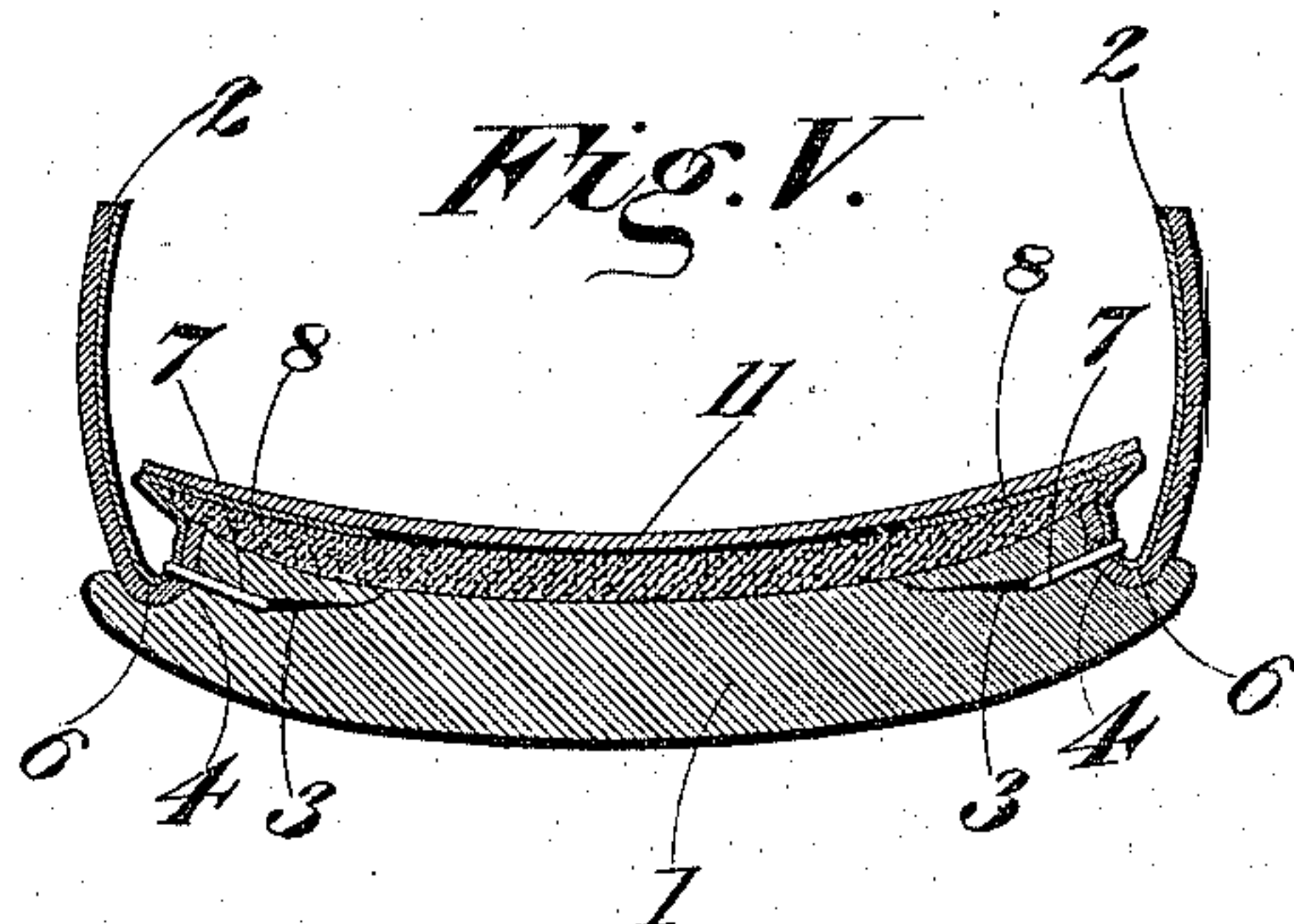
