

(Model.)

2 Sheets—Sheet 1.

H. LENNARD.
ART OF KNITTING STOCKINGS.

No. 315,043.

Patented Apr. 7, 1885.

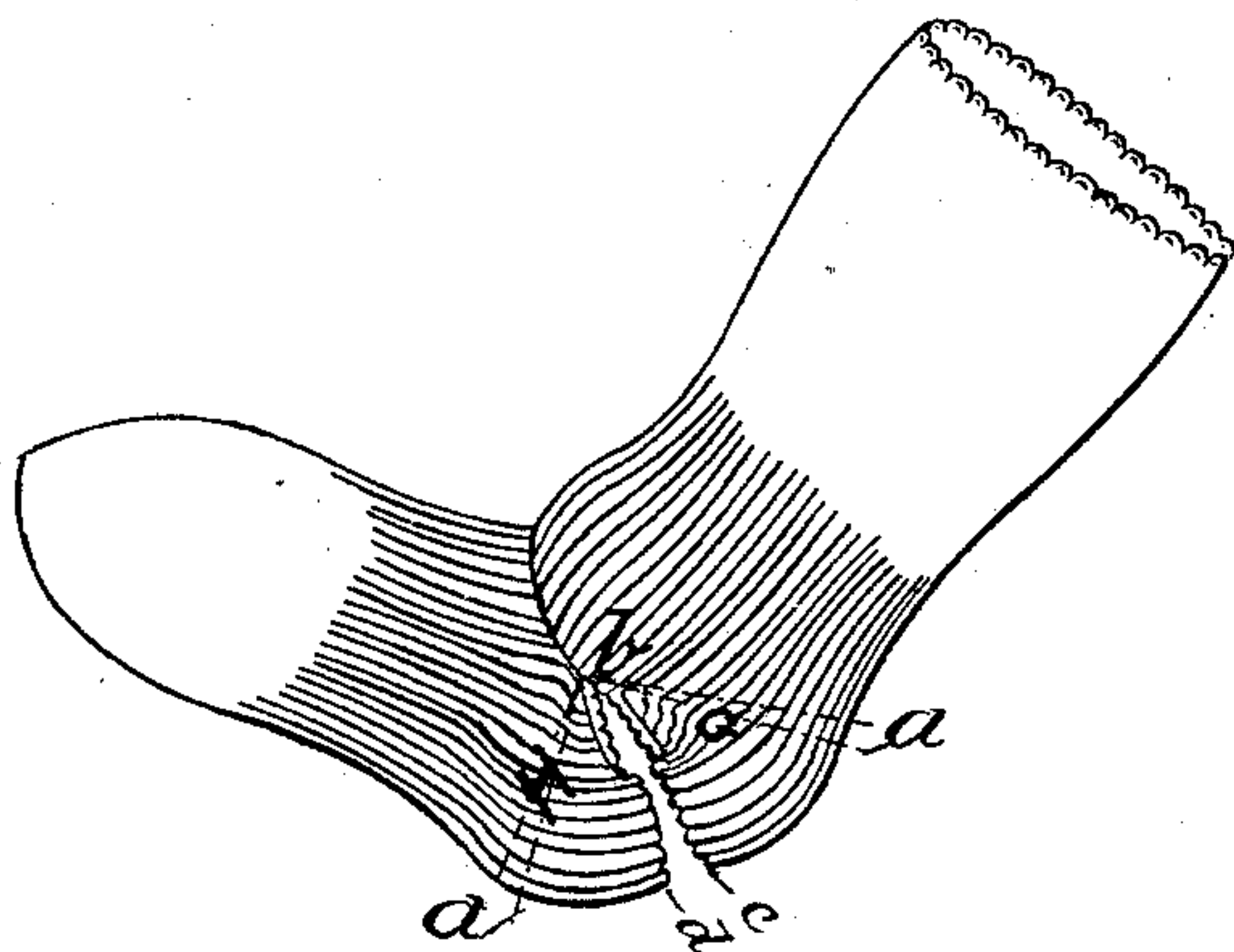


Fig 1.

