

No. 726,464.

PATENTED APR. 28, 1903.

H. F. ROONEY.
CUSHION HEEL.

APPLICATION FILED JULY 17, 1902.

NO MODEL.

Fig. 1.

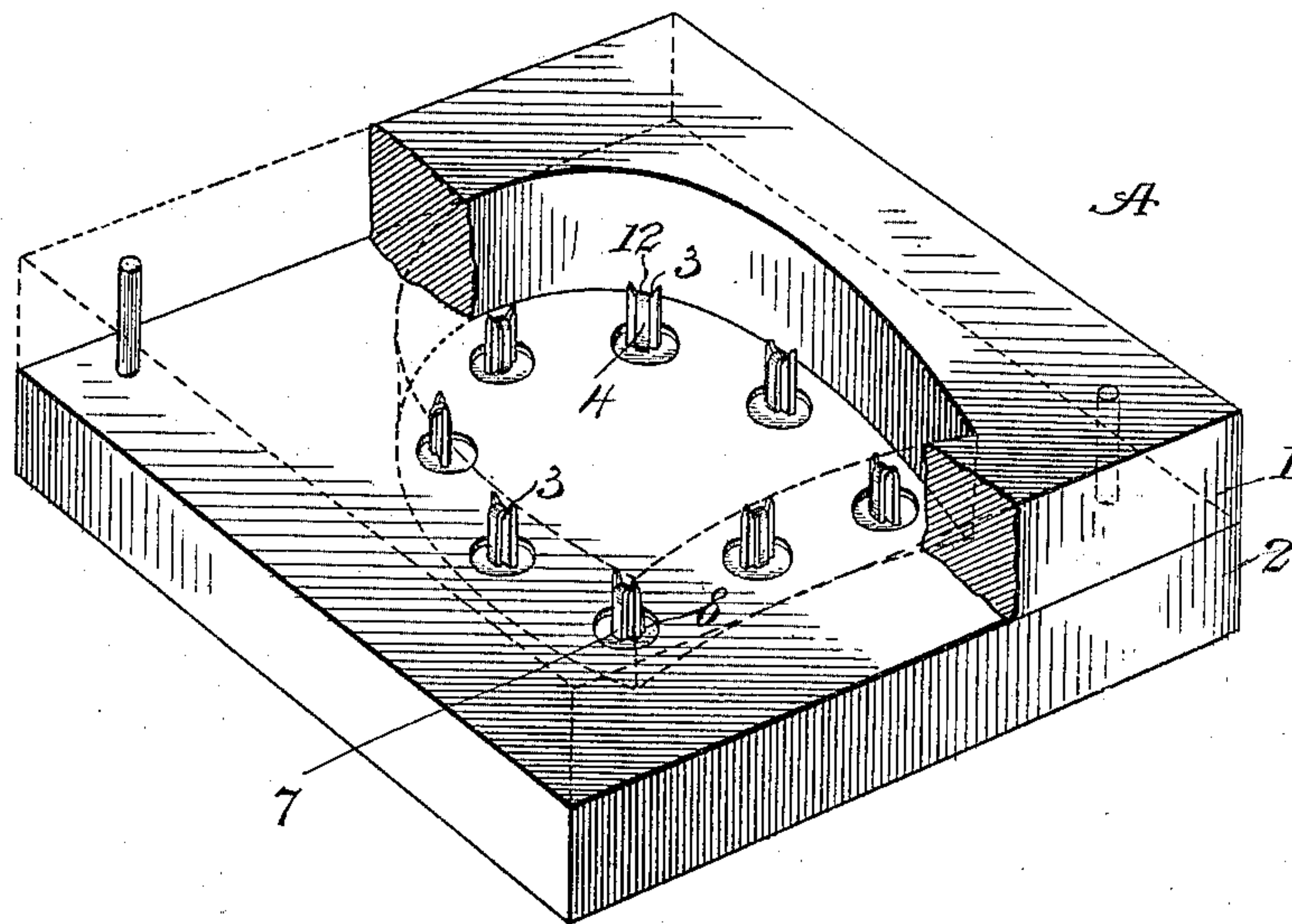


Fig. 4.