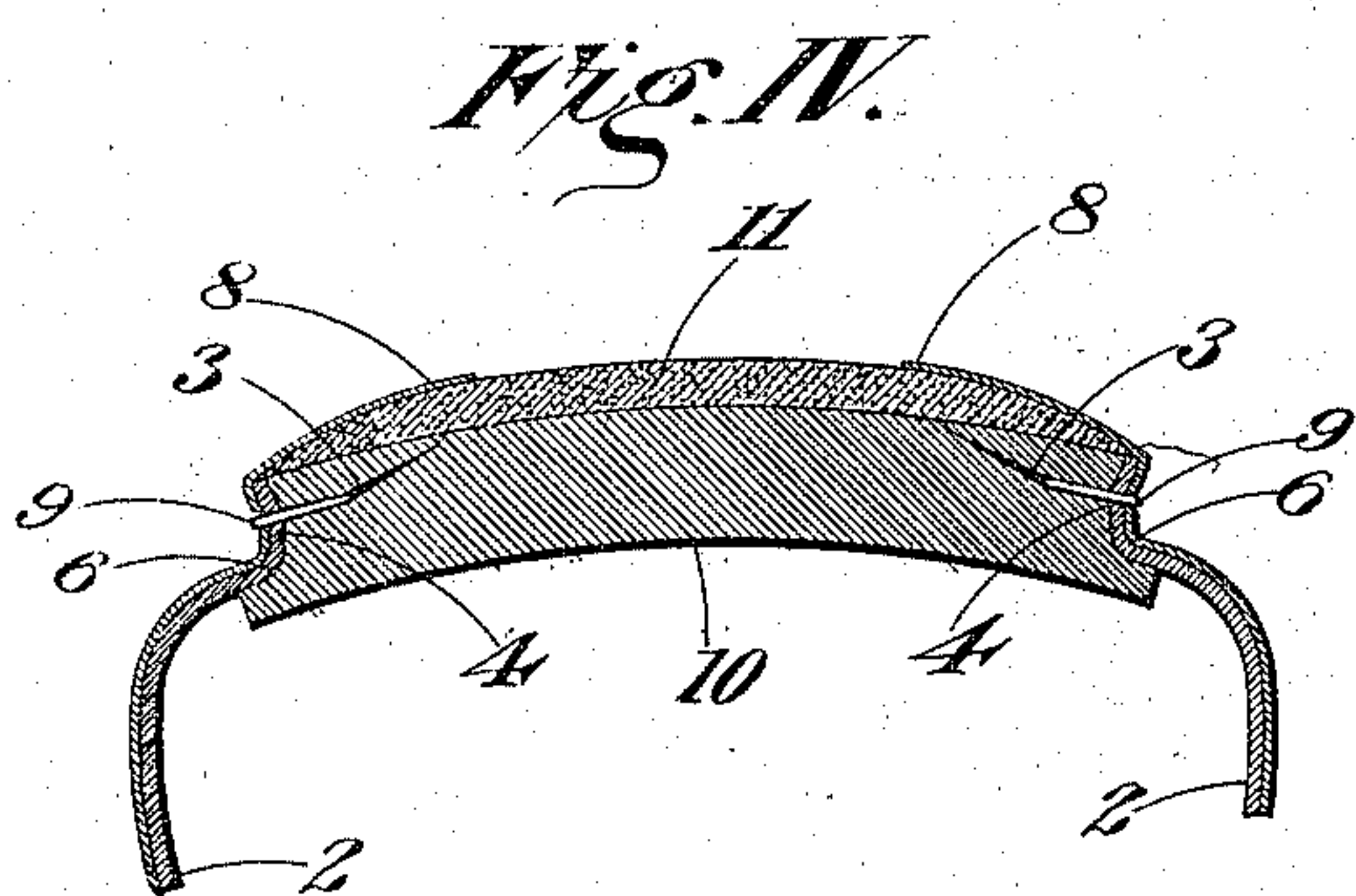
