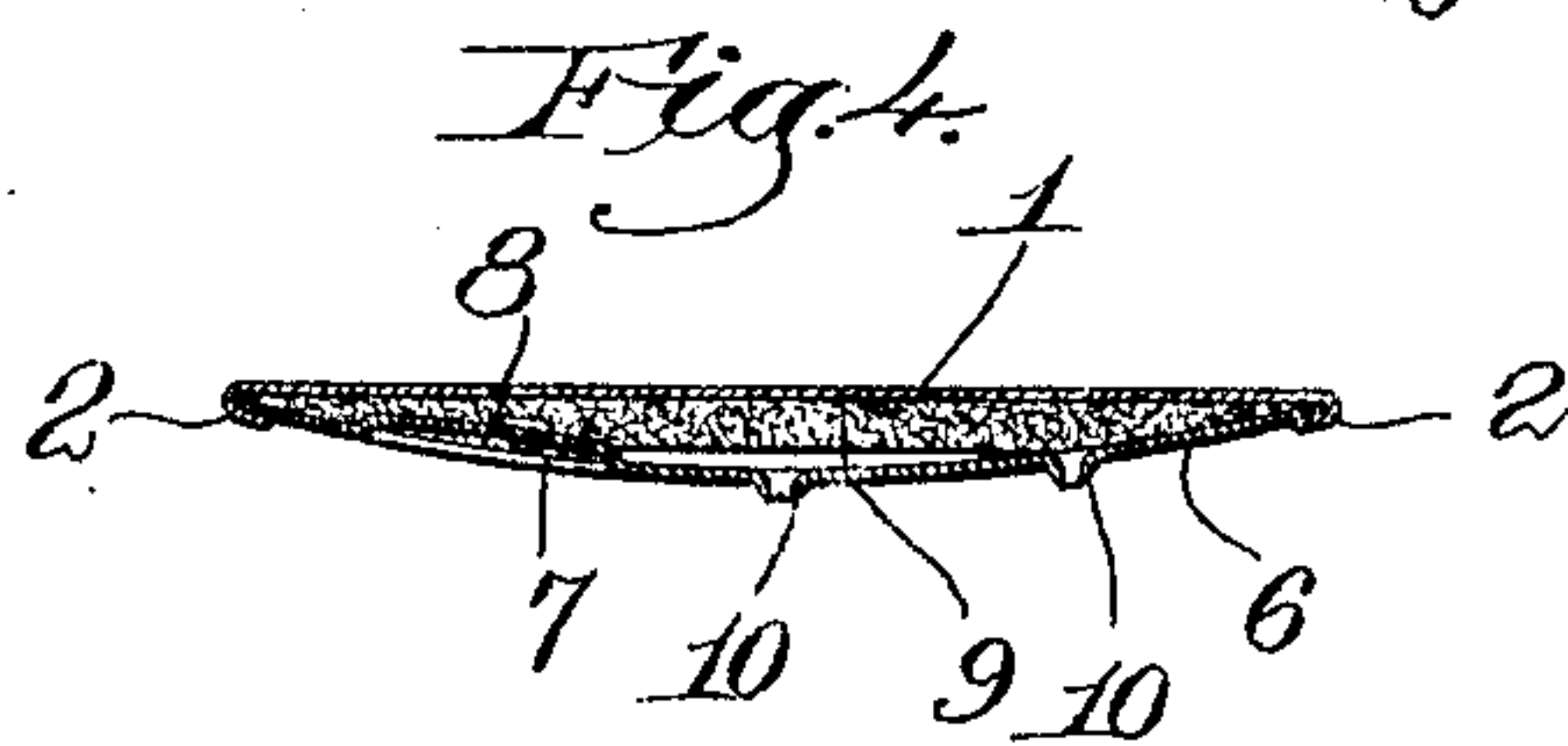
