

Aug. 17, 1937.

E. F. MILLER

2,090,219

STOCKING AND THE LIKE

Filed April 19, 1935

2 Sheets-Sheet 1

FIG. I.

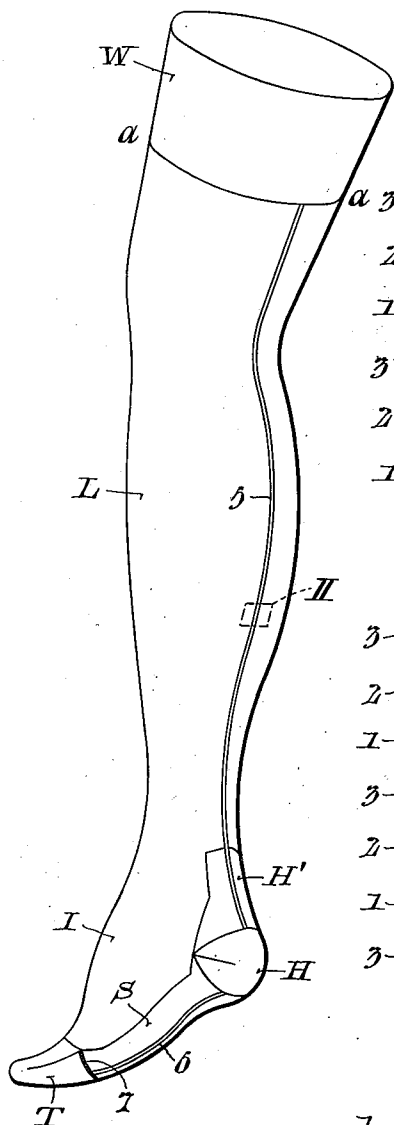


FIG. II.

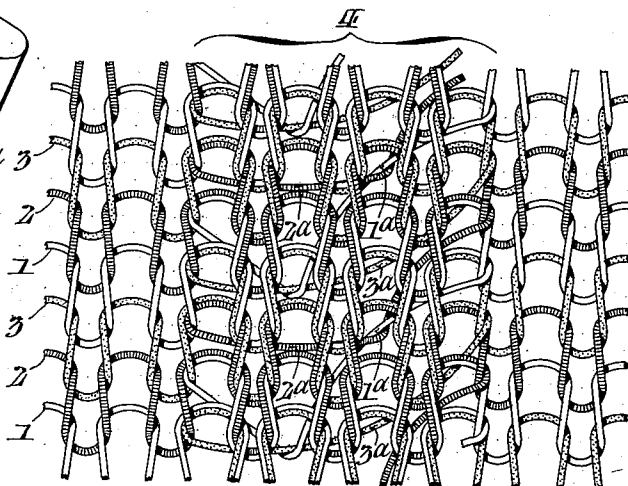


FIG. III.

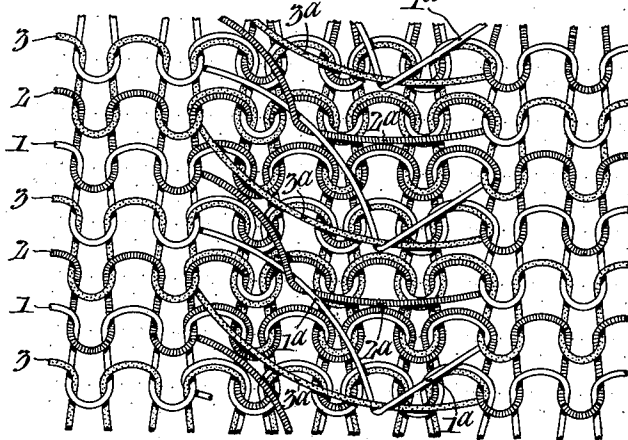
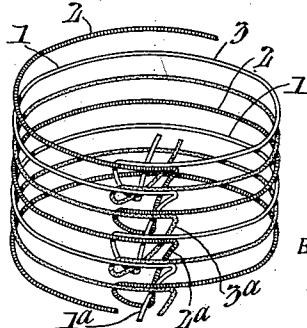


FIG. IV.



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FIG. V.