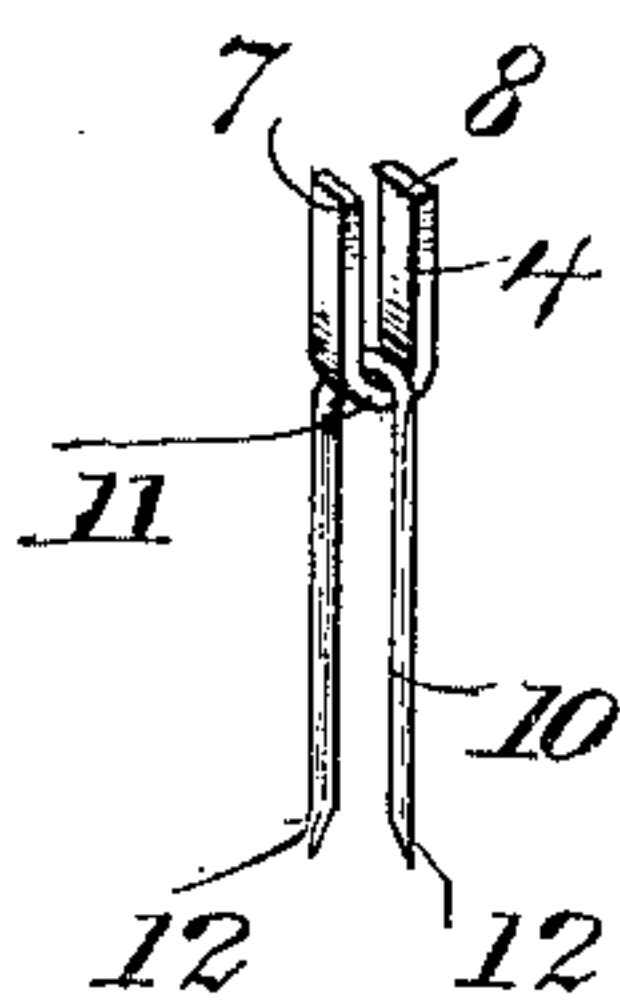


Fig. 2.