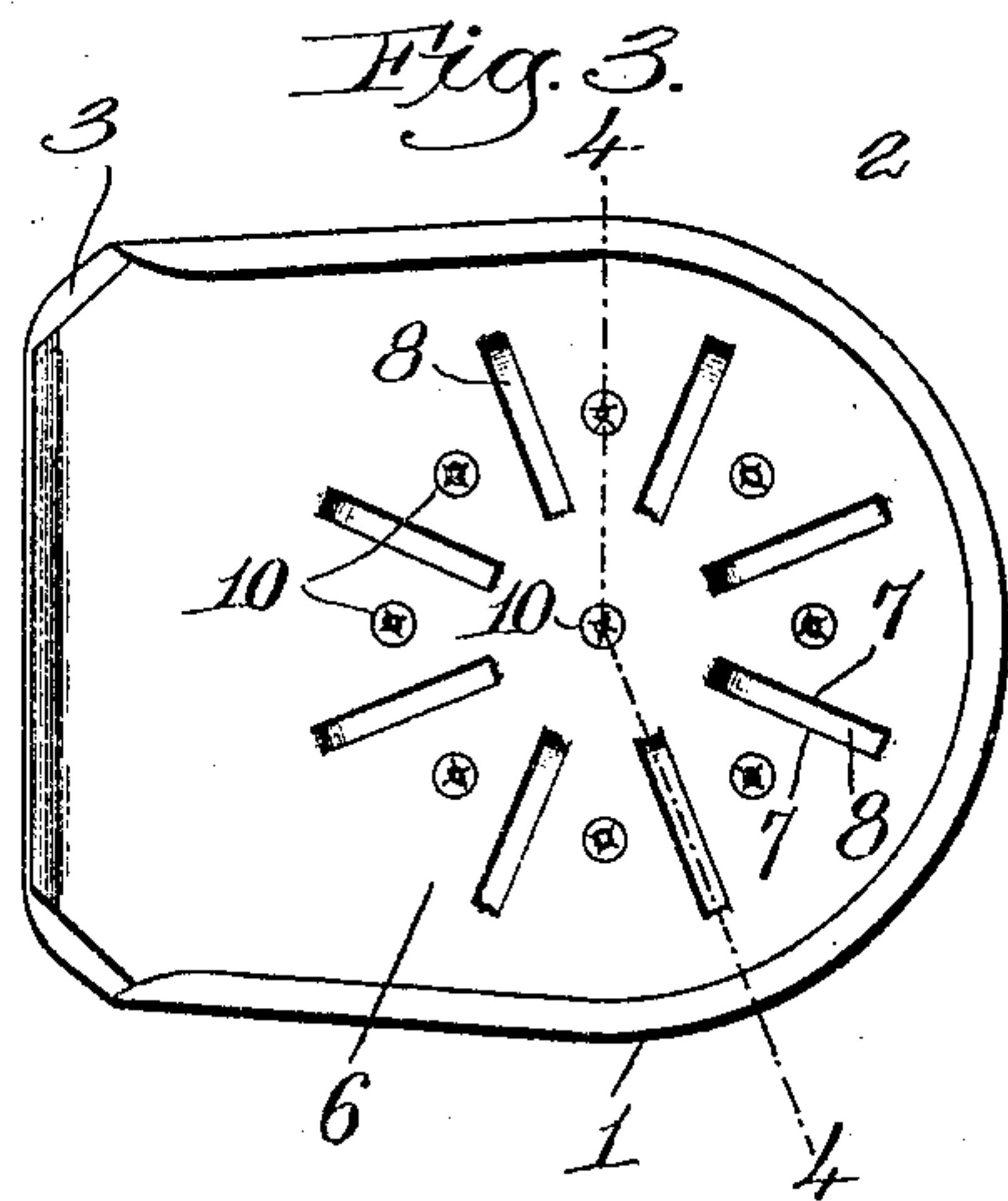
