

(No Model.)

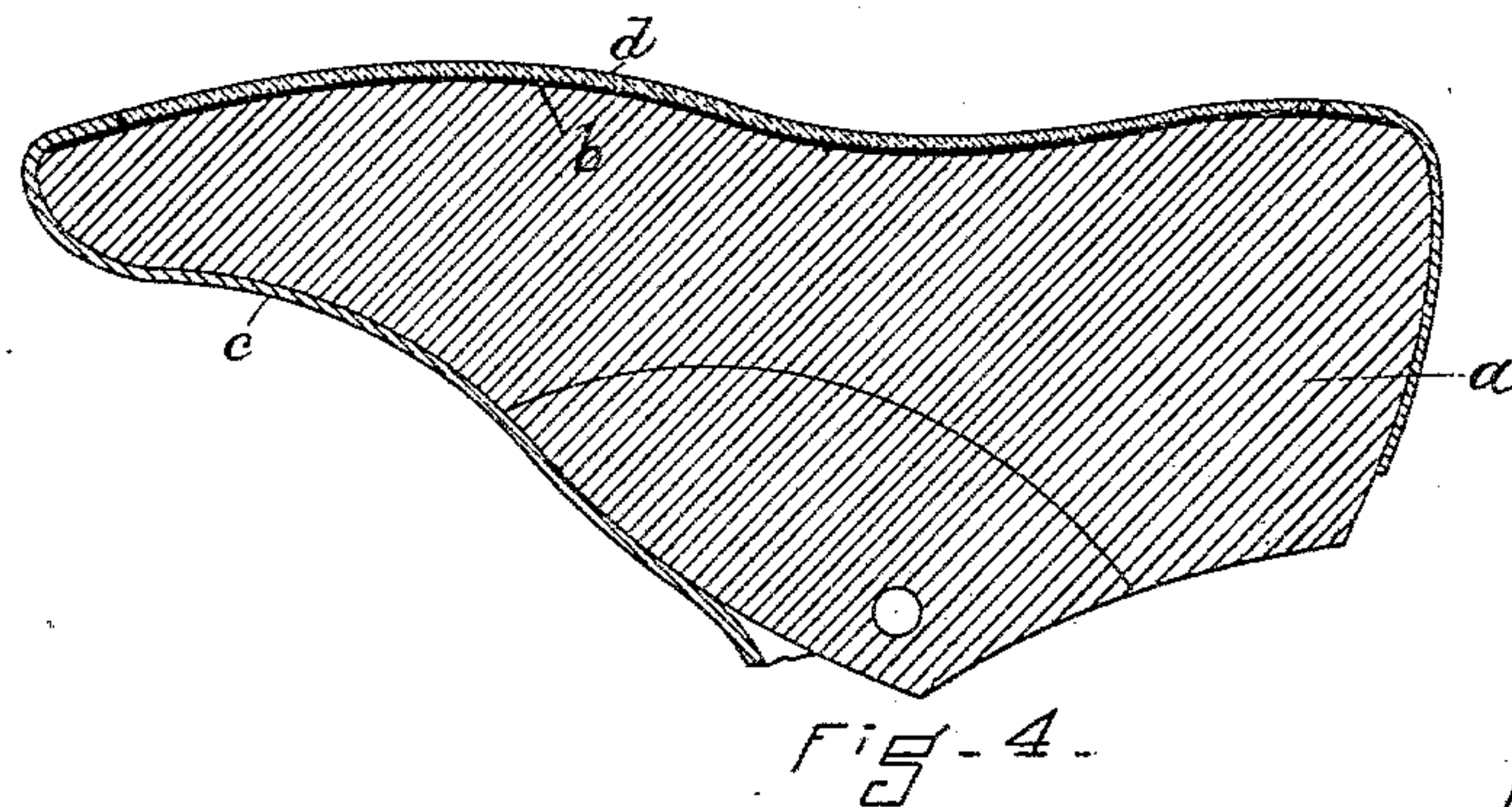
