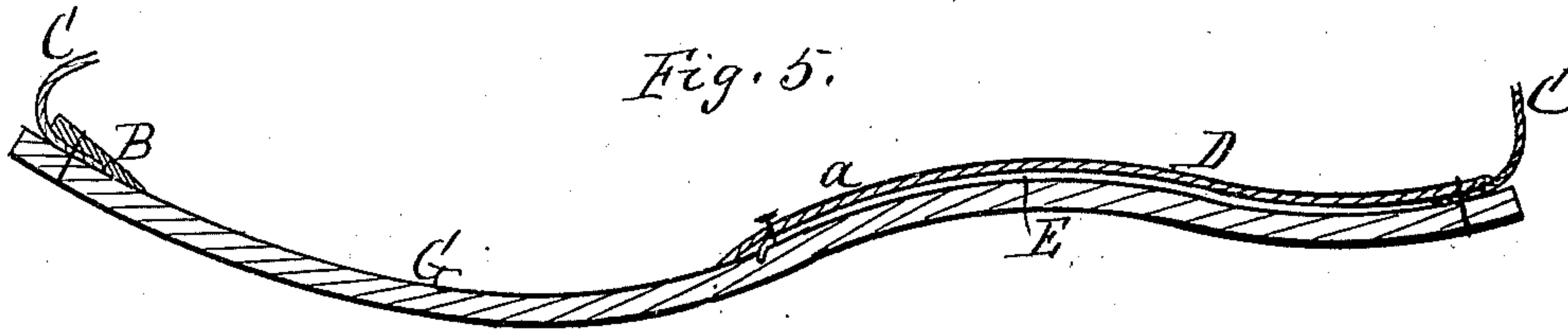
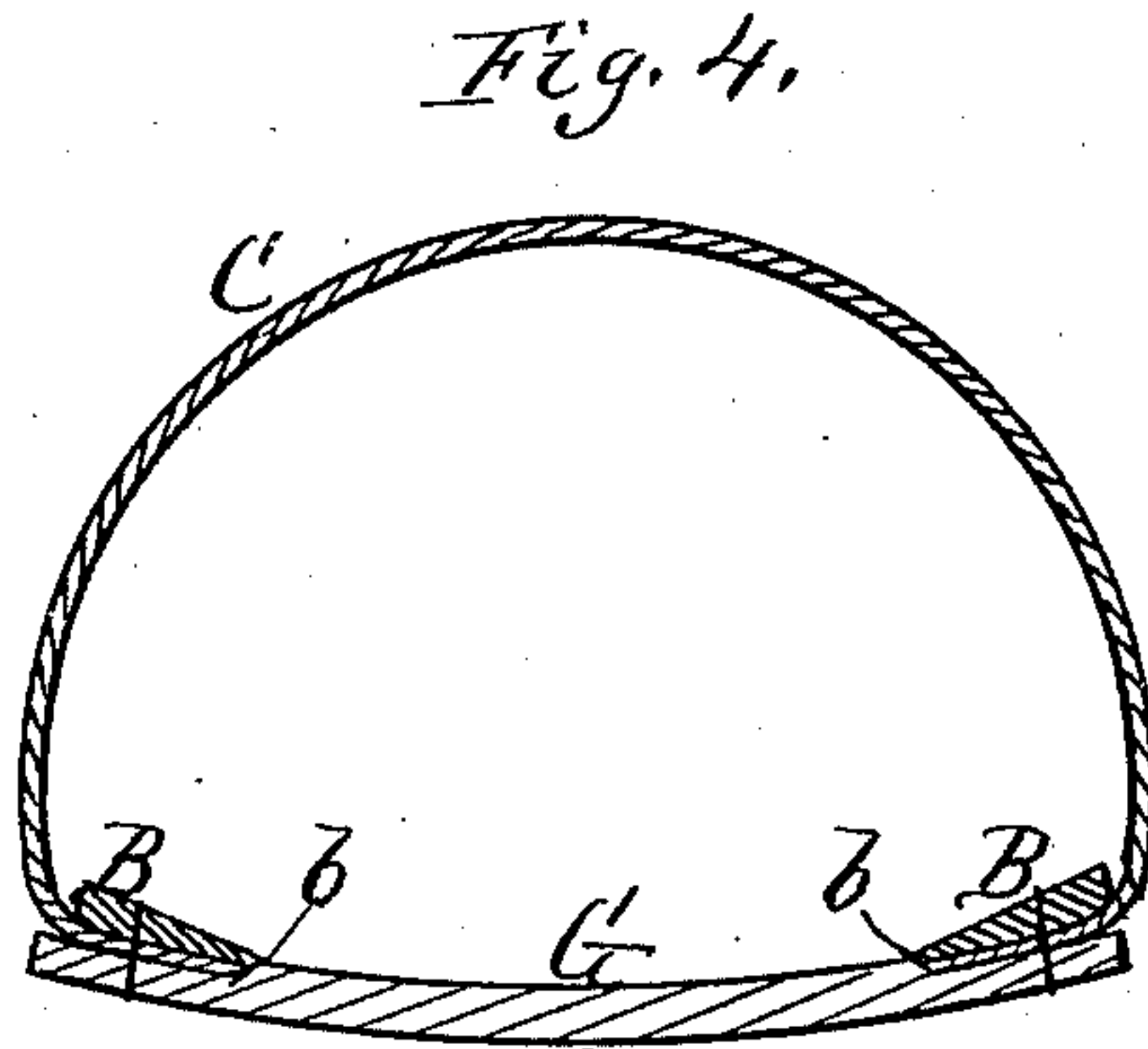
