

No. 830,911.

PATENTED SEPT. 11, 1906.

J. N. MOULTON.  
BOX FOR TOES OF SHOES.  
APPLICATION FILED OCT. 12, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

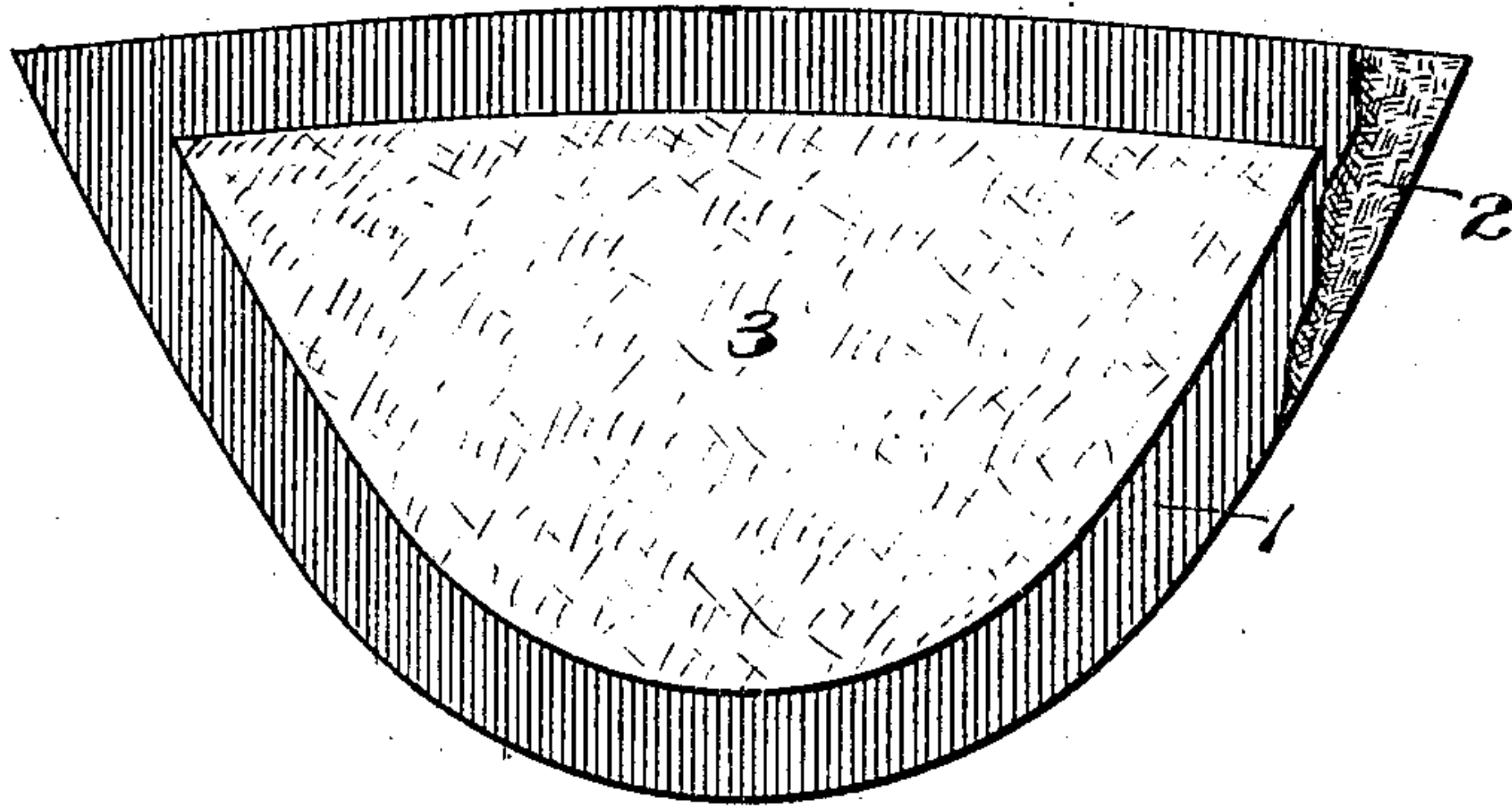


Fig. 2.