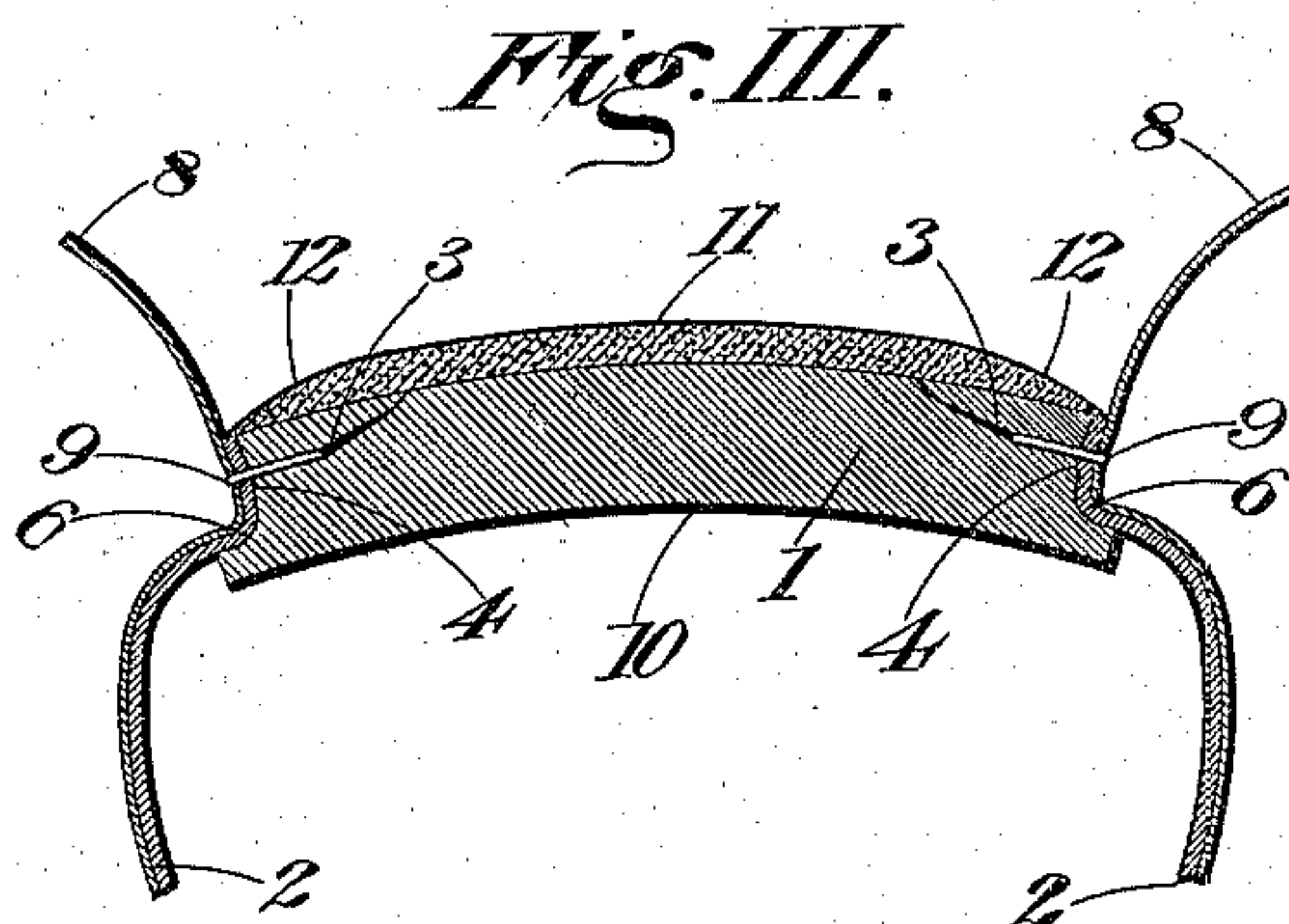
