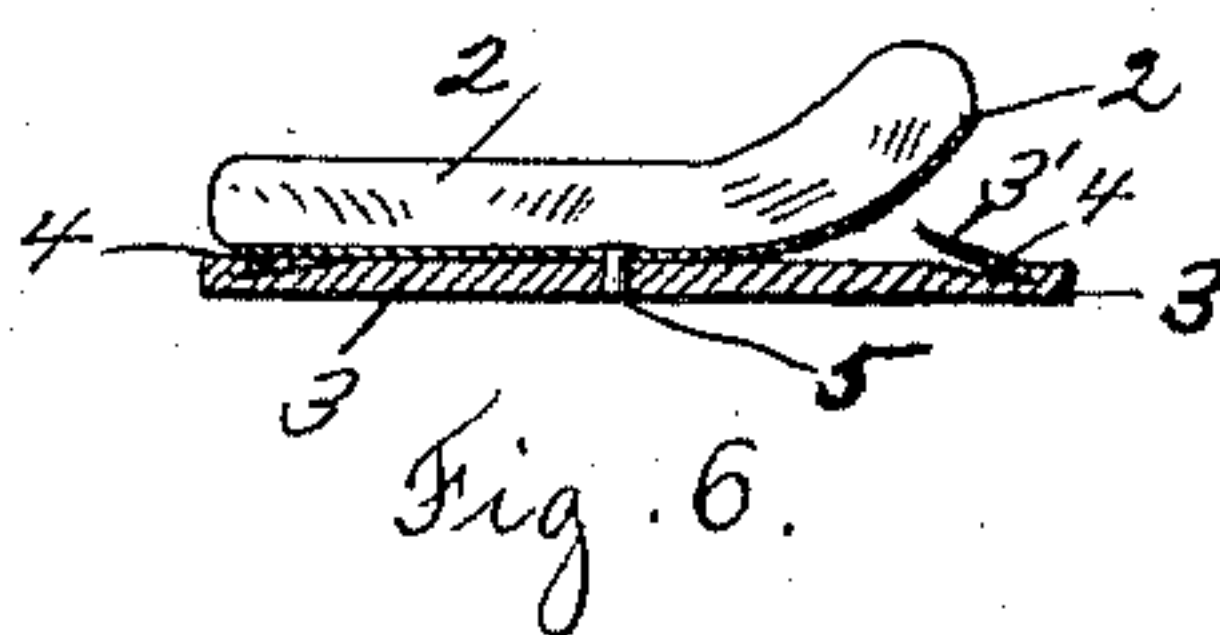
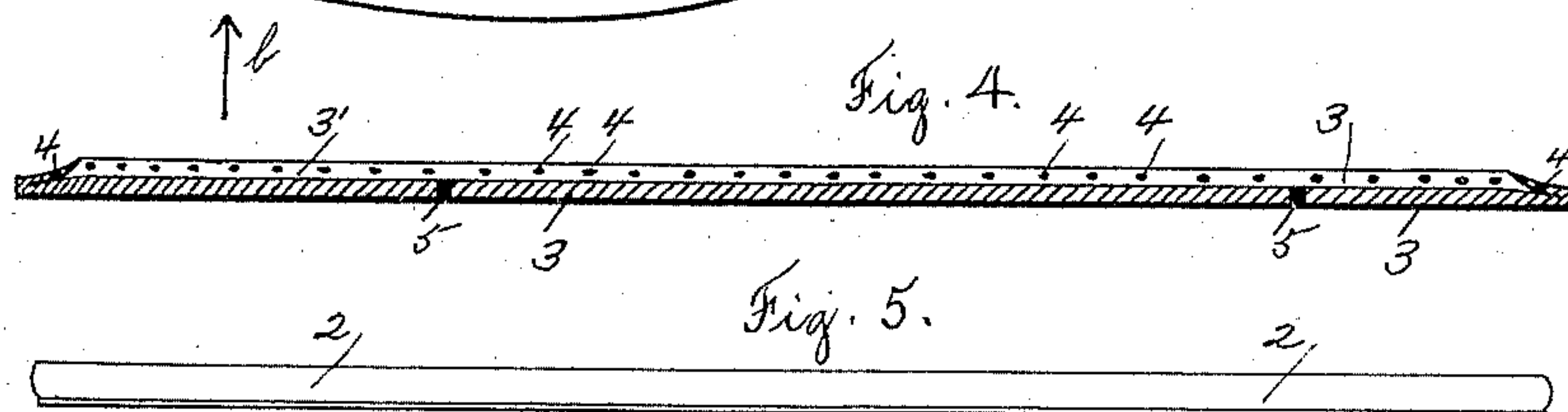
