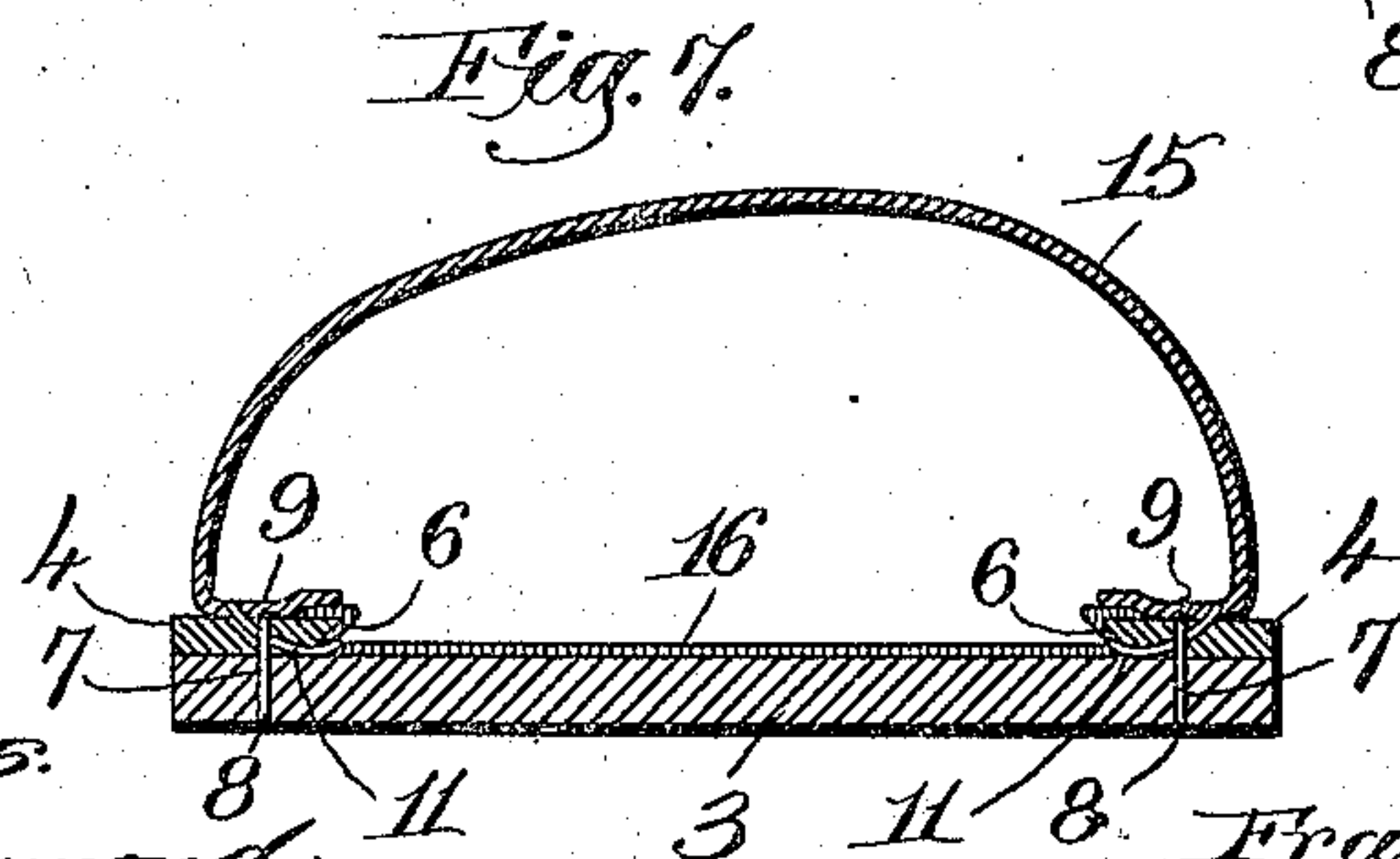