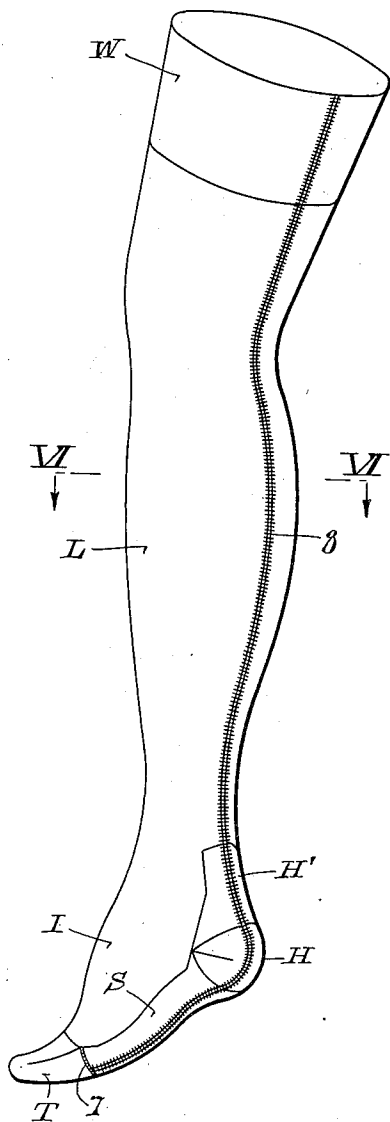
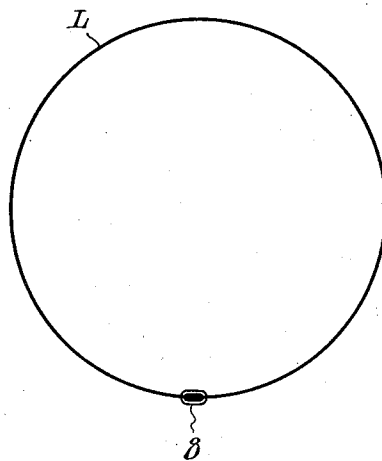


FIG. VI.



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UNITED STATES PATENT OFFICE

2,090,219

STOCKING AND THE LIKE

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Application April 19, 1935, Serial No. 17,164

3 Claims. (Cl. 66—178)

This invention relates to stockings and the like; and it has reference more particularly to seamless stockings as well as to seamless tubular fabrics produced on circular knitting machines.

The leg and instep portions of seamless stockings and tubular fabrics are ordinarily knitted from a single yarn; and when a very fine gauge yarn of silk, rayon or the like is employed, as for example in the production of sheer seamless hosiery, the texture is invariably marred at intervals by horizontal streaks, rings and other blemishes due to irregularities in the gauge of the yarn, and, if the yarn be dark in color, these imperfections are emphasized by contrast with the skin of the wearer when the stockings are worn.

My invention has for its chief aim to eliminate imperfections such as have been referred to, which desideratum I attain in practice, as hereinafter more fully disclosed, through employment, instead of but a single yarn, of a multiplicity of yarns of the same nominal count or gauge, color and material in knitting the tubular portions of stockings, i. e. the legs and insteps, and by causing single courses to be formed from said yarns successively in a predetermined repeating sequence with the yarns of adjacent courses overlapping and interknitted on a definite wale or wales, so that the inherent irregularities of the yarns are effectively distributed.

Other objects and attendant advantages of this invention will be manifest from the detailed description following of the drawings, wherein Fig. I is a perspective view of a stocking embodying the present improvements.

Fig. II is an enlarged fragmentary detail view of the stocking fabric within the confines of the rectangle II in Fig. I.

Fig. III is a view similar to Fig. II showing the inner face of the fabric.

Fig. IV is a diagrammatic view showing how the several yarns are used in succession to knit single courses of the fabric.

Fig. V is a view like Fig. I showing how the wale or wales in which the yarn changes occur may be concealed by a continuous cover seam of sewing stitches; and

Fig. VI is a diagrammatic sectional view of the stocking taken as indicated by the arrows VI—VI in Fig. V.

