

(Model.)

G. W. LANDENBERGER.

STOCKING AND MODE OF MAKING THE SAME.

No. 286,141.

Patented Oct. 2, 1883.

FIG. 1.

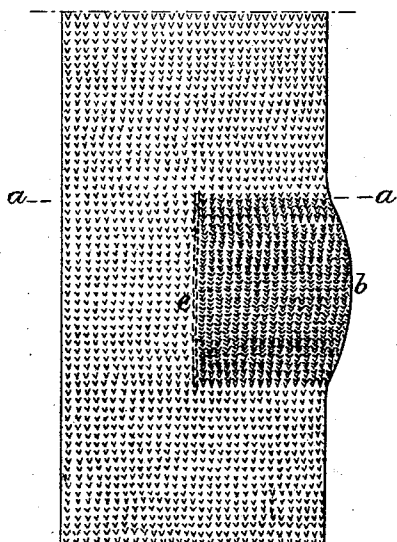


FIG. 2.

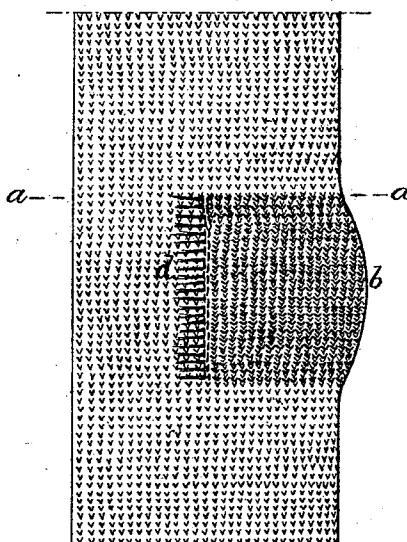


FIG. 4.

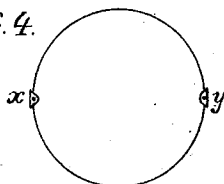


FIG. 5.

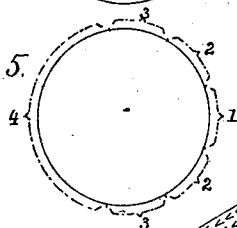
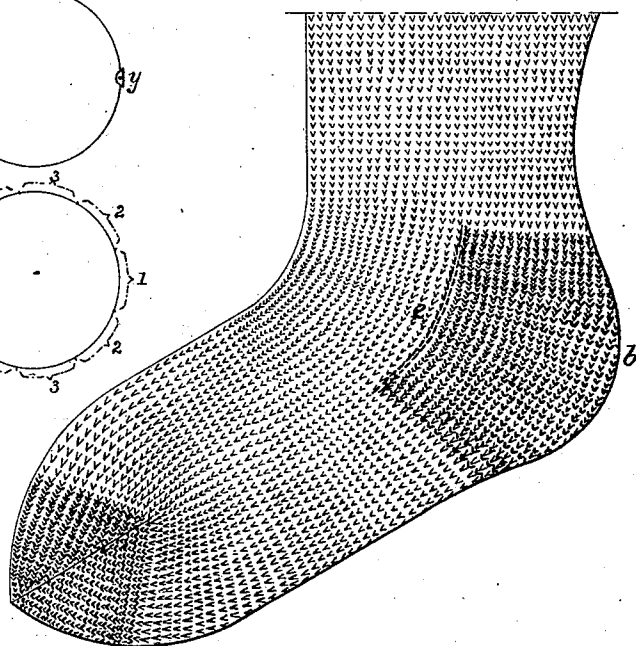


FIG. 3.



WITNESSES:

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TO IDA V. LANDENBERGER, OF SAME PLACE.

STOCKING AND THE MODE OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 286,141, dated October 2, 1883.

Application filed October 28, 1882. (Model.)

To all whom it may concern:

Be it known that I, GEORGE W. LANDENBERGER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Stockings and in the Mode of Making the Same, of which the following is a specification.

The main object of my invention is to rapidly and cheaply produce stockings which will be wholly without seams in the heel or foot, or will have a seam in the latter only at the toe, a further object being to impart additional thickness to the heel, so that it is better calculated than usual to resist wear.

In the accompanying drawings, Figure 1 is a view of part of a tube of knitted fabric adapted for the production of a stocking in accordance with my invention; Fig. 2, a view of the inside of said tube; Fig. 3, a view of part of a stocking made from such a tube; Fig. 4, a diagram illustrating the method of making a tube in accordance with my invention; and Fig. 5 a diagram illustrating another method of carrying out the invention.