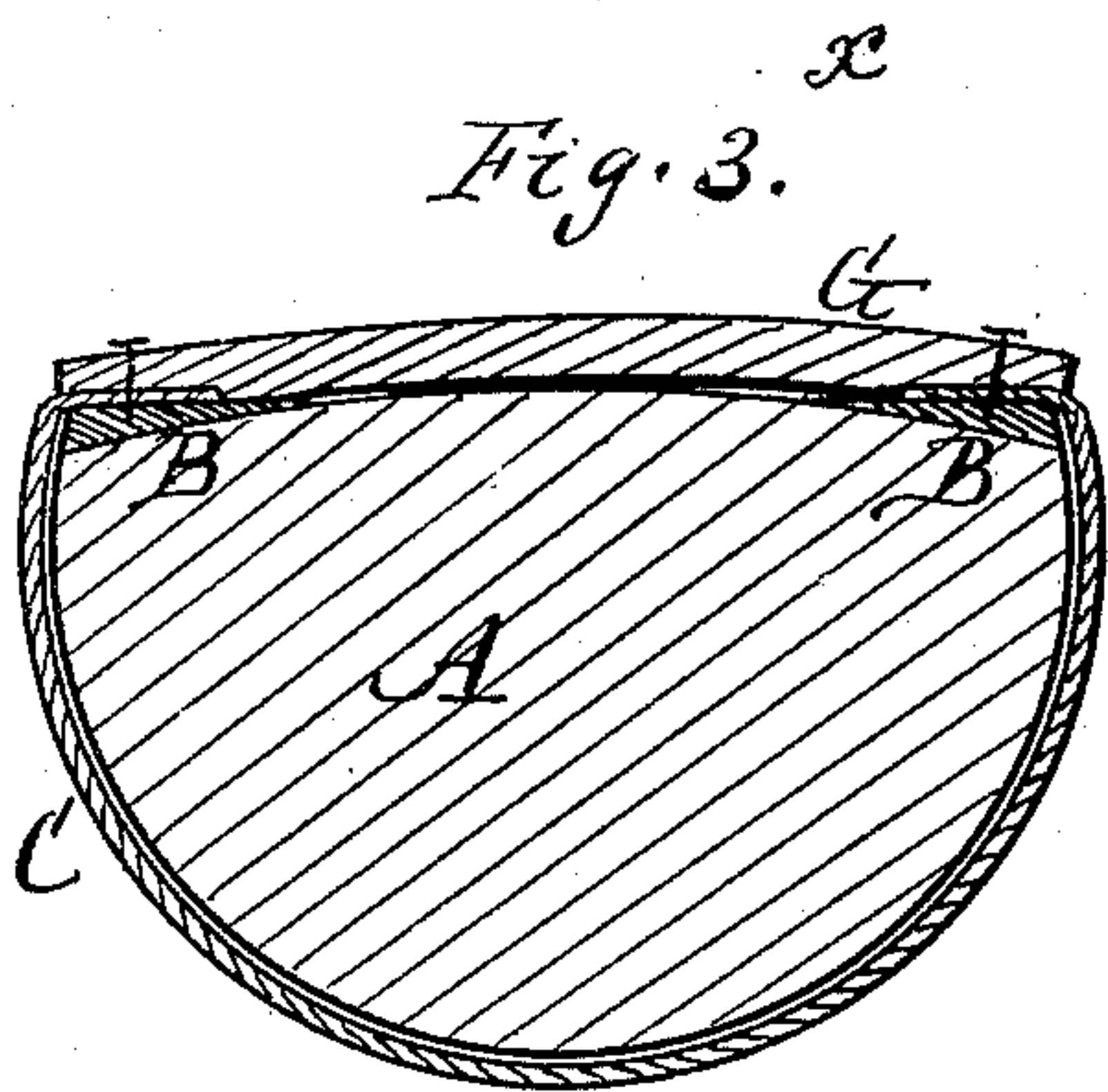
