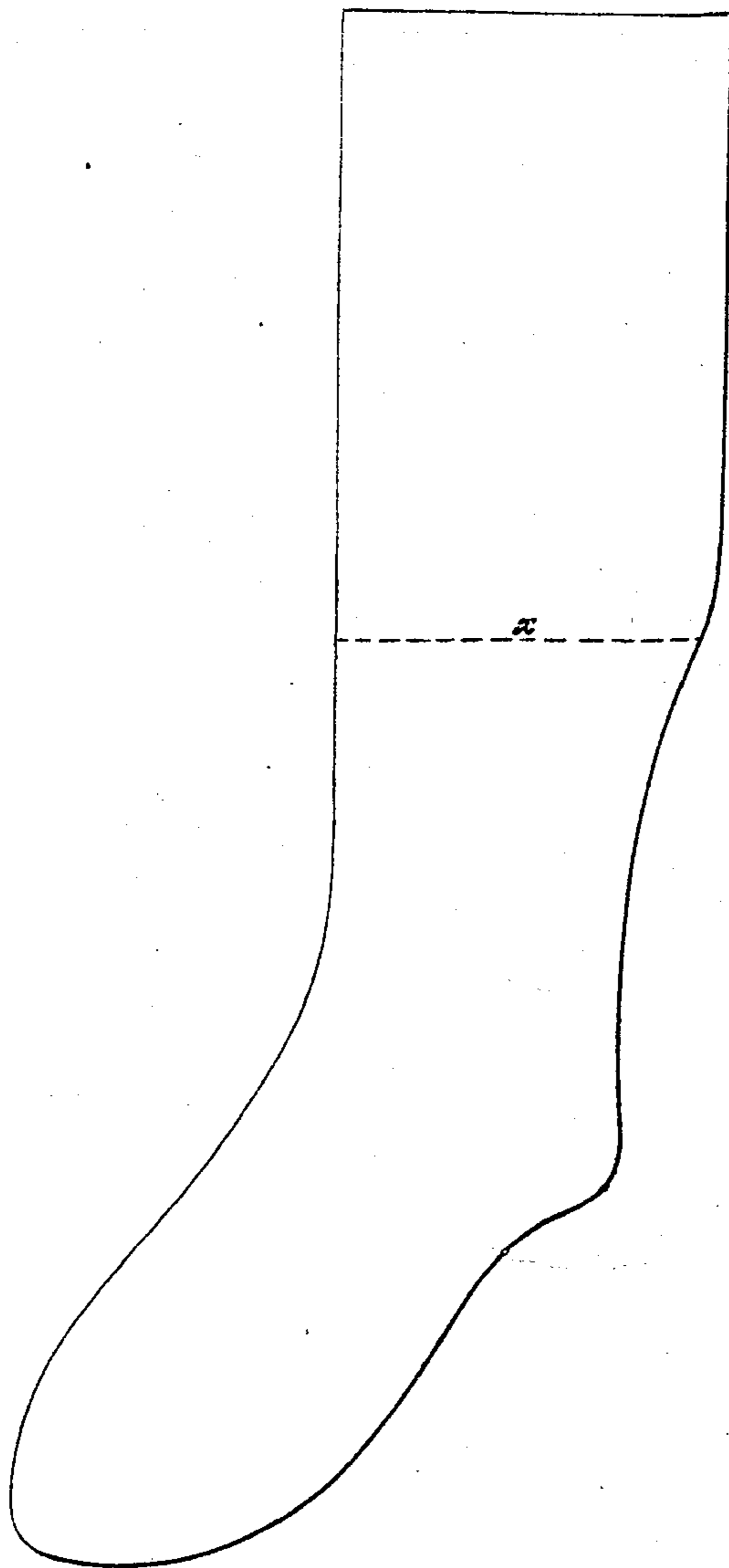


M. LANDENBERGER, Jr.

Improvement in Stocking

No. 129,146.

Patented July 16, 1872.



WITNESSES { Harry Smith  
Thomas M. Krain

Martin Landenberger Jr  
By his attys.  
Howson & Son

# UNITED STATES PATENT OFFICE.

MARTIN LANDENBERGER, JR., OF PHILADELPHIA, PENNSYLVANIA, AS-  
SIGNOR TO MARTIN LANDENBERGER & CO., OF SAME PLACE.

## IMPROVEMENT IN STOCKINGS.

Specification forming part of Letters Patent No. 129,146, dated July 16, 1872.

Specification describing an Improved Stocking, invented by MARTIN LANDENBERGER, Jr., of Philadelphia, Pennsylvania.

### *Improved Stocking.*

My invention consists of a stocking the leg of which consists of a knitted tube of threads of different thicknesses, as described hereafter, so that the diameter of the tubular leg may be varied to accord more nearly than in ordinary stockings of this class with the shape of the wearer's leg without materially detracting from the general uniform appearance of the fabric when it is stretched.

Stockings made of the tubular fabric produced by circular knitting-machines are cheaper than other stockings, owing to the facility of manufacturing them, but they are defective, owing to the unvarying diameter of the tube. It is usual to stretch such stockings on boards of the desired shape; but this involves the necessity of stretching some parts of the fabric and thereby rendering the loops more open than others, and a fabric of irregular appearance is the result. Sometimes the upper portion of the leg of the stocking is knitted more loosely—or, in other words, with slacker loops—than the lower portion, so that the tube may be made to assume the desired shape; but this plan necessarily causes the fabric to assume an uneven appearance, the loops at the upper portion of the leg being more open than those below.

In order to obviate this defect of ordinary stockings made from a tubular fabric I employ, in knitting the tubes, threads of different degrees of thickness. Thus, in the stocking illustrated in outline in the accompanying drawing, the lower portion, from the foot to the line

$x$ , is composed of a fine thread; but at the point  $x$  I substitute a coarser thread, without, however, removing the tube from the machine or discontinuing the process of knitting. The thicker thread necessarily enlarges the tube, without, however, producing any material difference in the character of the fabric at the point where the loops of thin thread meet those of the thick thread, for the knitted ribs of thick and thin threads are continuous from end to end; nor will there be any perceptible change in the continuity of the fabric if the loops of thick thread are knitted more loosely than those of the thin thread, for the extra thickness of thread will permit the loose knitting of the thicker thread without any danger of the fabric appearing more open after stretching than that composed of the thin threads.

For stockings of the cheaper class the tubular leg may be composed of but two different grades of thread, united at the point  $x$ , as shown; but more perfect stockings, better adapted to the shape of the leg, may be produced at a trifling additional cost by three or more grades of thread disposed of to suit such graduations in the diameter of the tube as the graduations in the sizes of the stocking may suggest.

I claim as my invention, and as a new manufacture—

A stocking the leg of which consists of a tube knitted with threads of different grades, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTIN LANDENBERGER, JR.

Witnesses:

ROBERT McCONNELL,  
JOHN F. TAGUE.