

(No Model.)

J. BENNOR.

STOCKING AND ART OF MANUFACTURING SAME.

No. 534,248.

Patented Feb. 19, 1895.

Fig. 1.

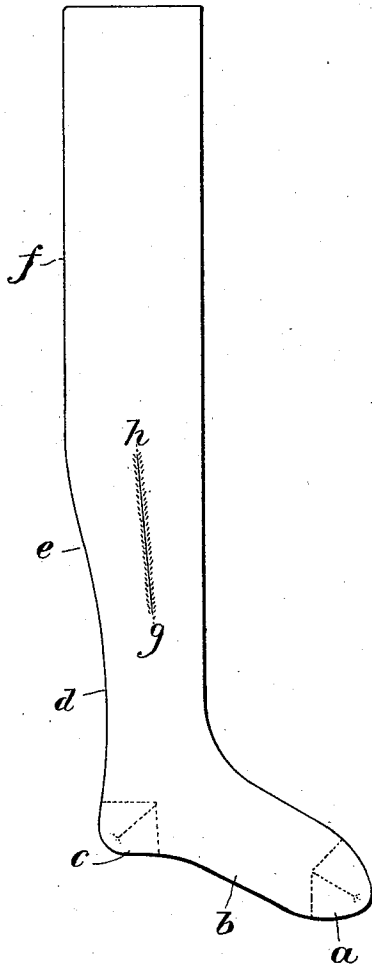


Fig. 2.

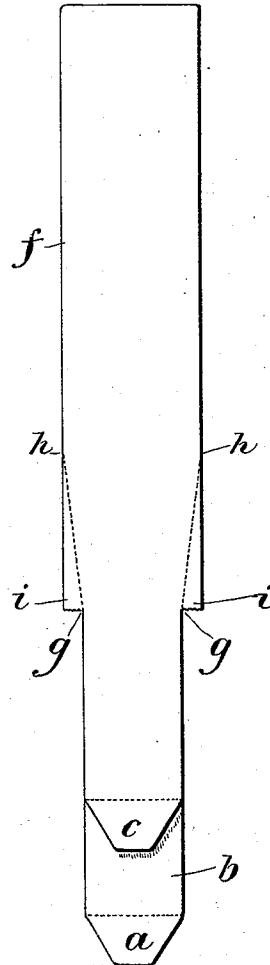
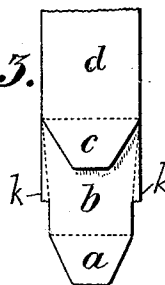


Fig. 3.



Witnesses:

Jesse B. Heller.
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John B. Nolan Attorney.

UNITED STATES PATENT OFFICE.

JOSEPH BENNOR, OF MACON, GEORGIA.

STOCKING AND ART OF MANUFACTURING SAME.

SPECIFICATION forming part of Letters Patent No. 534,248, dated February 19, 1895.

Application filed May 25, 1894. Serial No. 512,400. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEPH BENNOR, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented certain new and useful Improvements in Stockings and the Art of Manufacturing the Same, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to stockings and to the art of manufacturing the same. It has reference, more especially, to the class of goods produced upon "automatic" straight knitting machines of the kind set out in Letters Patent of the United States No. 440,389, dated November 11, 1890, and Nos. 485,316 and 485,317, dated November 1, 1892.

The invention consists, first, in a stocking in which the lower or narrow portion and the upper or wide portion of the leg are connected by an intermediate portion seamed laterally on diagonal lines running from the lower to the upper portion, as will hereinafter appear.

The invention consists, secondly, in the process of knitting a tubular web for stockings, upon two rows of needles, by throwing a predetermined number of needles out of action at each end of each row, then knitting with the needles in action, then throwing into operation the needles first thrown out of action, then knitting with all the needles in action, then cutting diagonally the laterally projecting portions of the web, and, finally, seaming or otherwise closing the slits or openings thus formed.

