

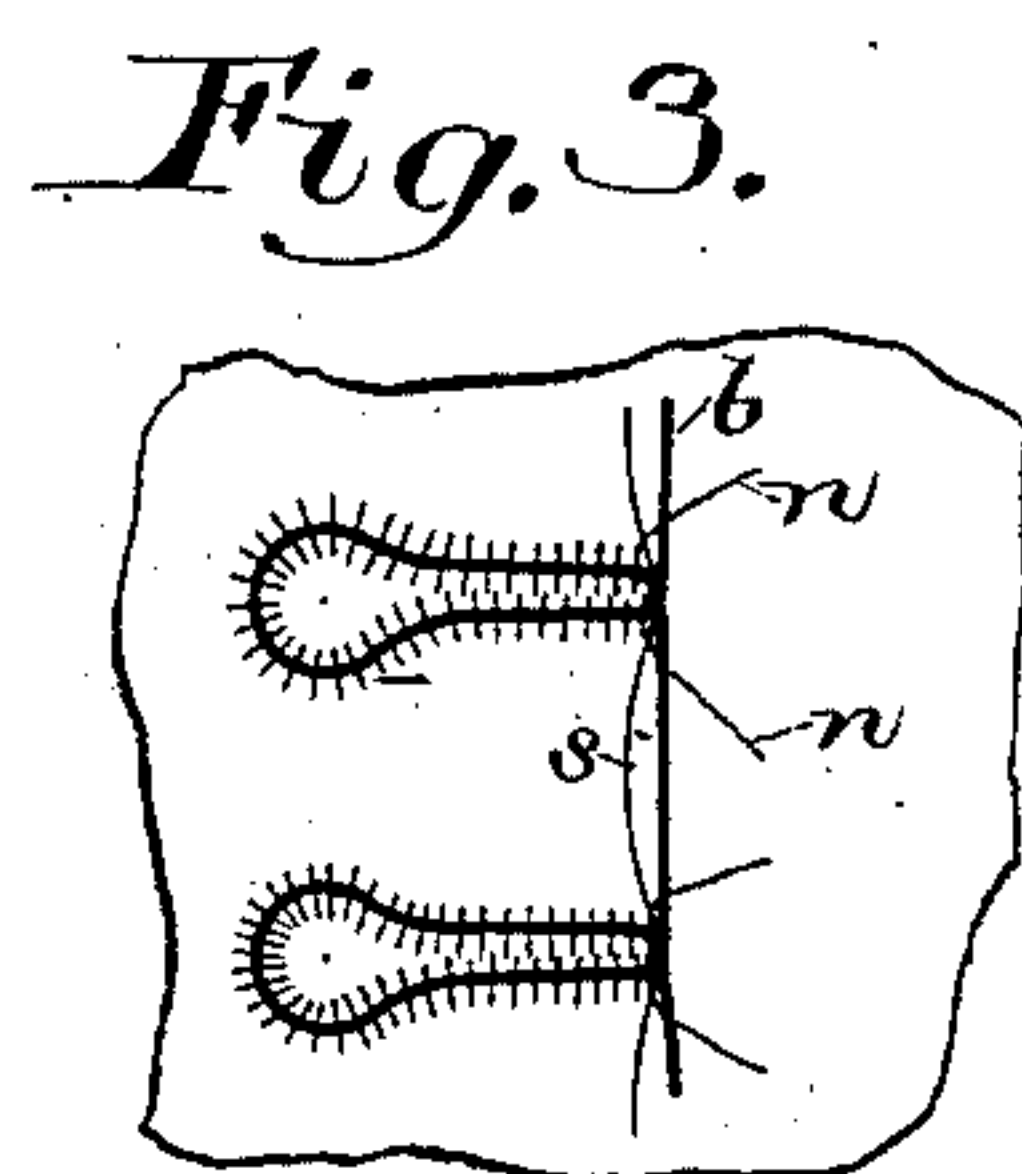
