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2,278,277

HOSIERY AND METHOD OF MAKING SAME

Filed April 24, 1941

2 Sheets-Sheet 1

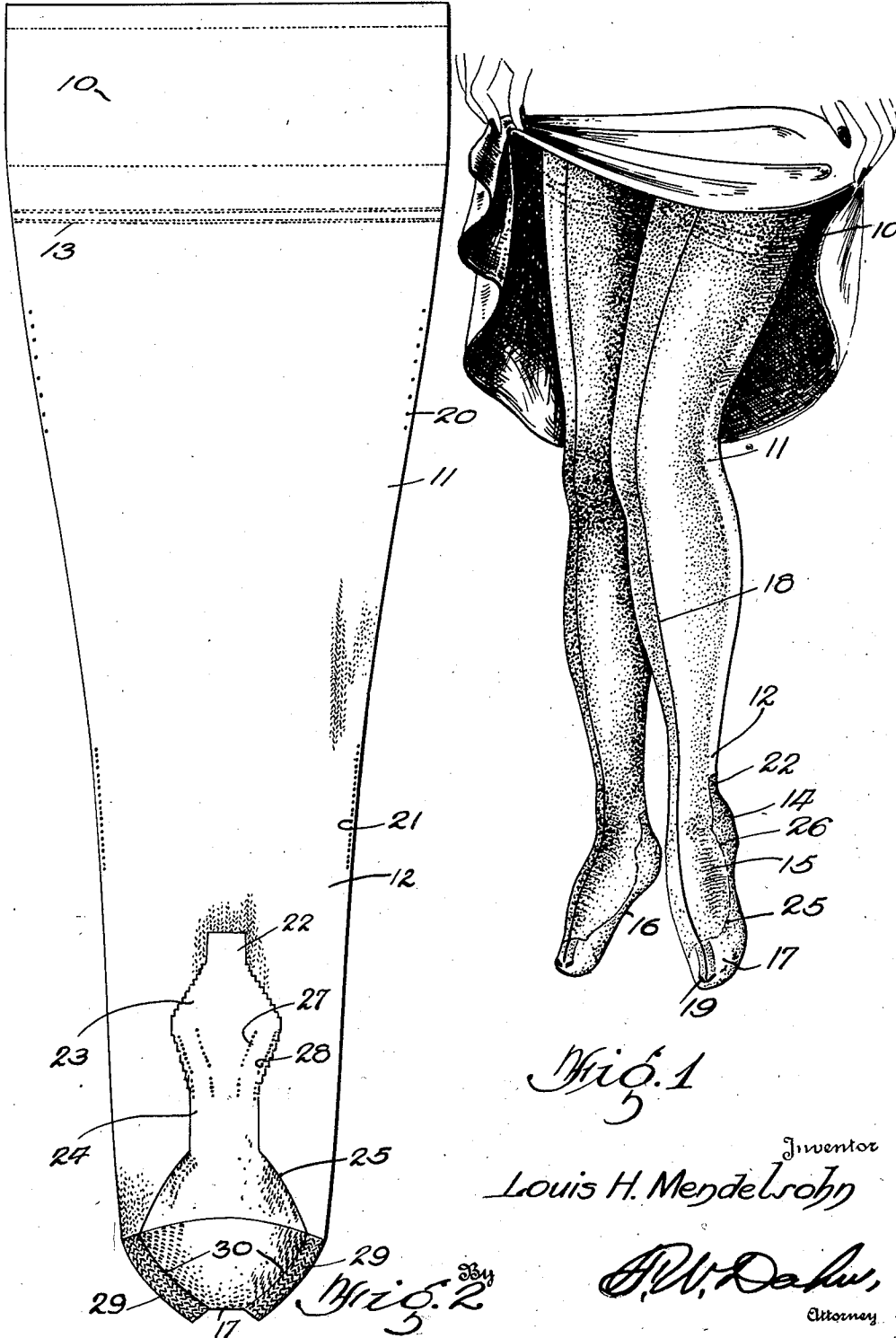


Fig. 1

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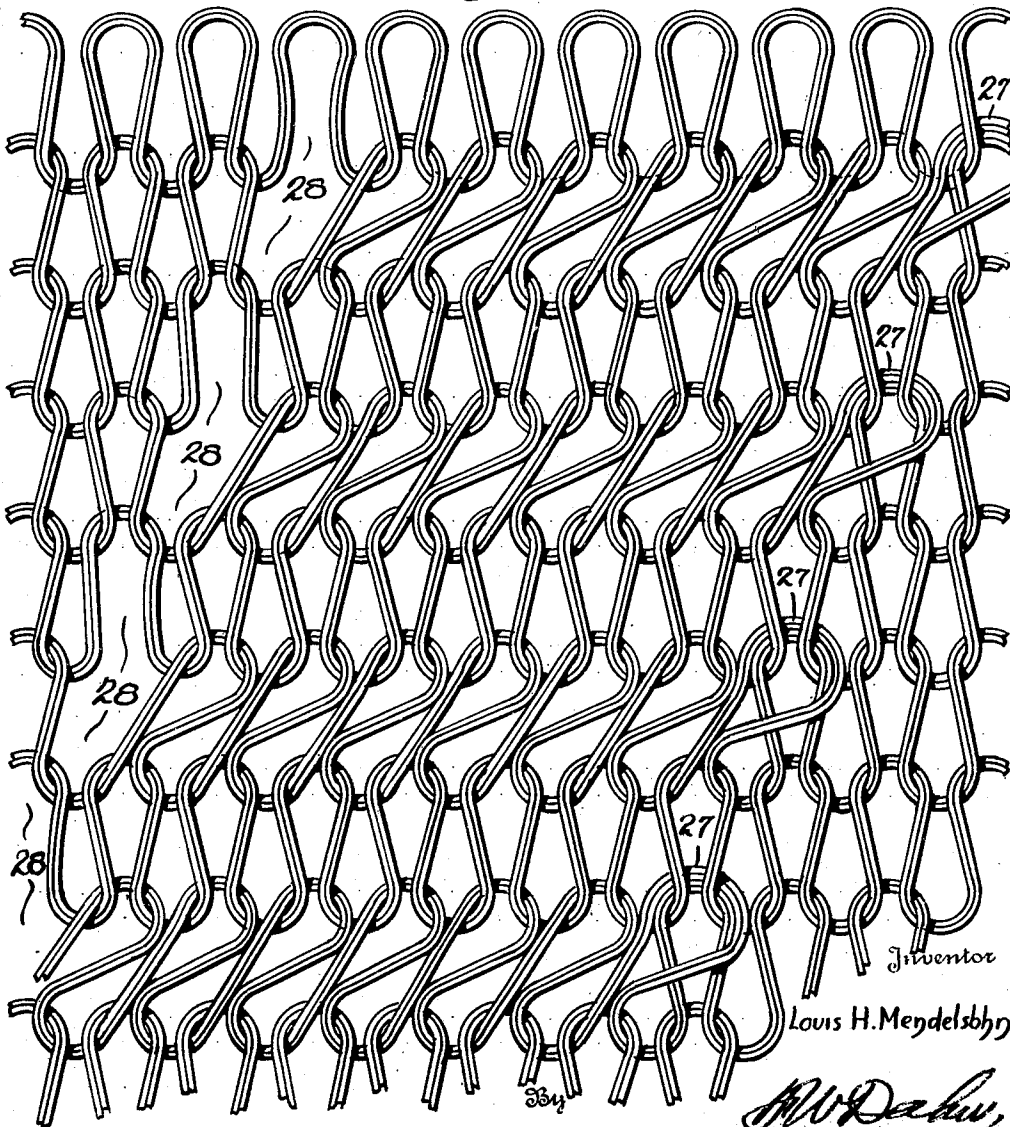
Fig. 3



28

27

Fig. 4



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HOSIERY AND METHOD OF MAKING SAME

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9 Claims. (Cl. 66—178)

My invention relates to hosiery, and it is an object thereof to provide hose having a seam extending down the front of the same instead of the conventional seam extending down the back of the stocking.

