

(Specimens.)

L. N. D. WILLIAMS.
KNIT SHIRT.

No. 412,054.

Patented Oct. 1, 1889.

FIG. 1.

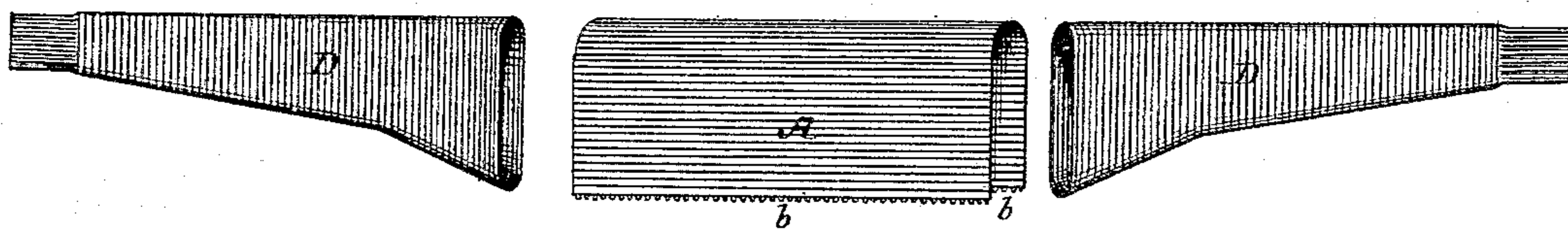


FIG. 1 $\frac{1}{2}$.

