April 22 , 1924. 1,491,757

R. W. SCOTT

SEAMLESS STOCKING

Filed Oct. 14 , 1922

Fig. 1.

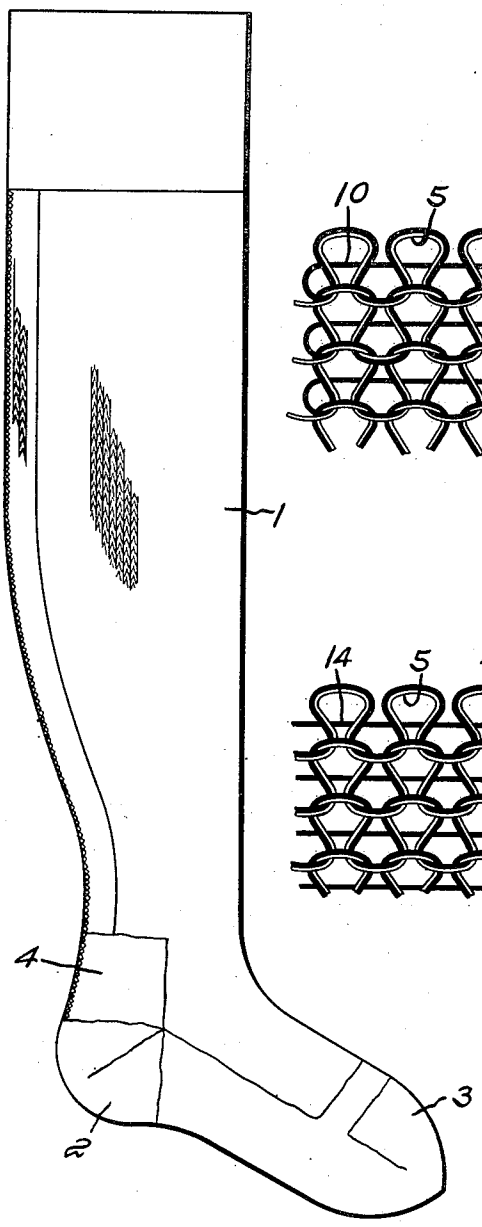


Fig. 2.

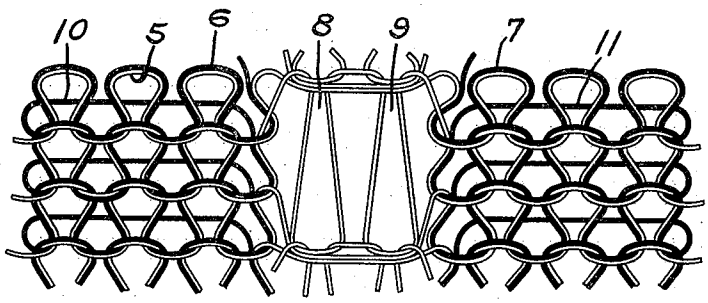
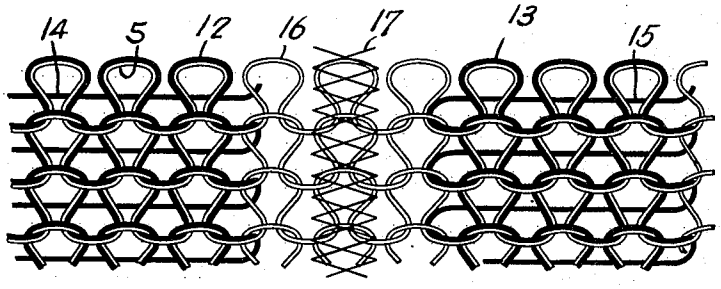


Fig. 3.



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Patented Apr. 22, 1924. 1,491,757

UNITED STATES PATENT OFFICE.

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SEAMLESS STOCKING.

Application filed October 14, 1922. Serial No. 594,525.

To all whom it may concern:

Be it known that I, RUFUS W. SCOTT, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented an Improvement in Seamless Stockings, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to seamless stockings. In order that the principle of the invention may be readily understood, I have disclosed certain embodiments of the stocking of my invention in the accompanying drawing wherein,—

Fig. 1 is a side elevation of a seamless stocking embodying my invention;

Fig. 2 is an enlarged and somewhat diagrammatic detail showing the manner of forming a part of the back of a stocking in accordance with one embodiment of the invention; and

Fig. 3 is a view similar to Fig. 2 but of another embodiment of the invention and which under certain conditions is the preferred form thereof.

The stocking of my invention is a so-called circular or seamless stocking knitted upon a circular machine having means for forming the heel and toe pockets, such as narrowing and widening pickers. While any suitable mechanism may be employed in the production of the stocking, the machine should be equipped with means for introducing the main knitting yarn, and for introducing a pair of reenforcing yarns at the desired points, and desirably with means for changing the stitch length as the knitting progresses.

My invention pertains more particularly to a mock seam which may be a line of sewing machine stitches or a structural variation in the knitting of the stocking, in combination with a plurality of stripes made by reenforcing threads, which features are so co-ordinated as to simulate certain full fashioned stockings, notably those wherein the selvaged edges of the leg portion are reenforced.