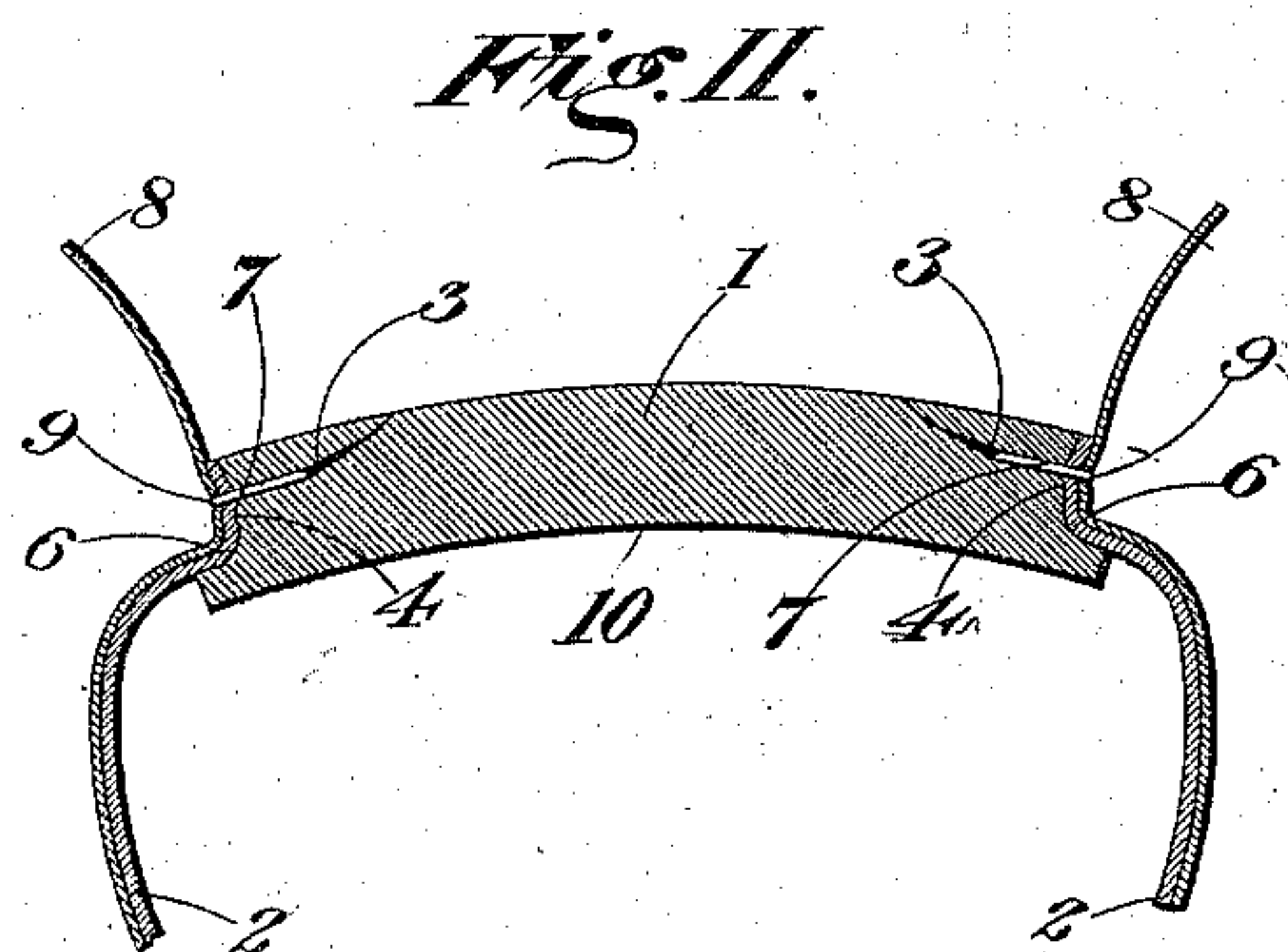
