

(No Model.)

A. R. PARKISON.
HEEL.

No. 482,561.

Patented Sept. 13, 1892.

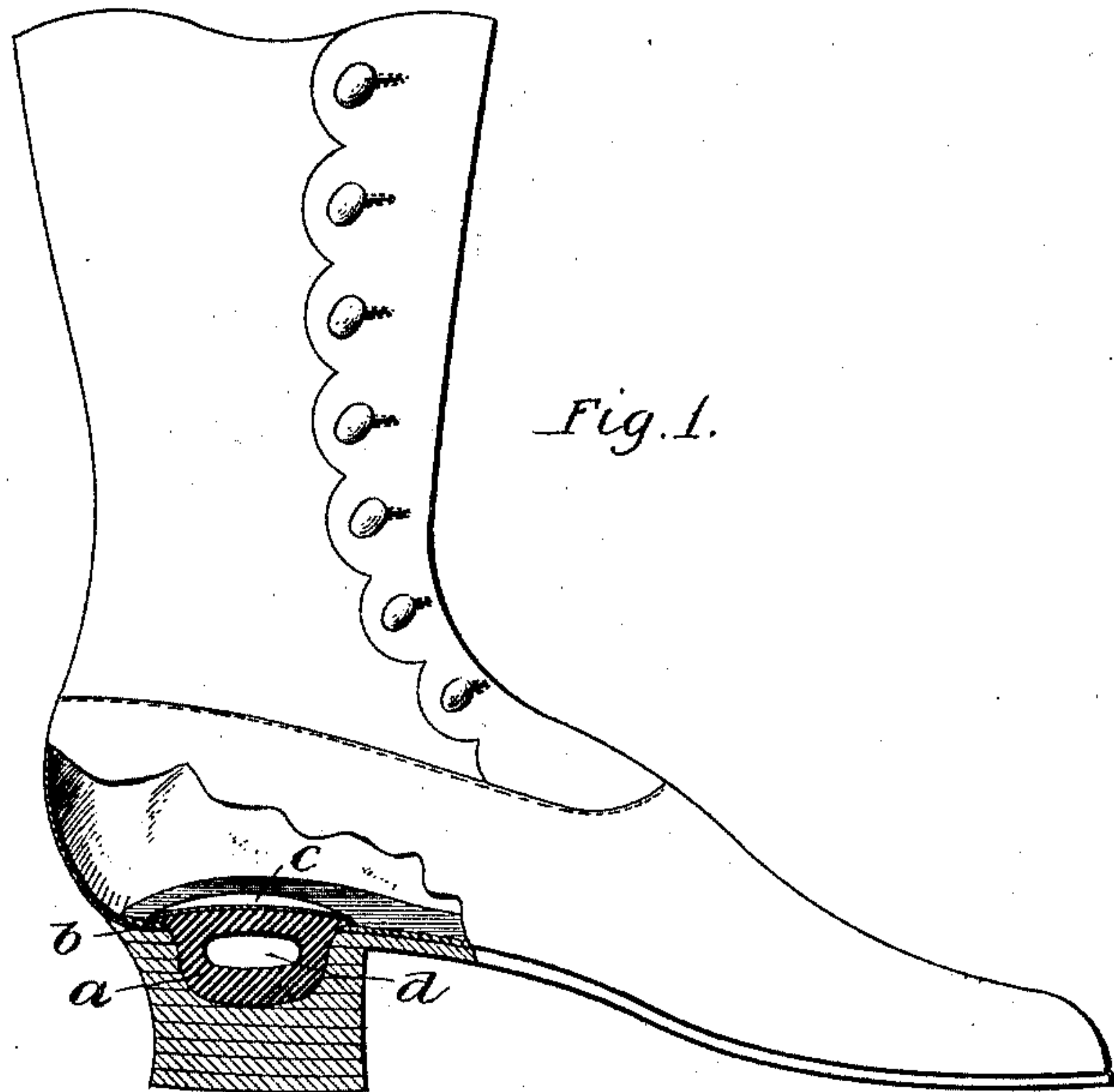


Fig. 2.

