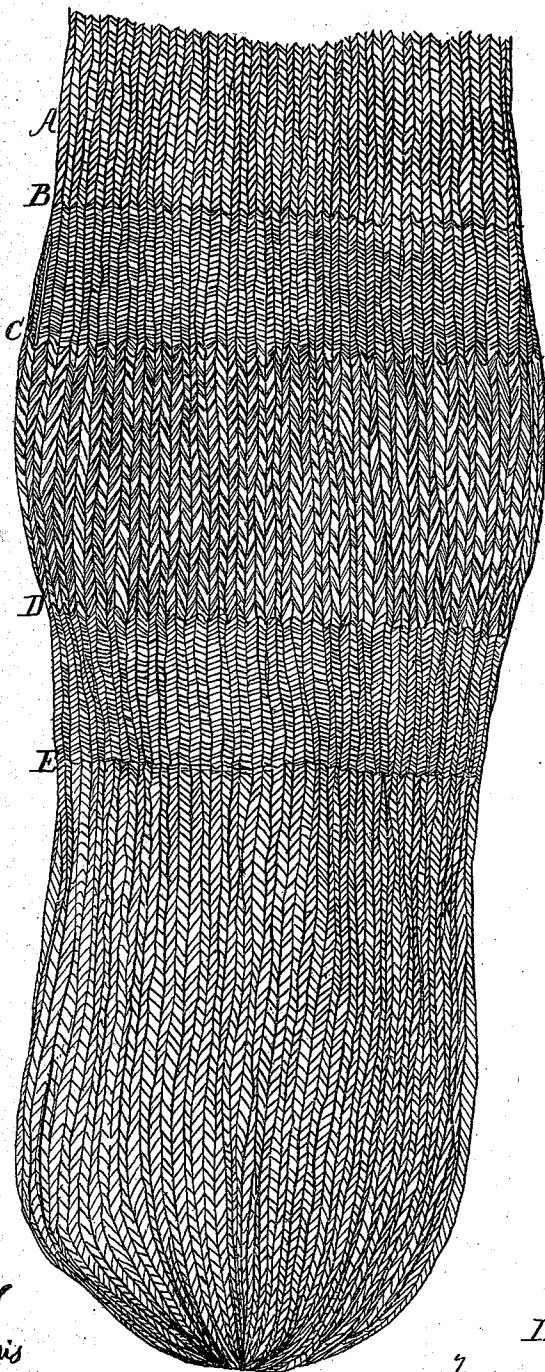


F. Woodward.
Knit Fabric.

N^o 106,017.

Patented Aug. 2, 1870.



Witnesses;
J. Dennis
Wm. H. Dennis

Inventor;
Ferdinand Woodward
By his Atty. J. Dennis Jr.

UNITED STATES PATENT OFFICE.

FERDINAND WOODWARD, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN STOCKINGS.

Specification forming part of Letters Patent No. **106,017**, dated August 2, 1870.

To all whom it may concern:

Beit known that I, FERDINAND WOODWARD, of Sacramento city and county, in the State of California, have invented certain new and useful Improvements in Stockings, Socks, &c.; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing, forming part of this specification.

The nature of my invention and improvement in stockings consists in shortening the stitches for the ankle and lengthening the stitches for the heel and instep, and adding one or more threads to the yarn to maintain the thickness of the fabric when the stitches are lengthened.

In the accompanying drawing the foot and ankle of one of my improved stockings are shown.

In making my improved stockings and socks I have found the machine called the "American knitting-machine" to answer a good purpose. It was patented to Dana Bickford, September 10, 1867, No. 68,595, and July 21, 1868, No. 80,121. These machines are provided with a device for lengthening and shortening the stitches at the will of the operator, which peculiarly adapts them to the knitting of my improved stockings and socks, although I suppose there are other machines upon which they may be knit with facility.

With one of the above-mentioned machines I first knit the leg portion A; then shorten the stitches about one-fourth, more or less, and knit about one and a half inch to fit closely around the ankle, as shown between B and C. I then lengthen the stitches to about one and a half time the length they are in the leg, and add one or more fine threads of the same or some other material to maintain the thickness of the fabric, notwithstanding the increased length of the stitches, and knit about three inches in length, or from C to D; then shorten the stitches to about the length they were between B and C, and knit one and a half inch in length to fit around the middle of the foot, from D to E, and then increase the length of the stitches to about what they are in the leg, and knit the

foot and toe; then drop all the stitches and remove the stocking or sock from the machine, and, with a round or blunt pointed darning-needle and yarn, pick up all the stitches and draw up the opening to about one inch in diameter, and then stitch across and athwart the opening until it is closed, which completes the toe of the stocking.

By the foregoing it is apparent that my improved stockings and socks are knit straight, or without widening or narrowing, by increasing or diminishing the number of stitches; but when drawn upon the foot, either side forward, the portion with long stitches, between C and D, surrounding the heel and instep, stretches easily and conforms readily to the part covered, while the part between B and C contracts closely around the ankle, and the part from D to E contracts closely around that part of the foot before the heel, making the whole to adjust and fit around the ankle and foot, while the opening closed by darning comes beneath the toes, so as to make it easy and comfortable to the foot.

My improvements are applicable to stockings knit flat as well as circular, and will be found of great advantage.

I think, in knitting the heel portion of woolen stockings, it is better to add a thread of cotton than wool.

My improved stockings, by being reversed when washed, so as to bring a different portion under the foot, will wear much longer than stockings that are not reversible, and they can be made with less labor and far cheaper than the stockings usually found in the market.

What I claim is—

A stocking in which the stitches are shortened for the ankle and lengthened for the heel and instep, and in which one or more threads are added to the yarn at the parts where the stitches are lengthened to maintain the thickness of the stocking, all as described.

FERDINAND WOODWARD.

Witnesses:

WM. ELLIS,
THOS. W. GILMER.