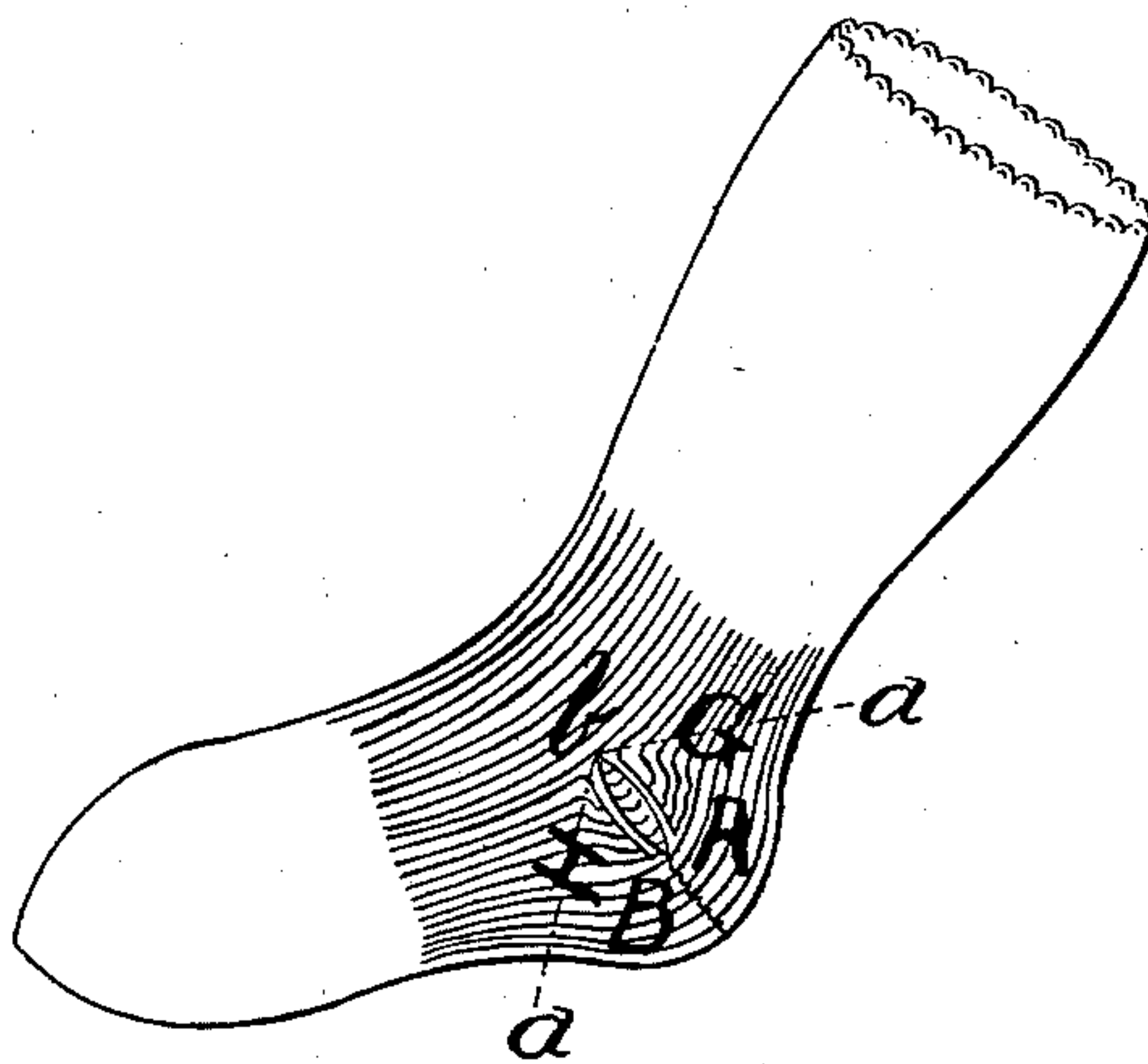


Fig 2

Witnesses.

Edmund Patterson
Robert Butcher.

Inventor.

Harry Lennard

per

William A. Edwards

Attorney.

(Model.)