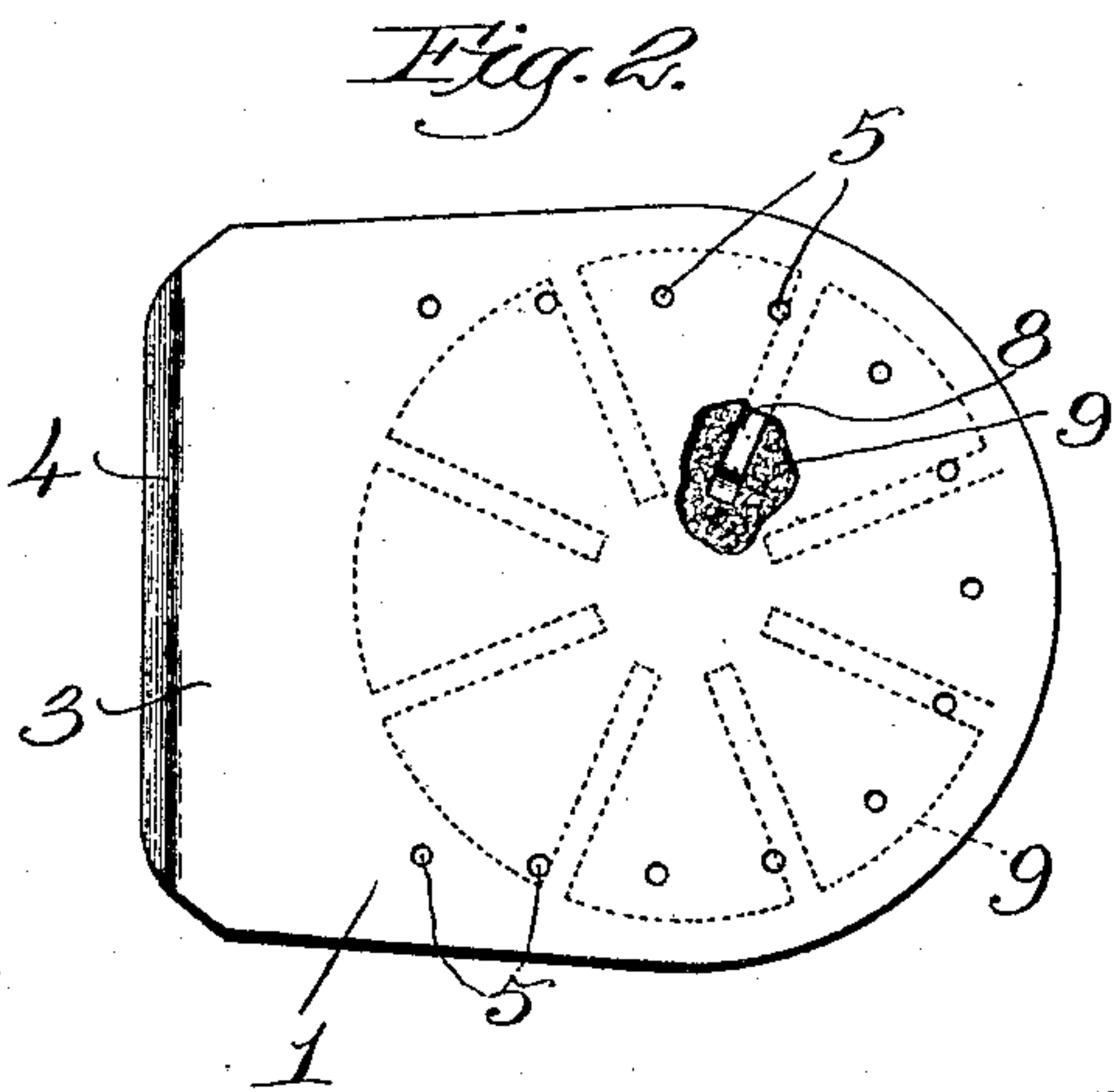