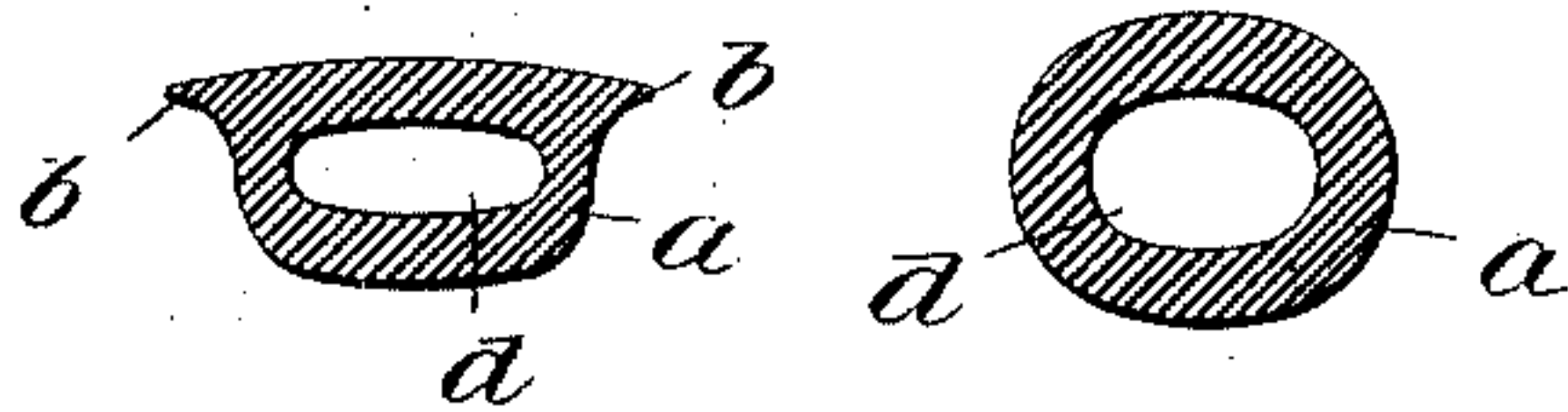


Fig. 3.

