

(No Model.)

2 Sheets—Sheet 1.

J. F. SLEEPER & J. P. MILLER.

ART OF MANUFACTURING STOCKINGS.

No. 415,580.

Patented Nov. 19, 1889.

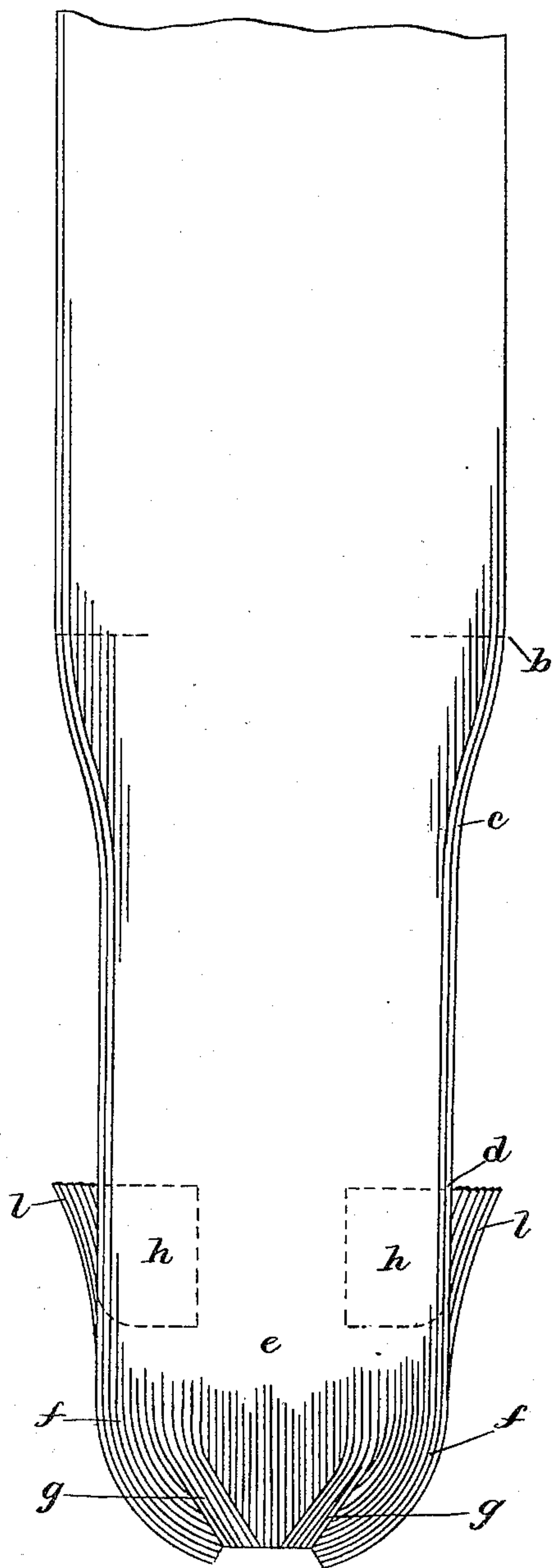


Fig. 1.

WITNESSES.