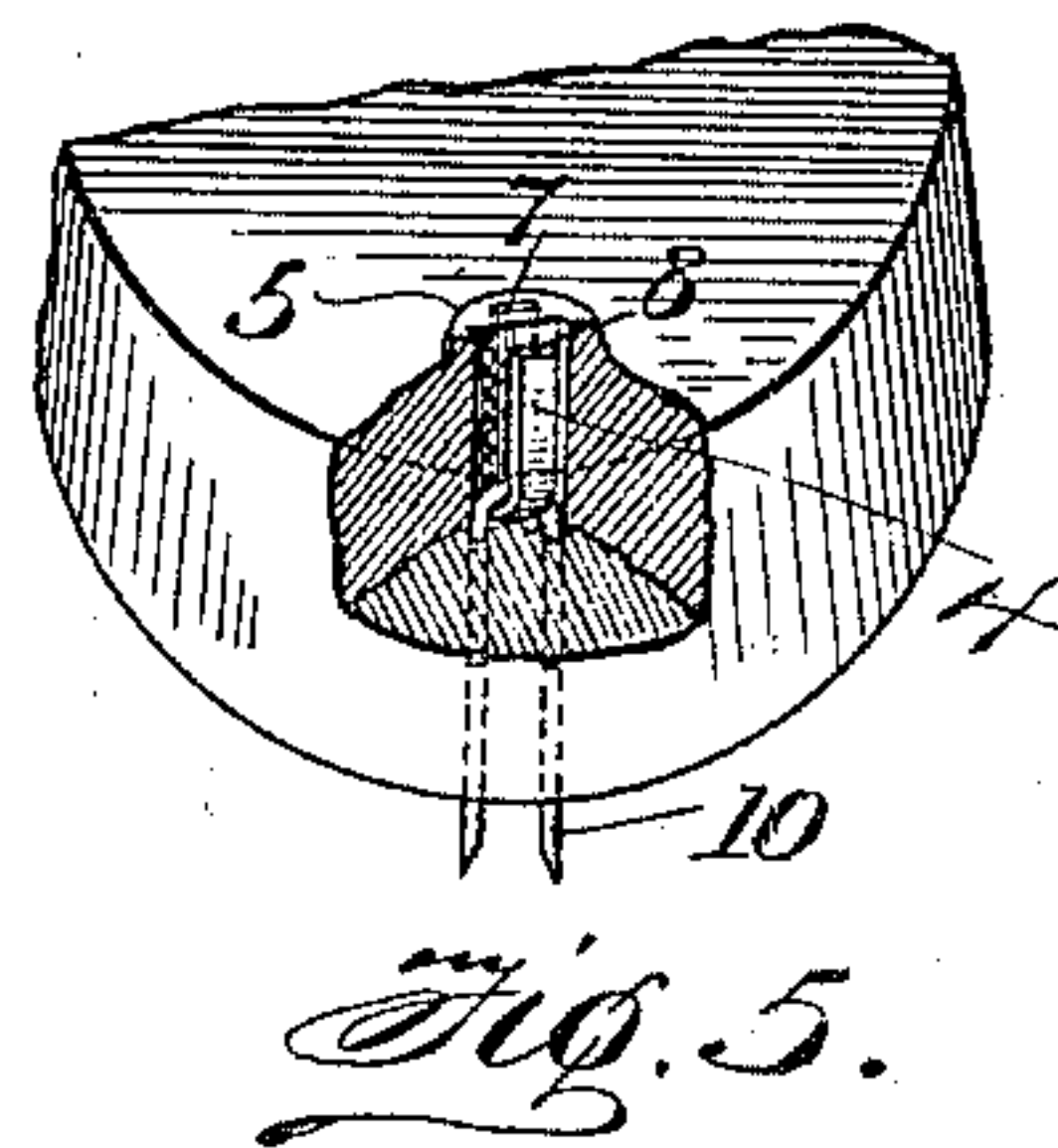
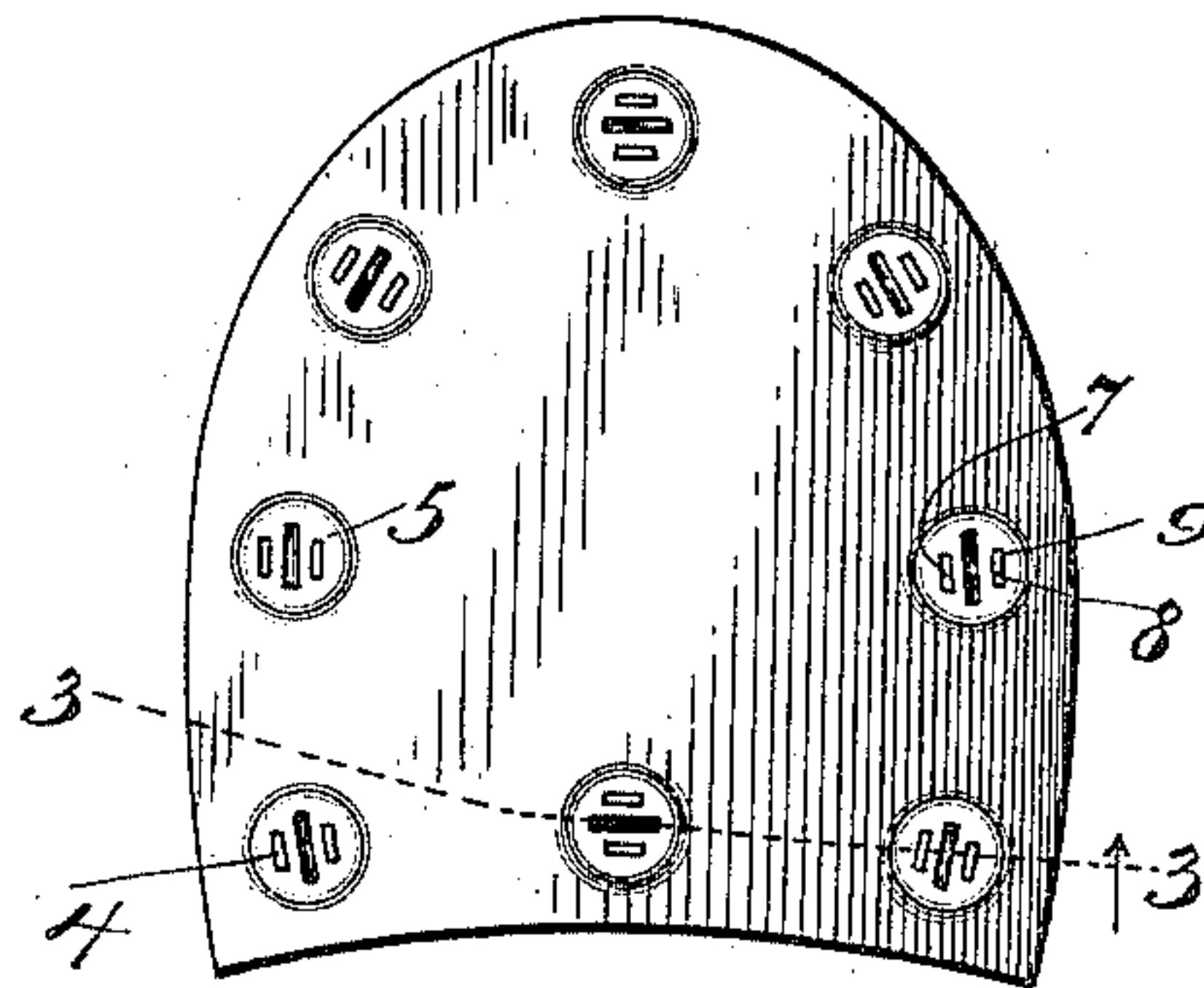