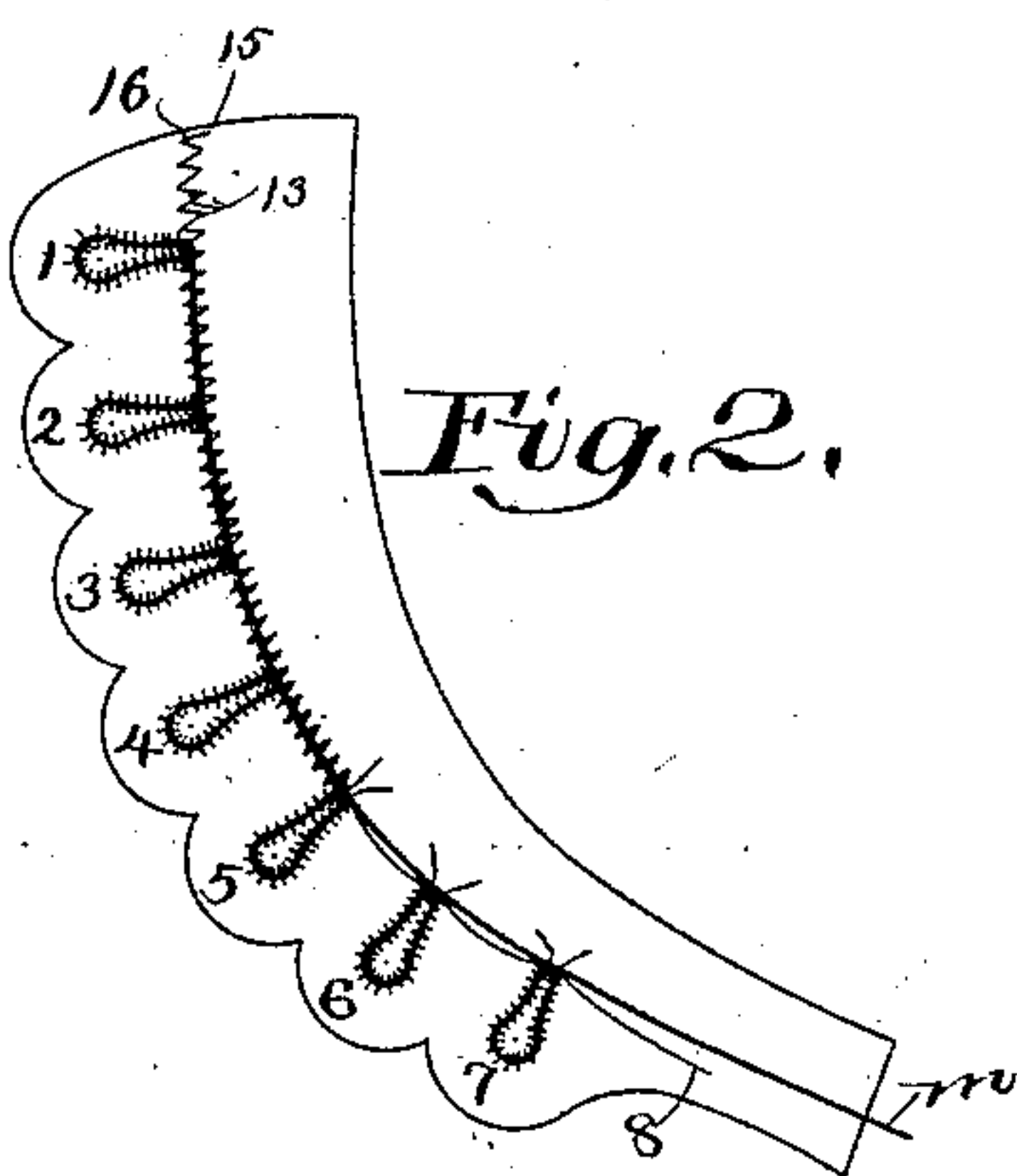
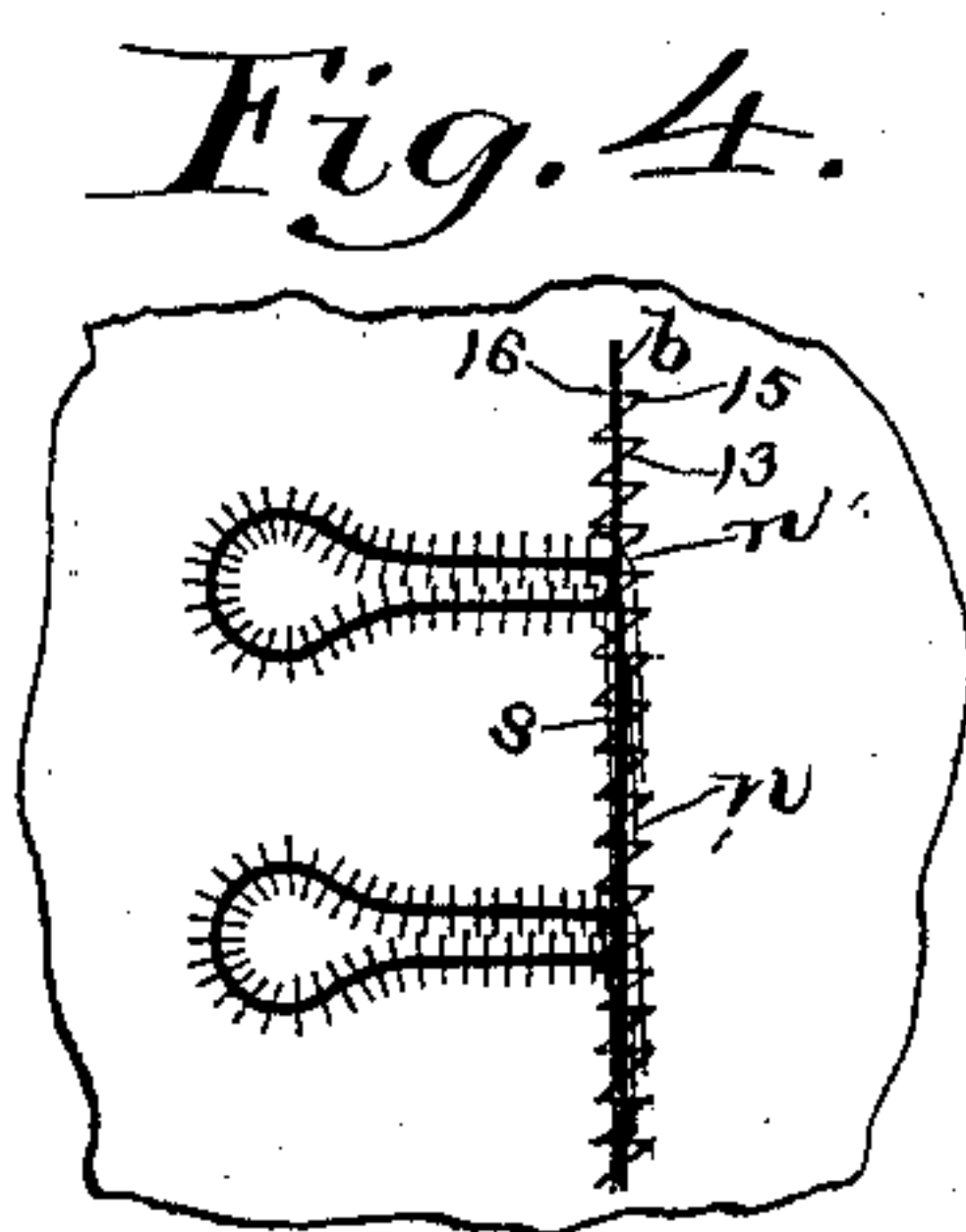