A. D. Harrison.
W. B. Ramsay.

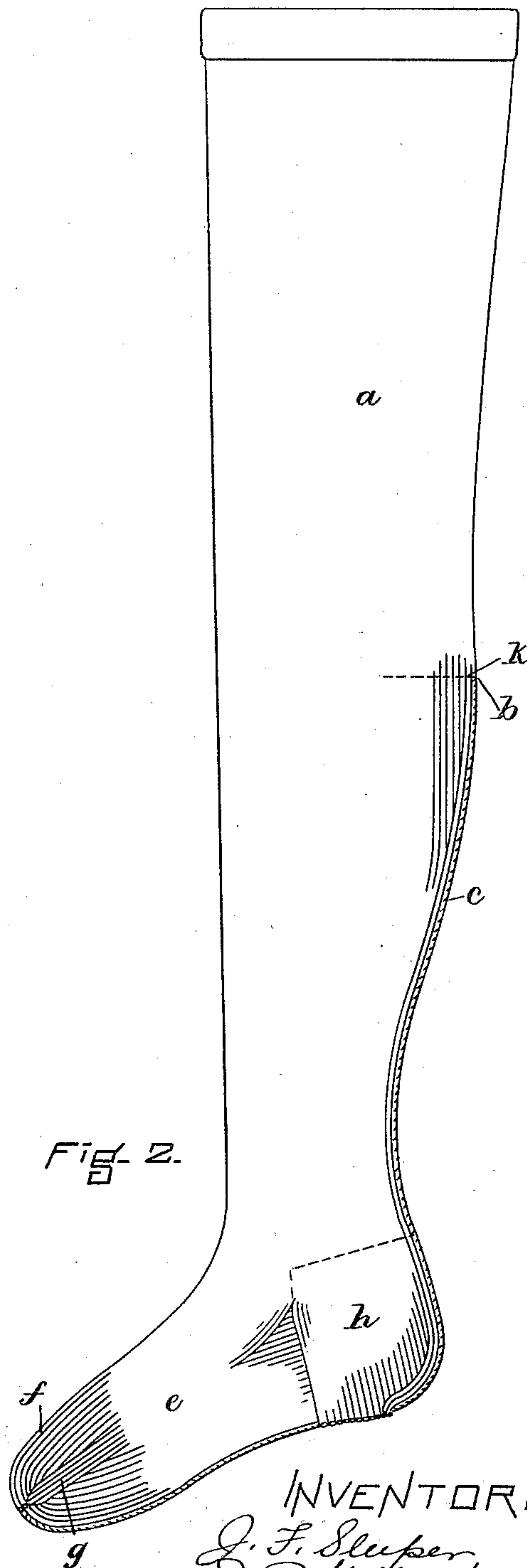


Fig. 2.

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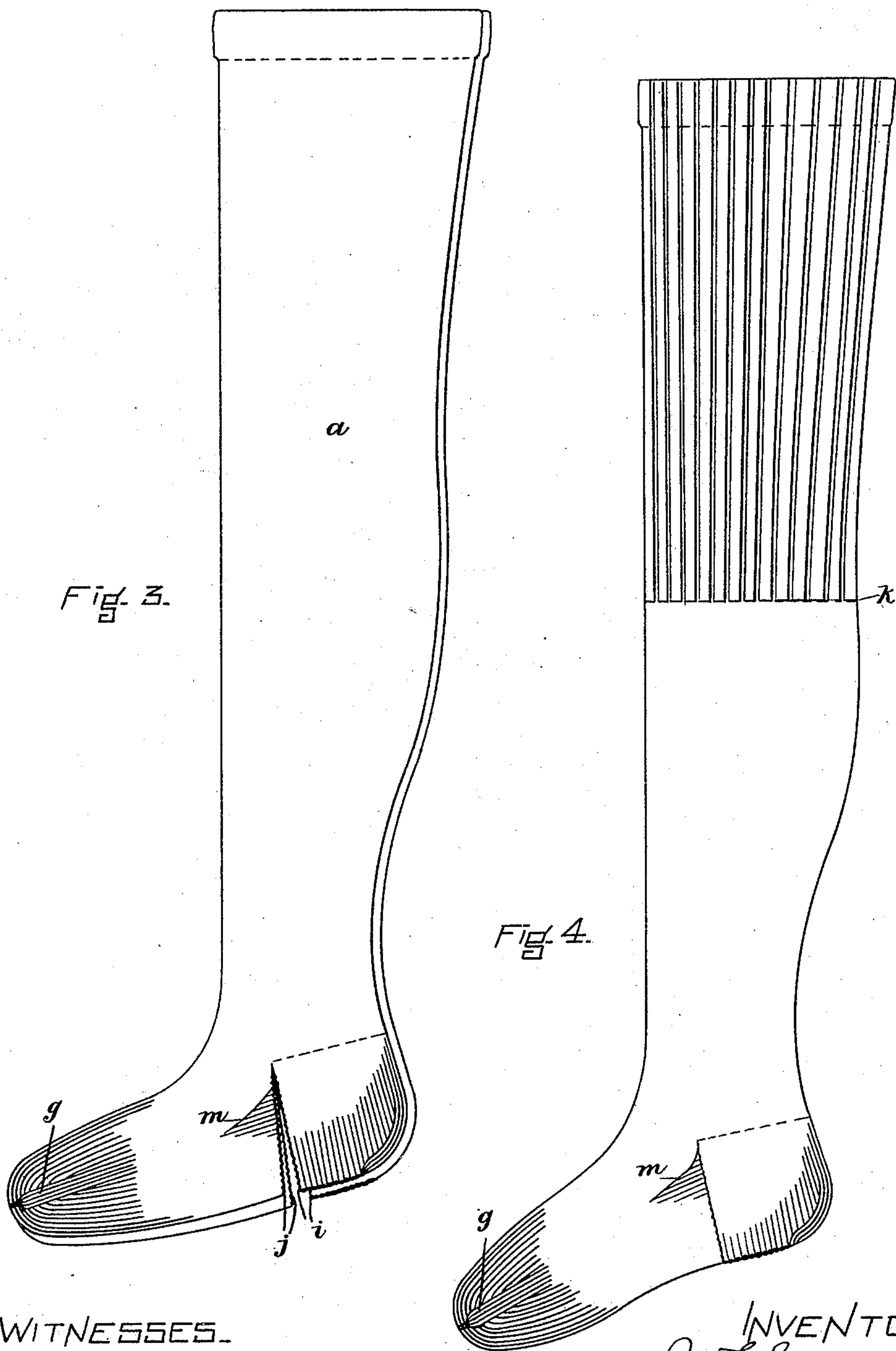
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UNITED STATES PATENT OFFICE.