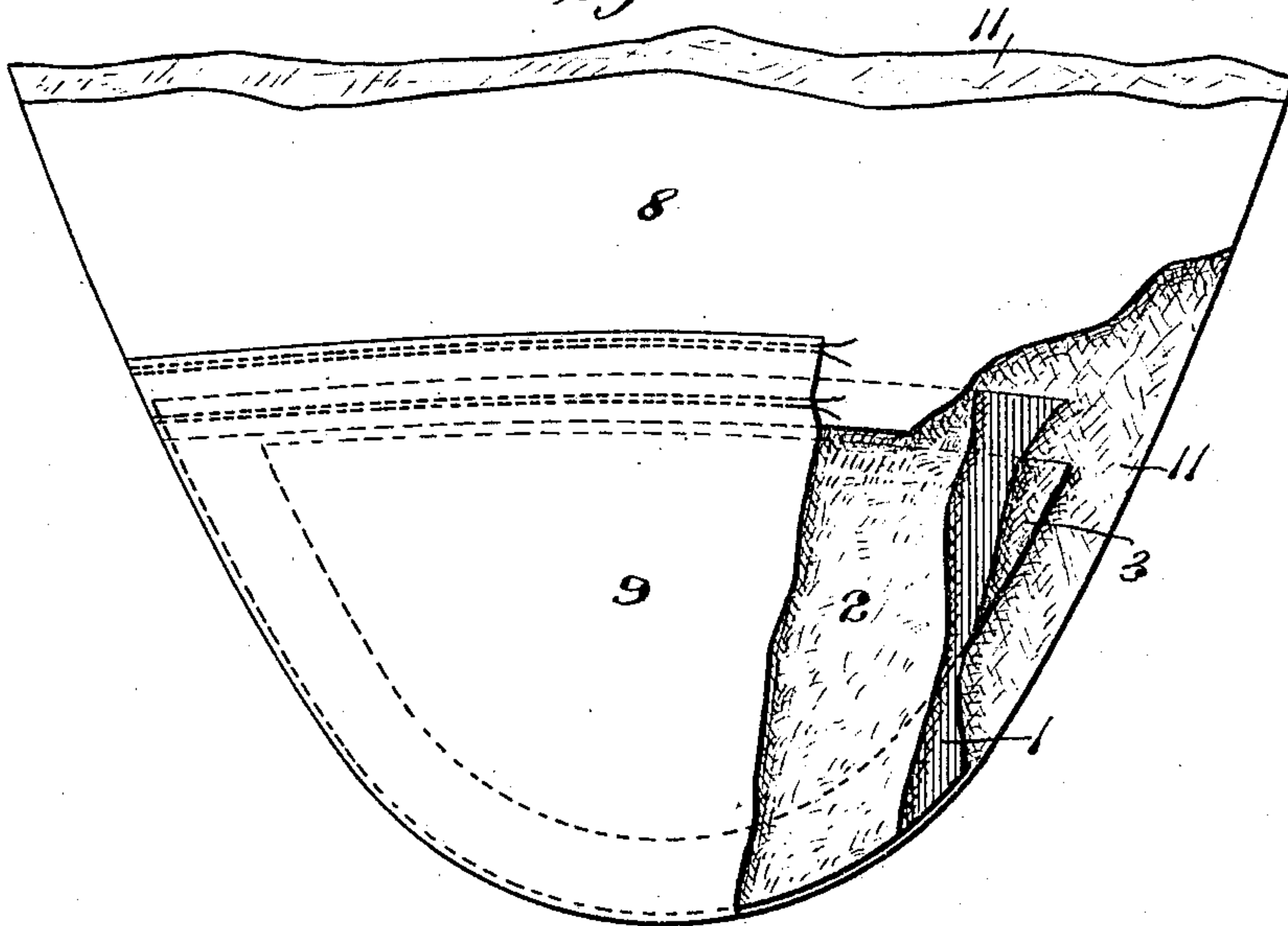
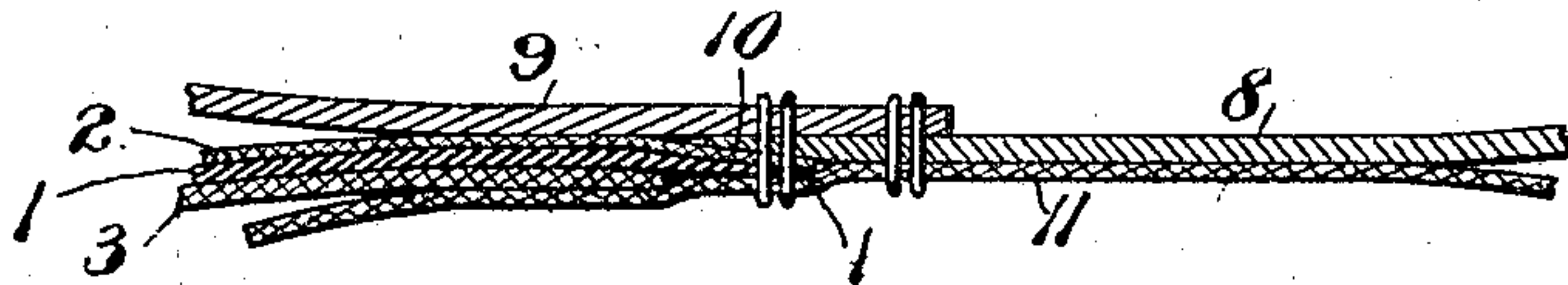