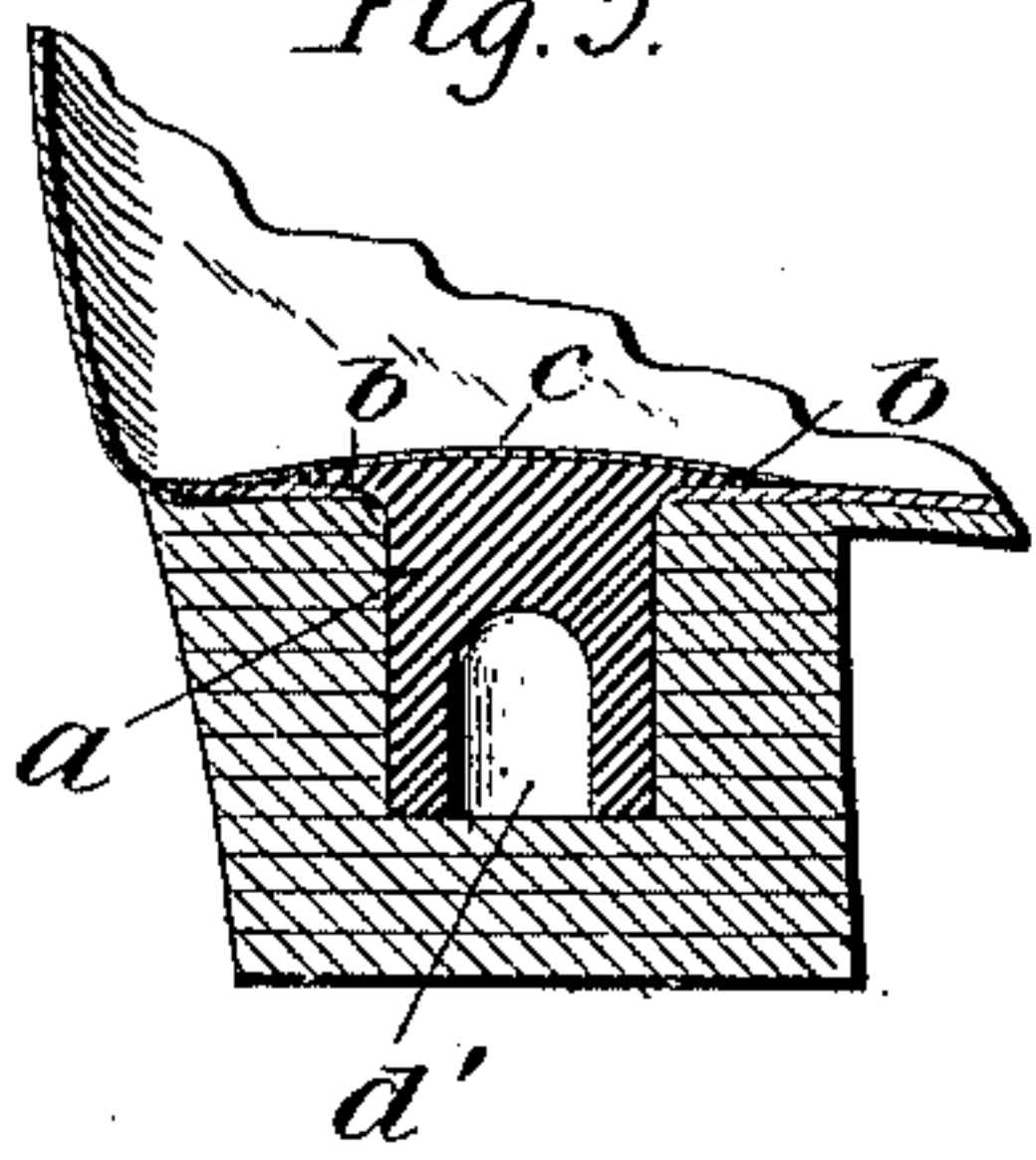


Fig. 4.

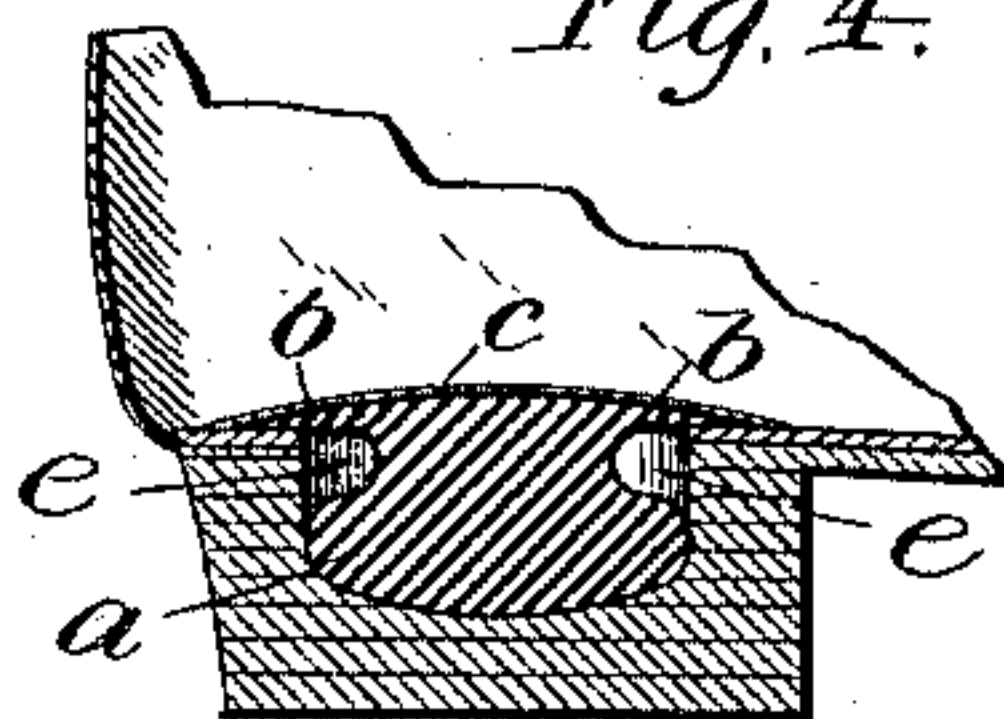
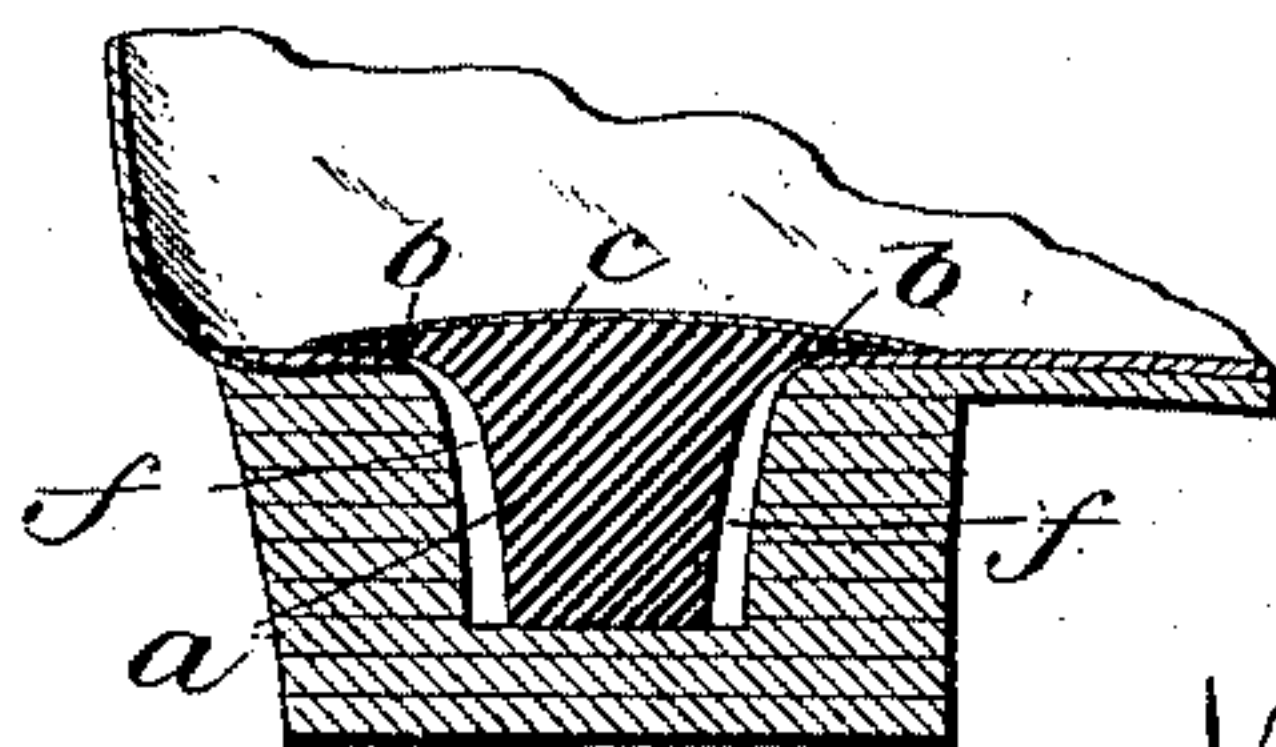