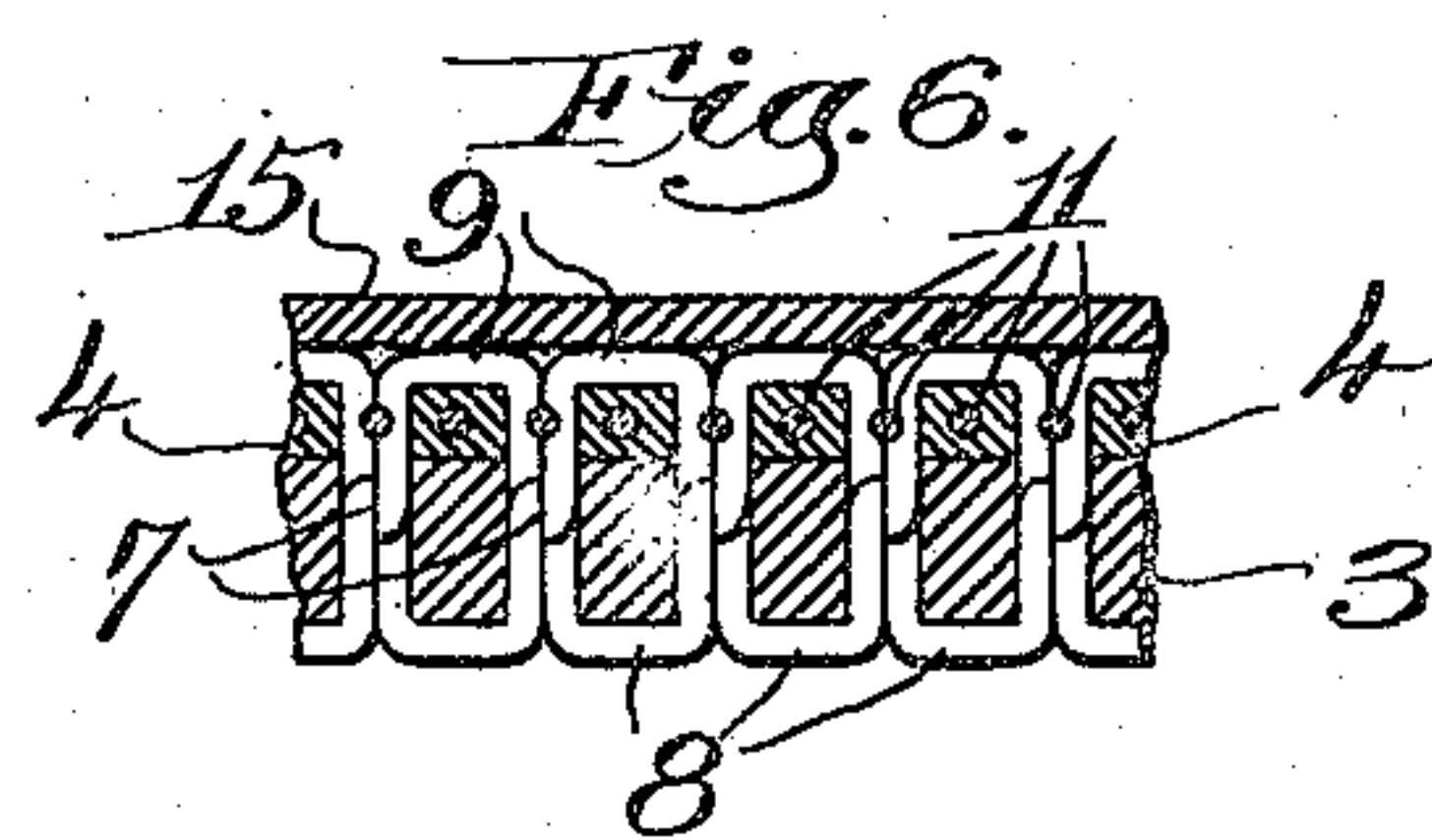