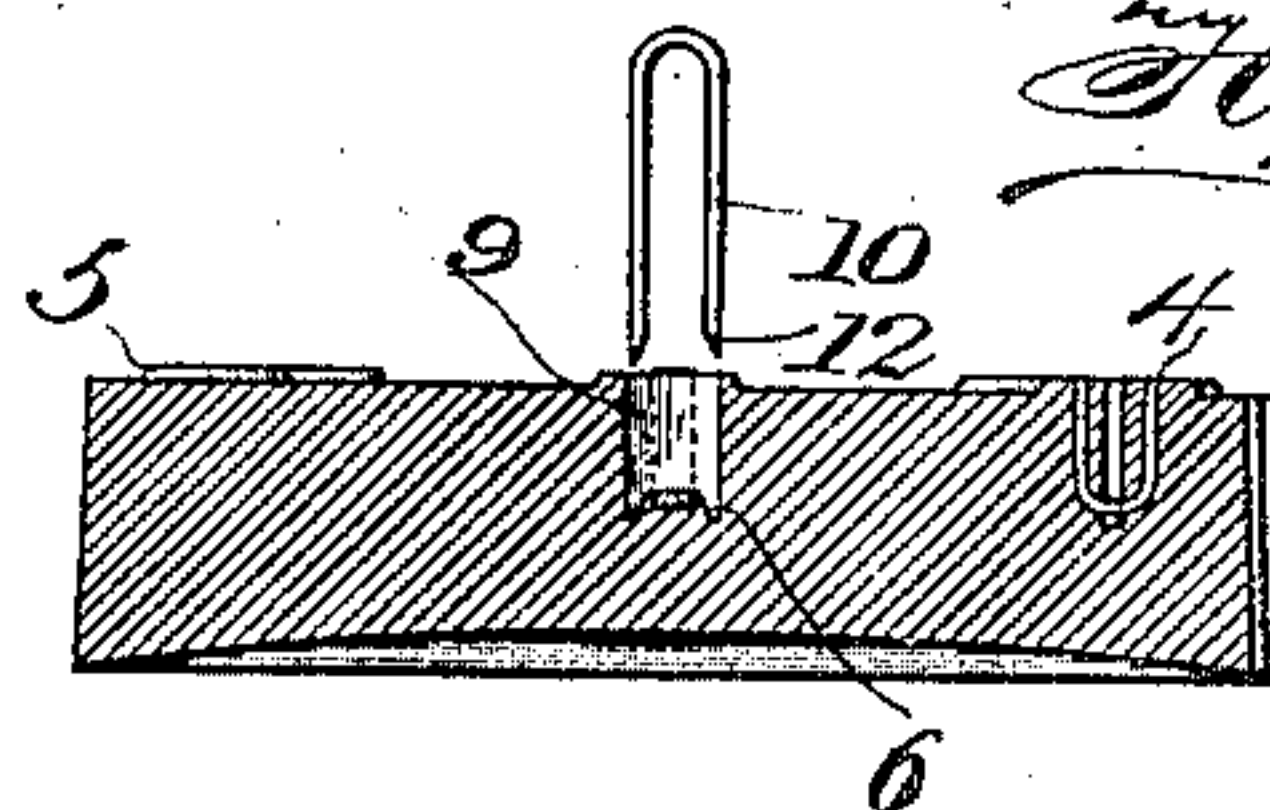