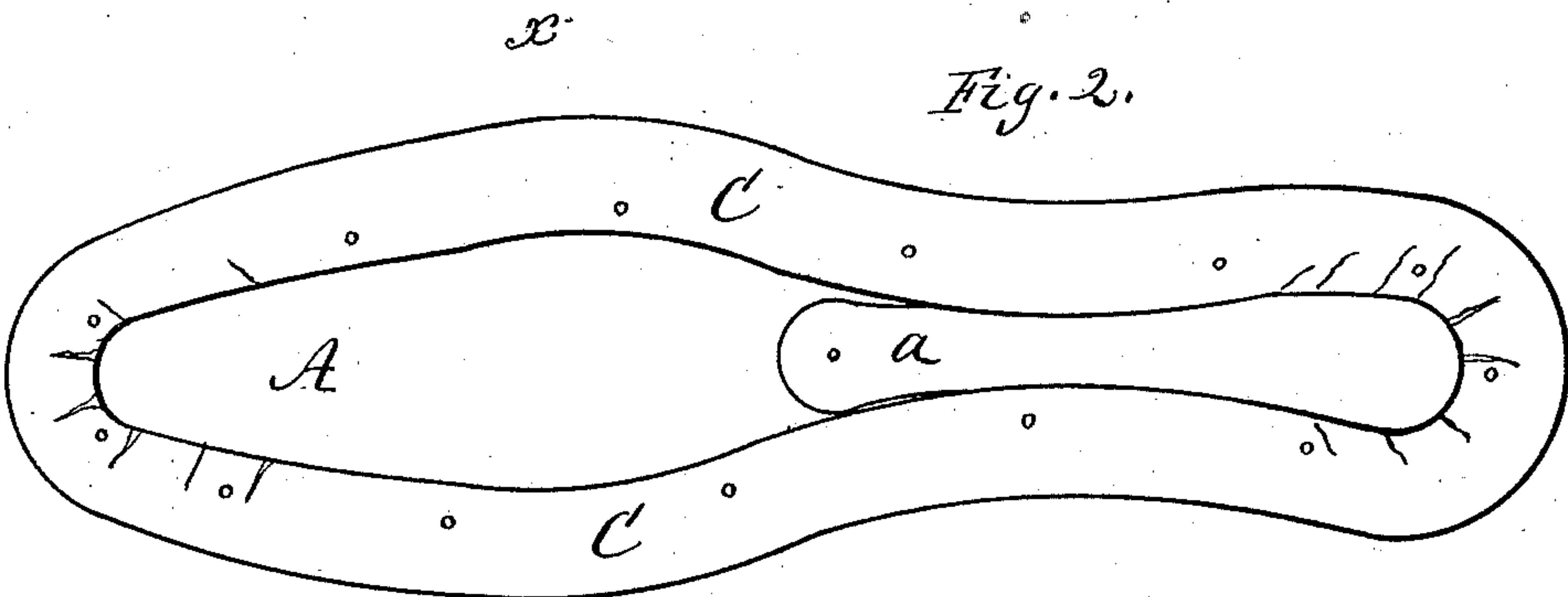
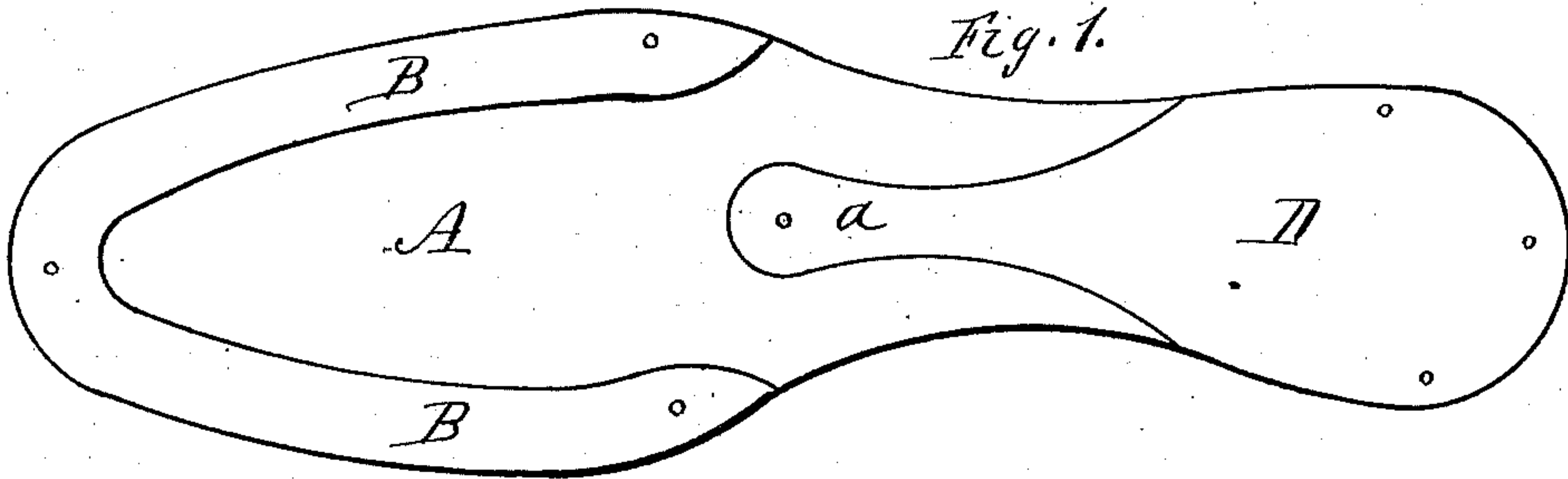