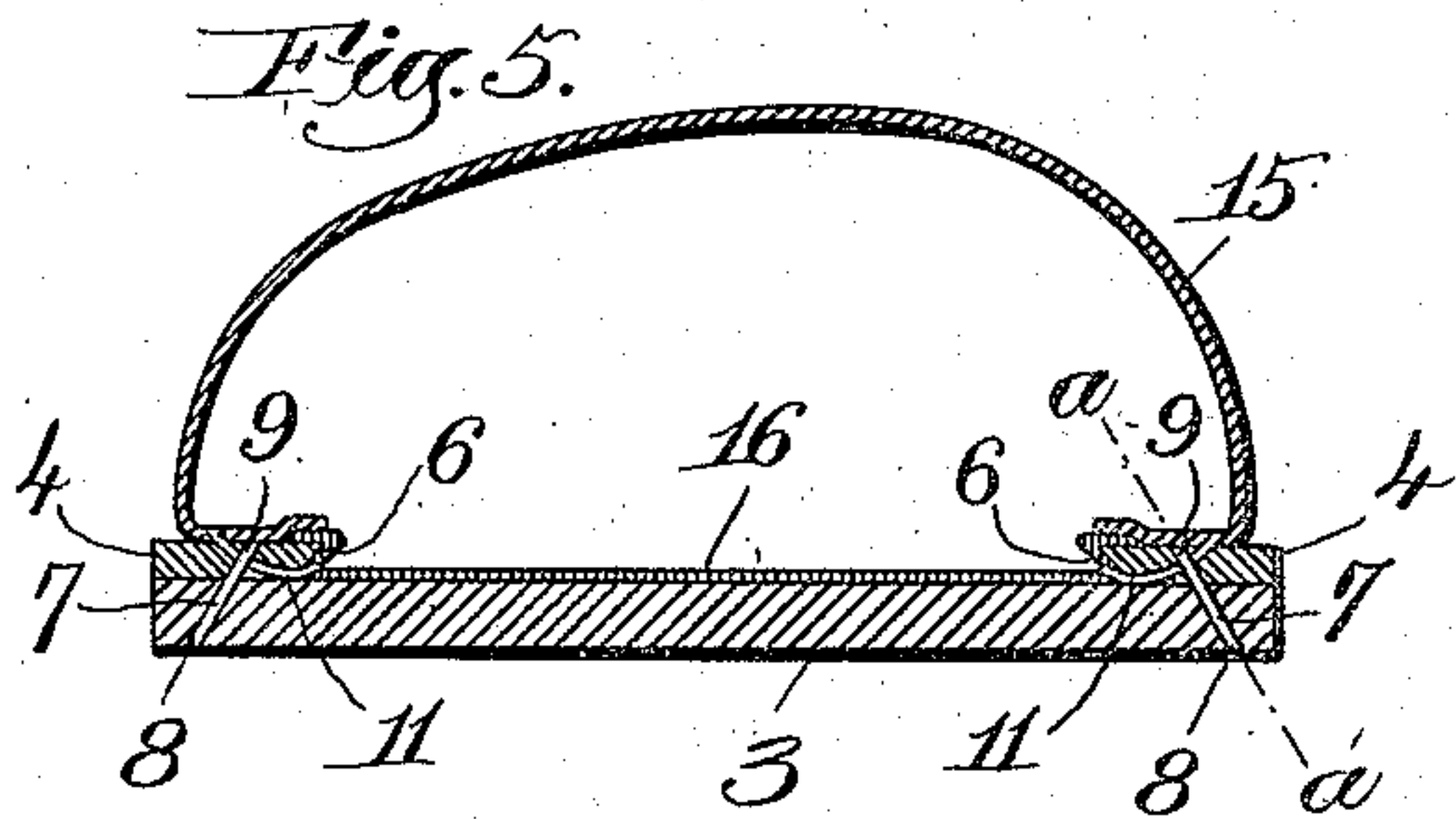
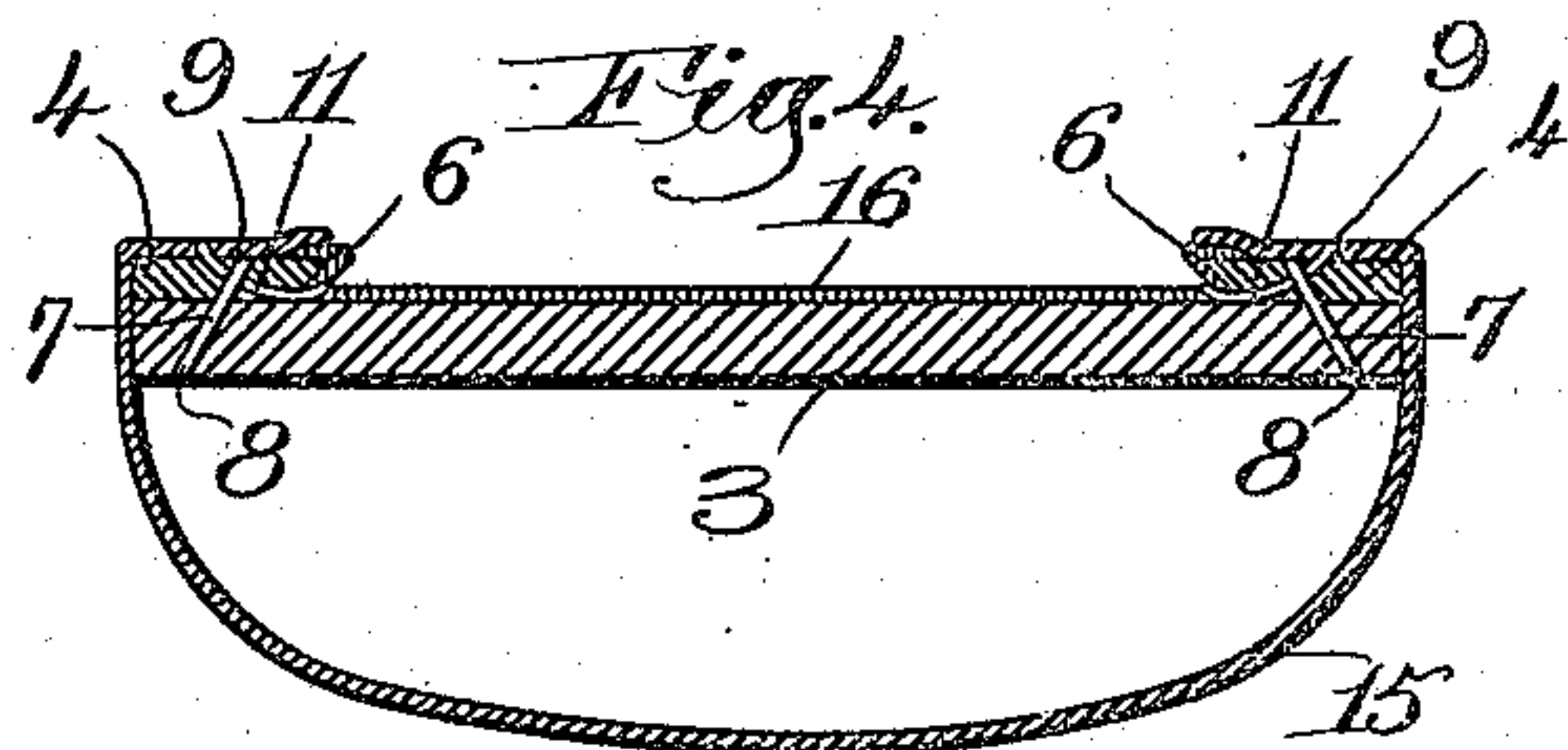