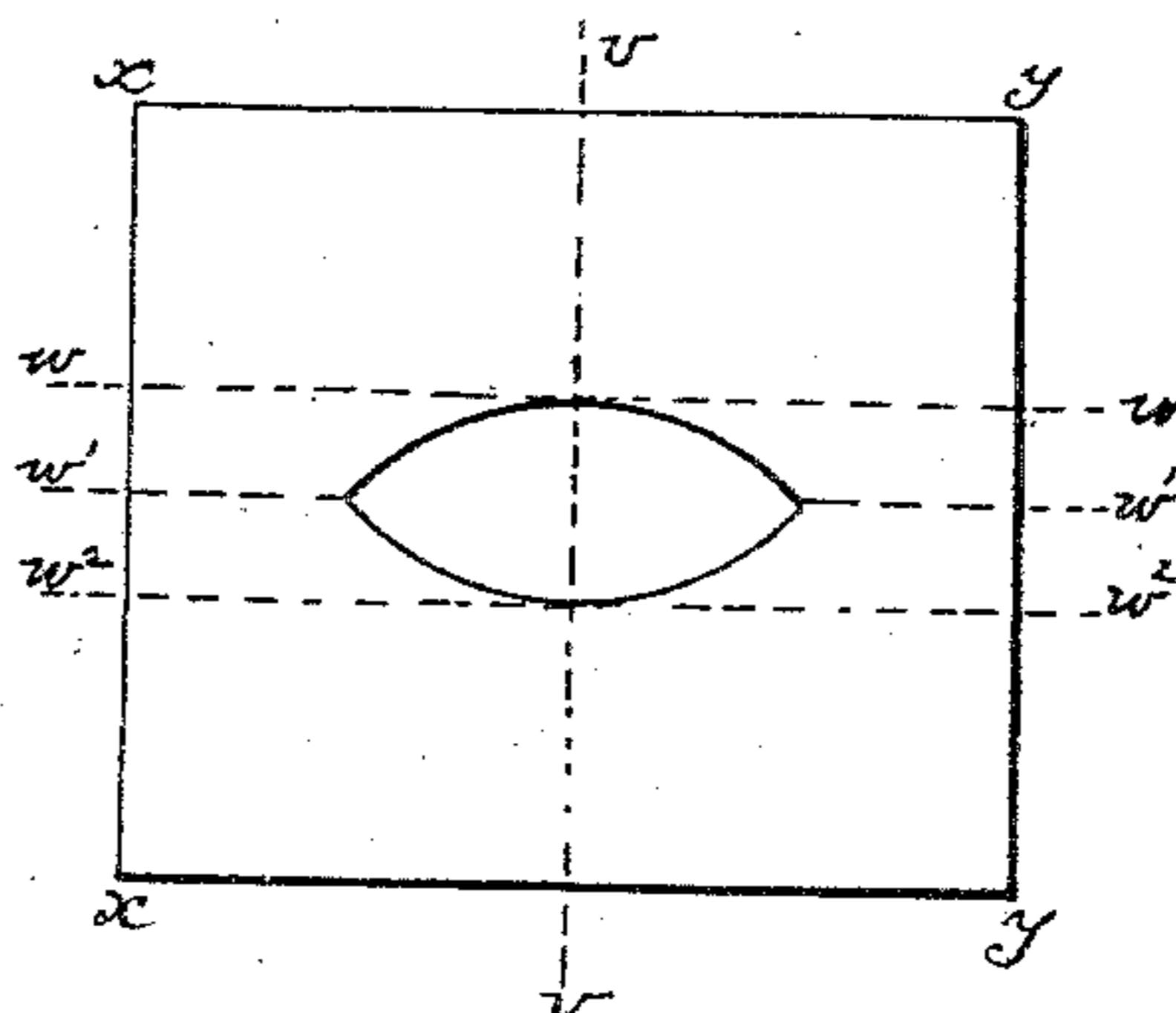
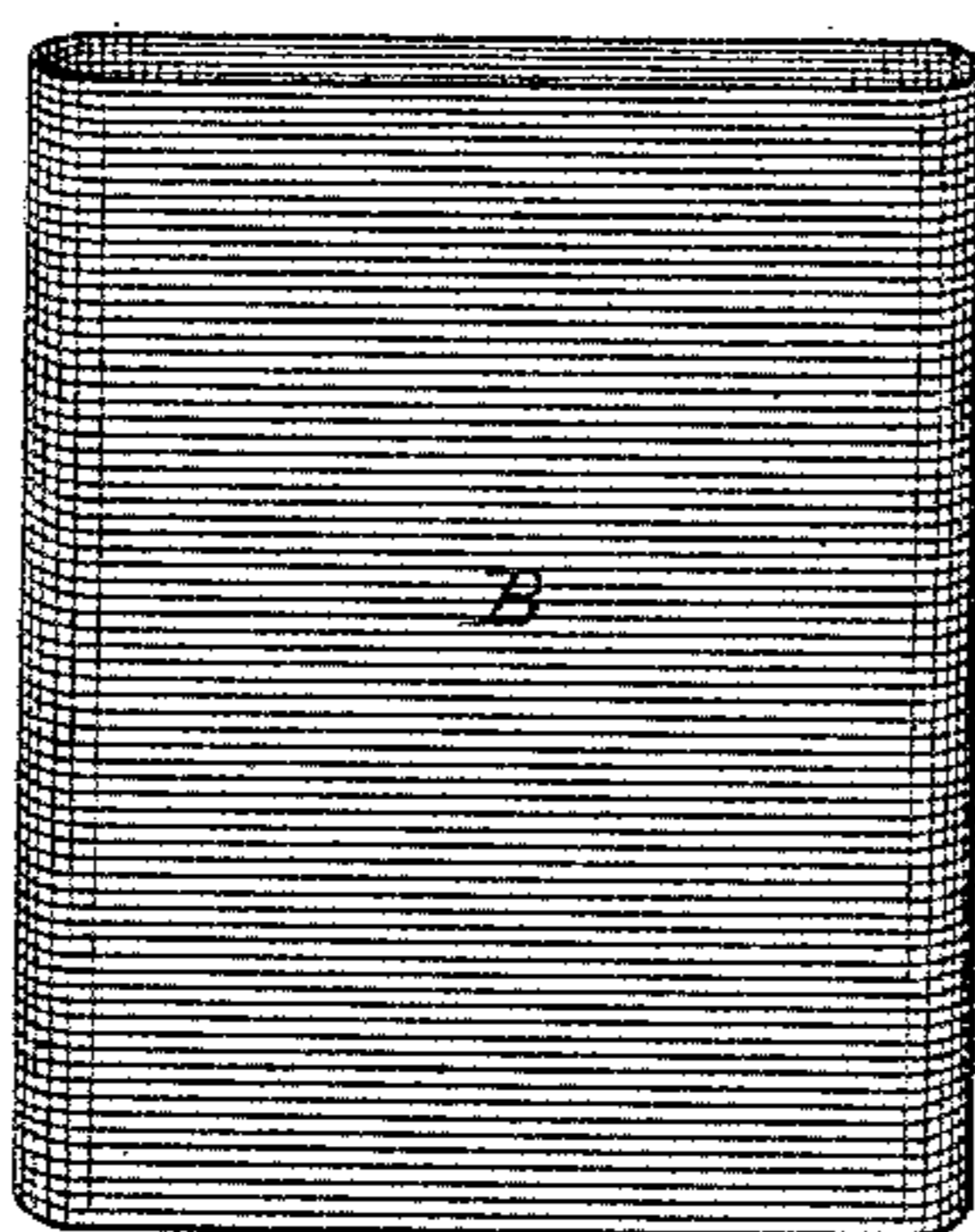