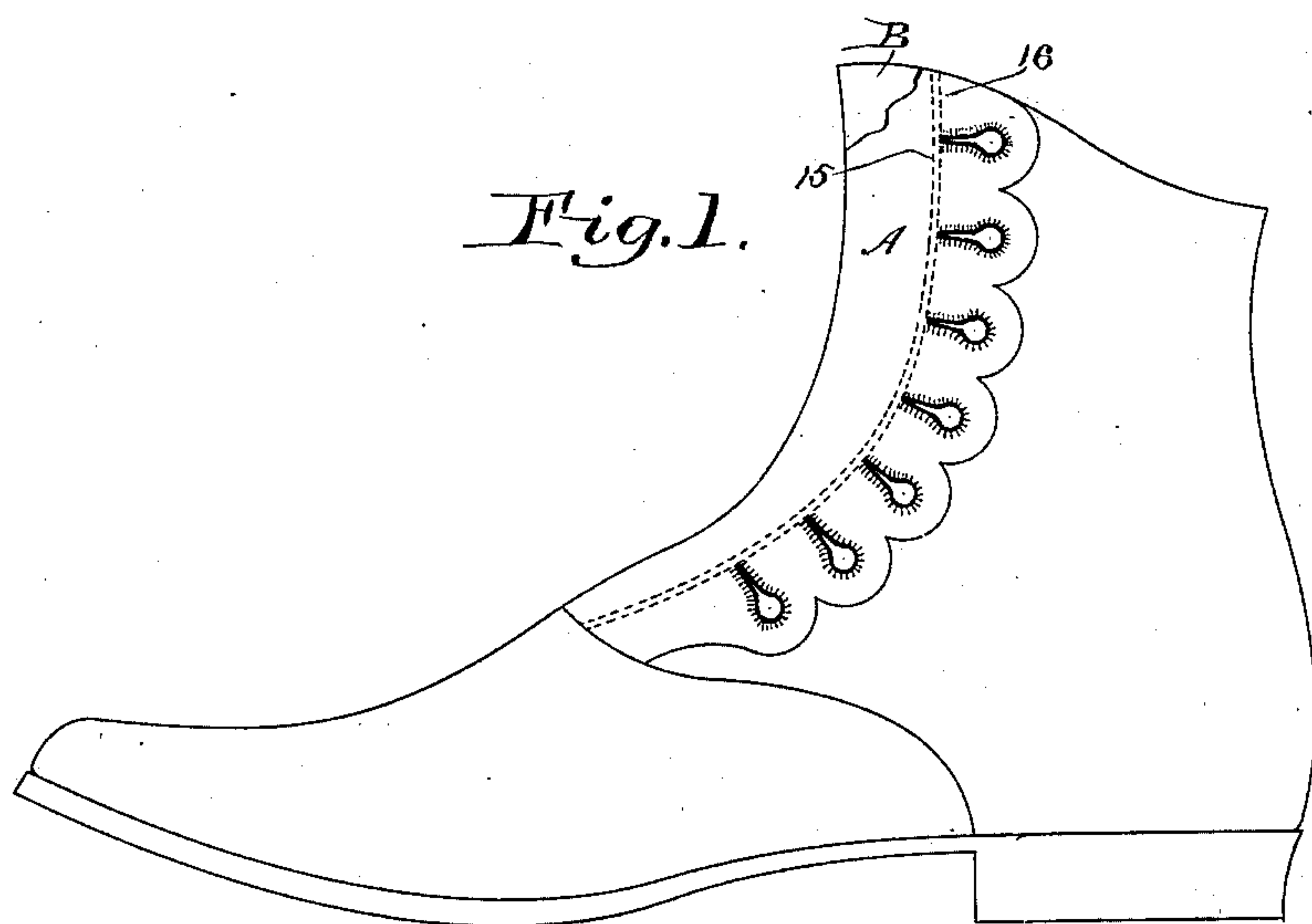
(No Model.)