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY F. ROONEY, OF RANDOLPH, MASSACHUSETTS.

CUSHION-HEEL.

SPECIFICATION forming part of Letters Patent No. 726,464, dated April 28, 1903.

Application filed July 17, 1902. Serial No. 115,983. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. ROONEY, a citizen of the United States, residing at Randolph, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Cushion-Heels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in shoe-heels, and has particular application to that class of heels commonly known as "cushion" or "elastic" heels.

This invention contemplates the production of a cushion-heel which shall be durable in construction, capable of being manufactured at little expense, and which shall relieve the wearer of all jars and shocks.

It is also the intention of the present invention to provide, in combination with the body of the heel proper, means for fastening the heel securely to the shoe, such fastening or securing means also assisting in forming a durable wearing or tread portion.

A further object of the invention is to so combine and correlate the parts or elements forming the fastening device for my heel that when pressure is transmitted to the heel in walking such parts by their peculiar positioning will act as a cushion to take the jar or shock from the wearer.

To the attainment of the hereinbefore-mentioned objects and others of a like nature the invention consists in the peculiar construction, combination, and arrangement of parts, as will be hereinafter described in the specification, illustrated in the drawings, and set forth in the appended claims.

For the full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and following description.

It will of course be understood that the invention is susceptible to various changes in the form, proportion, and minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and a disclosure of the invention and adaptation thereof is shown in the accompanying drawings, wherein—

Figure 1 is a perspective view of a mold for forming my improved heel, a portion of said view being broken away to show the arrangement of the pins having the metal tread pieces or staples placed thereon ready to be molded into the heel. Fig. 2 is a plan view of the bottom or tread portion of my improved heel. Fig. 3 is a vertical section taken on the line 3 3 of Fig. 2. Fig. 4 is an enlarged perspective view of the tread stud or staple and the interlocking staple for securing the heel to the shoe. Fig. 5 is a perspective view of a heel, a portion of said view being broken away to show the parts in operative position.

Referring now to the drawings in detail, and in particular to Fig. 1 thereof, A designates a mold formed of two parts, as at 1 and 2, the portion 2 having on its upper surface a number of vertically-mounted pins arranged in substantially the conformation of a heel. The outer end of each of these pins is grooved or cut away centrally, as at 3, to provide a rest or support for the tread or wearing studs or staples 4, it being the intention to have these wearing-staples molded into the heel. The upper face of the bottom mold-plate 2 immediately adjacent to or surrounding each of the pins is cut away or grooved, so that the elastic material of which the heel is formed when in its plastic state may enter these grooved or hollowed portions and when hardened will thus form a raised wearing or tread surface, as at 5, on the outer face of the heel. It will be seen by reference to Fig. 3 that the points formed by the grooving or cutting away of the central top portions of the vertical pins 3 cause small depressions, as at 6 6, to be formed approximately centrally of the body of the heel at the bottom of the recess or orifice formed by the main portion of the pin 3 during the process of molding the heel. The office of these small depressions at the base of the orifice is to form a means for holding or supporting the points of the fastening-staple preparatory to driving the latter through the heel and into the shoe.

While I have herein shown and described my improved wearing-stud as substantially a staple in conformation, it will of course be understood that I do not limit myself to this precise structure or form, but may employ any suitable stud without departing from the

scope of the invention. This wearing stud or staple 4 may be of any suitable material, but for most purposes I prefer to employ metal, and my improved or preferred form is best seen in Fig. 4, it being in the shape of a loop or staple, having end portions 7 and 8, which are adapted when the staple or stud is inverted and molded into the heel to project outward through the said heel until such end portions 7 and 8 are in substantially the same horizontal plane with the raised rubber tread part 5. Through the medium of the pin 3 an orifice or recess, as at 9, is formed in the heel intermediate the ends of the aforesaid wearing or tread staple 4, and into this recess or orifice is driven or forced a securing or fastening means of any desired character—such, for instance, as the staple or pin 10. The recesses formed by the said pin 3 for guiding the staple 10 into position are arranged in a plane extending between the branches or arms of the wearing-staple. It will also be seen that these guiding-grooves when the staples have been properly put in position and are therefore interlocked at their looped portions afford an opportunity for the securing-staple to move up and down with respect to the wearing-staple under the compression of the elastic body portion of the heel. I have herein shown my preferred form of this fastening means, which is an ordinary elongated relatively narrow staple formed, preferably, of wire or other metal. This fastening-staple is adapted to interlock with the loop or rounded portion 11 of the wearing-staple 4, and its arms or pins 12 enter into the above-described depressions 6, formed in the body portion of the heel. The fastening-staple is then driven downward until its loop portion interlocks or contacts with the inverted wearing stud or staple 4, and the arms 12 enter the shoe proper, thus securely fastening the elastic heel to the same.