Fig. 3.



Witnesses  
Augusta White  
L. Calvani.

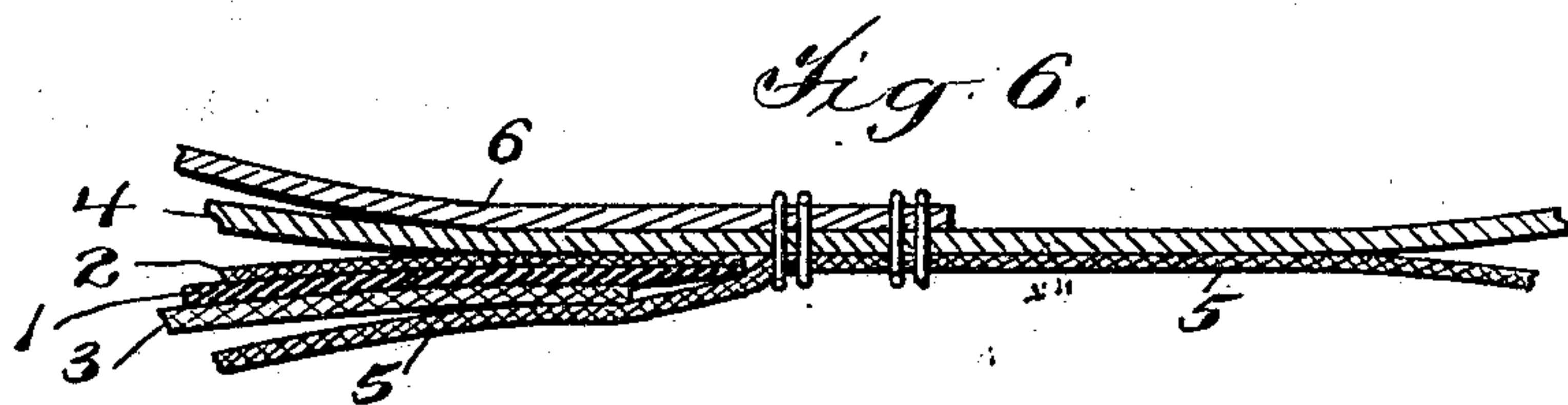
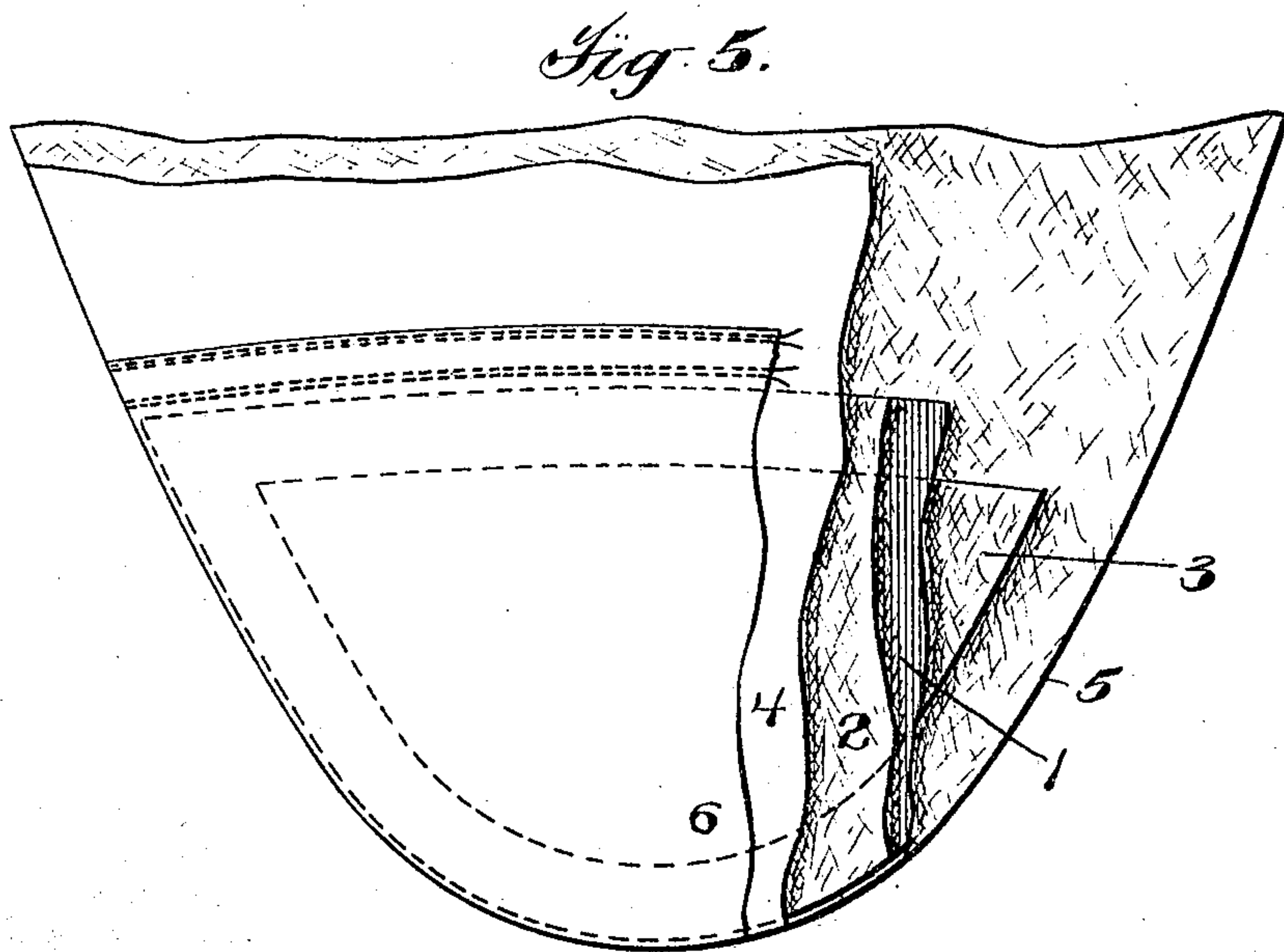