JOSEPH F. SLEEPER AND JOHN P. MILLER, OF LACONIA, NEW HAMPSHIRE,
ASSIGNORS TO FRANK P. HOLT, OF SAME PLACE.

ART OF MANUFACTURING STOCKINGS.

SPECIFICATION forming part of Letters Patent No. 415,580, dated November 19, 1889.

Application filed April 29, 1889. Serial No. 308,943. (No specimens.)

To all whom it may concern:

Be it known that we, JOSEPH F. SLEEPER and JOHN P. MILLER, of Laconia, in the county of Belknap and State of New Hampshire, have invented certain new and useful Improvements in the Art of Manufacturing Stockings, of which the following is a specification.

Our invention has special reference to what are commonly known to knitting-artisans as "French foot" stockings, and has for its object the production of improvements in the art of manufacturing such stockings, securing economy and convenience as the result of such improvements.

To these ends our invention embraces an improvement in the art of manufacturing stockings, consisting of knitting the lower leg and ankle portion as a flat-fashioned web down to the point where the formation of the heel is to be commenced, knitting two fashioned half heel-pieces, bringing into operation additional needles and narrowing on both sides to form a gusset or gore for the instep; knitting the foot portion as a flat web and narrowing to form the toe; uniting the rear edges of the sole or instep portion of the foot to the forward edges of the heel portions, and likewise uniting the edges of the foot, heel, and leg portions. The upper leg portion we may form as a circular web, picking as many as possible of the stitches or loops of the lower edge of the tubular web upon a straight row of needles, and employing as many more needles than those holding picked-on loops as may be necessary to form the lower leg portion, which we knit as a flat web, subsequently looping or otherwise uniting the loops or stitches of the lower edge of the tubular web which could not be picked on the straight row of needles to the upper edge of the lower leg portion formed by those needles of the straight row which did not hold picked-on loops.

Reference is to be had to the drawings hereto annexed and forming a part of this specification, of which drawings—

Figure 1 is a front view of a web adapted to form the lower leg, ankle, heel, and foot and toe portions of a stocking knit in accordance with our improved process. Fig. 2 is a

side view of the stocking complete. Fig. 3 is a side view of a flat knit web folded before the edges are united to complete the stocking. Fig. 4 is a side view of a modified form of the stocking complete.

The same letters of reference on the drawings designate the same parts or features, as the case may be.