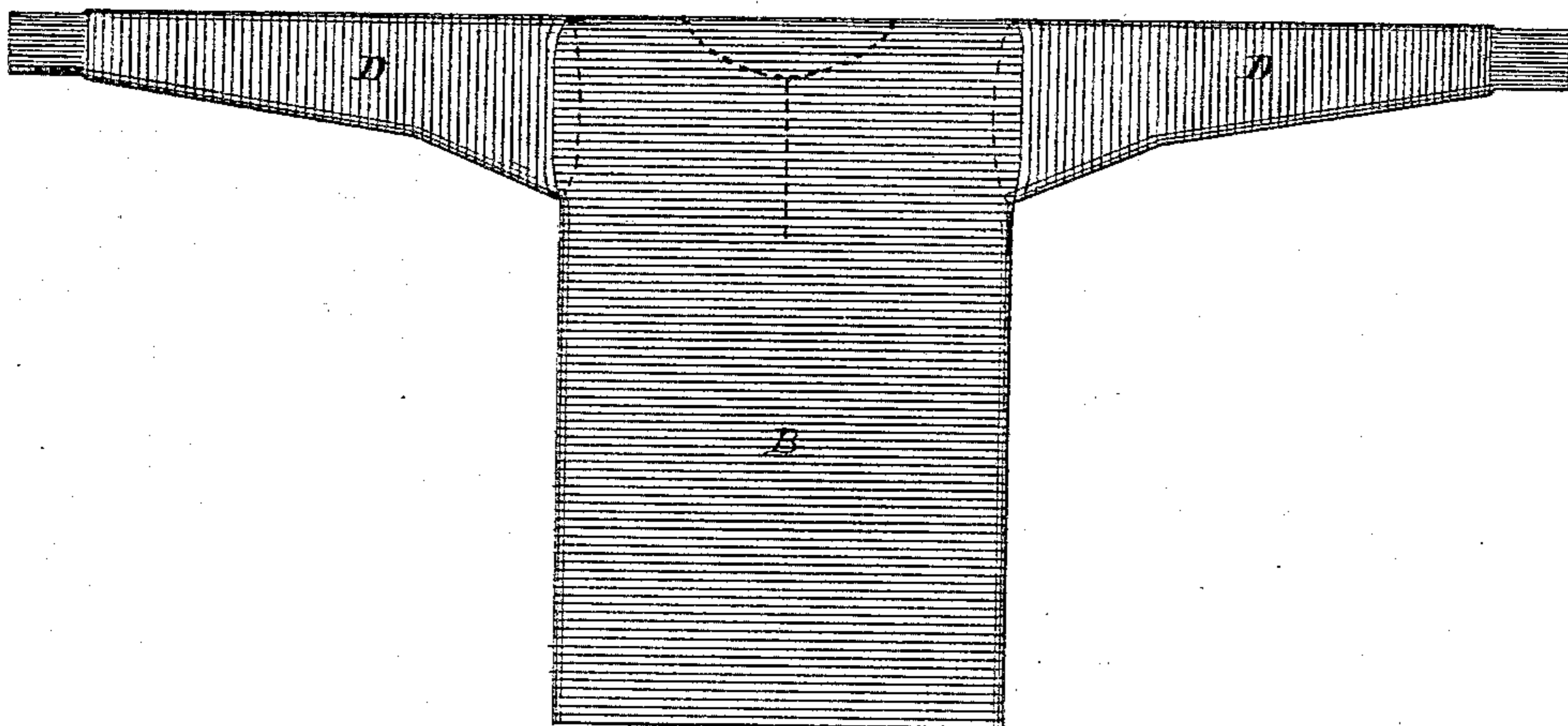