One of the advantages of such hose is that it is much easier to see whether the stocking is straight on the leg.

Another advantage, as compared with the usual full-fashioned hose resides in the fact that the stocking blank may be made in a continuous operation on a single machine, thus eliminating the usual topping and transfer operations. Since the entire foot is knitted continuously with the remainder of the blank the topping, looping and seaming required for the heel in the completion of the ordinary full-fashioned stocking are all eliminated and the separate seaming at the sole of the foot is eliminated, these operations being replaced by a single continuous seaming operation extending from the top of the stocking to the toe at the point where the end of the toe is looped in usual manner to close the toe.

Another advantage is that hosiery so made is stronger and more durable and much more comfortable to the foot, wearing longer and also having a much neater appearance than the ordinary full-fashioned stocking because it has a slenderizing effect on the appearance of the leg and ankle.

Another object of the invention is to provide hosiery having the advantages above enumerated, plus means at the sides of the foot to guard against runs such as arise when the heel of the stocking becomes worn, the stitches then running or "laddering" from a broken thread in the heel toward the toe, or from a break in the sole up the leg of the stocking.

Other objects and advantages of the invention will appear from the following description and from the drawings annexed hereto, which are made a part of this application and in which similar reference characters indicate similar parts.

Referring to the drawings, Fig. 1 is a perspective illustrating the appearance of a stocking made according to my invention when in use;

Fig. 2 shows one of the blanks ready to be seamed up to complete the stocking;

Fig. 3 is an enlargement of a small portion of the reinforced area of the stocking in Fig. 2, where the same is narrowed forwardly of the heel, and

Fig. 4 is a detail, much enlarged, illustrating

the method of making lock stitches as hereinafter described.

In the drawings there is shown a stocking of the full-fashioned type; i. e., one that is knitted as a flat blank and which is shaped in the knitting by varying the number of stitches per course without varying their size or length, so that when the free edges of the blank are connected the completed stocking will fit the leg without the use of varied-length stitches, as used in round-and-round knitting. This stocking comprises a leg portion including a welt 10, which may have a picot or fancy upper margin, a main leg portion 11 and ankle portion 12, there being preferably some lace work courses as at 13 for ornament and to serve as anti-run courses. The above parts are commonly knitted in a continuous operation, but according to my invention the heel 14, the foot portion comprising the instep 15 and the sole 16, and the toe portion 17, are also all knitted in a continuous operation on the same machine, it being understood that there may either be a body yarn extending throughout the entire blank shown in Fig. 2 or the body yarn may be changed to provide body yarns of different color or character in different parts of the blank, both methods being common in the art.

Instead of the usual practice of knitting a flat full-fashioned blank with heel tabs on a legger and then transferring to a footer to add the instep, sole and toe, followed by the several steps of connecting the free ends of the heel tabs and toe portions by looping and then seaming the remaining free edges of the blank together at the back of the leg and underneath the foot, I propose to knit the entire blank on one machine without any transfer, and to provide the same with continuous side edges that are connected by a single seam 18 at the front of the leg extending from the top of the stocking to the toe and forming the sole connection between the free edges of the stocking except for a short looped seam 19 at the toe connecting the upper toe portions to the lower toe portion. Thus the labor of sewing and looping is reduced to a minimum, there is no uncomfortable seam under the heel and sole of the foot, and it becomes very easy to see whether the stocking is on straight.

The blank is provided with flare narrowings or flare fashion marks at 20 and with leg narrowings or fashion marks at 21, and the narrowing is done by transferring loops on a few needles only at the lateral margins of the blank so that the narrowing marks will be included in the sewed

seam 18 and covered thereby and will not be visible in the finished hose.

Preferably the stocking is reinforced as best shown in Figs. 1 and 2, as by feeding a reinforcing yarn to certain needles by means of a carrier whose stroke is varied automatically, as is well known in the art.