Fig. 5.



Witnesses
August Johnson
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UNITED STATES PATENT OFFICE.

ALLEN RODGERS PARKISON, OF MONONGAHELA CITY, PENNSYLVANIA.

HEEL.

SPECIFICATION forming part of Letters Patent No. 482,561, dated September 13, 1892.

Application filed April 6, 1892. Serial No. 428,029. (No model.)

To all whom it may concern:

Be it known that I, ALLEN RODGERS PARKISON, a citizen of the United States, residing at Monongahela City, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Spring-Heels for Boots or Shoes, of which the following is a specification.

I have produced a bearing-cushion for the heels of boots or shoes, which I make of a rubber plug seated in a hollow heel and adapted to form an extended or rimmed top bearing for the heel of the wearer. I make the plug either hollow, solid, or corrugated in a way to give it the necessary cushion action within the hollow of the heel and to maintain its extended or rimmed bearing-surface in proper relation to the insole of the shoe.

My improvement gives a very comfortable tread to the wearer and relieves the muscles in walking. For persons employed on railway-trains it is of especial importance in relieving the injurious effects to the system occasioned by the jars and vibrations of the train.

My improvement is especially useful to persons having to walk upon hard floors or pavements and for soldiers whose march of long steps throws the heel first to the ground while the leg is in a comparatively rigid position at the knee, so that the tread is easy and pleasant.

My improved heel-bearing can be made and sold as an article of manufacture for different sizes of heels and can be applied to boots or shoes in use, as well as in manufacture, with little labor and cost and allow of the repair of the heel.

The accompanying drawings illustrate the application of my improved heel-cushion to the heel of a shoe and also show different forms of such heel-cushion adapted for use as a plug, and in which—

Figure 1 shows a shoe with its heel and air-cushion in section. Fig. 2 shows the air-cushion in vertical and horizontal section. Fig. 3 shows the heel with a modified form of spring-cushion. Figs. 4 and 5 show like views with other modifications of such cushion.