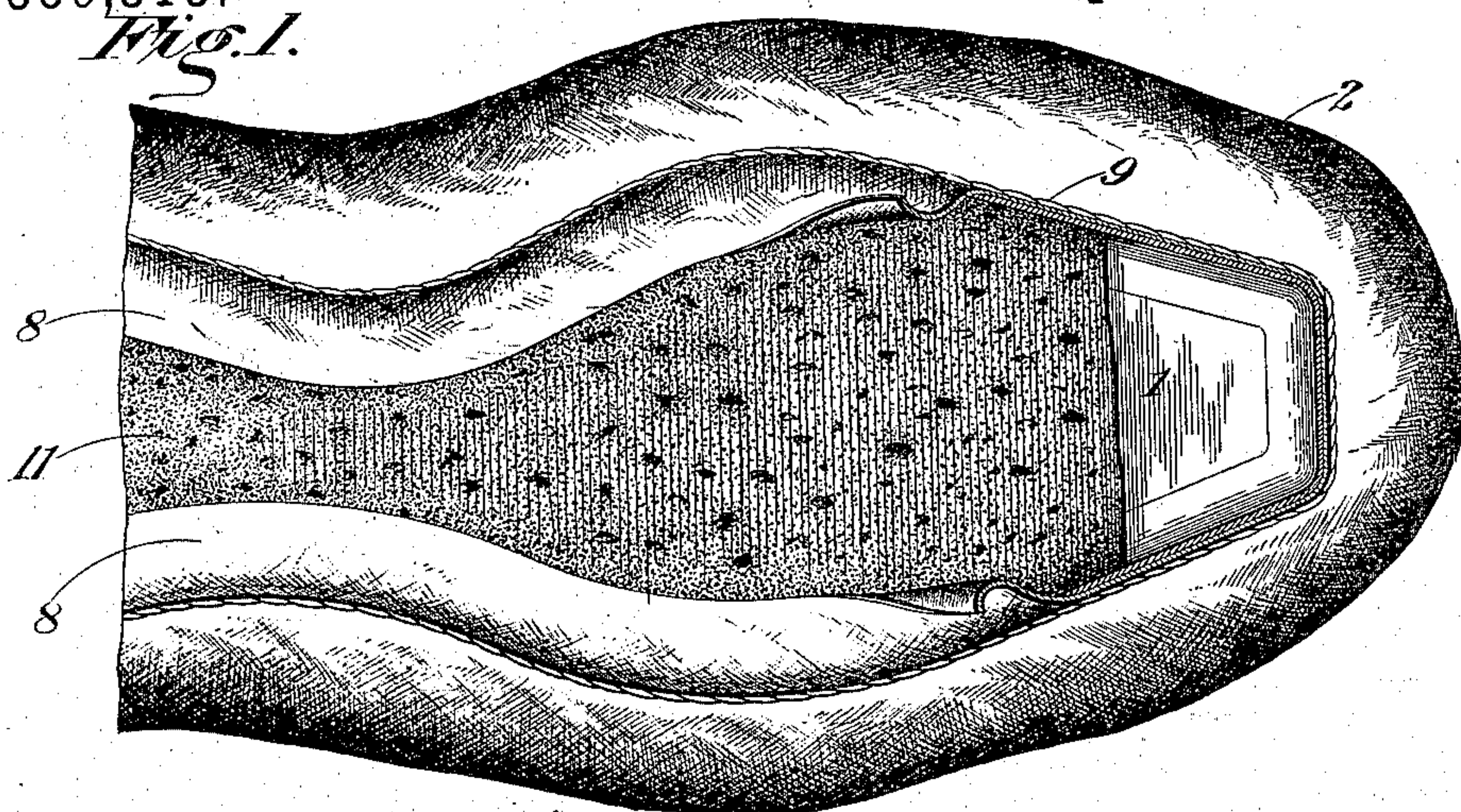


