manner, and I follow this stitch in the first row, knitting two stitches 11 together across the row and ending this row 9 with one stitch 12 made alone.

The second row 13 of stitches in this pattern is started, in hand knitting, by turning the work and knitting toward the opposite direction from the first row and it is started by knitting one stitch 14 alone and then knitting by an increase of one lockstitch 15 in each successive stitch across the row, ending with a single stitch 16.

The third row 17 is then started, after again turning the work to knit in the opposite direction from the second row 13 by knitting two stitches 18 together across the entire row.

The work is then again turned to knit the fourth row 19 in the same direction as the second row 13. This fourth row 19 is knitted with all stitches alike wherein there is knitted an increase lockstitch 15 in each successive stitch 20 in the entire row.

Thus, in a four row pattern unit, I am able to secure a novel, practical and comprehensive fabric band that is positively run-proof against thread runs in knitted fabrics and the like wherever it may be used and especially where it is used as a run-proof pattern in a stocking band 21 as shown in Fig. 7.

I have thus explained in comprehensive detail the novel and salient merits of my lockstitch and run-proof pattern and what I claim is:

1. A lockstitch pattern for knitted fabrics, to prevent runs and comprising as a pattern unit, four parallel rows of stitches and comprising in the first row, a single stitch followed by a plurality of groups of two stitches knitted together across the row and ending with a single stitch, a second row above the first knitted in the opposite direction thereto and comprising one single stitch followed by a lockstitch increase in each successive stitch across the row and ending with a single stitch, a third row next above the second and knitted in the same direction as the first row and comprising successive groups of two stitches together across the entire row, a fourth row next above the third and knitted in the same direction as the second row and comprising a lockstitch increase in each succeeding stitch across the row, thus defining a lockstitch pattern in a fabric band which will prevent thread runs through such a pattern of a knitted fabric band.

2. A lockstitch pattern in a knitted fabric band; comprising as a pattern unit, one row consisting of one stitch alone followed by two stitches knitted together in consecutive order and ending the pattern with one stitch alone, a second

row next above the first, knitted in the opposite direction, and consisting of a single stitch, followed by an increase of one lockstitch in each stitch across the row and ending in a single stitch, a third row next above the second and knitted in the opposite direction and including two stitches knitted together across the entire row, a fourth row next above the third and knitted in the opposite direction and consisting of an increase of one lockstitch in each stitch across the entire row, thus completing a lockstitch pattern in a fabric band which effectively provides a positive barrier against thread runs in such fabric.

3. A lockstitch pattern in a knitted fabric stocking band, comprising as a pattern unit, one row consisting of one stitch alone followed by two stitches knitted together in consecutive order and ending the pattern unit with one stitch alone, a second row next above the first knitted in the opposite direction thereto and consisting of a single stitch, followed by an increase of one lockstitch in each stitch across the row and ending in a single stitch, a third row next above the second and knitted in the opposite direction thereto and including two stitches knitted together across the entire row, a fourth row next above the third and knitted in the opposite direction thereto and consisting of an increase of one lockstitch in each stitch across the entire row, completing a lockstitch pattern in a stocking band which effectively provides a positive barrier against thread runs across such a band.

CORRELL COFFMAN BISCH.