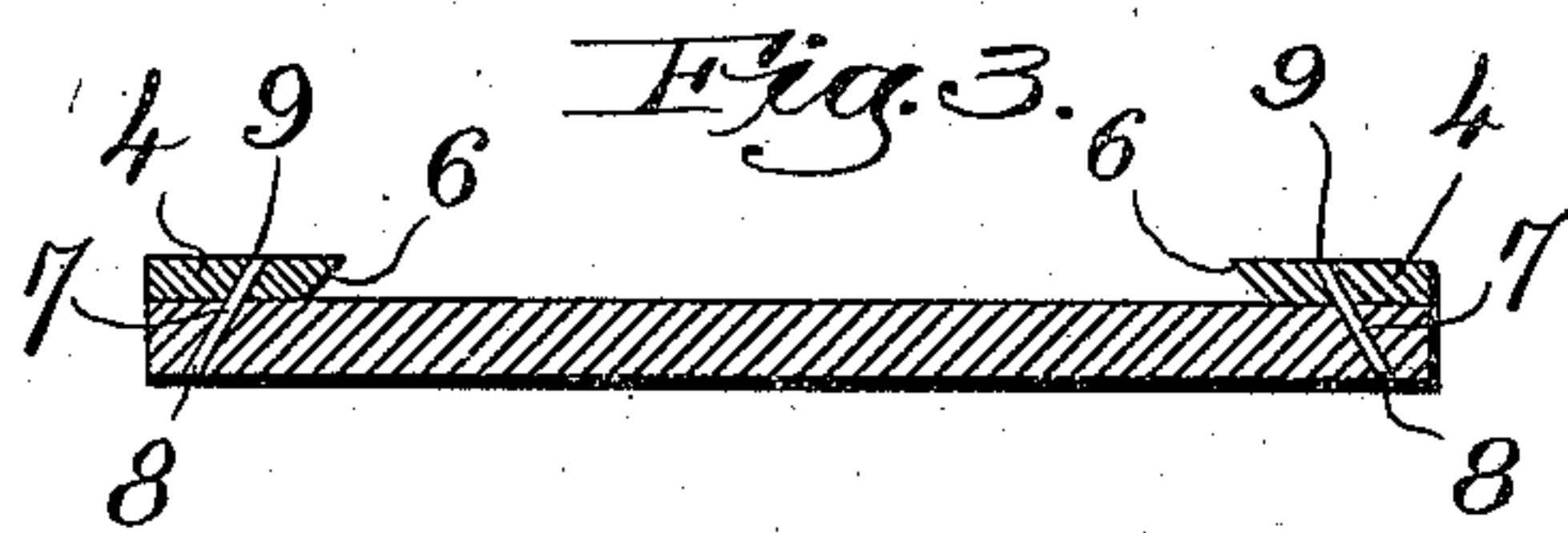