(No Model.)

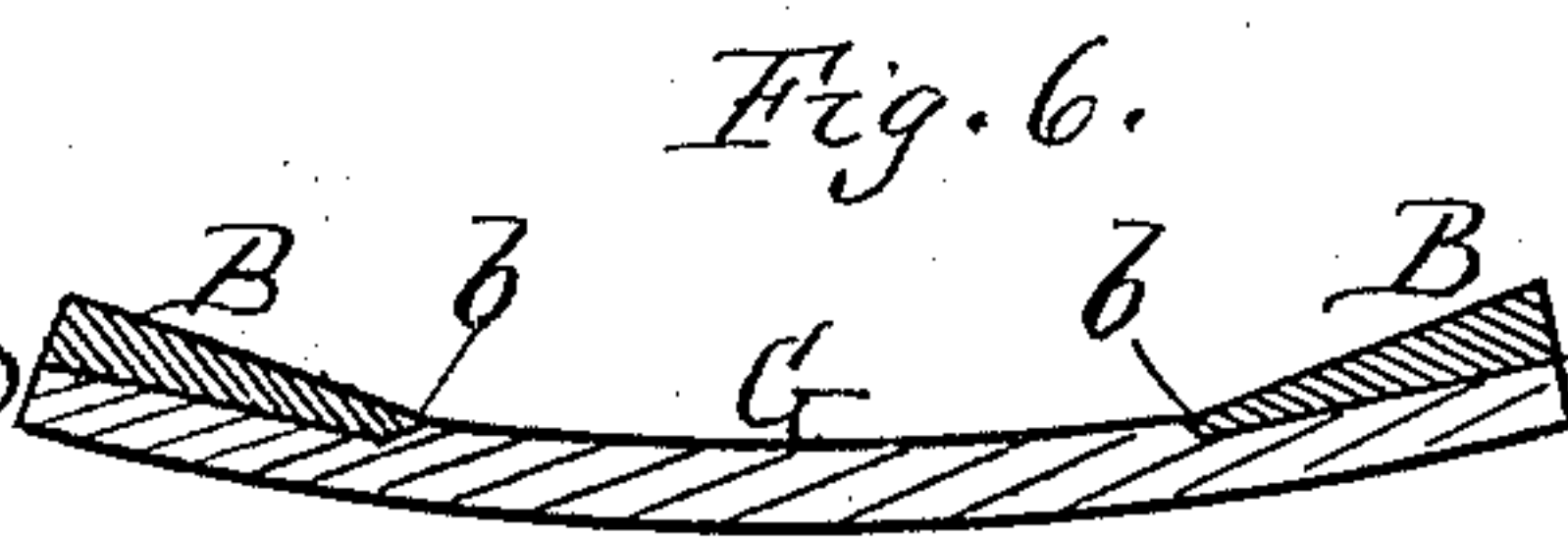
J. ELAM.
SHOE.

