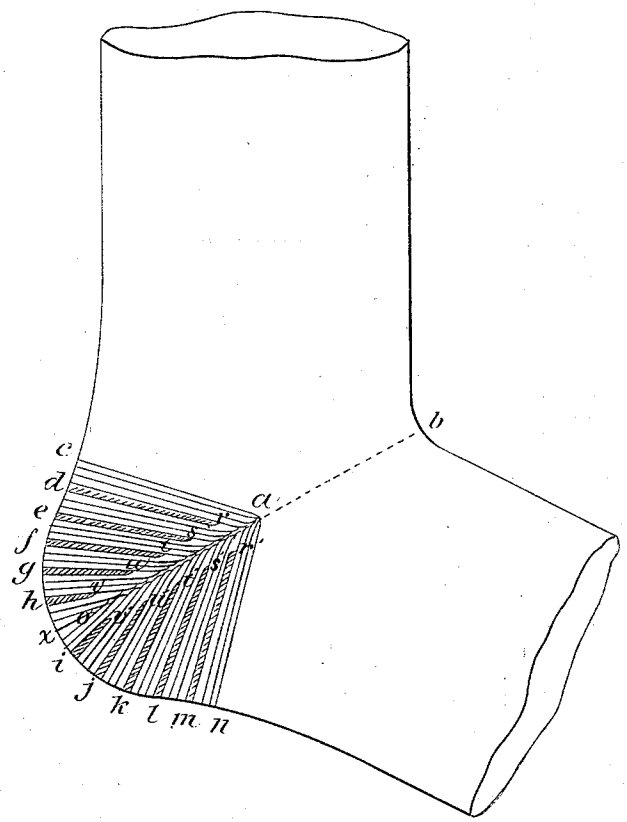
(No Model.)

F. LASHER.

STOCKING.

No. 271,338. Patented Jan. 30, 1883.



WITNESSES:

Willis A. Phillips

Edward E. Phillips

INVENTOR:

Frank Lasher,

by Franklin Scott, Atty.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FRANK LASHER, OF BENNINGTON, VERMONT.

STOCKING.

SPECIFICATION forming part of Letters Patent No. 271,338, dated January 30, 1883.

Application filed May 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANK LASHER, of the town of Bennington, in the county of Bennington and State of Vermont, have invented certain Improvements in Stockings, of which the following description, in connection with the accompanying single sheet of drawings, constitutes a specification.

This invention relates to the formation of the heels of stockings produced by continuous tubular knitting.

The nature of the invention is apparent from the accompanying drawing, which illustrates a detached section of a stocking, including the heel, with a small portion of the leg and foot.

As a description of the process of making this stocking will facilitate a clear understanding of its structure, I will premise by saying that the leg is knit in tubular form on a cylinder machine, such knitting progressing down to the line *c a b* of the drawing. At this stage the knitting on the needles of the front half of the leg over the upper instep, on the line *a b*, to a point on the other side opposite *a* is suspended, while knitting on the rear half continues. From the line *a c* to a point opposite *a* the formation of the back of the heel commences, and proceeds by narrowing, leaving one (or two, if necessary) needle out of action at the end of each course, on each side of the foot, until a limited number of courses—say three or four, as the case may require—have been run in, as between *c a* and *d r*. Then a shorter supplemental course of stitches, *d r*, which does not traverse the whole breadth of the rear heel part from the diagonal seam line *a o* to its companion line on the opposite side of the heel, but lacks two or three stitches (more or less) of meeting such seam-lines, is run in. The next subsequent range of stitches is knit clear across the heel, or from seam-line to seam-line, and at each end of the course picks up and unites with the terminal stitches of the range last preceding the supplemental course. Then the regular complement of narrowing courses is run in, and at *e s* another supplemental course is inserted or introduced in precisely the same way. Thus these supplemental courses *d r*, *e s*, *f t*, *g u*, and *h v* are run in at regularly recurring intervals of some definite number of courses until the apex of the heel at *o x* is reached. From this point, by the converse process of widening and introducing, in the way hereinbefore described, the supplemental courses of stitches *i v'*, *j w'*, *k t'*, *l s'*, and *m r'*, the sole portion *a x n* of the heel is produced, after which knitting on all the needles is resumed, and the foot of the stocking is formed in the usual way.

The number and length of the supplemental courses and the extent of interval between them may be regulated by the operator to suit the character of yarn used and the shape of heel desired.

Stockings have heretofore been knit having a gore or wedge-shaped piece knit in between the terminus of the leg proper and the top of the heel proper in order to obtain greater fullness and more room at the heel, as well as to secure a more natural and symmetrical shape to the heel; but objections lie to this mode of construction, as all the surplus cloth knit in for purposes of enlargement is inserted above the top of the heel, thereby, as it were, crowding the heel down and leaving the fullness desired up around the ankle, where it is not needed, and leaving the heel itself to be drawn into shape as best it may be by the wearer. By my improved method this extra material is inserted and distributed throughout the heel on both sides of the diagonal seam-line equally, thus leaving the apex of the heel in its true natural position, where it should be, and avoiding all unsymmetrical pouches or swells in the fabric, resulting from fulling all the supplemental yarn or cloth in at one place.

Hence I claim—

As a new article of manufacture, a tubular knit stocking having the leg and foot portions of ordinary form and the back and sole parts of the heel of narrowed and widened triangularly-shaped sections, respectively, and united on a diagonal line on each side of the heel, as shown, said back and sole sections of the heel having knit in at recurrent intervals throughout their longitudinal extent supplemental courses of stitches, each of which is shorter by a definite number of stitches than the course immediately preceding and following it, substantially as shown and described, and for the purposes set forth.

In testimony whereof I have hereto subscribed my name, at Bennington, Vermont, this 26th day of May, A. D. 1882.

FRANK LASHER.

In presence of—

FRANKLIN SCOTT,

THEO. J. OLIN.