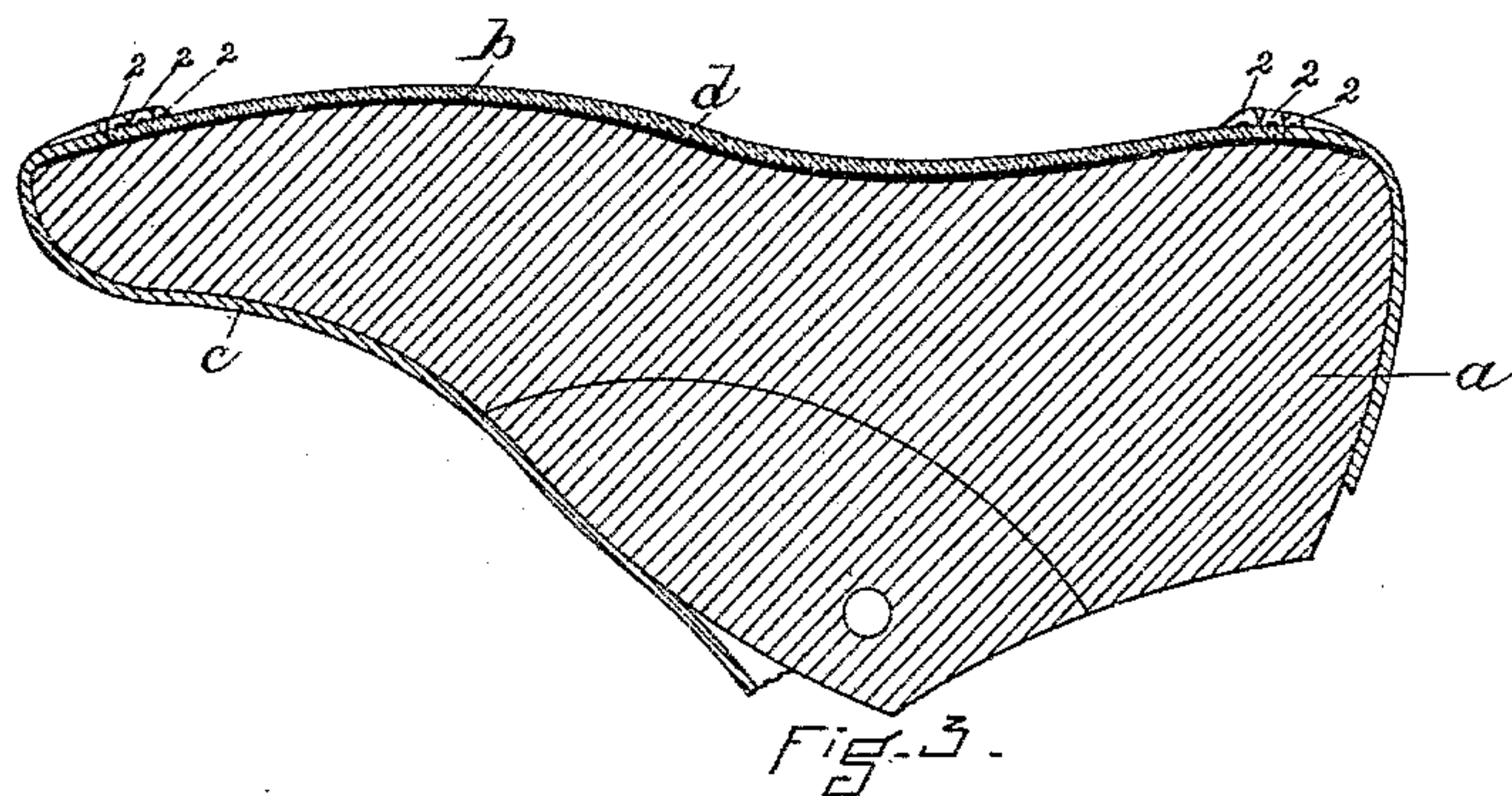
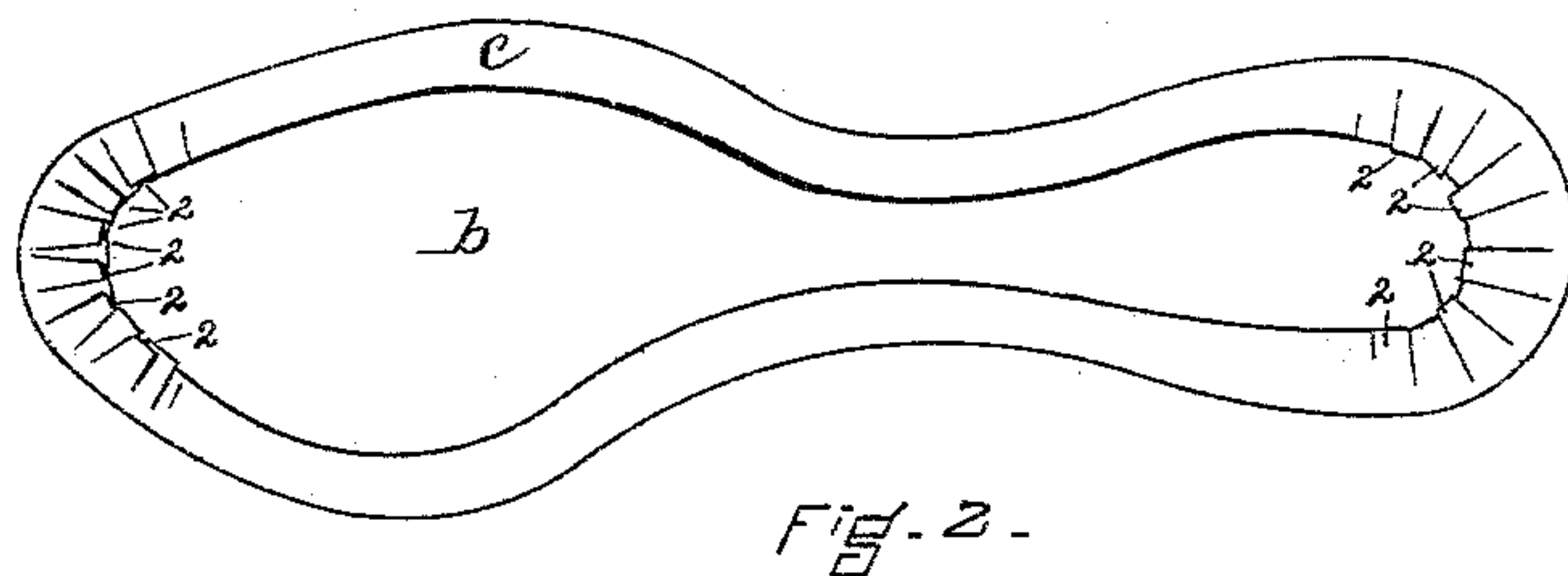