No. 307,033.

Patented Oct. 21, 1884.



Attest.
P. Hotch
J. H. Hopkins



Inventor.
Jabez Elam.
Mr R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

JABEZ ELAM, OF ROCHESTER, NEW YORK.

SHOE.

SPECIFICATION forming part of Letters Patent No. 307,033, dated October 21, 1884.

Application filed July 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, JABEZ ELAM, of Rochester, Monroe county, New York, have invented a certain new and useful Improvement in Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a bottom view of a last with the binder B and shank-piece D attached thereto by tacks. Fig. 2 is a similar view showing the upper lasted on the last. Fig. 3 is a cross-section of Fig. 2 in line *x x*, showing the parts enlarged. Fig. 4 is a cross-section of the finished shoe corresponding with Fig. 3, but with the last removed and showing the shoe right side up. Fig. 5 is a longitudinal vertical section through the sole. Fig. 6 is a cross-section of the sole with the binder B in place.

My improvement relates to shoes which are stitched on the McKay sewing-machine. Ordinary shoes made on this machine have both an inner and an outer sole, and the shoes are not turned inside out in the manufacture. As a consequence the lasting-tacks are left in, and are a source of great trouble. Furthermore, the shoes are stiff and uncomfortable in wear and strain greatly upon the stitching. In my invention no inner sole is used. A narrow strip, forming a binder, is employed, which is placed on the last, the upper is lasted to the same, and the stitching passes through the outer sole, the upper, and the binder, in the usual way. The whole center between the sides of the binder is left open, which insures great flexibility of the shoe, avoids great strain upon the stitching, and the bottom of the shoe is concaved to fit the foot properly. As the work progresses in the manufacture of the shoe the lasting-tacks, which are but few in number, are all removed, and none remain when the shoe is complete.