As delineated in Fig. I, my novel stocking has a welt top W which may be formed in the usual way on a circular knitting machine, for example, from one or more concurrently fed yarns by round and round knitting. Beginning at the welt

juncture line *a*—a three main yarns 1, 2 and 3 of the same gauge or count, color and material are employed in accordance with my invention to knit the tubular portions of the stocking; i. e. the leg L and the instep I likewise by round and round knitting. For the purposes of ready distinguishment from each other and the yarn 1, the yarns 2 and 3 have been cross-hatched and stippled respectively in Figs. II—IV. Incident to the formation of the leg and instep portions L and I of the stocking, the yarns 1—3 are fed to the needles of the producing machine in a predetermined repeating sequence,—in the present instance in the order of their numbering—to form successive single courses of the fabric as shown in Fig. IV, with the yarns of adjacent courses overlapped and interknitted in a few definite wales 4 of the fabric. In the illustrated instance, this overlapping and interknitting occurs across four of the fabric wales as shown in Figs. II and III, with the segments 1*a*, 2*a* and 3*a* of the yarns 1—3 floated behind said wales, and with resultant formation of corresponding longitudinal suture lines 5 and 6 respectively at the back of the leg and along the bottom of the stocking foot. Obviously, if desired or found convenient, the number of wales in which the interknitting of adjacent yarns takes place may be increased or decreased. As a consequence of the described procedure, the inherent irregularities of the yarns 1—3 are effectively distributed throughout the fabric with preclusion of streaks, rings or other blemishes in the parts of the stocking which are ordinarily exposed to view when the stocking is worn.

Also as illustrated, the heel pocket H and the toe pocket T of the stocking are formed by oscillatory knitting in this instance, at diametrically opposite sides of the tube preferably from a yarn or yarns other than the three above mentioned, the toe being closed across the bottom of the foot by a seam 7. The upper or advance heel portion H' and the sole S of the stocking may be reinforced by feeding an additional or plating yarn incident to the knitting of these portions of the stocking.

In order to hide the longitudinal lines 5 and 6 in which the yarns 1—3 overlap, a continuous cover seam of sewing stitches is preferably run down along the back of the stocking leg L, around the heel H and along the sole S as conventionally shown at 8 in Figs. V and VI, from the top to the toe closure seam 7 at the bottom of the stocking foot. The stitching 8 adds to the appearance and attractiveness of the stocking by making

up for the lack of continuity in the suture lines 5 and 6.

While the best results are attained by use of three or more yarns as herein described to knit seamless ringless stockings in accordance with my invention, a marked improvement over ordinary seamless stockings is had by interchange of but two yarns course for course of the knitting.

As an alternative, my improved stocking takes on an attractive horizontally striped ornamental appearance when, instead of yarns of one color, yarns of different color or of contrasting materials are employed in the knitting.

The method and mechanism for producing the stocking of my invention are disclosed and claimed in a separate application, Serial No. 17,163, concurrently filed herewith.

Having thus described my invention, I claim:

1. A seamless stocking having its leg and instep portions knitted from a multiplicity of yarns of the same nominal gauge, said yarns forming successive single courses of the fabric in a predetermined repeating sequence, with the yarns of adjacent courses overlapping and interknitted across one or more definitely corresponding wales longitudinally of the leg and foot of the stocking; and a line of stitching extending along the stocking leg and foot and covering the wale or wales aforesaid in which the overlapping of the yarns occurs.

2. A seamless stocking having its leg and instep portions knitted from a multiplicity of yarns of the same nominal gauge, color and material, said yarns respectively forming successive single courses of the fabric in a predetermined repeating sequence, with the yarns of adjacent courses overlapping and interknitted across one or more definitely corresponding wales at the back of said leg portion and the bottom of the stocking foot; and a line of stitching extending continuously from the top of the stocking and along the heel to the toe and covering the wale or wales aforesaid in which the overlapping of the yarns occurs.

3. A seamless stocking with its toe closed across the bottom of the foot, and having its leg and instep portions knitted from a multiplicity of yarns of the same nominal gauge, color and material, said yarns respectively forming successive single courses of the fabric in a predetermined sequence, with the yarns of adjacent courses interknitted across corresponding wales at the back of the leg and the bottom of the stocking foot, and a line of stitching extending continuously from the top of the stocking, along the heel pocket and along the foot bottom to the toe closure seam, and covering the wales aforesaid.

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