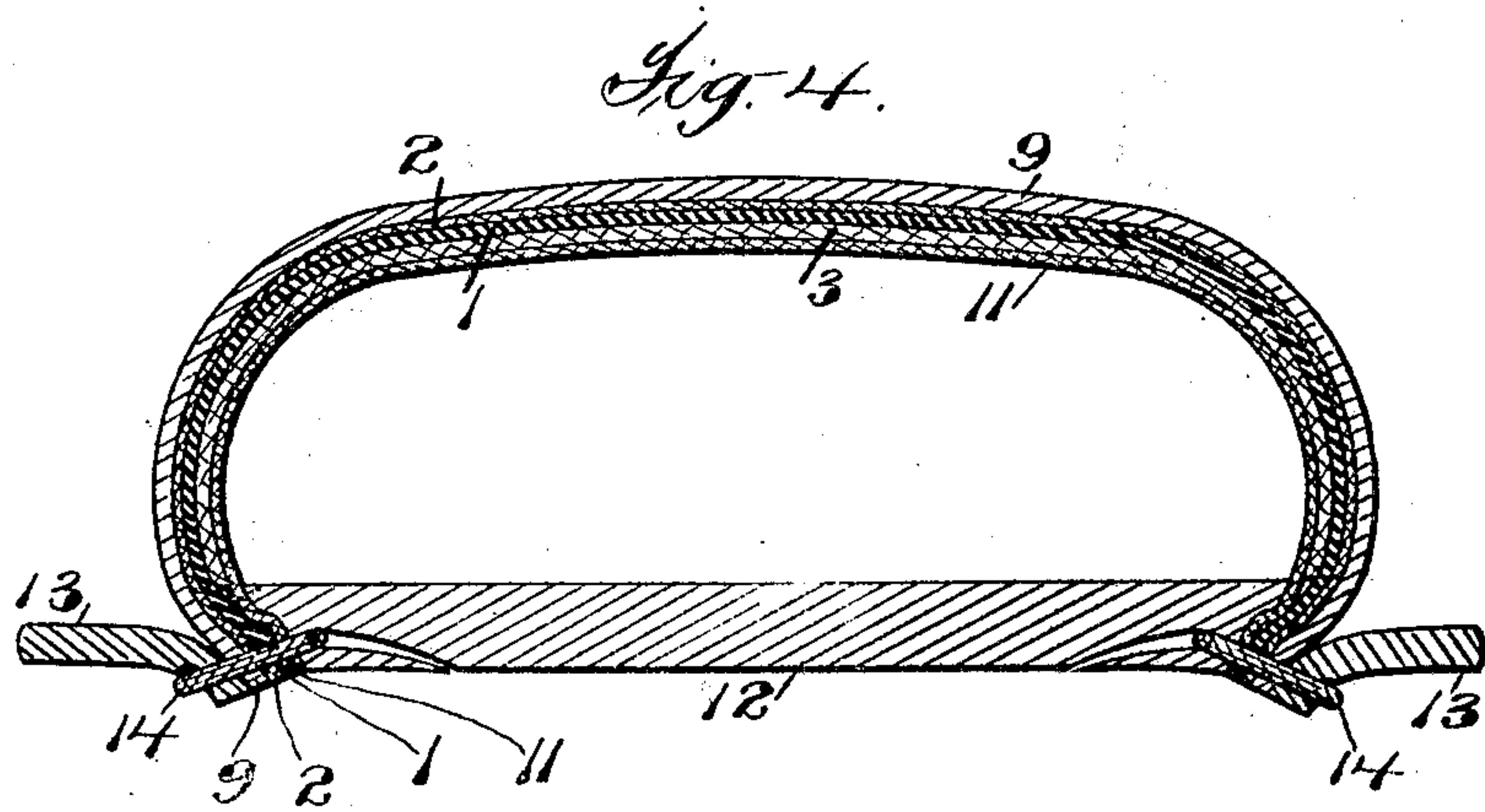
Inventor  
James N. Moulton  
By his Attorneys,  
Phillips, Brown, Rice & Kennedy