The invention consists, thirdly, in the process of forming stockings by throwing out of action at each end of each set of opposed needles, a predetermined number of needles, then proceeding to knit the toe, the foot, the heel, and the ankle or lower portion of the leg upon the remaining needles, then throwing into operation the needles first thrown out of action, and proceeding with the knitting of the leg of the stocking, then cutting diagonally the laterally projecting parts of the widened leg portion, and seaming or otherwise closing the slits or openings in the sides of the leg portion.

In the annexed drawings,—Figure 1 is an elevation of my improved stocking. Fig. 2 is a view of the knitted web preparatory to the

trimming and seaming of the laterally projecting parts of the leg portion, and Fig. 3 is a view of a knitted foot hereinafter referred to.

Referring to Fig. 1, *a* is the toe of the stocking; *b*, the foot; *c*, the heel; *d*, the ankle or lower portion of the leg; *e*, the fashioned portion of the leg, and *f*, the upper portion thereof. The fashioned portion is formed by shaping the leg on each side thereof, at *g*, *h*, instead of on the back portion only of the web, as heretofore, whereby a more graceful and natural form is imparted to the leg of the stocking than formerly.

In knitting the stocking, a straight knitting machine equipped with two opposite rows or sets of needles is employed, more especially such a machine wherein the knitting is commenced at the toe, and continued automatically through the other members of the stocking.

At the outset of the process, I throw out of operation at each end of each row of needles, a number of needles equal to one-quarter of the difference between those required for the formation of the ankle or narrow portion of the leg and those required for the formation of the upper or wide portion of the leg; that is to say, if there are seventy-six stitches required in each course of the narrow part and one hundred stitches required for each course of the wide part, I throw out of action at each end of each set of needles six needles, thus leaving in action seventy-six needles. This being done, the operative needles are manipulated to form the toe pouch, the tubular foot portion, the heel pouch, and the ankle or lower part of the leg in the manner set out in the Letters Patent aforesaid, whereupon the idle end needles are moved into operation, and the knitting of the leg with all the needles is proceeded with until a proper length has been formed. Following this, the web (Fig. 2) thus knit is dropped from the machine, and the operation is repeated for a like result, and so on successively. In the said web there is an open projecting portion (*i*) on each side of the leg portion where the inoperative needles were brought into play, that is, at the junction of the narrow and wide tubular parts. The laterally extended portions are cut in outwardly running diagonal lines from the narrow portion of the web upward, as from *g* to

h, and the slits or openings thus formed are seamed up or otherwise closed. The result is the completed full-fashioned stocking illustrated in Fig. 1.

- 5 If it be desired to fashion the foot, as well as the leg of the stocking, I throw out of action, at the beginning of the operation, several additional end needles, and knit the toe and the lower half (say) of the foot with the
10 remaining needles in action. I then throw into operation the said additional needles and knit the remainder of the foot. I then knit the heel, the ankle and the upper portion of the leg in the manner first above described.
15 The laterally-projecting portions *k* of the foot are trimmed off diagonally and seamed similarly to the leg portion. (See Fig. 3.)

I claim—

1. A fashioned stocking in which the upper
20 or wide portion of the leg and the lower or narrow portion of the leg are connected by an intermediate portion seamed laterally on diagonal lines running from the lower to the upper portion, substantially as described.

- 25 2. The process of knitting a tubular web for stockings upon two rows of needles, which consists in throwing a predetermined number of needles out of action at each end of each row, then knitting with the needles in action,

then throwing into operation the needles first
30 thrown out of action, then knitting with all the needles in action, then cutting diagonally the laterally projecting portion of the web, and, finally, seaming or otherwise closing the
35 slits or openings thus formed, substantially as described.

3. The process of knitting fashioned stockings upon two rows of needles equal to the required stitches to form the top of the leg, which consists in throwing a predetermined
40 number of needles out of action at each end of each row of needles, knitting the toe, the foot, the heel and the ankle of the stocking upon the remaining needles, throwing the
45 idle needles into operation, knitting the remainder of the leg upon all the needles, cutting or trimming diagonally the laterally-projecting parts of the widened leg portion, and
50 seaming or otherwise closing the slits or openings in the sides of the leg portion, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOSEPH BENNOR.

Witnesses:

JOHN R. NOLAN,
JESSE B. HELLER.