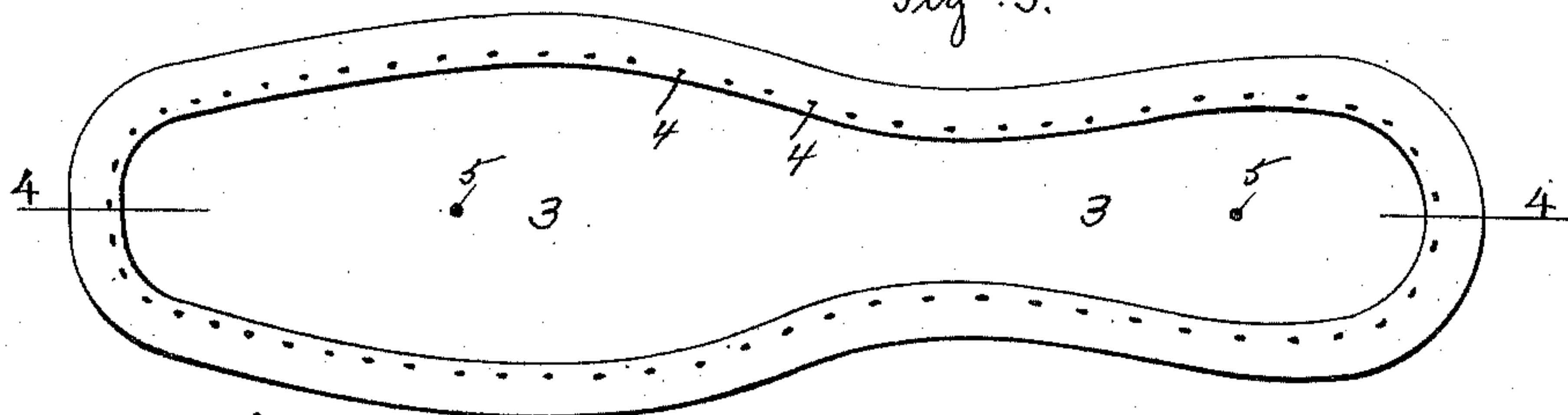
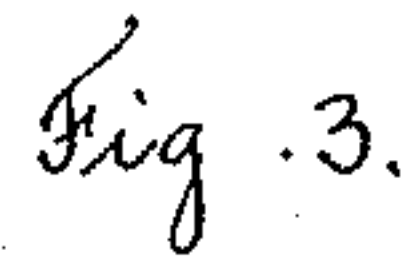
