July 14, 1942. R. H. LAWSON 2,289,581

METHOD OF KNITTING

Original Filed March 3, 1937

FIG. 1.

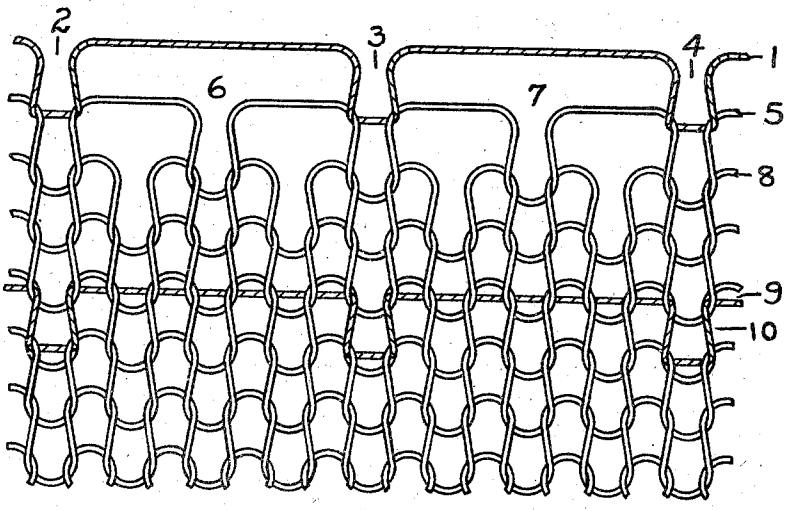


FIG. 2.

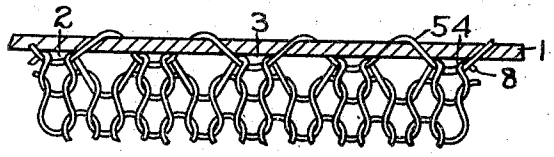


FIG. 3.

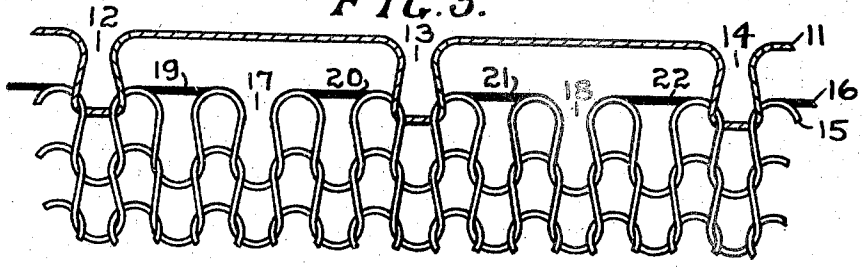
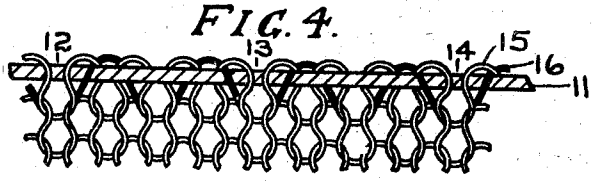


FIG. 4.



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METHOD OF KNITTING

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4 Claims. (Cl. 66—41)

This case concerns a method of knitting stocking tops and the article produced. More particularly, the invention involves the construction of the beginning edge or selvage of the stocking top and the manner of knitting the same to present a pleasing appearance, an edge fast against ravelling, and one which may be freely stretched but will have a suitable restraining effect in holding the stocking on the wearer's leg. This case is a division of application Serial #128,795, filed March 3, 1937.

In the figures of drawing:

Fig. 1 is a view showing a section of the fabric as it would appear theoretically;

Fig. 2 shows the top edge of the fabric very much as it would appear after being knitted, but of course, to a scale greatly enlarged; and

Figs. 3 and 4 are views corresponding to Figs. 1 and 2, but, showing a modified form of the invention.