In making the fabric shown in Figs. 1, 2, and 3 I can use an ordinary circular knitting-machine with latch-needles and having two thread-guides, *x* and *y*. The needles around a certain portion of the head—say half—are tuck-needles, and the cam which acts in conjunction with one of the guides—say the guide *x*—is a plain cam, while the cam which acts in conjunction with the other guide, *y*, is a change cam—that is to say, it has a movable portion so that it can be adjusted to operate or fail to operate the tuck-needles, as desired. Any desired form of change cam may be used. Instances of such cams may be found in the patents of McDevitt, No. 202,567, April 16, 1878; Vickers & Weston, No. 246,843, dated September 6, 1881; Lehman and Smith, No. 214,722, dated April 22, 1879, and Wrightson, No. 244,353, dated July 12, 1881.

In knitting the leg of the stocking, the change cam is set so as to operate the tuck-needles. All of the needles thus receive the threads from both guides *x* and *y*, and a uniform fabric is produced. The tube is knitted in this manner up to the line *a a*, and the

change-cam is then set so as to fail to operate the tuck-needles. The consequence of this is that on each rotation of the head the tuck-needles will receive the thread from the guide *x* only, while the other needles will receive threads from both guides, the thread from the guide *y* floating behind the tuck-needles. A bag-like projection or pocket, *b*, is thus formed on one side of the tube, and when this is of sufficient length the change cam is operated so as to again act on the tuck-needles, and the knitting of the uniform tube with both threads is proceeded with. The floating threads are afterward cut so as to leave only short projecting ends *d*, as shown in Fig. 2, and in order to secure these ends I prefer to run up a row of stitches, *e*, on each edge of the pocket *b*, as shown. The formation of the bag or pocket on the side of the tube tends to impart to this part of the tube the necessary fullness for the heel of the stocking, and to give the proper angle to that portion of the tube which forms the foot of the stocking.

When it is desired to have a heel differing in appearance from the leg and foot of the stocking, the thread delivered by the guide *y* during the formation of the heel portion of the tube may be of a different color from that delivered by the other guide; and when a heel thicker than the rest of the stocking is needed, the thread from the said guide *y* may be thicker than the thread from the guide *x*.

More than two guides may be used in carrying out my invention, and there may be more than two threads in the heel for each thread in the instep portion of the stocking, or the tuck needles and cams may be so constructed that for each thread in the instep portion of the stocking one part of the heel may have two threads, another part three threads, and so on. Thus, on reference to the diagram Fig. 5, the needles 1 may receive threads from four guides, the needles 2 threads from three guides, the needles 3 threads from two guides, and the needles 4 threads from one guide, while the heel portion of the tube is being made.

The toe of the stocking may be formed on the end of the tube by a narrowing and widening operation, so as to make it seamless, or

the toe may be formed by sewing and cutting in the usual manner, this forming no part of my invention.

I claim as my invention—

5 1. The mode described of making a pocket or bag on one side of a knitted tube during the formation of the same, said mode consisting in feeding one thread to all the needles around the machine so as to form continuous
10 courses of stitches and feeding an extra thread or threads to a portion only of the needles, so as to form interrupted courses of stitches connected by floating threads, as set forth.

2. The mode described of making the heel-
15 portion on a tube for the production of stockings, said mode consisting in feeding one thread to all of the needles around the machine to form continuous courses of stitches, feeding an extra
20 thread or threads to a portion only of the needles, so as to form interrupted courses of stitches connected by floating threads, and finally cutting off said floating threads, as set forth.

3. The mode described of making the heel
25 portion on a tube for the production of stock-

ings, said mode consisting in feeding one thread to all of the needles around the machine to form continuous courses of stitches, feeding an extra thread or threads to a portion only of the needles, so as to form interrupted courses of
30 stitches connected by floating threads, cutting off said floating threads, and finally running a row of stitches up each side of the tube to confine the loose ends of the threads, as set forth.

4. A stocking having courses of stitches extending continuously around both instep and heel, and having interrupted courses of stitches extending around the heel only and alternating with the continuous courses, each of said interrupted courses of stitches consisting of a
40 separate thread with cut ends, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. W. LANDENBERGER.

Witnesses:

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HARRY SMITH.