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2 SHEETS—SHEET 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## BOX FOR TOES OF SHOES.

No. 830,911.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed October 12, 1905. Serial No. 282,367.

*To all whom it may concern:*

Be it known that I, JAMES N. MOULTON, a citizen of the United States, residing at Haverhill, county of Essex, and State of Massachusetts, have invented certain new and useful Improvements in Boxes for Toes of Shoes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in shoes, and more particularly to that class of shoes which are provided with what are known as "box-toes."

In the better class of box-toe shoes as now ordinarily constructed the box is formed from a piece of sole-leather having skived edges, this leather being of proper shape to form the box when bent into position. This piece of leather is inserted loosely underneath the front portion of the vamp when the shoe is not made with a cut-off vamp and between the vamp and the lining. When the shoe is lasted, the thin skived edge of the sole-leather piece is turned under the inner sole, and when the welt is attached to the shoe the stitches pass through the thin edge of the box, securing it in position. A large number of shoes, and particularly shoes having an ornamental tip, is made with what is known as a "cut-off" vamp. In these shoes the vamp is cut away under the ornamental tip in order to save cost. In making a box-toe shoe of this character a piece of canvas is sewed to the cut-off edge of the vamp, this canvas being of the same shape as the ornamental tip, the meeting edges being arranged to make a butt-joint. The ornamental tip is now sewed to the vamp, usually by two lines of stitches. When shoes of this character are to be made with box-toes, a piece of sole-leather such as before described is slipped in between the canvas piece and the tip, after which the shoe is lasted and sewed, as before described. In cheaper grades of shoes and in that class of shoes known as "turns"—that is, shoes which are sewed inside out—the box is formed by a properly-shaped piece of canvas or cloth, this canvas or cloth after it has been sewed into the shoe being saturated with paste or glue to stiffen it. In all these constructions the arched edge of the box is free—that is to say, it is not connected with the adjacent parts of the shoe above the