It is quite common practice to incorporate rubber yarns in stocking tops to constitute a garter top and for the purpose of simulating a rib appearance. In many instances this rubber yarn is introduced at the beginning edge of the fabric and serves in the knitting of a selvage as well as imparting a resiliency to the fabric for the purpose of holding it on the wearer's leg, to create a rib appearance and for preventing curling to a degree. Heretofore it has been known to incorporate this elastic thread in the beginning course in practically every loop thereof with a result that the edge has sometimes been exceedingly tight and restricted when compared to the remainder of the fabric wherein that elastic yarn is very often held at wales spaced apart a few needles. In the present construction the beginning edge involves a construction wherein the rubber yarn is held in spaced wales but at the same time, an edge is formed which is absolutely fast against ravelling and which is pleasing in appearance. The selvage course or courses will not be tight or more restricted than the remainder of the stocking top in which the rubber is incorporated thereby having a more satisfactory feel as it is worn on the wearer's leg.

Now referring to the Figs. 1 and 2, one form of the invention will be described wherein the elastic yarn is taken on spaced needles, preferably every fourth needle in the first course of knitting, then on the second course a plain yarn will be taken on every other needle, these needles including the same needles which knitted the elastic yarn in the first course. By plain yarn, I mean any of the usual knitting yarns such as cotton, silk, wool or any of the yarns of artificial filaments. When this second course is drawn the rubber is cast off and, since it was not drawn through anything, will not assume the form of knitted loops although in the Fig. 1, it is shown being drawn into knitted loops merely for the purpose of showing the steps in the production of the stocking top. After drawing this second course the remainder of the stocking top is knitted of the plain yarn in any desired way, preferably knitting on all needles and incorporating the rubber yarn in spaced courses and in spaced wales throughout the remainder of the top to constitute a garter top of some conventional form. Here the elastic is knitted in every fourth course and on every fourth needle although it may be incorporated according to different schemes and may be inlaid as on every other needle and in spaced courses. The elastic yarn is knitted under a sufficient degree of tension depending upon the result desired, upon the type of elastic yarn, size, etc.

In Fig. 1, the first course of elastic is shown at 1 being knitted in wales 2, 3 and 4. The second course of plain yarn 5 is knitted in wales 2, 3 and 4 and also wales 6 and 7, that is, the second course is knitted on the same needles as knitted the first but on additional needles between those needles, this resulting in loops drawn on every other needle. Courses 8 and those continuing are knitted on all needles, and in spaced courses such as 9, the elastic yarn is again knitted as in wales 2, 3 and 4 being drawn into loops 10 which when the fabric is released will contract to distort the fabric and to simulate a rib appearance. Since the first course of rubber is knitted under the same degree of tension as courses 9, etc., and on the same needles, the rib appearance will be uniform from the very top edge throughout the entire stocking top.

In Fig. 2 the top edge of fabric is shown pretty much as it would appear when finished. The first course of rubber 1 will straighten out as it is retracted when tension is released and at the same time, will draw the second course 5 knitted on every other needle into the form shown. The loops drawn on needles 2, 3 and 4 will lie in front of the rubber while those drawn on needles 6 and 7 will lie behind it. These loops of the yarn 5 will be spread out or equalized in the spacing pretty much as shown in Fig. 2 and would not appear in the finished fabric as they are theoretically shown in Fig. 1. Likewise there would be a spreading and a distortion of the loops in course 8. It will be evident from an inspection

that this edge can not ravel, but that the elastic is rather freely held herein and the edge will not be unnecessarily tight or restricted so as to cause any discomfort to the wearer. The elastic yarn 1 is actually held at spaced wales only rather than being passed through all the loops of all the wales in the top as has been practiced heretofore.

Now referring to Figs. 3, and 4, I will describe a modification wherein similar principles apply, but wherein the actual construction varies slightly from that first described. The selvage is formed in this instance by drawing the elastic yarn on every fourth needle in the first course, then in the second course, drawing two plain yarns one on every other needle (including those needles which function in the first course) and the other on every needle. At this second course the rubber is cast off just as it was in the first instance. Throughout the rest of the fabric the top will be knitted on all needles and may incorporate the rubber yarn in any desired way.