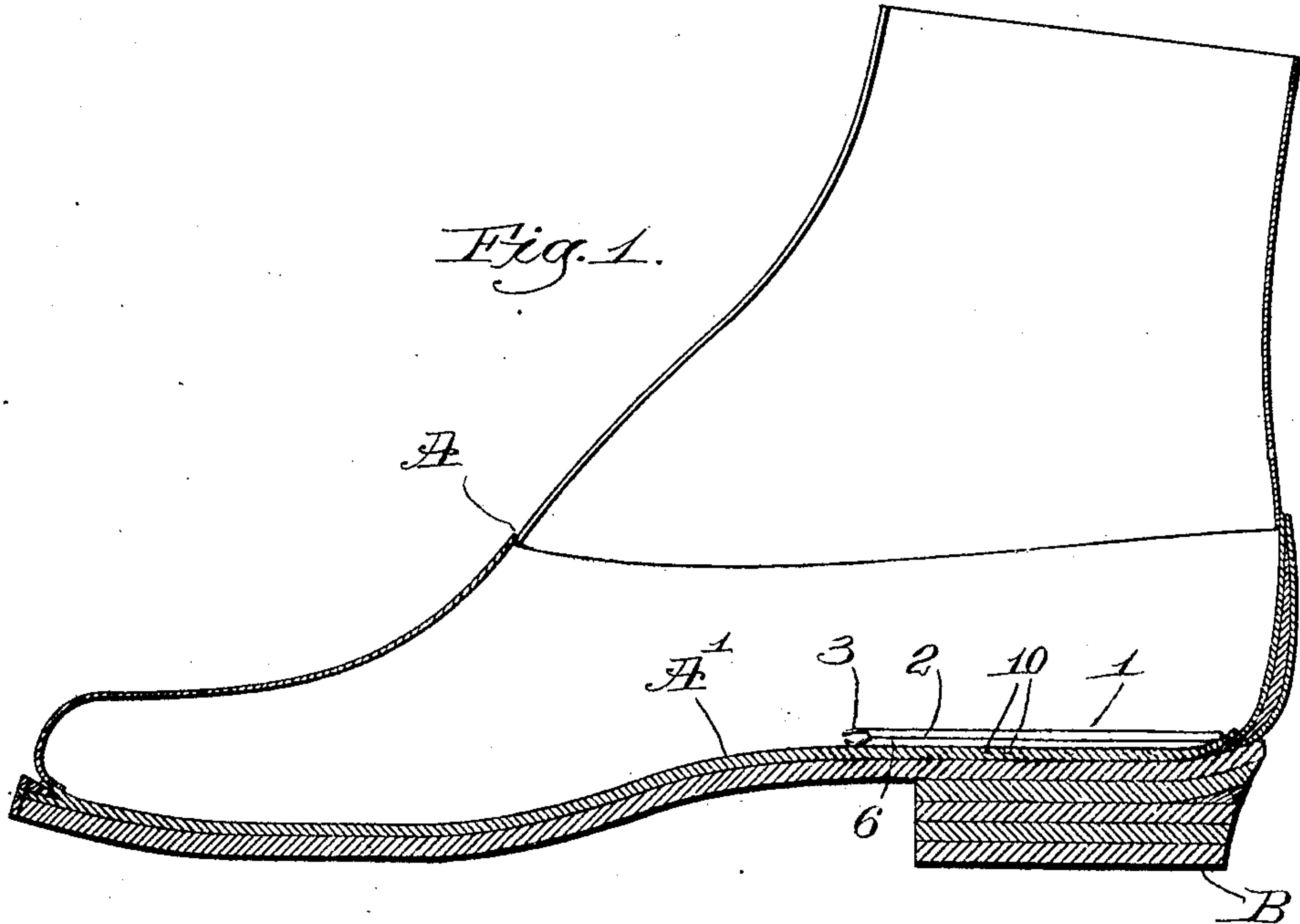