In carrying out our invention we may knit the upper leg portion *a* of the stocking as a flat web, as shown in Fig. 3, or as a circular web, as shown in Figs. 2 and 4. When formed as a tubular or circular web, we pick as many as possible of the stitches on one edge thereof upon a row of needles, and employ substantially as many more needles as there are loops of the web not picked on the needles, and knit a flat web for the lower portion below the calf, as from the line *b* to the line *c*, narrowing by transferring stitches inward, and then knit the ankle portion as a substantially straight flat web to the point *d*. There the formation of the heel is to be commenced, at which point we bring into operation additional needles (as many as may be necessary) at each end of the row, and narrow by transferring stitches to form a gusset or gore for the instep, and proceed with the knitting of the foot portion *e* and toe portion *f*, properly fashioning the latter, preferably by what is known as "box-narrowings" *g g*, as shown in Fig. 1, so arranging or positioning said narrowings that they may extend along the sides of the toe of the stocking, as represented in Figs. 2, 3, and 4. We then cut into the web on each side, at the line *d*, a sufficient distance and run the stitches of the upper cut edges upon needles and knit two half heel-pieces *h*, shaping or fashioning the same as indicated by dotted lines in Fig. 1. We then fold the web as shown in Fig. 3, and unite the forward edge *i* of the heel-pieces *h* to the rear edges *j* of the sole portion of the foot, and likewise join the edges at the end of the toe, the bottom of the foot, base and rear of the heel, and rear of the leg, completing the stocking, as shown in Fig. 2.

If the upper portion of the leg were formed as a tubular web, the stitches of the edge of the tubular web not picked upon the needles

in beginning the knitting of the lower leg portion as a flat web will be looped with the upper edge of such flat web as was formed by bringing into operation at this point
 5 needles in addition to those holding picked-on loops, as indicated at *k*, Figs. 2 and 4.

Our mode of procedure may be varied without departing from the nature and spirit of the invention; for example, at the point *d*
 10 knitting of the foot portion may not be begun until after the heel portions *h* may first have been knit, and the knitting of the instep portion of the foot may be begun after the needles employed to form the heel-pieces
 15 *h* shall have had their loops cast off, in which case it will not be necessary to cut into the web from the edges, as before explained. Again, after completing the knitting of the web the edges may be united in any desired
 20 order, not necessarily in the order hereinbefore recited.

The line of narrowing to form the gusset for the instep may be at the edge, as at *l*, Fig. 1, or some distance above the edge, as *m*,
 25 Fig. 3, or still farther upward or inward, so as to fall at the sides of the instep, as at *n*, Fig. 4.

Having thus described our invention, we declare that what we claim is—

30 1. The improvement in the art of knitting stockings which consists of knitting the lower leg and ankle portion as a flat-fashioned web down to the line *d*, where the formation of the heel is to be commenced, bringing into
 35 operation additional needles, knitting the toe and foot portions, and fashioning or shaping the latter, then cutting into the web on

each side of the line *d* a sufficient distance, and running the stitches of the upper cut edges upon the needles, and knitting two
 40 half heel-pieces *h*, shaping and fashioning the same, then uniting the rear edge of the sole or instep portion of the foot to the forward edges of the heel portions, and likewise uniting the edges of the toe, foot, heel, and
 45 leg portions, as set forth.

2. The improvement in the art of knitting stockings which consists of knitting the upper leg portion as a circular web, then picking
 50 a portion of the loops of the lower edge of the circular web upon needles and knitting the lower leg and ankle portions as a flat-fashioned web down to the point where the formation of the heel is to be commenced, bringing into operation additional needles,
 55 knitting and narrowing to form the gusseted instep portion, knitting the foot and toe portions and fashioning or shaping the latter, knitting two fashioned half heel-pieces, then uniting the rear edges of the sole or instep
 60 portion of the foot to the forward edges of the heel portions, and likewise uniting the edges of the toe, foot, heel, and leg portions, as set forth.

In testimony whereof we have signed our
 65 names to this specification, in the presence of two subscribing witnesses, this 18th day of April, A. D. 1889.

JOSEPH F. SLEEPER.
 JOHN P. MILLER.

Witnesses:

S. S. JEWETT,
 E. J. DINSMORE.