My invention consists in the combination, with the sole and upper, of a binder consisting of a strip surrounding the ball of the foot, to which the upper is lasted, and a shank-piece covering the metal shank, and provided with a tongue extending past the instep, said tongue being free, the parts being united by stitching, as hereinafter described.

In the drawings, A shows an ordinary last. B is the narrow strip forming the binder.

This is fitted on the bottom of the last surrounding the front portion or ball of the foot, and leaving an open space between, as shown in the plan view, Fig. 1. The binder is attached to the last by three tacks—one at the toe and two at the ends, as shown. The binder is made from a strip of leather bent and fashioned to meet the form of the last like a welt; therefore it is very cheap. In cross-section it is wedge-shaped, the thick edge being outside and the thin edge inside.

C is the upper, which is of ordinary form. In lasting, the outer surface of the binder is spread with glue or cement. The upper is drawn over the last, and its edges brought over in contact with the top glued surface of the binder. As fast as the lasting goes on, the three tacks which secure the binder to the last are withdrawn, and a few tacks are driven through the edge of the upper into the binder. This is only for the purpose of holding the edge of the upper firmly to the glued surface of the binder. As soon as the glue has set these lasting-tacks are also withdrawn, leaving no tacks in the portion of the shoe that receives the stitching.

D is a shank-piece of leather, which fits the heel of the last, and has a tongue, *a*, extending the length of the instep and resting in line with the rear ends of the binder.

E is the ordinary steel shank, placed in the shoe and resting on top of the leather shank-piece. A single tack at the inner end of tongue *a* holds the parts together, and the upper is then lasted over the shank-piece.

G is the outer sole, which is placed over the bottom of the last, and is secured by a few tacks, which are driven through into the binder. The edges of the outer sole, which fit to the binder B, are notched or hollowed, so as to form a small inclined shoulder, *b*, Fig. 6, at the point where the inner edge of the binder joins the sole, thereby sinking this inner edge of the binder and making a smooth and flush surface at the junction. By this means a natural hollow is left in the bottom of the shoe, which conforms to the convexity of the foot, as shown in Fig. 6. The wedge-shaped binder raises the sides, and the curve of the sole gives the hollow at the center. Thus prepared, the last is removed and the shoe is run through the McKay sewing-machine, which stitches

- through the sole, the upper, and the binder, as shown at *c c*, after which the tacks which secured the sole to the binder are removed, leaving no tacks in the shoe except the single
5 tack in the tongue of the shank-piece and the few tacks at the heel in securing the shank-piece. In stitching, the tongue of the shank-piece is left entirely free, so that the action is easy and unimpeded.
- 10 By the construction above described great labor and expense are saved, as the binder can be formed from a narrow strip properly bent, and all the material that forms an inner sole is dispensed with. The shoe is flexible
15 and easy to the foot. Less strain is produced on the stitching; therefore the wear is greatly increased. There is less tendency for the upper to spread or yield, and the shoe will keep in better shape.
- 20 By the notching of the sole as described a smooth surface is made to the bottom of the

shoe, and the use of the binders produces the desired concavity to receive the foot.

Having described my invention, I disclaim the devices shown in Patents Nos. 250,909 and 25 279,859.

I claim—

In a shoe having a single sole, the combination, with the sole and upper, of a binder, consisting of a strip surrounding the ball of 30 the foot to which the upper is lasted, and a shank-piece covering the metal shank and provided with a tongue extending past the instep, said tongue being free, the parts being united by stitching, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses. 35

JABEZ ELAM.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.