(No Model.)

G. W. SLEEPER.
SHOE.

No. 559,313.

Patented Apr. 28, 1896.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. SLEEPER, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
THE H. S. ROBINSON & COMPANY, OF SAME PLACE.

SHOE.

SPECIFICATION forming part of Letters Patent No. 559,313, dated April 28, 1896.

Application filed May 25, 1895. Serial No. 550,701. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SLEEPER, of Detroit, county of Wayne, State of Michigan, have invented certain new and useful Improvements in Shoes, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings.

My invention relates to improvements in turned shoes, particularly of that class having cork soles or soles partially composed of material comparatively impermeable to cold or moisture.

The object of my invention is to produce an improved turned shoe, having an insole impermeable to moisture and extending completely across the tread from one side of the vamp to the other, the last step of the manufacture of which causes the insole (which has previously been of less width than the sole) to extend beyond the edges of the sole to which it is secured and entirely close the space between the edge of the sole and the vamp and at the same time to compress the upper surface of the insole to form a more compact and even tread than it has heretofore been possible to produce.

A further object of my invention is to produce a shoe in which an insole-securing flap is so arranged that the final turning of the shoe will compel it to lie in close contact with both the upper and lower sides of the edges of the insole, projecting between the edges of the sole and the vamp to prevent the weakening of such projecting edges and to insure the resiliency necessary to the comfort of the wearer of the shoe.

In the accompanying drawings, Figure I is a bottom plan view of a shoe prior to turning and with the insole-retaining flap detached from the insole. Fig. II is a sectional view showing the parts of the shoe sewed together prior to the application of the insole. Fig. III is a similar view showing the insole in position before the flap is turned upon it. Fig. IV is a view similar to that shown in Fig. III, showing, before the shoe is turned, the insole-flap secured upon that which is to be in the completed shoe the inner surface of the insole. Fig. V is a sectional view showing the shape and relative positions of the parts after the shoe is turned and reshaped,

the edges of the insole projecting beyond the edge of the sole and entirely closing the space between the sole and the vamp and the flaps being in direct contact with the top and bottom surfaces of the extended edges of the insole.

In Figs. II to V of the drawings, inclusive, the parts of the shoe are for the sake of clearness somewhat magnified, and in some instances for the same reason the relative proportions may be slightly distorted.

Referring to the figures on the drawings, 1 indicates a shoe-sole, and 2 the vamp. 3 indicates the inner-seam channel, and 4 the outer-seam channel. Around the edge of the sole, opposite the channel 4, is formed a semi-cylindrical groove, in which the bend 6 of the vamp is drawn by threads 7 to impart to the completed shoe (see Fig. V) a smooth interior and exterior finish.

8 indicates an insole-retaining flap, preferably made of linen or other fabric, and which is secured, together with the edge of the vamp, to the sole by the threads 7. The flap, when the sole and the vamp are first united, lies in the position shown in Figs. II and III of the drawings, the line of stitching being indicated at 9 in those figures. The insole-retaining flap is preferably though not necessarily a continuation of the lining of the vamp and extends directly upwardly from the upper side of the row of stitches 9, by which it is secured, as contradistinguished from such construction as is shown in the patent issued to one Trimby, hereinafter referred to, in which construction the flap extends downwardly from the stitches and is turned or looped upwardly, which makes it impossible to conform the flap to the lower surface of the extended edges of the insole, which is an important feature of my invention.

When the vamp is stitched upon the sole, both the sole and the vamp are made to conform to the shape of the last to which they are fitted, the surface 10 of the sole being curved toward the vamp to conform to the usual preferable shape of the last.

After the sole and vamp are stitched together the channels 3 and 4 are properly laid or closed in the usual manner, and an insole 11, made of cork or other suitable material, is

secured by suitable adhesive substance upon the surface of the sole. The upper side of the insole, preferably after its application to the sole, is carefully shaped, so that its edges
5 are rounded or beveled down, as indicated at 12, to a feather-edge, the lower surface of the insole at this stage of manufacture being of a general concave shape, as shown in Figs. III and IV, its concavity conforming in a general
10 way to the shape of the concave surface 10 of the sole.

The area of the upper surface of the insole is, however, greatly increased by the shape imparted to it and its convexity is of con-
15 siderably greater magnitude than the concavity of its lower side.