While the principle of my invention involving the co-ordination of a line of sewing machine stitches or a structural variation in the character of the knitting so as to form a mock seam during the knitting operation, and the adjacent pair of stripes produced by auxiliary or reenforcing threads, may be applied at any desired part of the stocking or other fabric, it is obvious that the simulation referred to can best be achieved by forming the same at the back of the leg of the stocking and accordingly such embodiment of the invention is herein disclosed and will be sufficiently described without limiting the invention strictly thereto.

While for various reasons I prefer to form the mock seam as a line of sewing machine stitches, I will first describe that other form of my invention involving a structural variation of the fabric to produce a mock seam. The structural variation to produce a mock seam during the formation of the stocking is desirably a tuck stitch formation, though other structural stitch changes may be employed, such, for example, as draw stitches. If making a structural variation, I preferably employ tuck stitches and in order to emphasize the effect thereof, I may form two vertical rows of tuck stitches which rows may adjoin or may be separated by a single line of regular stitches, as hereinafter more fully disclosed.

The pair of stripes which are respectively upon opposite sides of the line of tuck stitches is desirably formed by introducing two auxiliary or so-called reenforcing threads in any known or suitable manner, beginning desirably at or near the upper end of the stocking and for any suitable width, as for example, from six to ten wales upon each side of the line or lines of tuck stitches, but without incorporation into the tuck stitches themselves. The result is best accomplished by introducing each of the two reenforcing threads to its series of needles so that said reenforcing threads are interknitted with the main yarn for a suitable number of stitches, after which each reenforcing yarn is floated back to the commencement edge of its own stripe, such action being repeated throughout the length of the stripe. While I refer to two distinct reenforcing yarns which are desirably introduced by two separate yarn guides or fingers, it is to be understood in certain cases I may use a single reenforcing thread which is first fed to a sufficient number of needles to make a partial course in one of said stripes and is then severed and

then reintroduced to a sufficient number of other needles to make a partial course in the other stripe at the other side of the mock seam, this action being repeated throughout the length of the stripe. Preferably however I employ two separate reenforcing threads and in each case float each thread from the terminating edge of its stripe back to the commencement edge thereof. In each case each reenforcing yarn is preferably interknitted with the main yarn or thread in every course throughout the length of the two stripes, but within the scope of my invention I may vary this, as by introducing each reenforcing thread to alternate courses only and at the same time alternate the introduction of the two reenforcing threads. That is to say, in one of said stripes I may interknit the reenforcing thread therefor into the first, third, fifth, etc., courses and for the other stripe I may introduce and interknit the other reenforcing thread into the second, fourth, sixth, etc., courses only, thus breaking joints as it were with the reenforcing threads in the two stripes. This effect may also be secured in the case where I used the same reenforcing thread for the two stripes, but sever such reenforcing thread between the two stripes.

Referring more particularly to the drawing, the stocking is indicated generally at 1, it having desirably a seamless heel 2 and toe 3, a high splice 4 of any suitable shape being provided in the knitting operation by introducing a reenforcing yarn, which may be the same yarn or thread as one of those employed for knitting the longitudinal pair of stripes, or a substitute yarn or thread.

The stocking may be knitted from any suitable material, as for example, silk, and beginning at or near the upper end of the stocking, as for example, at the bottom of the so-called welt portion, I introduce a pair of reenforcing yarns or threads which may be fed to the needles in any suitable manner, as for example, by two special yarn fingers at suitable points where the needles are divided by special cams, so that the needles which are not to take the auxiliary yarns or threads are either elevated or depressed, and the auxiliary yarns or threads are delivered to the other needles which in each case may be of any desired number, as for example, from six to ten at each side of the back median line of the stocking.

The stocking may be knitted upon any suitable type of machine, as for example, a circular knitting machine wherein the needle cylinder is stationary and the cam ring rotates or a machine wherein the needle cylinder rotates and the cam ring is stationary. If knitted upon a machine wherein the needle cylinder rotates, I provide means, unnecessary to describe herein at length, to prevent the two reenforcing yarns or threads from twisting about each other during those times when said yarns or threads are not being interknitted with the main yarn, that is, when said reenforcing yarns or threads have reached the concluding edge of each stripe and is withheld from action until such yarn or thread is reintroduced at the commencement edge of its stripe.

In Figure 2 I have represented the main yarn at 5 and the auxiliary yarns at 6 and 7, and for convenience of illustration merely have represented the two reenforcing yarns or threads as incorporated into the knitting for three wales only at each side of the median back line of the stocking. The knitted loops whereinto the auxiliary yarns or threads 6 and 7 are introduced are desirably plain loops such as are formed in regular knitting, but at the back median line of the stocking—and referring only to that form of my invention shown in Figure 2—I form during the knitting operation a mock seam by some suitable structural variation in the fabric, such for example, as two lines or wales of tuck stitches indicated at 8, 9, which two lines or wales preferably adjoin, but which may be separated by a line of plain stitches. My invention is not limited to the employment of a plurality of lines or wales of tuck stitches, as in certain cases a single line or wale of tuck stitches may be sufficient, and in any case the structural variation may be of any other suitable character that will constitute a mock seam, as for example, draw stitches. I may in some cases form the mock seam by introducting during the knitting still another thread in any well known manner so as to give a zig-zag appearance, but I prefer, if making a structural variation, to employ tuck or draw stitches.