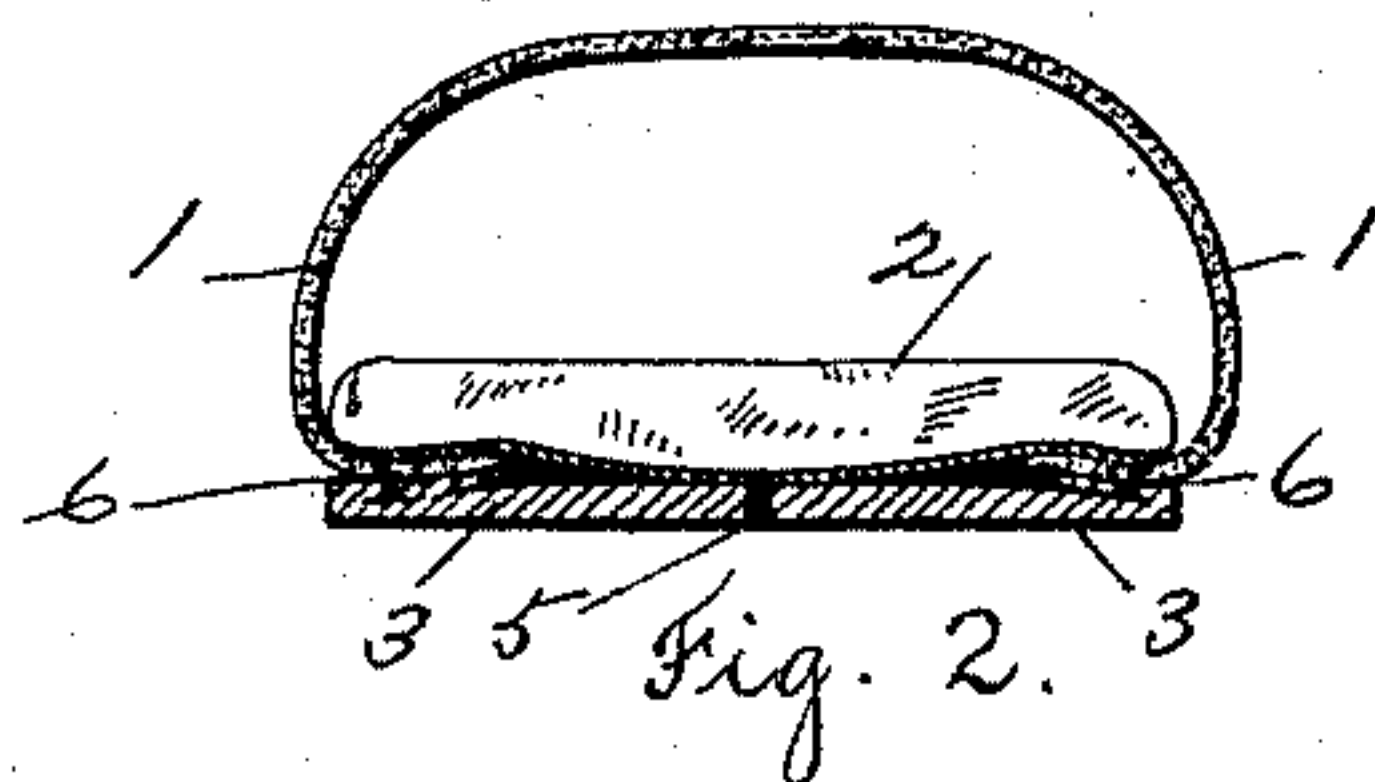
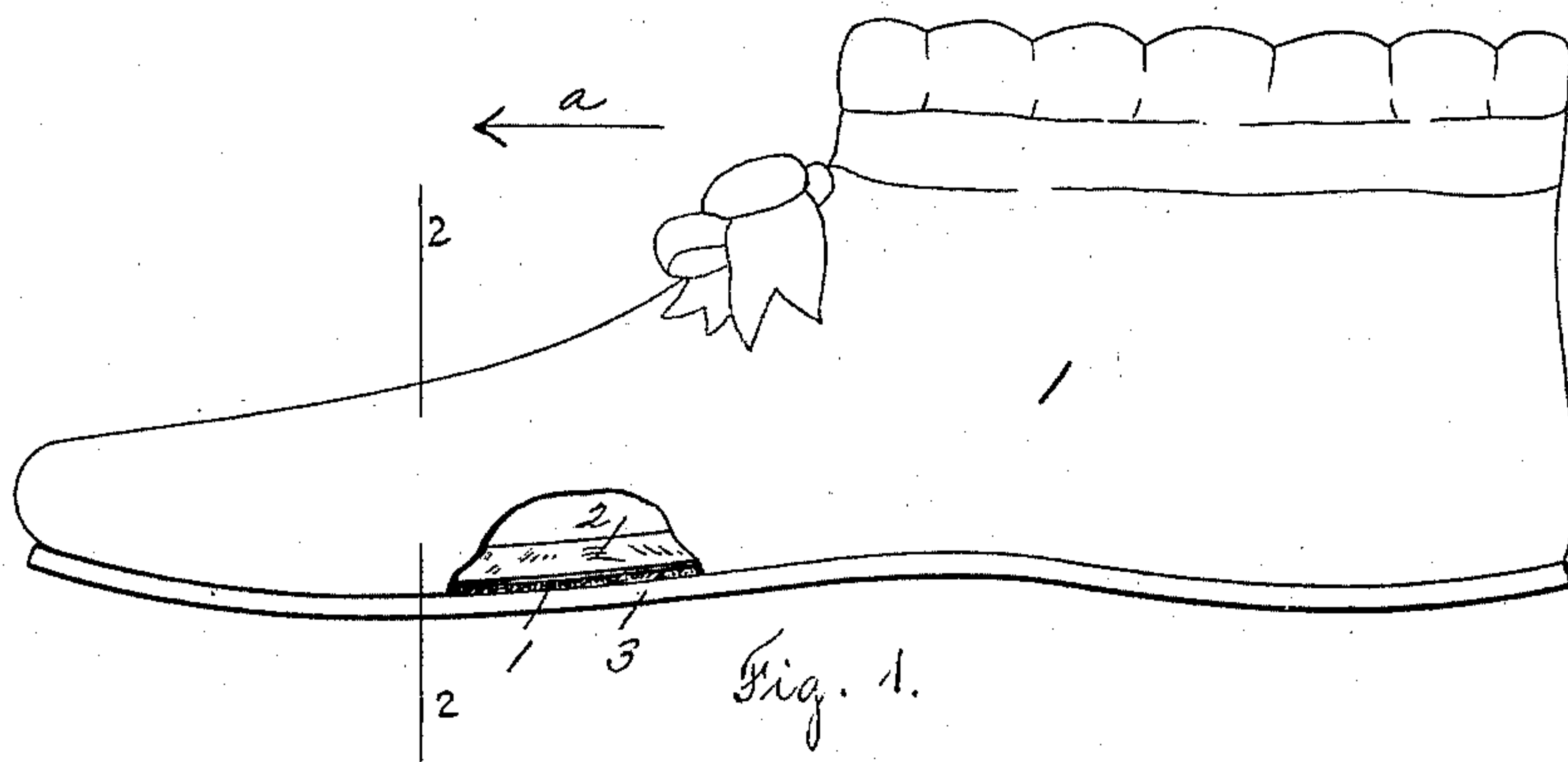