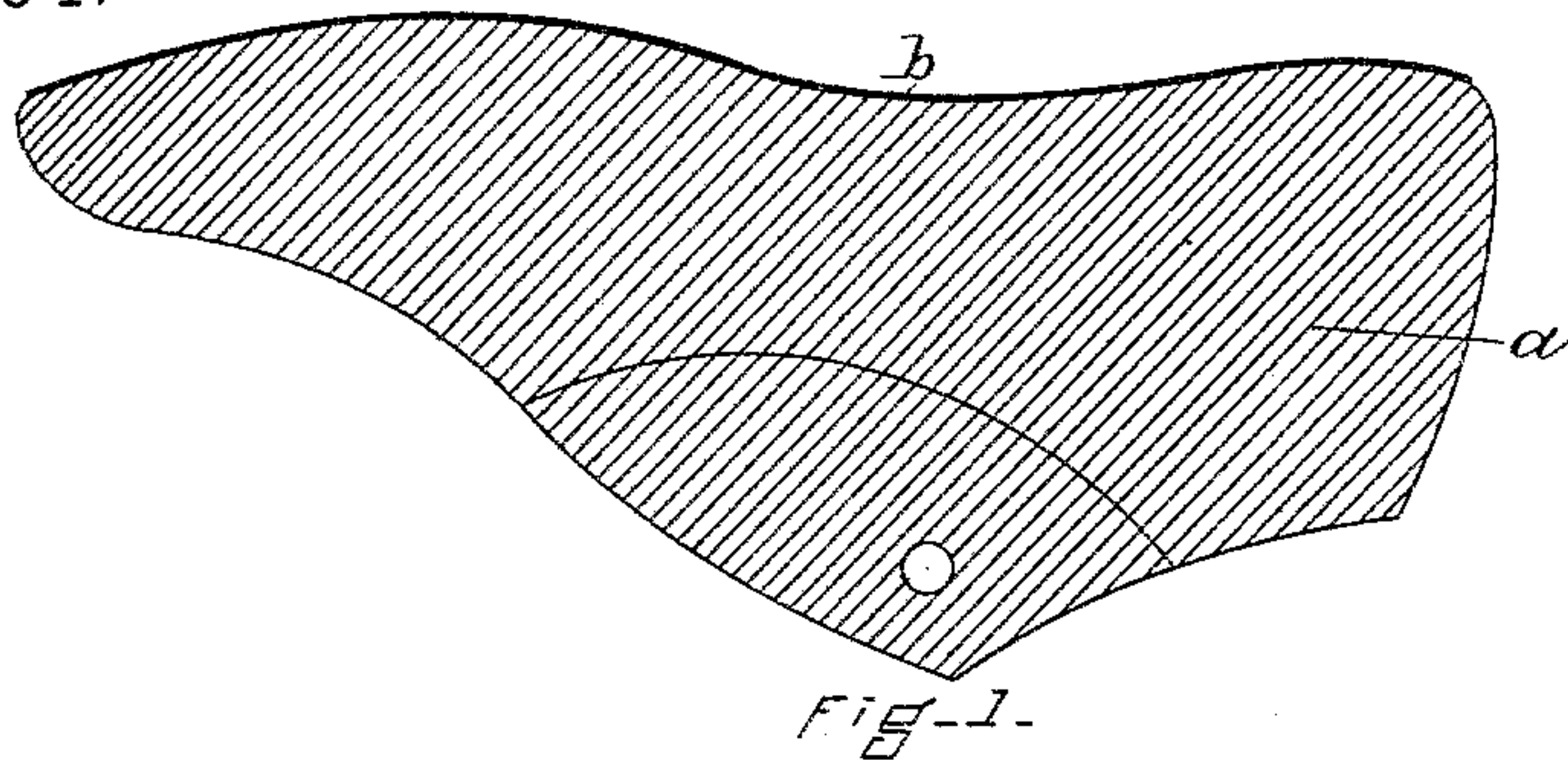
2 Sheets—Sheet 1.

