

A. & D. A. REED.

CUSHION SOLE.

APPLICATION FILED MAR. 22, 1911.

1,017,314.

Patented Feb. 13, 1912.

Fig. 1.

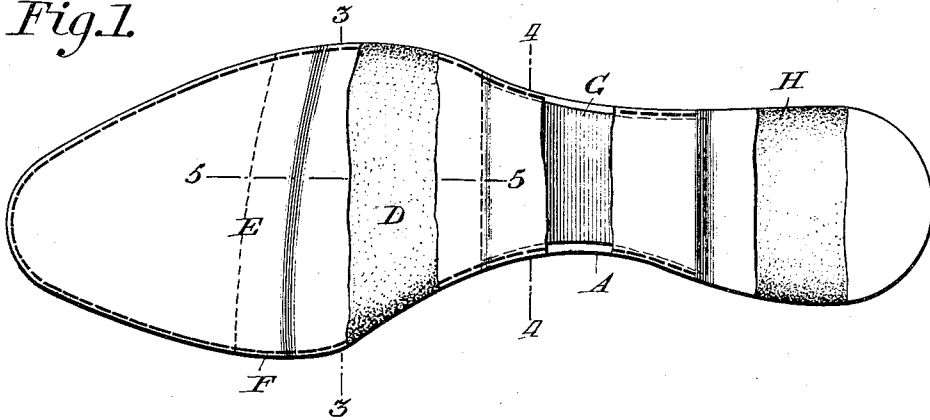


Fig. 2.

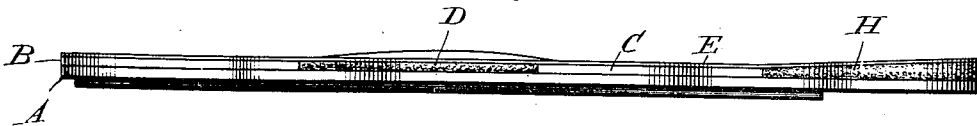


Fig. 3.

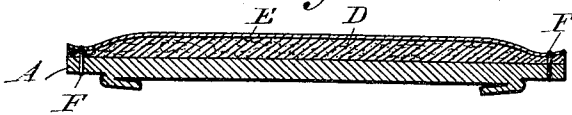


Fig. 4.

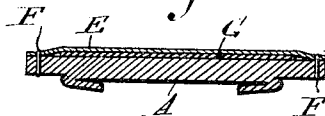
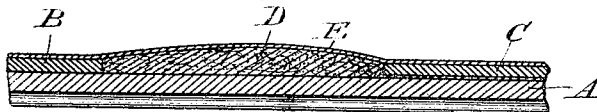


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

ADAM REED, OF ST. JOSEPH, MISSOURI, AND DAVID A. REED, OF BOZEMAN, MONTANA;
SAID ADAM REED ASSIGNOR OF ONE-FOURTH OF THE RIGHT TO SAID DAVID A.
REED.

CUSHION-SOLE.

1,017,314.

Specification of Letters Patent.

Patented Feb. 13, 1912.

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To all whom it may concern:

Be it known that we, ADAM REED and DAVID A. REED, citizens of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, and Boze-

man, in the county of Gallatin, State of Montana, respectively, have invented new and useful Improvements in Cushion-Soles, of which the following is a specification.

This invention pertains to boot and shoe soles of the cushion type.

In cushion soles when the cushion extends throughout the length of the sole, it is open to objection for several reasons among which may be mentioned the liability of the cushion to give rise to undue perspiration of the foot, and the tendency of the cushion to stretch both laterally and longitudinally to such an extent as to cause wrinkles; the said wrinkles in actual practice occurring to the greatest extent in the toe portion of the cushion where they extend upward between and beneath the toes and cause discomfort and in many cases abrasions and sores.

The object of the present invention is to provide a boot or shoe sole comprising a cushioned portion adapted to rest under the ball of the foot and comfortably conform to and adequately cushion enlarged joints at that point, a hard toe portion in front of said cushioned ball portion, adapted to support the toes of the wearer, and a hard shank portion in rear of the cushioned ball portion, calculated to support the arch of the foot.

The invention also contemplates the provision in rear of the hard shank portion of the sole, of a cushioned heel portion calculated to adequately cushion the heel of a person and prevent the transmission of shock and jar to the body incidental to walking.

With the foregoing in mind, the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a plan, partly broken away, of the sole constituting the preferred embodiment of the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section taken in the plane indicated by the line 3—3 of Fig. 1. Fig. 4 is a similar view taken in the plane of line 4—4 of Fig. 1. Fig. 5 is a detail longitudinal section taken on the line 5—5 of Fig. 1.

Similar letters designate corresponding

parts in all of the views of the drawings, referring to which:

A is the leather body of the sole. This leather body is shown as designed to form part of a welt shoe, but it is obvious that it may be comprised in a shoe of any other suitable type, and may be connected to an outer sole in any approved manner without involving departure from the scope of the claimed invention. On the toe portion of the leather body A is superposed a hard-leather layer B, and on the narrow instep portion of said body is arranged a hard-leather layer C.