(No Model.)

E. M. BLISS.
SOLE.

No. 497,067

Patented May 9, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD M. BLISS, OF WORCESTER, MASSACHUSETTS.

SOLE.

SPECIFICATION forming part of Letters Patent No. 497,067, dated May 9, 1893.

Application filed February 10, 1893. Serial No. 461,723. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. BLISS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Worsted-Slipper Soles; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to soles which are used in connection with worsted uppers, to make worsted slippers or shoes; said soles are usually called lamb's wool soles, polar soles, &c.

The worsted slipper soles are made and sold as an article of manufacture, separate from the uppers, and are ordinarily attached to the uppers by the person who crochets or knits the worsted uppers.

The object of my invention is to improve upon the construction of worsted slipper soles, and to provide a strong and durable worsted slipper sole, consisting preferably of two thicknesses of material, the inner sole, and the outer leather sole, which are attached together, and which are so made that they may be readily attached by hand to the worsted upper, by sewing with an ordinary needle and thread, which passes through holes, previously made in the turned channel flap on the upper surface of the leather sole, and through the lower turned in edges of the worsted upper, without passing through the body of the sole and appearing on the edge or outer exposed surface of the sole. Strong thread may be used, thus giving all the strength and durability found in light leather shoes.

My invention consists in certain novel features of construction of my improved worsted slipper soles, as will be hereinafter fully described, and the nature thereof indicated by the claim.