A. A. MEYER.
HEEL CUSHION FOR BOOTS OR SHOES.
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916,350.

Patented Mar. 23, 1909.



Witnesses.
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UNITED STATES PATENT OFFICE.

ANDREW A. MEYER, OF QUINCY, MASSACHUSETTS.

HEEL-CUSHION FOR BOOTS OR SHOES.

No. 916,350.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed January 8, 1909. Serial No. 471,333.

To all whom it may concern:

Be it known that I, ANDREW A. MEYER, a citizen of the United States, and resident of Quincy, county of Norfolk, State of Massachusetts, have invented an Improvement in Heel-Cushions for Boots or Shoes, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention has for its object the production of a novel, efficient and simple heel-cushion adapted to be inserted in the heel portion of a boot or shoe, to sustain the heel of the wearer in a comfortable and yielding manner while at the same time providing a firm and practically unvarying support for the side and back portions of the heel. That is to say, I so construct and arrange my novel heel-cushion that while the heel is as a whole sustained yieldingly the middle of the ball of the heel is permitted to yield, but the side and rear parts of the heel surrounding the ball are sustained in a firm manner on a substantially flat and rigid surface. This mode of supporting the heel is somewhat similar to the manner in which a horse-shoe supports the hoof, firmly and rigidly at the edges but leaving the interior portion free, the soft ball of the human heel requiring a considerable amount of freedom and elasticity while the surrounding portion should rest upon a substantially flat and relatively rigid surface.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a longitudinal section of a shoe with the heel-cushion embodying one form of my present invention applied thereto. Fig. 2 is an enlarged top plan view of my novel heel-cushion, partly broken out to show a portion of the pad. Fig. 3 is an underside view thereof. Fig. 4 is an irregular section thereof taken on the line 4—4, Fig. 3.

In use my heel-cushion is inserted into the shoe A, Fig. 1, and placed in position on the insole A' above the heel B, the forward or breast end of the cushion extending beyond the heel-breast and part way under the arch of the foot, as shown.

The heel-cushion comprises upper and lower members, made of thin but strong sheet metal, and I have found that hard sheet brass, properly nickel-plated to prevent corrosion, presents the requisite stiffness and

strength where needed while at the same time possessing the necessary resiliency.

In accordance with the present embodiment of my invention the upper member or heel-seat 1 is made substantially flat and of the general shape of the heel, Fig. 2, its side and rear edges being turned down and under to form a flange 2 which, as shown in Fig. 3, extends continuously from a point near the breast at one side, around the rear end of the plate and along the opposite side to near the breast. This flange stiffens and strengthens the heel-seat 1 and causes its sides and rear portion to be maintained flat, rigid and unyielding at all times, while the part of the seat within the rigid portion is free to flex or yield under pressure. At the breast portion the heel-seat 1 extends beyond the ends of the flange, as at 3, and is preferably given a slight transverse bend 4. A series of ventilating openings 5 are made in the heel-seat, Fig. 2, to provide for a proper circulation of air therethrough and thereby maintain the heel of the wearer dry and properly ventilated.

The under member 6 of the heel-cushion is made of sheet metal, conforming in its general outline to the heel-seat 1, but somewhat larger, so that when sprung into place in the pocket formed by the flange 2 the member 6 will be transversely arched, as shown clearly in Fig. 4, the flange being compressed firmly upon the edges of the under member 6 after it has been positioned, holding it securely connected to the heel-seat. It will be seen that the member 6 is connected with the seat 1 only at the rigid and unyielding portion of the latter, though it provides a yielding support for the heel-seat as a whole, as the convex face of the under member rests upon the insole within the shoe. When the weight of the wearer of the shoe comes upon the heel-seat 1 the supporting member 6 "gives" or yields sufficiently to provide for the cushioning action and resumes its normal arch or curvature when the pressure is relieved. I ventilate the member 6 in any suitable manner, and herein I have shown it as provided with pairs of parallel slits 7, the intervening metal being struck up above the concave face of the member, as at 8, forming species of ribs, which tend to stiffen it while at the same time providing openings for the circulation of air. These ribs 8 are shown in Fig. 3 as radiating from a common center, and they are further useful in retaining in place a radially slotted pad 9 of felt or other suitable

material, interposed between the upper and under members of the cushion. This pad is useful when the person is heavy, as it acts in conjunction with the metallic members forming the cushion to eliminate the jarring or concussion due to walking on hard streets or pavements.