Viewing Figure 2, it will be observed that the auxiliary yarns or threads are not incorporated into the tuck stitches, but in each case is floated back or away from said tuck stitches as indicated at 10, 11 in Fig. 2, at the inside or back of the fabric. Thus each stripe is wholly distinct from the mock seam, though coordinating or cooperating therewith to produce the simulation referred to.

It will be evident that the line or double line of tuck stitches simulates the actual seam at the back of the leg of a full fashioned stocking, and that the pair of stripes simulate the reenforced selvage edges characteristic of many full fashioned stocking legs.

If, as is preferable, the stocking be knitted of silk, and the reenforcing yarns be of cotton, the stitches forming the structural variations between the two stripes are knitted

wholly of silk and not of silk and cotton, as the reenforcing yarns or threads do not enter into the formation of the mock seam. The silk yarn or thread presents a pleasing contrast to the silk and cotton yarns or threads of the adjacent reenforced stripes and removes an objection resulting from the use of both silk and cotton yarns or threads, namely that the cotton tends to work to the face of the fabric and thus partly obscure the silk. Within the scope of my invention however any other suitable kind of yarn or thread may be employed.

In this form of my invention the transverse elasticity of the knitted portion of the fabric between the two stripes is in no way impaired and the mock seam of tuck stitches or other structural variation does not impair the longitudinal elasticity of the stocking.

In Figure 3 I have represented another form of my invention and which for many purposes is the preferred form or embodiment thereof. Therein, I form two stripes as described with respect to Figure 2 and have indicated the two reenforcing yarns or threads at 12, 13 the floated portions of said yarns or threads being respectively indicated at 14, 15. Between said two stripes I leave a suitable number of rows or wales of plain knitting formed only by the main yarn or thread 16 and after the stocking is completed I sew a line of sewing machine stitches indicated at 17 along the back median line of the stocking to form a mock seam. This may be done in any usual or well known manner and need not be described at length. In this form of my invention it will be observed that since the float thread lengths are short, the transverse elasticity of the stocking is not impaired thereby.

It is clearly to be understood that my invention may be incorporated in knitted fabrics other than stockings and hose.

Having thus described certain specific embodiments of my invention and the best modes known to me for producing the same, I desire it to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for the purpose of limitation, the scope of the invention being set forth in the following claims.

Claims:

1. A so-called seamless stocking having a mock seam extending through a substantial part of the stocking, the adjoining part of the stocking at each side of said mock seam having an auxiliary thread incorporated thereinto but wholly distinct from said mock seam, but with the same constituting a simulation of a seamed selvaged reenforcement of a full fashioned stocking.

2. A so-called seamless stocking having at the back of the leg a mock seam extending lengthwise thereof, said mock seam having adjoining the seam at each side thereof a knitted in auxiliary yarn or thread constituting a lengthwise stripe, said two stripes being wholly disconnected but together cooperating with said mock seam to constitute a simulation of the seamed reenforced selvage of a full fashioned stocking.

3. A so-called seamless stocking having at the back of the leg a longitudinally extending mock seam composed of a line of tuck stitches of the main yarn or thread only and two stripes respectively at opposite sides thereof but adjacent thereto and paralleling the same, each of said stripes being composed of a portion of the main yarn or thread and an auxiliary yarn or thread interknitted therewith but floated across such stripe at the inside of the stocking, each floated yarn or thread being confined to the lateral dimensions of its stripe, whereby a simulation of the seamed reinforced selvage of a full fashioned stocking is produced and whereby the floated portions of said yarns or threads are of such short length as not to impair the transverse elasticity of the stocking.

4. A so-called seamless stocking having at the back of the leg a longitudinally extending line of tuck stitches constituting a mock seam and at each side thereof and in close proximity thereto a knitted in auxiliary thread providing two stripes wholly distinct from each other and from said mock seam so far as said auxiliary threads are concerned but cooperating with said mock seam to produce a simulation of the seamed reenforced selvage of a full fashioned stocking.

5. A so-called seamless stocking having at the back of the leg a longitudinally extending mock seam and two stripes respectively at opposite sides thereof but adjacent thereto and paralleling the same, each of said stripes being composed of a portion of the main yarn or thread and an auxiliary yarn or thread interknitted therewith but floated across such stripe at the inside of the stocking, each floated yarn or thread being confined to the lateral dimensions of its stripe, whereby a simulation of the seamed reenforced selvage of a full fashioned stocking is produced and whereby the floated portions of said yarns or threads are of such short length as not to impair the transverse elasticity of the stocking.

In testimony whereof, I have signed my name to this specification.

RUFUS W. SCOTT.