(No Model.)

G. W. YOUNG.

INSOLE.

No. 581,146. Patented Apr. 20, 1897.

Fig. 2.

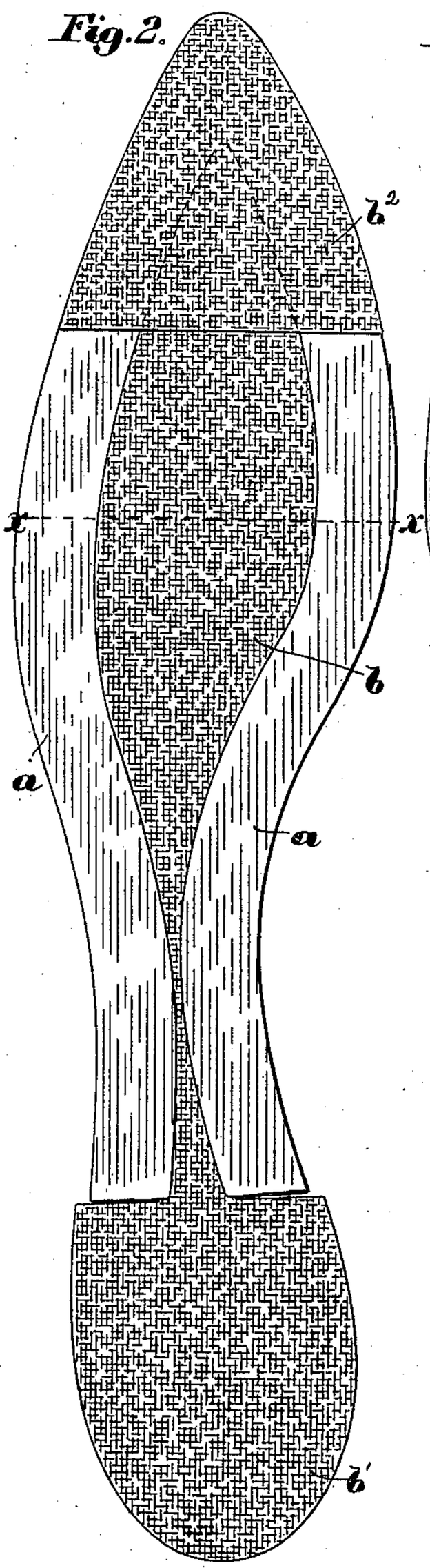


Fig. 1.

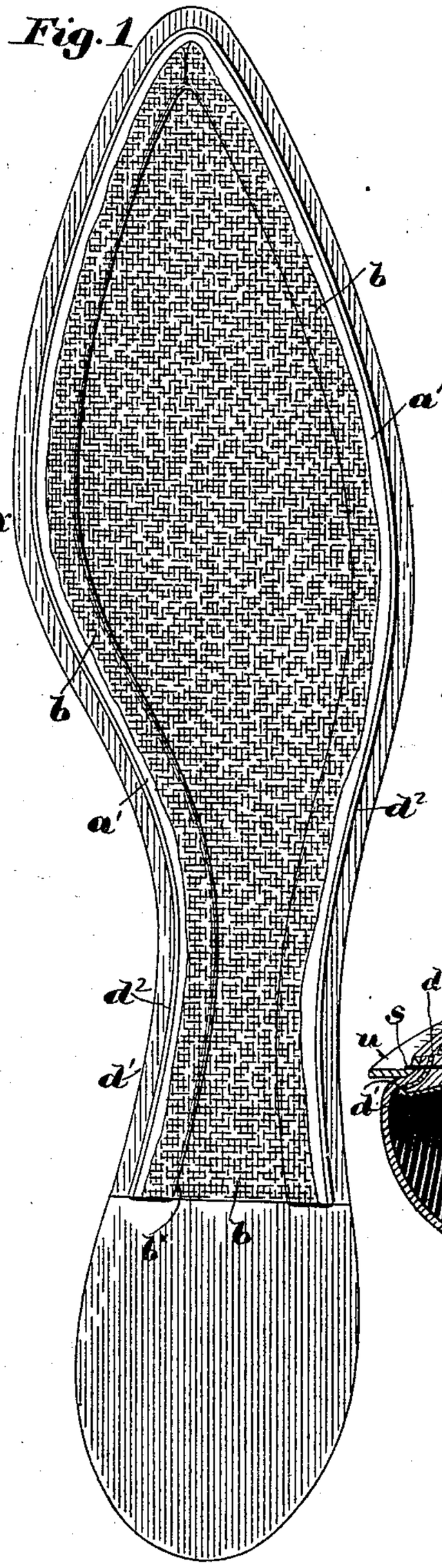


Fig. 3.

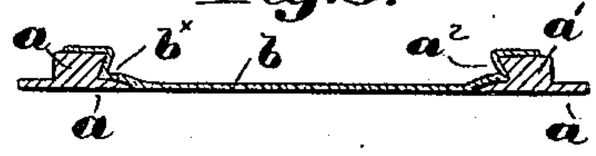


Fig. 5.