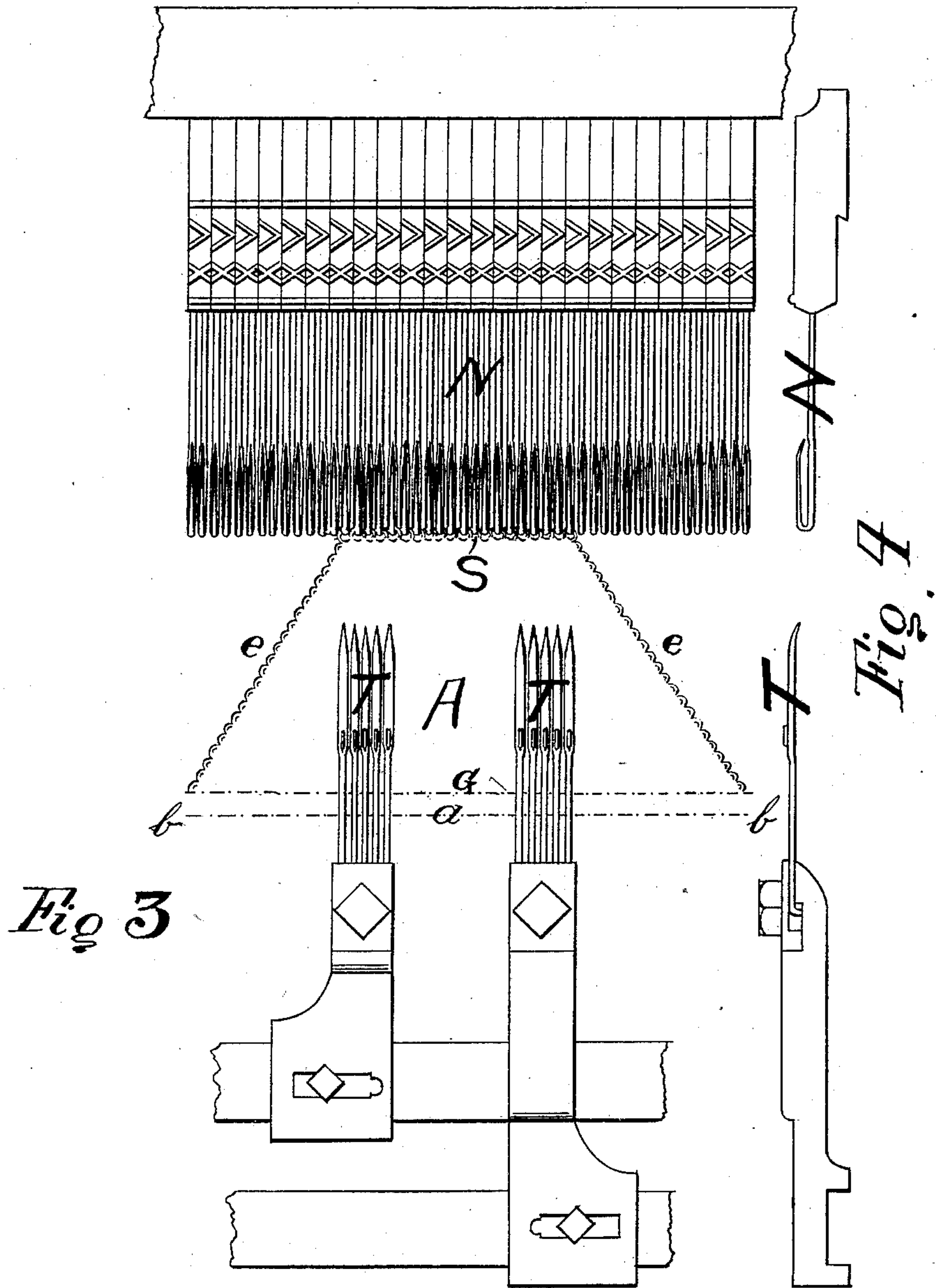
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UNITED STATES PATENT OFFICE.

HARRY LENNARD, OF DUNDAS, ONTARIO, CANADA.

ART OF KNITTING STOCKINGS.

SPECIFICATION forming part of Letters Patent No. 315,043, dated April 7, 1885.