sole—and the box is liable to break down. When this occurs, it is very difficult and frequently impossible to restore the shoe to wearing condition, particularly if the leather forming the box is wet. The canvas box above referred to is objectionable, for the reason that if it becomes wet the box is practically destroyed and for the further reason that when such box is used in turned shoes the shoes must be turned immediately before the paste or glue stiffens. Further, in making a cut-off-vamp shoe with a box-toe two stitching operations are necessary—viz., the operation by which the canvas piece is secured to the vamp and the operation by which the tip is secured to the vamp.

In order to avoid the difficulty of the breaking down of the box-toes, as hereinbefore stated, the use of a molded rubber box has been suggested. The initial cost of these boxes is, however, so large as to practically prohibit their use, and aside from this fact great difficulty was experienced in the attempts to last these boxes into shoes by the machinery now almost universally employed in making shoes. These molded rubber boxes have not, therefore, gone into use.

The present invention has for its object to produce an improved box for the toes of shoes which is inexpensive and which is adapted to be used in any class of shoes or boots.

A further object of the invention is to produce an improved shoe with a box-toe, the toe being flexible or elastic, being easily and readily put in position in the shoe, and which will not break down or be injured by exposure to moisture.

A further object of the invention is to produce a box-toe shoe of the cut-off-vamp type in which the box, tip, and vamp are secured together by a row of stitches, thus doing away with one stitching operation and with the canvas fore-piece usually employed, whereby the expense of making the shoe is reduced and the shoe improved.

With these and other objects not specifically referred to in view the invention consists in certain constructions and in certain parts, improvements, and combinations, as will be hereinafter fully described, and then specifically pointed out.

Referring to the drawings, Figure 1 is a



view illustrating in plan a form of the improved box. Fig. 2 is a detail view illustrating the improved box in position in a shoe of the cut-off-vamp type. Fig. 3 is a sectional view, on an enlarged scale, illustrating the manner of securing together the box, vamp, and tip shown in Fig. 2. Fig. 4 is an enlarged sectional view illustrating the method of securing the improved box in a shoe. Fig. 5 illustrates the manner of using the improved box in connection with a shoe in which the vamp is not cut off. Fig. 6 is a detail sectional view, on an enlarged scale, illustrating the manner of securing together the parts shown in Fig. 5.

While the improved box for the toes of shoes which forms the subject of this application may be varied, in the best constructions the box will comprise what may be termed a "body-piece" and a "toe-piece," the toe-piece lying when the box is in the shoe toward the interior of the shoe and the body-piece lying outside the toe-piece. The material for the body-piece may be considerably varied; but the material which is regarded as the best for this purpose is a sheet of elastic material—such, for instance, as rubber—(indicated at 1 in the drawings,) this sheet of rubber being reinforced by a sheet of thin fabric 2. While also the material for the toe-piece may be varied, canvas or duck is regarded as the best for the purpose. This toe-piece is marked 3, and when the box is made in what is regarded as the best form this toe-piece will be smaller than the body-piece, so that the body-piece is relatively thin at the edges as compared with the thickness of the box elsewhere.

The boxes may be formed in any suitable manner; but a very cheap and satisfactory way of forming them is to superpose sheets of the reinforcing fabric, rubber, and canvas and unite them by passing them through hot rolls, thus rendering the use of cement or paste unnecessary and avoiding the tendency to stiffen the structure which is due to the use of such materials. The boxes are then stamped out by suitable cutters, after which the canvas, and, if necessary, a part of the rubber, is skived off to form the thin edge referred to.

Boxes constructed in accordance with the invention may be embodied in shoes, if desired, in the usual way. As illustrated in Fig. 5, the box is shown as loosely inserted between the forward end of the vamp 4 and the usual lining 5 of a shoe in which the vamp is not cut away. When a tip, as 6, is employed with this class of shoes, it may be secured to the vamp by rows of stitching, as is usual and as is illustrated in Fig. 5.