Referring to the drawings, it will be seen that I make the heel with a hollow which opens at the insole, and I may make this hol-

low by gouging out the insole and heel from the inside of the shoe, or by cutting out the lifts before the shoe is made, or in any way to suit the kind of heel which is used. The cushion-plug *a*, which I make of rubber, is seated within the heel-hollow, so that its top surface is slightly raised above the plane of the insole, is extended to form a rim or flange *b* to enlarge the bearing-surface, and to make a smooth fit at the edge of the heel-hollow. This rimmed enlarged bearing-surface I prefer to cover with a pliable false insole *c* of suitable material glued to the rubber or fastened to the insole to protect the stocking of the wearer from being discolored. The opening in the insole may be made larger than the hollow in the heel to receive the rim or flange of the plug-cushion to make a smooth surface fit upon the top lift of the heel, and the rim may be undercurved to an edge for this purpose. The body of the plug I make hollow to form an air-cushion *d* and comparatively flat, or I may make it in the form of a plug hat, with the hollow *d'* open at the crown, or I may make it with one or more annular corrugations *e* below the rim to give the necessary elasticity to the body of the plug. I may make the body of the plug solid with tapering or concave walls and make the hollow in the heel of a little greater diameter than the plug to form a space *f*, within which the plug may expand under compression to render the plug elastic. The other forms of plugs may be fitted closely in the heel-hollow and their elasticity obtained by their hollow or corrugated form. The plug may be secured in its seat by being glued to the bottom of the heel-hollow or by its rimmed top, or by both.

The rubber plug formed with a closed air-chamber and seated solidly within the heel-body gives the advantage of a single heel-bearing, having walls within its body which render it more easily yielding and compressible, while the air confined within it gives a free spring or cushioned action by its resistance under the impact or weight of the wearer. Yet such yielding or free compressible action of the plug within its body is also obtained from interior walls open at the bottom of the plug, because the latter is thereby permitted to yield inwardly within the space between its walls, whether open or closed, and so provide for the

compression of the body of the plug inwardly of its body. This space in the body of the plug, which renders it easily compressible, may be provided by reducing the body of the plug 5 externally, so as to form an enlarged bottom and top, with an intervening neck or groove where the yielding or flexibility is provided at the thinnest or smallest part of the body, whether it be solid or hollow. It is a neces- 10 sity, however, that the plug-cushion formed as I have stated shall be fixed within the body of the heel itself, that it shall have a firm bottom seating within the heel, and that it shall form a single bearing for the heel of the 15 wearer within an opening in the insole without interfering with the proper securing of the insole to the upper, to the heel, and to the sole proper.

I claim as my improvement—

20 1. A heel for boots or shoes, having a hollow extending below the sole, closed at its bottom and opening at and within the insole, in combination with a rubber plug having its body reduced in thickness between its ends 25 and having an annular convex rim seated upon the insole, whereby it is rendered compressible, substantially as described.

30 2. A heel for boots or shoes, having an interior hollow extending below its sole, closed at the bottom and opening at and within the insole, in combination with a hollow or chambered rubber plug seated upon the bottom or said heel-hollow and having an annular rim

projecting within an opening in the insole, substantially as described. 35

3. A heel for boots or shoes, having an interior hollow extending below the sole, closed at its bottom and open at and within the insole, in combination with a rubber plug having a closed air-chamber therein, seated upon 40 the bottom of said heel-hollow and having a rim seated within the opening in the insole, substantially as described.

4. As a new article of manufacture, the herein-described cushioned plug for the heels 45 of boots or shoes, consisting of a rubber plug having a closed air-chamber therein and a top rim and adapted for use with a heel having an interior hollow extending below its sole, closed at the bottom and open at the insole, 50 substantially as described.

5. The combination, with the heel of a boot or shoe having an interior hollow, of a rubber plug having a circular top convex bearing- 55 surface seated within an opening in the insole and its body of less diameter seated upon the bottom of said heel-hollow and glued on one or both seats, substantially as described, for the purpose stated.

In testimony whereof I have hereunto signed 60 this specification in the presence of witnesses.

ALLEN RODGERS PARKISON.

Witnesses:

GEO. A. FIFE,

GEO. T. LINN.