A. F. SMITH.

MANUFACTURE OF BOOTS OR SHOES.

No. 373,694.

Patented Nov. 22, 1887.



WITNESSES.
A. D. Groom
J. T. Ball.

INVENTOR -
A. F. Smith
by Wright, Brown & Connelley
Atty.

(No Model.)

2 Sheets—Sheet 2.

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MANUFACTURE OF BOOTS OR SHOES.

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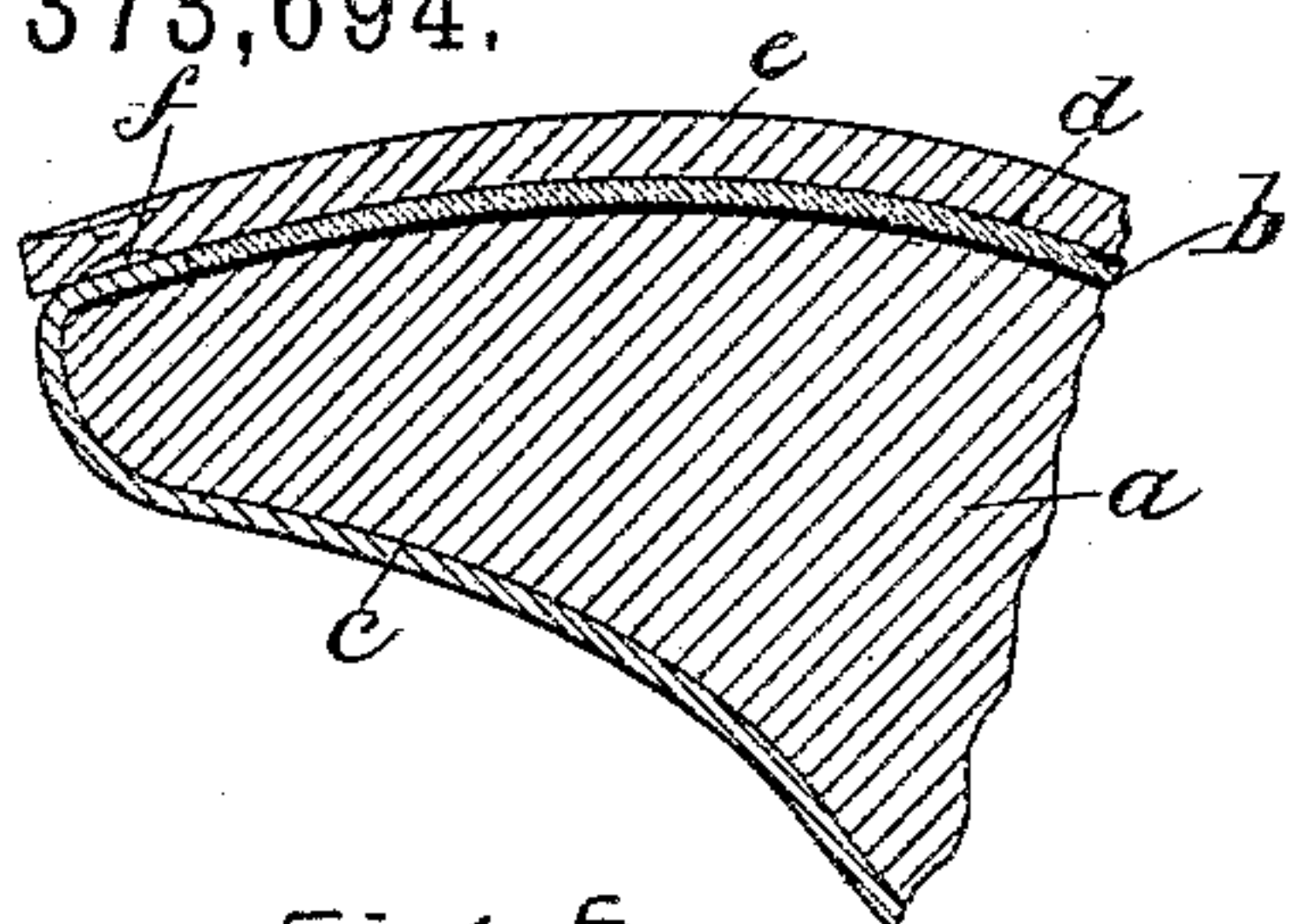