In order to easily and quickly secure the heel-cushion in the boot or shoe I have provided self-contained fastening means, shown as tubular spurs 10 projecting from the convex face of the under member 6, conveniently formed by punching the metal outward with a suitable tool, each spur thus presenting several sharp teeth or prongs which enter and embed themselves in the inner sole of the shoe. These spurs are so effective in taking hold that after one or two wearings the cushions will be permanently fastened in place.

It will be seen that while the heel-seat is as a whole yieldingly sustained by the member 6 its edge portions at the sides and rear will not flex or bend, thereby providing a firm, flat and unchanging surface for the superposed parts of the heel, but the soft or ball portion of the heel is sustained by the springy and readily yielding interior part of the heel-seat. The greatest elasticity of the latter is at the front or breast end, which in practice extends about one-half inch beyond the heel-breast and under the arch of the foot, to form a yielding, resilient support therefor, this arch-sustaining portion 3 projecting beyond the ends of the flange 2 and being free from the forward member of the under member 6, as shown.

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

1. A heel-cushion comprising a substantially flat and resilient top member constituting a heel-seat, and a transversely arched bottom member connected with the heel-seat only at its side and rear edges, to form an elastic support for the heel-seat as a whole while preventing flexing or bending thereof at its side and rear edges, the central and breast portions of the heel-seat yielding to pressure of adjacent portions of the heel of the user.

2. A heel-cushion comprising a substantially flat sheet-metal top member stiffened at its side and rear edges and having ventilating openings, a transversely arched bottom member connected with said top member only at its stiffened edges, the bottom member resting upon its convex face and yieldingly sustaining the top member, and

integral fastening means on the bottom member.

3. A heel-cushion comprising a substantially flat sheet-metal top member stiffened at its side and rear edges and having ventilating openings, a transversely arched bottom member connected with said top member only at its stiffened edges, the bottom member resting upon its convex face and yieldingly sustaining the top member, the bottom member having ventilating openings therein, and tubular fastening spurs projecting from said member and adapted to embed themselves in the sole of a boot or shoe when inserted therein.

4. A heel-cushion comprising a perforated sheet-metal heel-seat turned under at its side and rear edges to form a stiffening and retaining flange, and a transversely arched bottom member sprung into the flange and providing a yielding support for the heel-seat as a whole, said bottom member having a series of ventilating slots formed therein, the breast end of the heel-seat extending beyond the flange and free from the bottom member, to form an elastic support for the superposed arch portion of the foot.

5. A heel-cushion comprising a perforated metallic heel-seat substantially rigid adjacent its side and rear edges and yielding within said edges, and a resilient sustaining member for and connected with the heel-seat at the rigid edge portions thereof.

6. A heel-cushion comprising a perforated metallic heel-seat substantially rigid adjacent its side and rear edges and yielding within said edges, a resilient metallic sustaining member for and connected with the heel-seat at the rigid edge portions thereof only, and a non-metallic pad interposed between the heel-seat and the sustaining member.

7. A heel-cushion comprising a perforated, substantially flat, metallic heel-seat substantially unyielding adjacent its side and rear edges and yielding within them, an arched and apertured resilient sustaining member connected with the heel-seat only at its rigid edge portions, the convex face of said sustaining member being downturned, and integral means on said member to retain it in position in the shoe.

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

ANDREW A. MEYER.

Witnesses:

JOHN C. EDWARDS,
FREDERICK S. GREENLEAF.