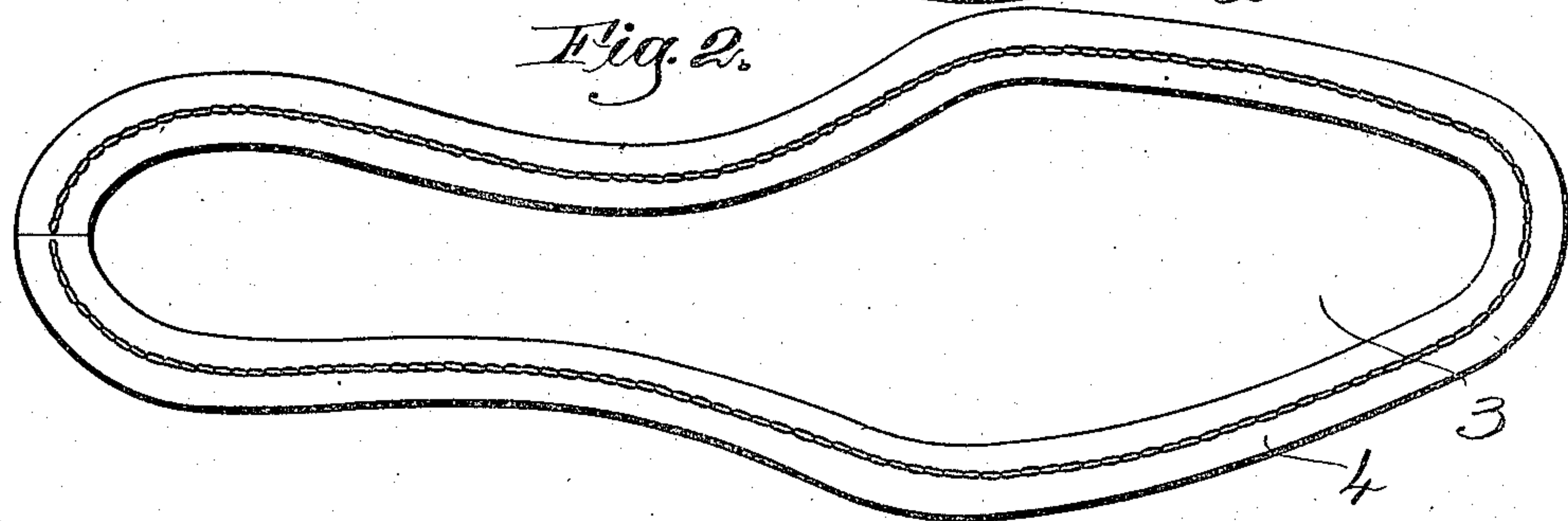