The improved box lends itself readily to the construction of an entirely novel box-toe shoe. As has been pointed out in the preamble to the specification, it is common in

making box-toe shoes of the cut-off-vamp type to first stitch a piece of canvas to the vamp, the edge of the canvas making a butt-joint with the edge of the vamp. The tip is then sewed to the vamp, after which the box is loosely inserted between the canvas and the tip. While the improved box may be employed in this manner, it is possible because of the strength of the body-piece and its thinness to lap the edges of the vamp and box, as illustrated in Figs. 2 and 3. In these figures the vamp is marked 8 and the tip 9. The relatively thin edge of the box is laid underneath the edge of the vamp, which may be skived off, if desired, as illustrated at 10 in Fig. 3, this skived edge of the vamp resting on the skived rubber edge of the box. The tip 9 is now placed in position, and the parts are secured together by the usual double row of stitches, these stitches passing through the tip, the vamp, and the body-piece of the box and also through the usual lining (indicated at 11) when the same is employed. When a shoe constructed in this manner is lasted, the parts are drawn smoothly over the last and do not form a ridge or projection the existence of which would be highly objectionable in the construction of a box-toe shoe. Further, one stitching operation is done away with—viz., the operation of stitching the canvas fore-piece usually employed to the vamp—and the canvas fore-piece itself is also done away with, so that the expense of producing the shoe is materially reduced.

While the particular form of box illustrated is well adapted to the formation of such a box-toe cut-off-vamp shoe as has been described, other constructions of box may be employed. When the box has been placed in the shoe, the shoe is lasted in the usual manner and the upper or vamp, box, and lining, when lining is used, are secured to the inner sole. The method of securing these parts when the box is used with a cut-off-vamp shoe, such as illustrated in Fig. 2, the shoe having a welt, is illustrated in Fig. 4. In this figure the usual channeled inner sole is indicated at 12, the welt at 13, and the stitches by which the parts are secured together are indicated at 14.

The improved box, and especially the particular construction illustrated in the drawings, has many advantages as compared with the construction heretofore employed. It is flexible and at the same time sufficiently elastic or resilient, so that it cannot be broken down. If it is bent out of shape, it will resume its shape after the bending pressure is removed. It is adapted for use in all forms of shoes and, further, is waterproof, so that it is not injuriously affected by moisture. Furthermore, these boxes are exceedingly cheap to make and can be readily handled in the lasting machinery now commonly employed in all factories.



While the particular forms of box illustrated are regarded as efficient for carrying the invention into effect, changes and variations may be made therein without departing from the invention.

What is claimed is—

1. A box for the toes of shoes comprising a body-piece formed of a sheet of rubber, a thin reinforcing sheet of fabric, these parts being closely attached throughout their extent, and a toe-piece of canvas on the other side of the rubber sheet and similarly closely attached thereto.

2. A box for toes of shoes comprising a body-piece formed of a sheet of rubber, a thin reinforcing sheet of fabric on one side of the rubber and a toe-piece of canvas on the other side of the rubber, these parts being closely united by the adhesive quality of the rubber, thus rendering the use of paste or cement unnecessary.

3. A box for the toes of shoes comprising a body-piece formed of a thin sheet of rubber, a thin reinforcing sheet of fabric on one side of the rubber and a toe-piece of canvas on the other side of the rubber, these parts being closely united by the adhesive quality of the rubber, and the structure being skived on the side of the toe-piece to form a thin edge.

4. A shoe having a cut-off vamp, a box and

a tip, the adjacent edges of these parts being overlapped and united by stitching passing through them.

5. A shoe having a cut-off vamp, a box having an edge which is relatively thin with respect to its body portion, the cut-off edge of the vamp overlapping the edge of the box, and a tip overlying the lapped edges, all these parts being united by stitching.

6. A shoe having a box-toe, the box thereof comprising a body-piece formed of reinforced elastic material and a canvas toe-piece closely united thereto, the edge of the body-piece being relatively thin as compared with the thickness of the box and being turned under and secured to the inner sole.

7. A shoe having a box-toe, the box comprising a body-piece formed of sheet-rubber, a thin reinforcing sheet of fabric and a toe-piece of canvas which is smaller than the body-piece whereby the body-piece has a thin edge, this edge being turned under and secured to the inner sole.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES N. MOULTON.

Witnesses:

AUGUSTA WHITE,  
G. M. BOOST.