FIG. 2.



Witnesses:

Alex. Darkoff
William D. Corrier.

Inventor:

Louis N.D. Williams
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

LOUIS N. D. WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO ROBERT W. SCOTT, OF SAME PLACE.

KNIT SHIRT.

SPECIFICATION forming part of Letters Patent No. 412,054, dated October 1, 1889.

Application filed April 5, 1889. Serial No. 306,046. (Specimens.)

To all whom it may concern:

Be it known that I, LOUIS N. D. WILLIAMS, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Knit Shirts, of which the following is a specification.

The object of my invention is to produce in a cheaper and simpler manner than usual a knitted shirt having a tubular seamless body and without seams upon the shoulders. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 represents detached from each other the various parts of a knitted shirt made in accordance with my invention. Fig. 1½ is a diagram illustrating a special method of making one of the parts of the shirt, and Fig. 2 is a view showing the shirt completed by securing the parts together.

In making the improved shirt shown in Fig. 2 I first form a flat web A of the proper length and width for the shoulder portion of the garment, which web is then folded, as shown in Fig. 1, and the loops around the lower edges bb of the web are, by preference, applied to the needles of a circular or other knitting machine capable of producing a seamless tubular fabric. Such fabric is then produced of a length sufficient for the body B of a shirt, as shown in Fig. 2, and if the shirt is to be sleeveless all that then remains to be done is to form the neck-opening and breast-slit as shown by dotted lines in Fig. 2; or, if desired, a neck-opening of the required form may be formed in the strip A during the making of the same or before it is connected to the body, as shown, for instance, in Fig. 1½. A strip of this character may be made by first making a web on needles from x to y up to the line w , and then while the needles from v to y retain their stitches proceeding with the formation of fabric upon the needles from x to v , and gradually dropping out needles at the end v until at the line w' the web has been properly narrowed, and then gradually bringing these needles into action until they are again operative up to the line v , when the web reaches the line w^2 . The same operations are then performed upon the other half of the needles from y to v , pro-

ducing narrowed web from w to w' , and widened web from w' to w^2 , and web of the full width from x to y is then made until the strip is completed.

A sleeveless shirt made in accordance with my invention is perfectly seamless, as the running of the stitches along the edges b of the strip A upon the needles of the machine which produces the tubular body B forms a seamless union between the parts A and B.

If a sleeved shirt is to be produced, the sleeves D, preferably of shaped tubular seamless fabric, may be produced on another machine, and the loops or stitches at the inner end of each sleeve secured to the armholes formed by the edges of the folded top or shoulder part A of the body of the shirt, the armhole-seams thus constituting the only seams in the garment, and being formed by the usual seaming-machine, so that they are not bulky or uncomfortable; or, if desired, the selvage edges around each armhole may be applied to the needles of a circular machine, on which the shaped tubular seamless sleeve is produced.

Various other modifications within the scope of my invention may be adopted. For instance, the lower edges b of the folded strip of fabric A, forming the shoulder portion of the shirt, may be secured by the usual seaming-machine to the upper edge of a previously-prepared tube B of the proper size for the body of the shirt, the sleeves may be united to the shoulder portion either before or after the body portion is united thereto, and the shoulder portion may be of different fabric from the body and sleeves, so as to be less elastic in character than the rest of the garment, and thus form a comparatively stiff yoke for the garment.

I am aware of the patent to R. W. Scott, No. 404,229, May 28, 1889, in which is shown a shirt having the front and back shoulder webs connected on the shoulders by a rib-course; but this rib-course is slack and produces the appearance of a seam on the shoulders, and, moreover, causes a thin place in the fabric on each shoulder, whereas the shoulder-web of my improved shirt is of substantially uniform character from front to back—that is to say, there is no break or material

change in the character of the stitch on each shoulder, as in the shirt shown in the Scott patent.

5 I therefore claim as my invention and desire to secure by Letters Patent—

10 1. A shirt of knit fabric, having a seamless tubular body portion and a seamless shoulder-web of substantially uniform character from front to back, said shoulder-web being united at its lower edges to the upper edge of the tubular body, substantially as specified.

15 2. A shirt of knit fabric, having a seamless tubular body portion and a seamless shoulder-web of substantially uniform character from front to back, the lower edges of said shoulder-web forming a seamless union with the upper edge of the seamless tubular body portion, substantially as specified.

20 3. A shirt of knit fabric having a seamless tubular body portion, a seamless shoulder-web of substantially uniform character from

front to back and united at its lower edges to the tubular body portion, and sleeves united to the opposite ends of said seamless shoulder portion of the shirt, substantially as 25 specified.

4. A shirt of knit fabric, having a seamless shoulder-web of substantially uniform character from front to back, a seamless tubular body united to the lower edges of said shoulder-web, and sleeves each composed of a 30 shaped seamless tube, said sleeves being united at their inner ends to the armholes at the opposite sides of the seamless shoulder-web, substantially as specified. 35

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

LOUIS N. D. WILLIAMS.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.