The insole applied by my method completely covers the inner-seam channel 3, and its outer edge approaches almost to the seam 9,
20 at the outer edge of the sole, but does not before the shoe is turned extend altogether so far as the edge of the sole. When the insole is applied and finished in the manner described, the flap 8 is turned over upon the in-
25 sole and is secured thereto, as by suitable adhesive material, after being drawn taut and smooth upon and over the insole. At this stage of the process the last is withdrawn and the shoe is turned in the ordinary man-
30 ner and again lasted. By this process the relations and comparative shapes of the inner and outer soles are reversed. The surface 10 of the sole 1 now assumes instead of a concave a convex shape, which is its final form.
35 On the other hand, the inner or exposed surface of the insole is rendered slightly concave, (see Fig. V,) and owing to the shape which was imparted to it before turning and its greatly increased area, the inner surface of
40 the insole, after turning, is rendered exceedingly compact and is perfectly smooth and even, affording a smooth, level cushion within the shoe for the foot.

It is evident that the increase of area of the
45 convex side of the insole and the consequent packing or condensation of such surface when the material is turned in the opposite direction will greatly increase the resiliency or elasticity of the tread, it being observed that
50 while the upper surface of the insole is rendered more compact the material upon the opposite or under side of the insole will be expanded, thus producing an insole having a compact resilient upper surface and a soft
55 cushion-like lower surface. Moreover, by the process of turning and the consequent change of the relative shapes of the sole and insole the edge of the insole is forced to occupy and cover the entire upper surface of the sole and
60 to present a complete inner covering for the same extending from side to side of the vamp.

The insole-retaining flap 8 previously drawn around the edge of the sole and laid flat upon the insole, as described, is by the
65 final turning forced to conform to the surface of the projecting edges of the insole, and not

only serves to secure the insole in place upon the sole, but constitutes a yielding reinforcing-piece for such projecting edges and there-
by tends to prolong the life or property of 70 elasticity of that part of the insole which projects beyond the edge of the sole. The raw edges of the flaps may be protected and a finish given to the bottom of the shoe, as usual, by a layer of soft leather. 75

From the foregoing it may be gathered that my shoe is produced by applying an insole to a previously-united sole and vamp, suiting its size, as specified, to the size of the sole, properly shaping the edges and preferably 80 having previously secured the edges by a flap, turning the shoe inside out in the usual manner and reshaping it so as to cause the insole to extend entirely to the vamp and, simultaneously, to cause the flap to conform to its 85 extended edges and, further, to vary the relative degree of compactness of the upper and lower surfaces of the insole.

I am aware that an impermeable insole extending between the inner-seam channels of a 90 shoe, as shown, for example, in United States Patent No. 509,149, issued November 21, 1893, to Harry H. Budd, of Rochester, New York, is not new, and that broadly a cork or similar insole covering the inner-seam channels, 95 such, for example, as shown in Patent No. 476,497, issued June 7, 1892, to Thomas W. Trimby, of Rochester, New York, is also old; but from the subject-matter of the first-named patent my invention is distinguishable as en- 100 tirely covering that portion of the inner surface of the sole to which it is applied in the completed shoe, and as contradistinguished from the subject-matter of the latter patent my invention is distinguishable as embodying 105 an insole extending beyond the sole to the vamp.

What I claim is—

1. The herein-described turned shoe, which consists of a sole and vamp united together, 110 an insole extending entirely across the sole and projecting beyond its edges, and an insole-retaining flap bound around the projecting edges of the insole and in contact with the upper and lower surfaces of said project- 115 ing edges, substantially as specified.

2. The herein-described turned shoe, which consists in a vamp and sole secured together by a row of stitches an insole entirely cover- 120 ing the sole and extending beyond its edges, and an insole-retaining flap extending directly upwardly from the upper side of the stitches securing the sole and vamp and around the projecting edges of the insole, substantially as specified. 125

In testimony of all which I have hereunto subscribed my name.

GEORGE W. SLEEPER.

Witnesses:

JOS. BELANGER,
H. J. CHISM.