No. 884,681. PATENTED APR. 14, 1908.

A. & D. A. REED.

SHOE.

APPLICATION FILED JUNE 29, 1907.

Fig. 1.

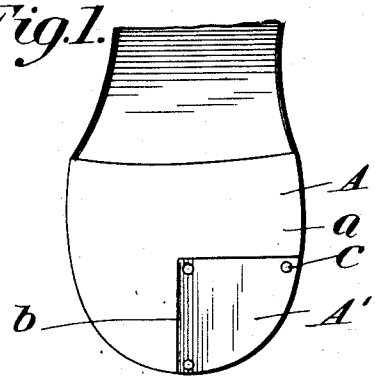


Fig. 3

Fig 2

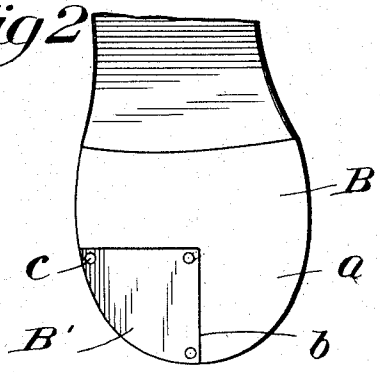


Fig. 4.

Fig. 9.

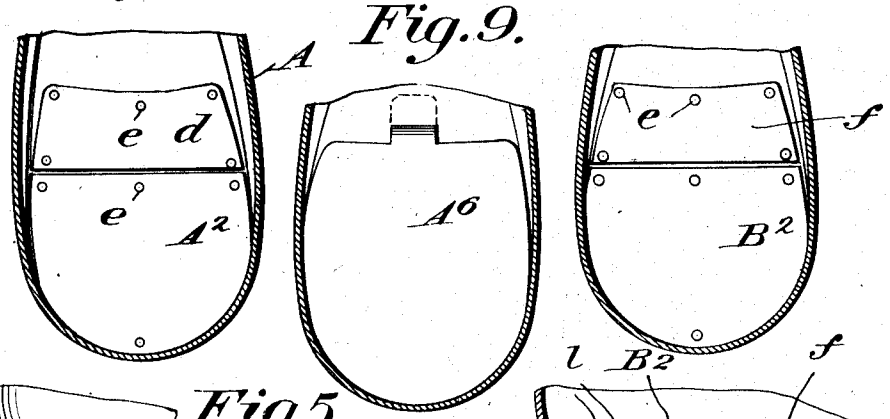


Fig. 5.



Fig. 6.

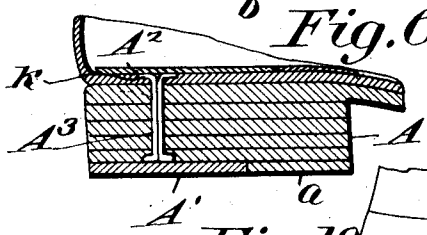


Fig. 7.

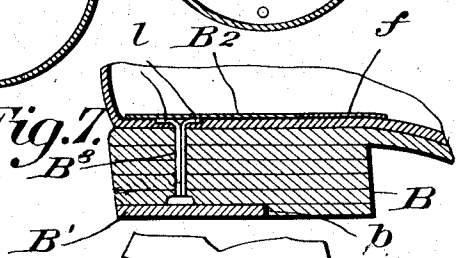


Fig. 8.

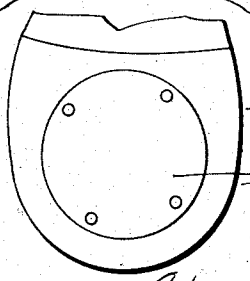
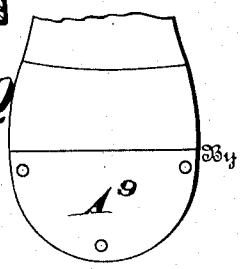


Fig. 10.



Witnesses

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UNITED STATES PATENT OFFICE.

ADAM REED AND DAVID A. REED, OF LOS ANGELES, CALIFORNIA.

SHOE.

No. 884,681. Specification of Letters Patent. Patented April 14, 1908.

Application filed June 29, 1907. Serial No. 381,480.

To all whom it may concern:

Be it known that we, ADAM REED and DAVID A. REED, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Shoes, of which the following is a specification.

Our invention pertains to electric shoe bottoms; and it has for one of its objects to provide shoe bottoms provided with simple and efficient means for maintaining a current of electricity through the body of the party wearing the shoes.

Another object of the invention is the provision in shoe bottoms, of electric means, certain elements of which are so constructed and arranged that they are adapted to serve the additional office of heel plates—*i. e.*, plates for preventing wear of the leather portions of the heels.

Other advantageous features of 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:

Figures 1 and 2 are inverted plan views of the heel portions of a pair of shoes electrically equipped in accordance with our invention. Figs. 3 and 4 are plan views of the same. Fig. 5 is a side elevation of one heel portion. Fig. 6 is a vertical section showing the manner in which the conductive heel-plate of one heel portion is electrically connected with a corresponding plate on the heel-seat. Fig. 7 is a similar view showing the manner in which the heel-plate of the other heel portion is connected with the plate on its heel-seat. Fig. 8 is a view similar to Fig. 1 of a modification. Fig. 9 is a view similar to Fig. 3 of another modification. Fig. 10 is a view similar to Fig. 1 of another modification.