Referring to the drawings: Figure 1 is a side view of a worsted slipper provided with my improved sole; a portion of the side of the slipper is broken away. Fig. 2 is a cross section on line 2, 2, Fig. 1, looking in the direction of arrow a, same figure. Fig. 3 is a plan view of the

outer leather sole previous to the attachment of the inner sole thereto, showing a series of holes in the turned channel flap around the edge of the sole. Fig. 4 is a cross section on line 4, 4, Fig. 3, looking in the direction of arrow b, same figure. Fig. 5 is an edge view of the inner sole, in this instance made of lamb's wool, and cut from the sheep skin, tanned with the wool on, and, Fig. 6 is a cross section through the outer leather sole, and the inner sole; one edge of the inner sole is shown raised to allow of the sewing of the lower edge of the worsted upper to the turned channel flap on the outer sole.

In the accompanying drawings, 1 is a crocheted or knit upper, of any desired shape, 2 is the inner sole, in this instance of lamb's wool, and 3 the outer sole of leather. The outer sole 3 is channeled upon its inner surface around the edge thereof, and the turned channel flap portion 3' bent up, as shown in Figs. 4 and 6, and a series of holes 4, at regular intervals, punched or made in the turned channel flap 3'. Said holes 4 extend through the flap 3' in a horizontal plane, above the plane of the sole proper, as shown in Fig. 4.

The inner sole 2 is preferably attached to the outer leather sole 3 by one or more rivets or screws 5, preferably in the center portion of the soles, so as to hold said soles together, and at the same time allow the edges of the inner sole 2 to be freely turned up, as shown in Fig. 6, to permit of passing the thread 6, shown in Fig. 2, which unites the worsted upper 1 to the outer sole 3, through the holes 4 in the turned channel flap 3', and through the turned in edges of the worsted upper 1, which extends between the edges of the outer leather sole 3, and the inner sole 2, as shown in Fig. 2.

The worsted upper is preferably turned inside out, and sewed to the outer leather sole by hand, by a common needle and thread; the needles passing through the holes 4 in the turned channel flap 3', and through the lower turned in edge of the worsted upper. After the worsted upper is sewed to the sole as above described, it is turned so as to bring the stitched portion upon the inside of the sole, and the inner sole 2 is then flattened down as shown in Fig. 2, and secured to the outer

leather sole by gum or other adhesive material, that adheres by the application of heat, or otherwise secured if preferred.

5 The advantages of my improved construction of soles for worsted slippers or shoes, will be readily appreciated by those skilled in the art.

10 I produce a strong and durable worsted slipper sole, with the outer or wearing sole made of leather preferably sole leather, and said outer sole provided with a series of holes extending through the turned channel flap upon its inner surface which holes extend in a horizontal plane above the plane of the sole proper, and through which the stitches, which unite the sole to the worsted upper pass, thus doing away with the sewing through the sole so that the stitches will be exposed upon the outer wearing surface thereof or the edge thereof. I prefer to attach the inner sole to the outer leather sole by one or more rivets or screws through the center portion of the soles, but if preferred adhesive gum, or other means for attaching the soles together may be employed, and said soles may be permanently attached together, or temporarily, so that the inner sole may be removed during the operation of sewing the worsted upper to the leather sole, in order to permit of free access to the holes in the turned channel flap

of the leather sole, and after the worsted upper and leather sole are attached together, the inner sole may be attached.

I have described herein, and shown in the drawings, the inner sole made of lamb's wool, the tanned skin with the wool on it, and I prefer to use lamb's wool for the inner sole, but it will be understood that I do not limit myself to the use of an inner sole of lamb's wool, as I may use with very good result, an inner sole of felt or other pliable material.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with the outer leather sole provided with a turned channel flap upon its inner surface, extending continuously around the edge of the sole, said turned channel flap provided with a series of holes extending through the flap portion, in a plane above the plane of the sole, of an inner sole of lamb's wool, or other pliable material secured to the outer sole along its central portion with its edges free and adapted to be raised, for the purpose stated, substantially as set forth.

EDWARD M. BLISS.

Witnesses:

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