Fig-5-

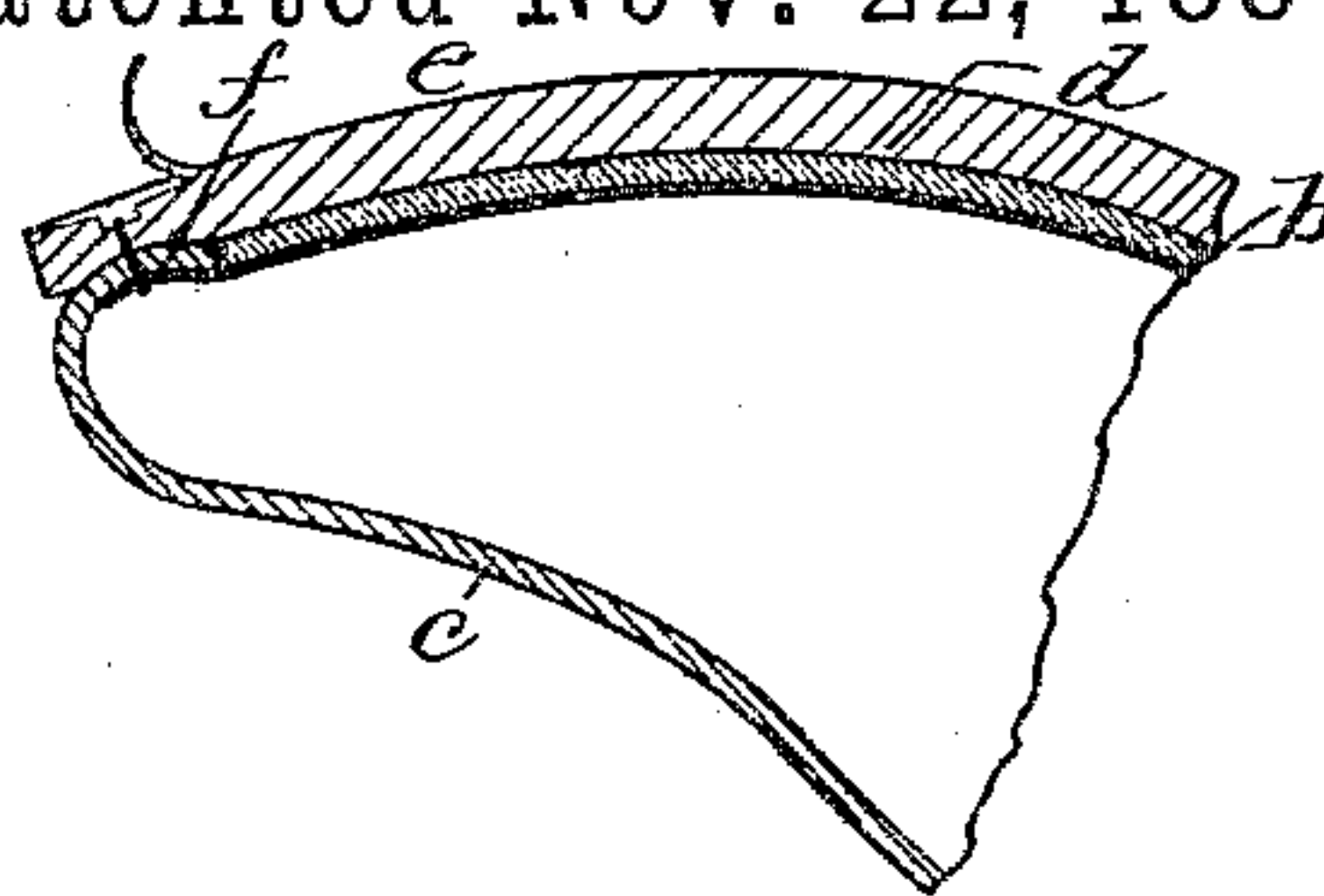


Fig-6-

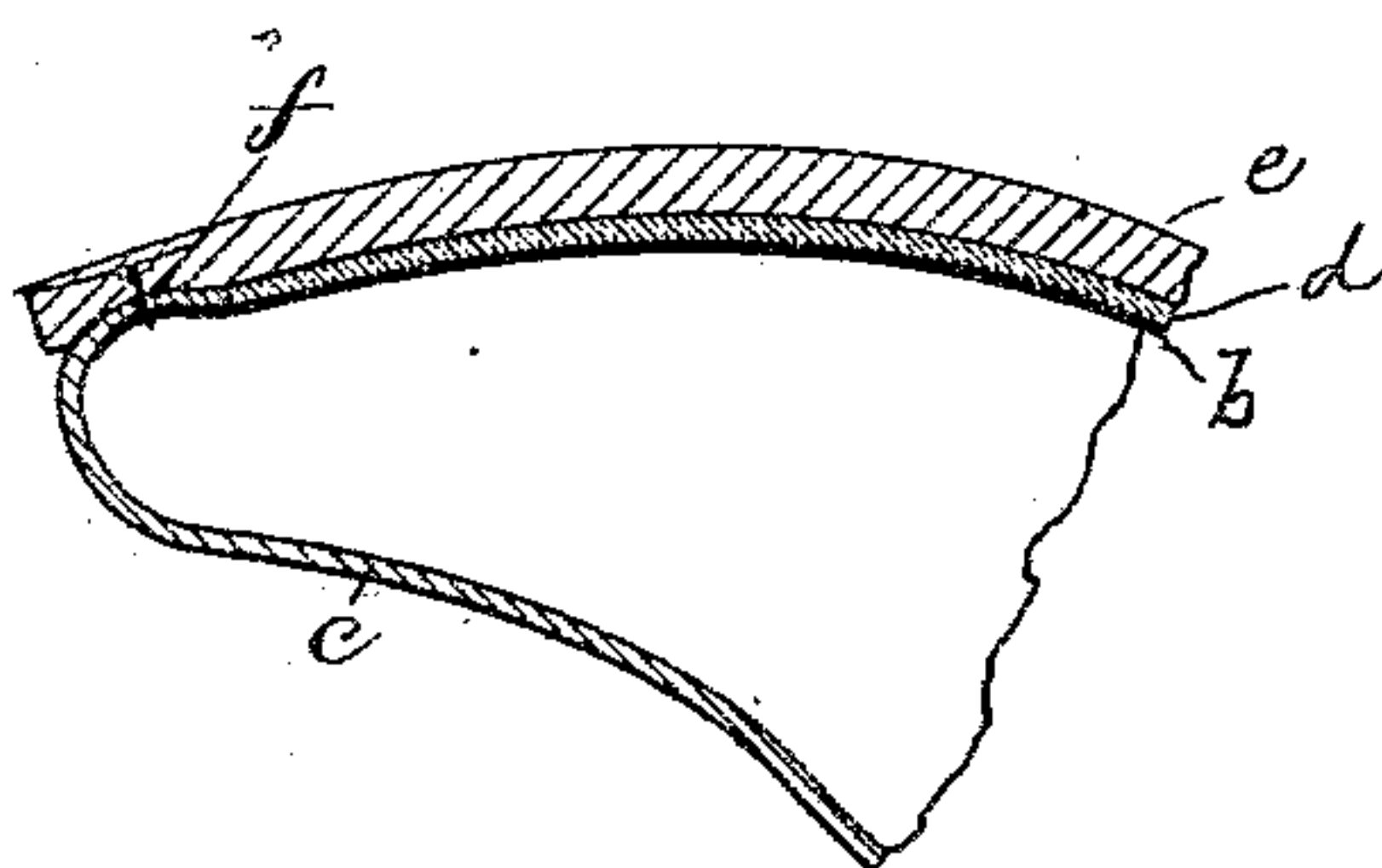


Fig-7-

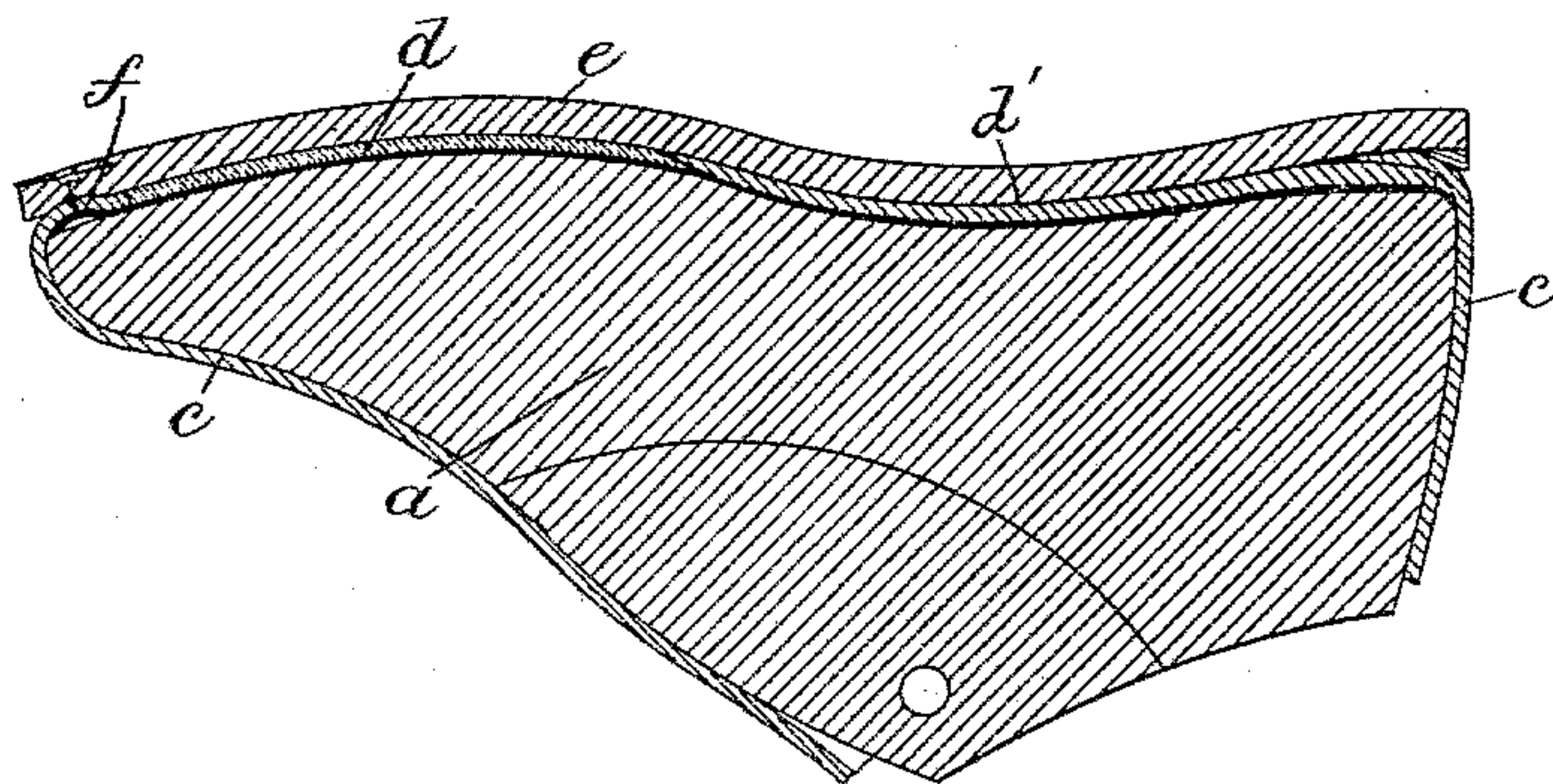


Fig-8-

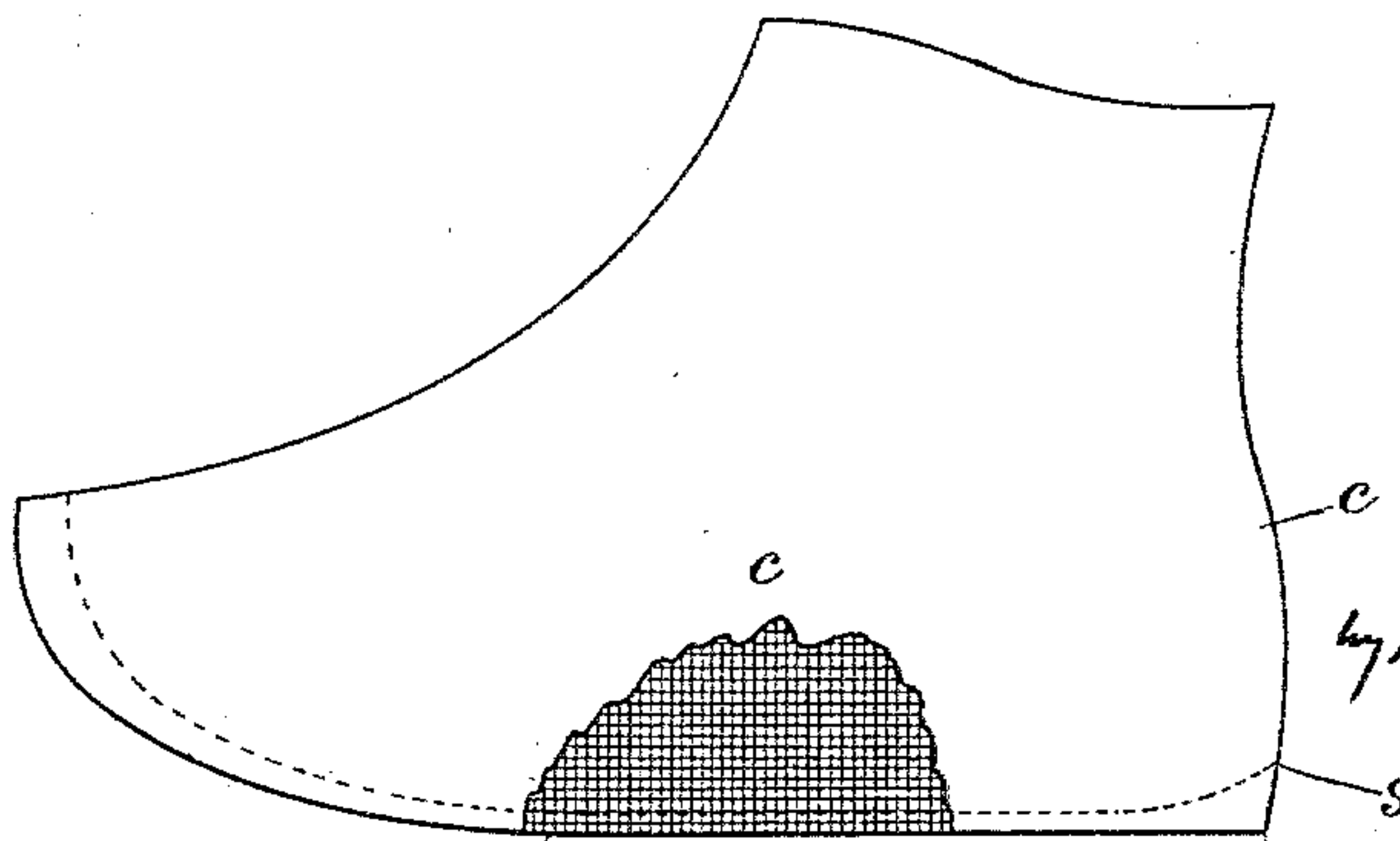


Fig-9-

WITNESSES.
A. D. Grover.
J. T. Ball.

INVENTOR.
A. F. Smith
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UNITED STATES PATENT OFFICE.

AARON F. SMITH, OF LYNN, MASSACHUSETTS.

MANUFACTURE OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 373,694, dated November 22, 1887.

Application filed October 3, 1887. Serial No. 251,250. (No model.)

To all whom it may concern:

Be it known that I, AARON F. SMITH, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Boots or Shoes and Methods of Making the Same, of which the following is a specification.

This invention relates to the manufacture of boots or shoes described in Letters Patent granted to A. Seaver, April 5, 1887, No. 360,822, and Letters Patent granted to me October 18, 1887, No. 371,713, in which a boot or shoe is described having the wearing-sole secured to the upper by cement, the shoe shown in the Seaver patent having no inner sole, while the shoe shown in my patent has an inner sole extending from the heel along the shank and terminating at the ball.