Referring by letter to the said drawings, and more particularly to Figs. 1 to 7, thereof: A and B are the heel portions of a pair of shoes, which shoes, in general, may be and preferably are of the ordinary, well known type. The lower heel lifts *a* of the said heel portions A and B have their outer and rear portions cut out, as indicated by *b*, to form segmental recesses in which are arranged segmental conductive plates A′ and B′ of opposite signs, corresponding in thickness to the lifts; the plate A′ complementary to the heel portion A being preferably of hard-tempered copper, and the plate B′ of the other heel portion—*i. e.*, the heel portion B, being preferably of zinc. The said plates A′ and B′ are fixedly connected to their respective heel portions by nails, screws or the like, indicated by *c*, and consequently it will be apparent that in addition to their electrical functions, presently set forth, the plates will effectually prevent "running down" of the outer rear portions of the heels, which is so objectionable because it causes the shoes to lose their shape. It will also be apparent that when the lower lifts of the heels are worn out, they may be readily removed and replaced with new lifts without disturbing our novel plates A′ and B′.

As shown in Fig. 3, the seat of the heel portion A is provided with a thin copper plate A^2, and a thin zinc plate *d* separated from the copper plate A^2; the said plates A^2 and *d* being preferably secured to the heel seat by nails *e*, the heads of which are countersunk as shown. In Fig. 4, the seat of the heel portion B is shown to be provided with a thin zinc plate B^2 and a thin copper plate *f* separated from the plate B^2; these plates B^2 and *f* being also, by preference, connected to the heel seat by nails *e* the heads of which are countersunk.

Connected to the copper plate A′ of heel portion A and extending upward through the heel is a conductor A^3, preferably of copper, Fig. 6, which has one or more arms *k* at its upper end resting under the copper plate A^2, and connected to the zinc plate B′ of the heel portion B and extending upward through the heel is a conductor B^3, preferably of zinc, Fig. 7, having one or more arms *l* at its upper end resting under the zinc plate B^2.

In virtue of the heel portions A and B being provided with plates A′ and B′, respectively, of opposite signs, and the said plates being electrically connected to the heel seats, it will be apparent that when the shoes are in use and the plates A^2 and B^2 are subjected to the action of perspiration, a mild electric current will pass through the body of the wearer of the shoes, the earth, and our novel appliances of opposite signs with which the shoes are equipped. It will also be apparent that by virtue of each of the heel seats having plates of opposite signs or of opposite electric elements adapted to be contacted with the feet of the wearer, an electric current will be generated between said opposite elements under the influence of the feet of the wearer.

In lieu of employing segmental conductive plates such as shown in Figs. 1 and 2, circular plates A^5 such as shown in Fig. 8 may be used without involving departure from the scope of our invention as claimed. We would also have it understood that in lieu of the plates A^2 and B^2 such as shown in Figs. 3 and 4, plates A^6 one of which is shown in Fig. 9 may be employed; the said plate having a tongue at its forward end passed through a slot in the insole of the shoe, whereby it is retained in position.

It will be gathered from the foregoing that while our improvements are calculated to maintain an electric current conducive to good health through the body of a person wearing the shoes, they add but little to the cost of production of and the weight of the shoes, and do not detract in any manner from the finished appearance thereof.

In lieu of segmental conductive plates such as shown in Figs. 1 and 2 or circular plates such as shown in Fig. 8, plates A^9 shaped and arranged as shown in Fig. 10, relative to the heels, may be employed without affecting our invention.

The construction herein shown and described constitute the preferred embodiments of our invention, but it is obvious that in practice such changes or modifications may be made as fairly fall within the scope of our invention as defined in the claims appended.

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

1. The combination of a pair of shoe bottoms, a conductor comprising an electric element, connecting the upper and lower sides of one bottom and arranged to contact at its lower end with an electrolyte, and a conductor comprising an opposite electric element, connecting the upper and lower sides of the other bottom and arranged to contact at its lower end with an electrolyte.

2. The combination of a pair of shoe bottoms, a conductor comprising an electric element, extending from the upper side of one bottom to the lower side thereof and terminating at the latter side in a plate arranged to contact with an electrolyte, and a conductor comprising an opposite electric element, extending from the upper side of the other bottom to the lower side thereof and terminating at the latter side in a plate arranged to contact with an electrolyte.

3. The combination of a pair of shoe bottoms, an electric element arranged on one bottom and electrically connected with the underside thereof and arranged to make contact at the lower end of said connection with an electrolyte, an opposite electric element arranged on the other bottom and electrically connected with the underside thereof and arranged to make contact at the lower end of said connection with an electrolyte, an electric element opposite to the first mentioned element arranged on the same bottom as said first mentioned element but electrically isolated therefrom, and an electric element opposite to the second mentioned element arranged on the same bottom as said second mentioned element but electrically isolated therefrom.

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

ADAM REED.
DAVID A. REED.

Witnesses:
W. C. HOGAN,
CHAS. T. BUNN.