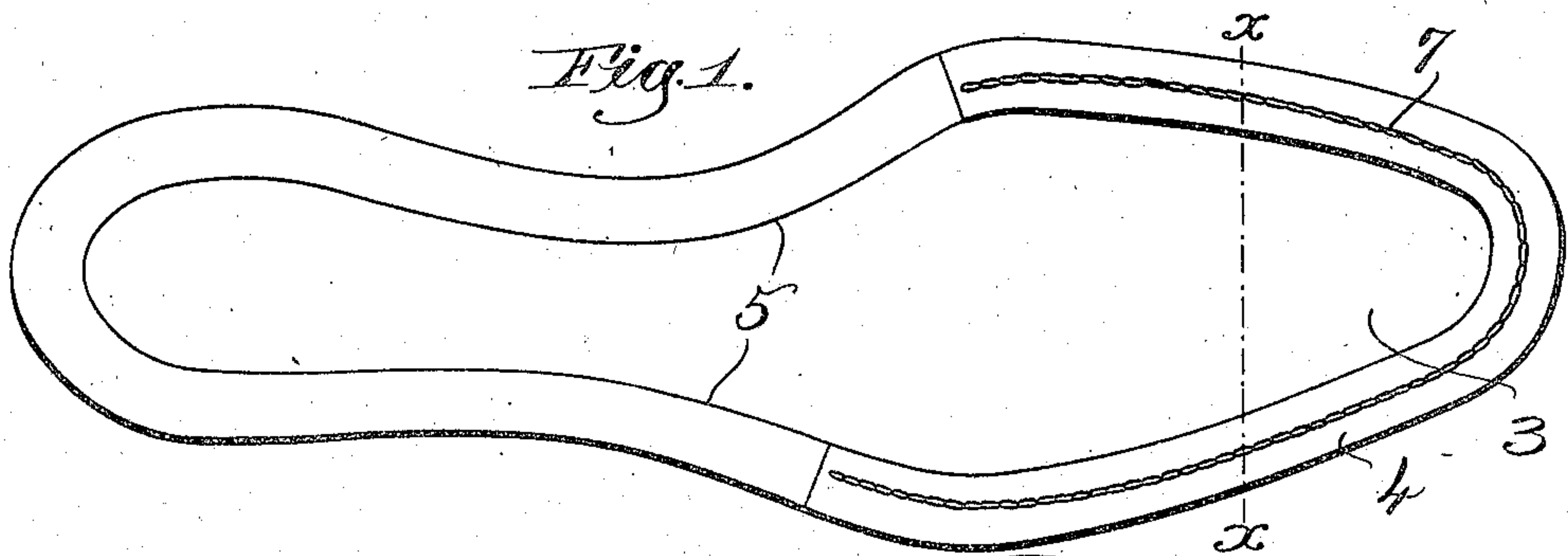