From the description hereinabove given the manner of making and employing my improved heel will be readily apparent. The wearing or tread loops or staples are placed upon the pins 3 in the manner shown in Fig. 1, the ends 7 and 8 thereof resting upon the bottom of the depressions or hollows surrounding the aforesaid pins. The soft plastic rubber or elastic composition of which the heel is formed is then poured into the mold and permitted to harden therein. When the mass has sufficiently hardened, the heel is removed and is substantially as shown in the cross-section of Fig. 3, the staple 4 being embedded or molded into the body of the elastic heel, the passage or orifice 9 being formed between the arms of the said wearing-staple. When it is desired to apply the heel to a shoe, the staple 10 is driven into the recess or orifice 9 until it interlocks and contacts with the looped portion of the wearing stud or staple 4, thus causing the heel to be held securely in place.

The many advantages incident to a shoe-

heel of this character will be readily apparent. It will be seen that the two end portions of the wearing-staple perform the function of two wearing studs or nails, thus tending to the durability of the tread-surface of the heel. The bend or loop in this wearing-staple acts as a lock for the fastening or securing pin 10 when the latter is driven into the heel, for, as will be observed, the arms of this staple 10 pass on both sides of the loop in the double wearing stud or staple 4. This causes these parts to interlock at a point approximately half-way through the thickness of the rubber heel, thereby forming an effective securing means. Another important advantage is the resiliency or elasticity incident to my structure. When pressure is placed on the heel in walking, the loop portions of the staples separate or press away from each other, thus cushioning the shock or jar which the wearer would otherwise experience, and as soon as the pressure is removed from the heel the two loops, interlocked as they are, return into contact again. There are also many other advantages incident to my improved heel; but they are so evident that it is unnecessary to dwell upon the same in detail here.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A heel of the class described, comprising a body portion formed with an orifice, a staple or loop within the orifice of said body portion, and a second staple or loop interlocking the first staple for securing the heel to a shoe, substantially as described.

2. A heel of the class described, comprising a body portion, and interlocking staples within the same, extending in opposite directions, one forming a wearing-surface, and the other securing means, substantially as described.

3. A heel of the class described, comprising an elastic body portion formed with orifices, a metallic wearing staple or loop provided with arms within the orifices and having their ends extended to the wearing-surfaces of the body portion, and a metallic fastening means entering said orifice between the aforesaid arms and crossing the staple or loop for securing the heel to a shoe and for retaining the staple or loop in position, substantially as described.

4. A heel, comprising a body portion formed with surfaces raised above the remainder of the heel-bottom to provide a wearing-tread, staples embedded in the said raised portion with their ends flush with the wearing-surface, and means for locking said staples in place in said heel, substantially as described.

5. A heel for shoes and the like, comprising a body portion, staples embedded in said heel so that their ends form a part of the wearing-surface thereof, means for locking said staples in the body portion, the heel being provided with guiding-grooves arranged in a plane extending between the branches or arms

of the wearing-staple for permitting the locking means to reciprocate under the yielding action of the heel without dislodging the staple, substantially as described.

- 5 6. A heel, comprising an elastic body portion, a wearing staple or loop embedded in said body portion, and a second staple interlocking with the wearing-staple for locking it in position, the interlocking portion of the staple being capable of movement with respect
10 to each other under the compression of the body portion of the heel, substantially as described.

7. A heel comprising a suitable body portion formed with an orifice and guiding-depressions extending into said body portion at the base of said orifice, and securing means adapted to be passed through said depressions for fastening the heel in position, substantially
15 as described. 20

In testimony whereof I hereunto affix my signature in presence of two witnesses.

HENRY F. ROONEY.

Witnesses:

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JOHN T. FLOOD.