It will be understood that the method of reinforcing may be varied as, for example, by the use of split seam reinforced areas, and that the shape, location etc., of the reinforced area or areas may be varied according to desire or need.

In the preferred form shown in the drawings the reinforcement comprises a high splice 22 which is widened step-by-step to form a heel reinforcement 23 that is narrowed step-by-step after passing the heel corner, then is parallel-sided through part of the sole reinforcement 24 and then is widened again at 25 after the manner known as the cradle foot. The narrowing and widening in the heel and the sole are preferably of the two-needle type.

One cause of returns of hosiery is that runs start near the heel, as by reason of wear at the heel, and it is an object of my invention to do away with such runs and consequent loss of merchandise due to returns or replacements.

In order to prevent runs from starting in or about the heel and proceeding down the foot or in the sole and then up the leg, I provide means for stopping them near the margin of the reinforced area at 25 (Fig. 1) i. e. at the lower or front side of the heel reinforcement. In a preferred form such run stop means consists of open narrowings made by transferring stitches in a number of wales (e. g. 22 wales) one needle to the left or to the right, as the case may be, so as to add a transferred stitch to the needle at 27 (Fig. 4) and to leave a small opening at 28 (Figs. 2 and 3). The loop transferred out of its wale at 28 locks the stitches in that wale, so that if a run starts back of the opening 28 it is arrested when it reaches that opening and by the use of open narrowings in a suitable number of courses such runs may be prevented.

The toe of the stocking is reinforced throughout and the stitches forming the toe portions 29 at the sides of the blank are transferred to narrow the blank rapidly and so provide fashioning lines appearing at 30, 30.

It will be obvious to those skilled in the art that various other changes may be made in the device shown and described in the specification and drawings, all without departing from the spirit of the invention, and therefore I do not limit myself to what is shown and described therein but only as set forth in the appended claims.

What I claim is:

1. Fashioned hosiery having a seam from top to toe at the front thereof and having a seamless reinforced heel portion, the lower part of the heel reinforcement being narrowed step by step, and run-stopping means adjacent the edges of such narrowed portion of the reinforced area.

2. Hosiery as in claim 1, the run-stopping means comprising lock-stitches in the reinforced area.

3. Hosiery as in claim 1, the run-stopping means consisting of transferred stitches.

4. A method of making fashioned hosiery comprising the steps of knitting the leg, heel, foot and toe portions in a continuous operation as a flat blank having the heel portion midway between its lateral edges, knitting a reinforced area at a distance from the said lateral edges to reinforce the heel and sole areas, narrowing the heel portion of said reinforced area step-by-step at its lower end, providing run-stopping means in the reinforced area adjacent opposite margins of the narrowed heel portions, looping the end of the toe portion, and connecting the lateral edges of the blank to each other by a continuous seam to complete the stocking.

5. A method of making fashioned hosiery comprising the steps of knitting the leg, foot, heel and toe portions in a continuous operation as a flat blank having the heel portion midway between its lateral edges, narrowing the blank along its lateral edges by shifting a relatively small number of the outermost loops inwardly at intervals so as to form narrowing marks close to said edges, looping the end of the toe, and seaming said lateral edges together by a single continuous seam.

6. Full-fashioned hosiery having leg, heel, foot and toe portions knitted in a continuous length and seamed together at the front of the hose, said hose having narrowing marks adjacent said seam.

7. Full-fashioned hosiery having a seam from top to toe at the front thereof and having narrowing marks concealed by said seam.

8. Full-fashioned hosiery having a leg portion, a foot portion, a seamless heel and a toe portion, a seam at the front of the hose extending from the top of the hose approximately to the end of the toe, and narrowing marks adjacent said seam.

9. A flat fashioned hosiery blank comprising leg, heel, foot and toe portions knitted in a continuous operation, said blank having a heel and sole reinforcement midway between its sides and having narrowing marks close to its opposite side edges.

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