F. A. BEAL.
TURNED SHOE.
APPLICATION FILED APR. 9, 1908.

899,501.

Patented Sept. 29, 1908.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK A. BEAL, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO FRANK A. BEAL AND WILLIS H. HANSCOM, OF HAVERHILL, MASSACHUSETTS, COPARTNERS AS BEAL & HANSCOM.

TURNED SHOE.

No. 899,501.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed April 9, 1908. Serial No. 426,058.

To all whom it may concern:

Be it known that I, FRANK A. BEAL, a citizen of the United States, residing at Haverhill, county of Essex, and State of Massachusetts, have invented an Improvement in Turned Shoes, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

10 This invention relates to turned shoes and has for its object to provide a novel turned shoe which has all the appearance and many of the advantages of a welt shoe.

A turned shoe is generally much more flexible than a welt shoe, and for this reason it is an easier shoe to wear, but as commonly made the sole of the turned shoe is provided with a channel to form a shoulder to sew the upper to and because of this the thickness of the sole which is available for wear is materially reduced.

A welt shoe can be and usually is made with an extension edge, a feature which cannot be embodied in a turned shoe as ordinarily made. Moreover, in the welt shoe the manner of sewing the outsole to the welt is such that the entire thickness of the outsole is available for wear which is an advantage.

25 A turned shoe embodying my present invention has the desired flexibility of an ordinary turned shoe and at the same time it has the appearance of a welt shoe and has the advantage over ordinary turned shoes that the entire thickness of the sole is available for wear.

30 In making my improved shoe I first sew or otherwise secure a welt to the top of the sole and then I sew the upper wrong side out to the top of the welt by means of stitches that interlock with the stitches or fastening means that secure the welt to the sole. The upper is sewed to the welt in such a way that after the shoe is turned right side out, the outer edge of the welt projects beyond the upper in the same manner as that of an ordinary welt shoe does, thus giving to the shoe the appearance of a welt shoe. The interlocking of the stitches that sew the welt to the sole with the stitches that sew the upper to the welt locks both sets of stitches firmly in place and makes a very strong shoe in which the stitches are not at all liable to be pulled out even if they become broken.

Referring to the drawings wherein I have shown some embodiments of my invention,

Figure 1 is a top plan view of a sole for one of my improved shoes, said sole having the welt sewed thereto; Fig. 2 is a similar view showing the welt sewed all the way around the sole; Fig. 3 is a section through the sole on the line $x-x$; Fig. 4 is a section through the sole on the same line $x-x$, showing the upper sewed wrong side out to the welt; Fig. 5 is a transverse section of the shoe after it has been turned; Fig. 6 is an enlarged section on substantially the line $a-a$, Fig. 5; Fig. 7 is a view similar to Fig. 5 showing another way of securing the welt and sole together.

In making a turned shoe in accordance with my invention I first take a sole 3 and secure thereto a welt 4. This welt may be either applied at the front portion only of the sole where the sole is most liable to wear, as shown in Fig. 1, in which case the shank and heel portion of the sole will be channeled at 5 in usual manner, or the welt may be extended clear around the sole, as shown in Fig. 2. The inner edge 6 of the welt 4 constitutes the shoulder to which the upper is sewed, and the use of the welt in this way obviates the necessity of channeling the sole at the portion where the welt is located. The welt is preferably secured to the sole by stitches 7 and in the preferred embodiment of my invention these stitches are inclined downwardly and outwardly, as shown in Figs. 3, 4 and 5, although said stitches might be arranged vertically, as shown in Fig. 7. The advantage of placing the stitches in an inclined position will be referred to later on. After the welt has been sewed to the sole, as above described, the upper 15 is stitched to the welt by stitches 11, the edge of the upper being drawn over the top surface of the welt for the stitching operation, as shown in Fig. 4. The stitches 11 which unite the upper to the welt enter the welt at the lower inner corner thereof, pass upwardly through the welt and edge of the upper in an inclined direction, and emerge from the upper and welt at a point situated outside of the line of stitches 7. Said stitches 11 and 7 thus cross each other, the point of crossing being situated in the body of the welt and between the top and bottom surface thereof. The crossing of the two lines of stitches in this way causes the stitches of one line to interlock with those of the other as illustrated in Fig. 6, although in practice the stitches of the two lines of stitching will not necessarily be