Located and preferably secured by adhesive or other suitable means on the body A, between the hard-leather toe layer B and the hard-leather instep layer C, is a cushion D of lamb's wool, felt or other appropriate material, which is preferably shaped as shown in Fig. 1, and over all is placed a covering E, of soft calf-skin or other suitable material, which corresponds in outline to the body A, as shown. The said covering E is connected to the body A and also to the hard-leather layers B and C and the cushion D, by a line of through and through stitches F which preferably extends from a point at one side of the rear end of the instep portion to a point at the opposite side of said rear end, as shown, so as to leave the heel portion of the covering free. It will also be noted here that the stitches F serve in the connection of the hard-leather layers B and C to the body A upon which said layers are superposed.

Interposed between the instep or shank portion of the body A and the hard-leather layer C and resting between the lines of stitches F, is a piece of spring-steel G which is preferably, though not necessarily employed, with a view to assisting in the support of the arch of the foot.

As before stated, the portion of the covering E in rear of the stitches F is preferably left free, and said free portion is provided at its underside with a heel-cushion H of lamb's wool, felt or other suitable material. This heel cushion is connected by adhesive to the underside of the covering E.

The outer sole and upper of a shoe (not shown) are stitched or otherwise secured to the described cushion sole on a last by any of the well known methods known to the shoemaker's art; said securing is done around all of the edge of said sole except

the previously mentioned free heel portion. This free heel portion is afterward secured to said outer sole in the following manner: Said last is withdrawn from the shoe, and
 5 the heel cushion H and its free portion of cover E are folded over and upon the shank portion of the described cushion sole, after which a last having a metal heel seat is inserted in the shoe and the well known operation of nailing a heel thereon is performed,
 10 with the nails deflected and clenched by said metal heel seat against and on the inner surface of the heel portion of hard sole A. Said last is then removed, after which cement is applied to the thus exposed portion
 15 of hard sole A, the free portion of cover E and the heel cushion H are returned to the position shown, after which said heel cushion is pressed firmly on said cement, thereby
 20 securing said cushion and its portion of cover E in place. This latter cementing of cushion H may, when desired, be omitted for facilitating subsequent nailing of said heel, as is done when the same is repaired,
 25 in which case the same mode of cushion turning and heel nailing is repeated.

By virtue of the construction of the sole described, the cushion D serves to comfortably conform to and adequately cushion the
 30 ball of the foot, and this without rendering the foot too warm or giving rise to undue perspiration. It will also be manifest that the interposition of the cushion D between the opposed ends of the hard-leather layers
 35 B and C precludes shifting of the said cushion, and that this together with the snug fit of the covering E over the layers B and C and at opposite sides of the cushion D renders the formation of the objectionable
 40 wrinkles hereinbefore referred to practically impossible. The hard leather layers B and C constitute adequate supports for the toes and arch, respectively, of the foot of the wearer, and this without rendering the foot
 45 unduly warm, while the heel cushion, when employed, performs the function ascribed to it without appreciably heating the foot and causing undue perspiration.

While we have shown and described one
 50 form of our invention, it is to be understood that we are not limited to the details, but that modifications may be made therein within the scope of the claims appended.

Having described our invention, what we
 55 claim and desire to secure by Letters-Patent, is:

1. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a
 60 raised hard-leather toe portion extending throughout its width, a hard-leather layer secured on the instep portion of the body and extending throughout the width there-

of; a piece of sheet-steel interposed between said layer and the body; a cushion secured in position and superposed on the
 65 body throughout the area between the opposed ends of the raised toe portion and layer; and a cover secured in position and arranged over the toe portion, layer and
 70 cushion.

2. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a
 75 raised hard-leather toe portion extending throughout its width, and a raised hard-leather instep portion extending throughout its width and also having between the opposed ends of said raised portions a space that extends throughout its width; a cushion
 80 secured in position and superposed on the body throughout the area between the opposed ends of the raised portions; a cover secured in position and arranged over the hard leather portions and the cushion and
 85 extending in rear of the rearmost hard-leather portion, and a cushion disposed under the cover and in rear of the rearmost hard-leather portion and abutting at its forward end against said rearmost hard-leather
 90 portion.

3. A cushion sole for boots or shoes, comprising a leather body of the full size and form of an ordinary shoe sole having a
 95 raised hard-leather toe portion extending throughout its width, and a raised hard-leather instep portion extending throughout its width and also having between the opposed ends of said raised portions a space that extends throughout its width; a cushion
 100 secured in position and superposed on the body throughout the area between the opposed ends of the raised portions; and a cover secured in position and arranged over the hard-leather portions and the cushion.
 105

4. A cushion sole for boots or shoes, comprising a cushion, a leather body of the full size and form of an ordinary shoe sole, corresponding in width to the cushion and arranged under the same and having a toe
 110 portion disposed in front of the cushion and an instep portion disposed in rear of the same, and a cover arranged over said body and cushion; said body, cushion and cover being suitably connected.
 115

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

ADAM REED.

DAVID A. REED.

Witnesses to signature of Adam Reed:

MORRIS P. COOK,
 REGNIER P. SHOUP.

Witnesses to signature of David A. Reed:

FRED WYLLIE,
 G. T. MORRIS.