Application filed January 25, 1884. (Model.) Patented in Canada February 7, 1884, No. 18,634.

To all whom it may concern:

Be it known that I, HARRY LENNARD, a British subject, residing at the town Dundas, in the county of Wentworth, Province of Ontario, Canada, have invented certain new and useful Improvements in the Art of Knitting Stockings, (for which I have obtained Letters Patent in Canada, No. 18,634, dated February 7, 1884;) and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

It is the object of my invention to produce a stocking with a properly-shaped seamless heel. I accomplish this object by the mode hereinafter described, and particularly pointed out in the claim.

Figure 1 illustrates a side view of the stocking as it appears with the heel parts knit thereto before the said heel parts are looped or joined together. Fig. 2 illustrates a side view of the stocking as it appears when the said heel parts are looped or joined together and the stocking completed. Fig. 3 shows a plan view of a portion of a straight-narrowing knitting-machine, illustrating a set of needles and narrowing-points, with an outline of one-half of the heel portion of a stocking knit thereby. Fig. 4 illustrates a side view of a needle and a narrowing-point.

In carrying out my method of knitting a stocking, I first knit a tubular web for the leg and foot portions in any well-known way to the desired length. I then at the proper place sever the stitches of the web a suitable distance, as shown in Fig. 1 by the line *a b a*. I then run on half of the loops to form the upper half of the heel A at the line G, which is about three rows of stitches from the severed edge *a b* onto the needles N of a straight-narrowing machine, as shown in Fig. 3, which is a detail plan of a straight-narrowing machine, showing the needles N, narrowing-points T, and an outline of the heel part A united at the line G. I may use C. H. Young's Straight-Narrowing Machine, patented December 26, 1879, No. 222,619, or any other straight-narrowing machine of similar character. Then I knit about eight or more rows of loops the whole width of the part A, forming, as I proceed, a selvage on each side of the portion A.

Then, by the use of the narrowing-points T T, Figs. 3 and 4, I narrow one loop on each side every two courses, and continue this operation until the desired length and form of the upper portion of the heel A, Figs. 1 and 3, are produced. Then I remove off the needles the loops *c* at the extreme end of the upper portion, A, of the heel. I then run on the loops of the lower portion of the severed part at the line H, Fig. 1, onto the needles N of the narrowing-machine, as before described, and repeat the same work to obtain the same form for the lower heel part, B, Figs. 1 and 2, as was done to produce the upper part, A, in Figs. 1 and 3, both parts A and B being exactly of the same size and form. Then I remove the loops *d* from the needles. After the upper and lower parts, A B, are knit as above described, the three rows of stitches that were left above the lines G H and to the lines *a b a* are raveled back to the lines G H. These said three rows now being raveled off to where the junction or union was made in the fabric leaves the said union neat and perfect. The selvages *e f*, that are formed where the yarn is turned backward and forward in knitting the upper and lower portions for the heel A B, and the loops *c d*, that form the extreme ends of said heel parts A B, are united together by looping with needle and thread by hand or machine, making the heel as shown in Fig. 2, the toe being knitted in any known way.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—

The improvement in the art of knitting stockings which consists in knitting a tubular web to the desired length for the leg and foot portions in any well-known way, then severing the stitches of the web where the heel is to be formed a suitable distance, then running on the loops of the upper portion of the severed part about three rows of stitches above the severed edge onto the needles, then knitting about eight rows of loops the whole width of the half of the heel, then narrowing one stitch or loop at each side every two courses, continuing this operation until the desired form of the upper half of the stocking-heel is formed, then drawing off the remaining loops from the needles, then running on the loops of the lower portion of the severed part again

about three rows of loops from the edge, as in the preceding case, and repeating the same work so as to obtain the same form for the lower half of the heel as already described for the
5 upper half, then again drawing off the loops from the needles, then raveling off the three rows of loops that were left on above where the severed loops were picked onto the needles until the union of the heel parts with the leg

and foot portions is left perfect, then uniting to the selvage edges and the looped ends of the heel parts, and knitting the toe in any well-known way, substantially as described.

HARRY LENNARD.

Witnesses:

EDMUND PATTERSON,
PHILIP J. THORNES.