G. S. HILL.

BUTTON HOLE PIECE FOR BUTTON BOOTS.

No. 360,590.

Patented Apr. 5, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE S. HILL, OF LYNN, ASSIGNOR TO JOHN REECE, OF BOSTON, MASS.

BUTTON-HOLE PIECE FOR BUTTON-BOOTS.

SPECIFICATION forming part of Letters Patent No. 360,590, dated April 5, 1887.

Application filed February 3, 1887. Serial No. 226,395. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. HILL, of Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in
5 Button-Hole Pieces for Button-Boots, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to improve button-boots, and especially that part thereof known as the "button-hole piece," in order that the latter may be materially strengthened and finished in superior manner.

15 Button-holes in button-hole pieces for shoe-work are commonly stitched or bound over their edge in a sewing-machine, two threads being used, one being carried by an eye-pointed needle above the material and the other by an
20 under-thread carrier of some sort; and it is customary to lay a third thread, called a "bar-thread," about the edge of the button-hole, so as to be covered by the stitching of the other two threads referred to. When one
25 button-hole has been stitched, the button-hole piece is moved forward by hand, bringing another button-hole in position under the stitching mechanism to be stitched, and during this operation the under thread above referred
30 to, as well as the bar-thread, is left extended from one to the next button-hole. So, also, in stitching button-holes by machinery, the small end of the button-hole has usually left projecting from it two ends, they coming from the needle-thread used in the manufacture of the but-
35 ton-hole. These free ends, as well as the threads extending from one to the next button-hole, are sometimes cut off, and the small end of the button-hole is completed by a hand-
40 needle. In some instances the threads connecting adjacent button-holes have been whipped over and caught down to the material of the button-hole piece by a thread carried by a hand-operated needle.