My present invention relates more especially to the construction shown in my above-named patent; and it has for its object to improve the shoe and the mode of manufacturing the same in the particulars which will be hereinafter specified.

Of the accompanying drawings, forming a part of this specification, Figures 1 to 8, inclusive, represent views of the different operations which comprise my improved method. Fig. 9 represents a side view of the unlasted upper.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I first place upon the bottom of a last, *a*, a false inner sole or sole-lining, *b*, of canvas or other reasonably-strong cloth, the same substantially covering the bottom of the sole.

In making a shoe of the character described in my above-named patent I place on the lining an inner sole, *d*, extending from the heel along the shank and terminating at the ball. I then take an upper, *c*, the usual cloth lining, *c'*, of which has been secured to the edge of the upper by stitches near the edge of the upper, as shown in Fig. 9, so that the said lining, when cemented to the false inner sole or sole-lining, as next described, will hold the outer portion of the upper to said sole-lining. I place the upper *c* on the last and draw its edges over upon the lining *b*, and upon the incomplete inner sole secure said edges to the exposed fore part of the sole-lining by cement, using a

strong and quickly-hardening cement for this purpose. I find that by this means I can secure the edges of the upper with sufficient firmness and entirely do away with lasting-tacks and lasting threads or cords.

In the operation of cementing the toe-portion of the upper to the sole-lining the operator forms the surplus stock into plaits or folds 2 2, as shown in Figs. 2 and 3. After the cementing operation the projecting portions of the plaits or folds are trimmed off with a suitable knife to make the toe portion of uniform thickness with the other overlapping portions of the upper, as shown in Fig. 3. The cement connection of the upper to the sole-lining enables the trimming operation to be performed with perfect freedom, there being no nails or threads to be avoided by the knife. After the trimming operation a filling, *d*, of any suitable cheap material, is placed on the sole-lining to fill the space inclosed by the edges of the upper, said filling being of the same thickness as the upper stock, and then an outer sole, *e*, coated on its inner surface with cement, is pressed against the bottom of the lasted upper and against the filling and the incomplete inner sole thereon. I use a suitable sole-laying machine for this purpose, having a flexible pad which conforms to the shape of the bottom of the last, as described in the patents above referred to. The inwardly-turned edge of the fore part of the upper is therefore secured by cement to the sole-lining *b* on one side and to the sole *e* on the other side, and is thus firmly held. The shoe is next removed from the last, and the sole *e* is permanently united to the upper sole-lining and incomplete inner sole by stitches or other permanent fastenings applied in any suitable way.

I prefer to form a groove, *f*, in the inner surface of the sole *e* to receive those portions of the upper in which the securing-stitches are placed, so that said stitches will be somewhat sunken below the general level of the upper surface of the sole-lining, as shown in Figs. 6 and 7.

The boot or shoe thus produced is extremely light and flexible and presents a smooth foot-bearing surface at the inside, the trimming away of the plaits or folds of the upper making the inner surface at the toe much smoother than it could otherwise be, while the filling

makes the edges of the upper entirely imperceptible.

By cementing the upper to the sole-lining all annoyance and discomfort to the wearer caused by lasting tacks or cords is avoided.

My invention is not limited to a shoe having the incomplete inner sole, *d*, as it may be applied to shoes without any inner sole, in which case the entire edge of the upper would be cemented to the sole-lining *b*, and the plaits or folds at the heel would be trimmed off as well as those at the toe.

I claim—

1. The improved method of making boots or shoes, the same consisting in placing a sole-lining on the bottom of the last, drawing the edge of the upper over upon and cementing it to said sole-lining, trimming off the surplus stock from the inwardly-turned edge of the upper, cementing an outersole to the inwardly-turned edge of the upper, and finally uniting the outer sole, upper, and sole-lining by permanent fastenings, as set forth.

2. The improved method of making boots or shoes, the same consisting in placing a sole-lining on the bottom of the last, securing the upper-lining to the edge of the upper, drawing the edge of the upper over upon and cementing its lining to said sole-lining, trimming

off the surplus stock from the inwardly-turned edge of the upper and its lining, cementing an outer sole to the inwardly-turned edge of the upper, and finally uniting the outer sole, upper, and sole-lining by permanent fastenings, as set forth.

3. A boot or shoe composed of the sole-lining *b*, the upper having its edges cemented to the under side of the sole-lining and trimmed at the toe portion, the filling placed in the space inclosed by the edge of the upper, and the outer sole having a stitch-receiving groove in its inner surface and united to the upper and lining by stitches which are depressed below the foot-bearing surface within the shoe by the groove *f*, as set forth.

4. The improved method of lasting uppers, the same consisting in placing a false inner sole or sole-lining on the bottom of the last and then cementing the inwardly-turned edge of the upper to said lining, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 24th day of September, A. D. 1887.

AARON F. SMITH.

Witnesses:

C. F. BROWN,

A. D. HARRISON.