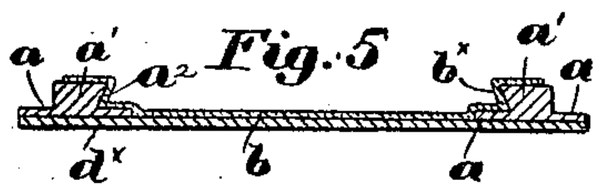
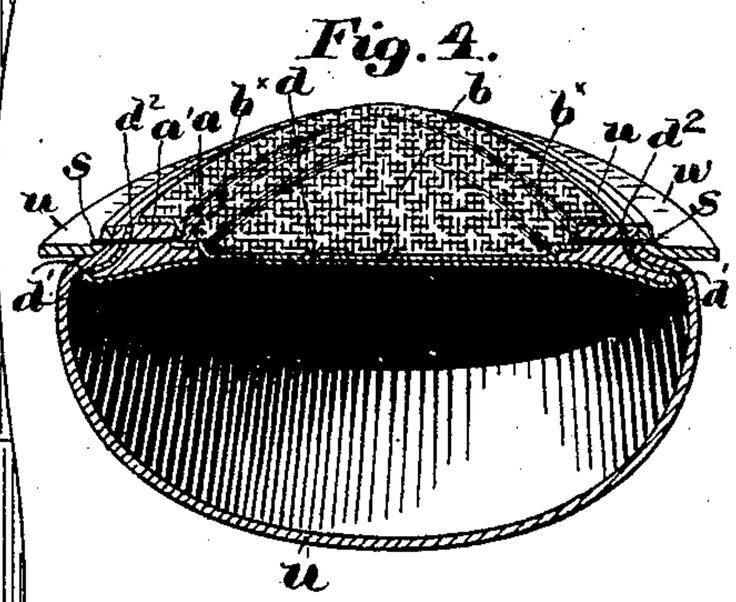


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE W. YOUNG, OF LYNN, MASSACHUSETTS.

INSOLE.

SPECIFICATION forming part of Letters Patent No. 581,146, dated April 20, 1897.

Application filed June 23, 1896. Serial No. 596,592. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. YOUNG, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Insoles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In ordinary machine-sewed welted boots and shoes the welt and upper are usually secured to the insole by a line of stitching passing through the flap or between substance into the channel, requiring an insole thick enough when channeled to leave a sufficiently heavy lip or channel-flap. Rather stiff stock of good quality and rather expensive has to be employed; and this invention has for its object the production of a novel, cheap, and flexible insole which possesses sufficient strength to enable it to be used in the manufacture of welted boots and shoes.

In accordance with my invention I make the insole proper preferably of textile material, as, for instance, stout canvas, of the requisite shape and size, to which is suitably secured a rib or wale of leather, the textile fabric being so arranged with relation thereto that it provides a firm and strong hold for the stitches securing the insole and upper together. Preferably a thin sock-sole is made as a part of the insole, though it may be applied separately, if desired.

Figure 1 is a plan view of the outer face of an insole embodying my invention with the sock-sole forming an attached part thereof. Fig. 2 is an inner face view of the insole. Fig. 3 is a transverse sectional view thereof, taken on the line $x\,x$, Fig. 2. Fig. 4 is a sectional view of the insole shown in Fig. 1 with the upper and welt secured thereto, and Fig. 5 is a transverse sectional view of a modification to be referred to.

In making my improved insole I take narrow and comparatively thin leather strips, preferably, and pass them through a suitable shaping apparatus to leave a thin flexible base a and a wale or rib a' on one side thereof, as most clearly shown in Figs. 3 to 5, inclusive, the inner wall a^2 of the rib being slightly undercut, as shown. Waste strips and cuttings can be readily used for this purpose, making their production very cheap, and the prepared strips are then bent to shape, as shown in Figs. 1 and 2, extending from at or near the breast-line of the heel to and around the toe. A piece of thin material b, preferably stout canvas or duck, having, as shown, a heel portion b', is applied to the ribbed sides of the wale-strip and secured thereto by cement, the thin fabric or "body," as it may be termed, being of sufficient size to admit of its being creased along the line $b^\times$, Fig. 1, to enter the undercut portion a^2 of the rib or wale a' and fit snugly thereover.

The edge of the body b is not necessarily carried over and entirely around the rib a', as I have found that sufficient strength is attained by the construction herein shown.

At the toe portion of the insole I prefer to attach a reinforcing-piece b^2 of canvas, at the under side, Fig. 2, to give additional strength thereat.

By the construction described the rib or wale a' is so greatly strengthened and reinforced, even when made of very poor stock, that stitches will firmly hold, the greater portion of the strain being taken up by the body b, the rib serving mainly to mold or shape the insole properly to receive the stitches s, uniting the upper u and welt w thereto, Fig. 4.

The upper and welt may be secured to my novel insole by a "Goodyear" or other similar type of sole-sewing machine.

In Figs. 1 and 4 I have shown the sock-sole as secured to and forming a part of the insole, said sock-sole d being made of thin leather laid upon and cemented to the inner face of the insole, (shown in Figs. 1 and 3,) the edges of the sock-sole being bent at d' over the base a and up against the outer wall of the rib or wale a' at d^2 and cemented in place. The stitches s then pass through not only the rib or wale of the insole proper, but also through the upturned portion d^2 thereof, so that it is absolutely impossible for the sock-sole to curl up in use along its edges.

In Fig. 5 the sock-sole $d^\times$ is shown as secured to the inner face of the insole, but terminating at the base of the rib-carrying strip, in such construction the stitches uniting the insole, welt, and upper having no connection with the sock-sole.

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

1. An insole for boots and shoes, composed of an unchanneled body of thin material, and a stitch-receiving strip secured thereto near its edges, having an extended base and on its adjacent face a rib or wale to receive the stitches which unite the upper and welt to the insole, the body being molded about the rib or wale, substantially as described.

2. An insole for boots and shoes, composed of a flat, unchanneled body of thin material, a stitch-receiving strip secured thereto, having on its adjacent side a rib or wale, and a sock-sole cemented to the under side of the insole, the edges of said sock-sole being turned up against the outer wall of the rib or wale, and the body molded about the latter, whereby the stitches uniting the upper and welt to the insole will pass through the body, rib, and upturned portion of the sock-sole, substantially as described.

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

GEO. W. YOUNG.

Witnesses:

JOHN C. EDWARDS,

AUGUSTA E. DEAN.