so evenly spaced with reference to each other as is illustrated in Fig. 6. In the formation of the stitches, however, the stitches of one line become stranded more or less but this only serves to more completely interlock the stitches of the two lines.

I prefer to use waxed thread for stitching the upper to the welt and also for stitching the welt to the sole. Where thread of this character is used, the crossing stitches 7 and 11 of the two lines of stitches become interlocked firmly together so that even though any of the stitches should become broken, yet the interlocking of the stitches would hold the remaining stitches firmly and thus prevent the shoe from giving way. This interlocking of the stitches 7 and 11 I regard as of considerable importance as it adds greatly to the durability of the shoe.

I prefer to arrange the stitches 7 in an inclined direction, as shown, because this brings the lower portions 8 of the stitches comparatively near the edge of the sole and prevents the welt and sole from separating at the edge and at the same time it brings the upper portion 9 of the stitches well toward the inner edge of the welt and thus prevents the welt from pulling up from the sole when the shoe is in use. Moreover, by making these stitches 7 inclined it is easier to cause the two lines of stitches to interlock with each other. It is within my invention, however, to make the stitches 7 extend vertically from the sole and welt, as shown in Fig. 7, although I regard the embodiment shown in Fig. 5 as preferable. A shoe made in this way has a welt extending out beyond the upper and where the welt extends around the front portion of the sole only, such a shoe has all the appearance of an ordinary Good-year welt shoe and can be tapped in the same way that a welt shoe can. It is much more flexible than a welt shoe and has other desirable qualities. The drawings show the welt as extending entirely around the sole which is a construction that is adaptable for gymnasium or similar shoes. It is immaterial to my invention, however, whether the welt extends clear around the sole or around the front portion only.

I have in the drawings shown the sole as provided with a lining 16 of canvas or other material which lining covers and overlies the inner edge 6 of the welt. The advantage of

using such a lining of canvas is that it strengthens the welt at the point where the upper is sewed thereto and acts to prevent the stitches 11 from cutting the welt.

I have not attempted to show all embodiments of my invention, but have merely shown and described sufficient to illustrate the principle thereof.

The welt may be made of leather or of any suitable material.

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

1. A turned shoe comprising a sole having a welt attached thereto by stitches that pass through both the welt and the sole, and an upper having its edges overlying the top of the inner edge of the welt and stitched thereto by stitches which enter the welt at or near the lower inner corner thereof and pass upwardly through the welt and upper in an inclined direction and emerge on the upper side of the upper at a point outside of the stitches that unite the welt to the sole.

2. A turned shoe comprising a sole and a welt sewed together by stitches which incline downwardly and outwardly from near the inner edge of the top of the welt to near the outer edge of the sole at the bottom, and an upper stitched to the welt by stitches that cross or interlock with the stitches that unite the welt to the sole.

3. A turned shoe comprising a sole having a welt sewed to the top thereof by stitches which extend through the welt and sole, a canvas lining for the sole, said lining overlying the inner edge of the welt, and an upper having its edges overlying the top of the inner edge of the welt and stitched thereto by stitches which enter the welt at or near the lower inner corner thereof and pass upwardly through the welt and upper in an inclined direction and emerge on the top of the upper at a point outside of the stitches that unite the welt to the sole, said two lines of stitches crossing each other at a point within the body of the welt.

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

FRANK A. BEAL.

Witnesses:

HARRY J. COLE,
W. SCOTT PETERS.