In Fig. 3 the elastic yarn knitted at the first course is shown at 11 and is knitted on needles 12, 13 and 14 while in the second course a plain yarn 15 is knitted on every needle while another plain yarn 16, herein shown shaded for purposes of identification, is knitted on every other needle as on 12, 13 and 14 and the intermediate needles 17 and 18, and so on. Thus this plain yarn 16 will float as shown at 19, 20, 21, 22, etc. Of course this showing in Fig. 3 is merely theoretical to illustrate what actually takes place in the process of knitting. The actual fabric when the rubber has contracted and has acted to redistribute the loops in course two, will appear very much as shown in Fig. 4. In that figure the rubber 11 passes through in back of loops of the yarns 15 and 16 which were drawn by needles 12, 13 and 14 and in front of all the other loops, that is, in front of those drawn by needles 17 and 18 as far as yarn 16 is concerned, and those drawn by all intervening needles as far as yarn 15 is concerned. There is a redistribution of the yarn 16 very much as there was in the first form with respect to yarn 5. This will be evident from an inspection of the shaded yarn 16, Fig. 4. The loops of the other yarn 15 are tied in and prevented from running by both yarns 11 and 16 but the rubber yarn 11 is held quite freely and only at every fourth wale. The same advantages apply in either instance.

In knitting either of these fabrics the machine will necessarily be equipped with needle selecting means capable of raising every fourth needle to take the rubber yarn in the first course and in the second course raising those same needles, but in addition thereto every second needle as at 6 and 7, Fig. 1, and 17 and 18, Fig. 3. In addition to this, to make the second form, the yarns 15, 16 will be taken by needles raised to a greater height than the others while the floats 19, 20, 21, 22, etc. will pass behind the intervening needles which will take the yarns 15 but will avoid taking the yarn 16 within the hooks. All this is clearly understood by those skilled in the art and it is not considered necessary to make a showing of such knitting nor to describe the same in any detail in this case. An example is shown in United States Patent Number 1,922,977.

The invention has been described in more or less specific terms and as applied to one particular spacing of needles, or one particular set up, but the invention is not to be limited thereby except as by the scope of the appended claims.

I claim:

1. The method of knitting a selvaged plain knit seamless stocking top on a circular knitting machine which comprises, feeding an elastic yarn to the hooks of every fourth needle only on the first round of knitting, feeding a yarn to the hooks of alternate needles only on the second round of knitting while casting off the elastic yarn fed on said first round, and continuing the knitting of said stocking top with an inelastic yarn on at least said alternate needles.

2. The method of knitting a selvaged plain knit seamless stocking top on a circular knitting machine which comprises, feeding an elastic yarn to the hooks of every fourth needle only on the first round of knitting, feeding an inelastic yarn to the hooks of alternate needles only on the second round of knitting while casting off the elastic yarn fed on said first round, and continuing the knitting of said stocking top with an inelastic yarn on at least said alternate needles.

3. The method of knitting a selvaged plain knit seamless stocking top on a circular knitting machine which comprises, feeding an elastic yarn to the hooks of every fourth needle only on the first round of knitting, feeding an inelastic yarn to the hooks of alternate needles only on the second round of knitting while casting off the elastic yarn fed on said first round and continuing the knitting of said stocking top with an inelastic yarn fed on all needles.

4. The method of knitting a selvaged plain knit seamless stocking top on a circular knitting machine which comprises, feeding an elastic yarn to the hooks of every fourth needle only on the first round of knitting, feeding an inelastic yarn to the hooks of alternate needles only on the second round of knitting while casting off the elastic yarn fed on said first round, and continuing the knitting of said stocking top by knitting an inelastic yarn on all needles and by knitting an elastic yarn at spaced needles.

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