45 In accordance with my invention, the projecting ends of thread referred to, as well as the threads extended from one to the next button-hole, are brought together or laid parallel and are inclosed by stitching, the stitching being done on an independent machine
50 and by an independent operation, the stitching consisting of three threads, two of which

are carried by eye-pointed needles held in one needle-bar, the loops of thread drawn out from the eye-pointed needle below the material and at a point below the said assembled
55 threads being united by means of a third thread taken from a shuttle or bobbin, in accordance with either the Singer or Wheeler & Wilson systems of sewing; or it may be by any
60 other equivalent thread-carrier.

My invention consists, essentially, in a button-hole piece containing a series of button-holes, the ends of which are connected by two
65 rows of stitches, the loops of which below the material co-operate with a third thread to inclose not only the free ends of the threads used to overstretch the edges of the button-hole and left projecting from the small end of the but-
70 ton-hole, but also to cover and inclose the under thread and bar-thread between adjacent button-holes, substantially as will be described.

Figure 1, in elevation, shows a button-boot having a button-hole piece embodying my in-
75 vention. Fig. 2 shows the under side of a button-hole piece, five of the button-holes being finished, while the remaining button-holes are but partially finished. Fig. 3, enlarged, represents two button-holes with the threads
80 used for overstretching, the free ends of the needle-thread being distended, the said figure also showing plainly the bar-thread and the under thread as extended from one to the other button-hole; and Fig. 4 represents the parts
85 shown in Fig. 3, with the free ends of the needle-thread brought together and inclosed by stitching composed of three independent threads, two from two eye-pointed needles and one from a shuttle-bobbin or other usual un-
90 der-thread carrier.

The button-hole piece A is and may be of usual material and shape. This button-hole piece has, as herein shown, (see Fig. 2,) seven
95 button-holes, numbered, respectively, from 1 to 7.

Each button-hole has its edge overstretching by the employment of two threads—one, *n*, carried by an eye-pointed needle, and the other, *s*, carried by a shuttle or under-thread carrier. 100
A bar-thread, *b*, is laid about the edges of the button-hole, so as to be covered by the overstretching, the said bar-thread, as well as the under thread, being left extended between one

and the next button-hole by moving the button-hole piece sufficiently to bring one and then the next button-hole in position in connection with the stitching mechanism to be stitched.

Usually the small end of the button-hole at the under side of the button-hole piece has projecting from it two free ends, they being parts of the needle-thread *n*. To avoid cutting off these free ends, and also the threads extended from one to the next button-hole, I have devised a plan by which I am enabled to inclose the said free ends, as well as the under thread and the bar-thread extended from one to the next button-hole, within machine-stitching. This stitching referred to is made in two rows, as at 15 16, (see Figs. 1 and 2,) the threads of each of the two rows being carried by an eye-pointed needle. The two eye-pointed needles carried by one needle-bar pass through the material, one at each side of the assembled ends *n* and the under thread and the bar-thread connecting the two button-holes, and when below the material the loops of thread drawn out from the eyes of the two eye-pointed needles are united by a third thread, 13, carried by a shuttle or bobbin or taken from other suitable thread-carrier. The two rows of stitching 15 16, formed as described, and appearing at the outside of the button-hole piece, as shown, connect the inner ends of the button-holes, and with the under thread, 13,

form part of the stitching to inclose and whip down the loose ends and other threads referred to at the under side of the button-hole piece. The double row of stitching 15 16 also acts to strengthen the button-hole piece and to form a finish or ornament for the same, as shown in Figs. 1 and 2.

Mechanism by which to form the two rows of stitching 15 16 and gather the threads at the under side of the material in one continuous line to be inclosed in stitching is represented in application Serial No. 226,394, filed by me on the 3d day of February, 1887.

I claim—

In a button-boot, a button-hole piece containing a series of button-holes the ends of which are connected by two rows of stitches, the loops of which below the material cooperate with a third thread to inclose not only the free ends of the needle-thread used to over-stitch the edges of the button-hole and left projecting from the small end of the button-hole, but also to cover and inclose the under thread, *s*, and bar-thread, substantially as described.

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

GEORGE S. HILL.

Witnesses:

GEO. W. GREGORY,
F. CUTTER.