J. W. ARROWSMITH.

INSIDE HEEL CUSHION.

APPLICATION FILED MAY 28, 1914.

1,195,327.

Patented Aug. 22, 1916.

Fig. 1.

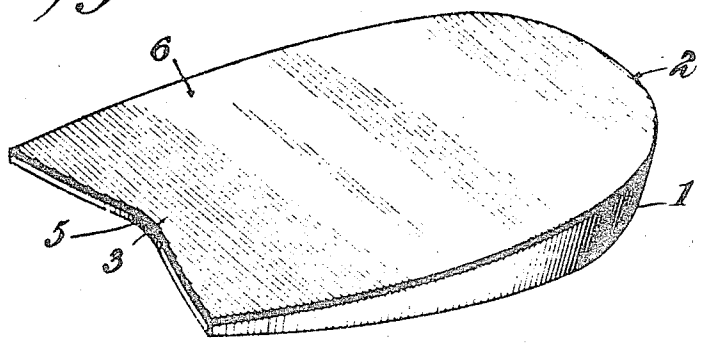


Fig. 2.

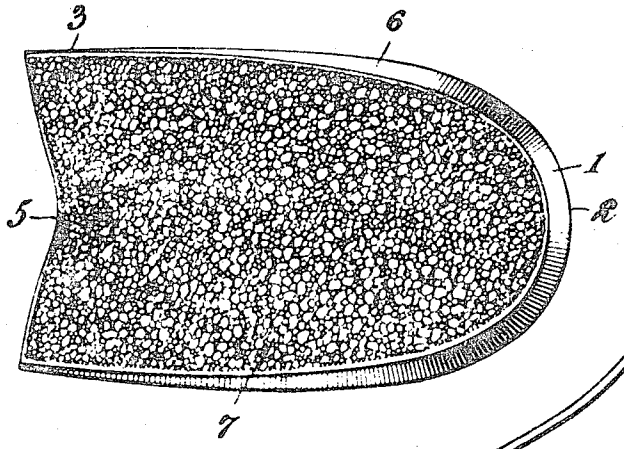


Fig. 3.

WITNESSES

Howard D. Orr.

F. T. Chapman.

J. W. Arrowsmith, INVENTOR,

BY E. G. Siggers

ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES W. ARROWSMITH, OF MORRISTOWN, NEW JERSEY.

INSIDE HEEL-CUSHION.

1,195,327. Specification of Letters Patent. Patented Aug. 22, 1916.

Application filed May 28, 1914. Serial No. 841,521.

To all whom it may concern:

Be it known that I, JAMES W. ARROWSMITH, a citizen of the United States, residing at Morristown, in the county of Morris and State of New Jersey, have invented a new and useful Inside Heel-Cushion, of which the following is a specification.

This invention has reference to improvements in inside heel cushions for foot coverings, such as shoes and the like, and its object is to provide a cushion which may be introduced into the shoe and will retain its place therein without the necessity of any special fastening devices, and at the same time provide an extremely elastic support.

In accordance with the present invention the cushion is formed of a piece of highly elastic rubber material, so constructed as to present an impervious surface toward the foot of the wearer while the surface presented toward the insole of the shoe at the heel portion thereof is such as to effectively resist any tendency of the cushion to creep.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification with the further understanding that while the drawings show a practical form of the invention the latter is not confined to any strict conformity with the showing of the drawings, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention.

In the drawings:—Figure 1 is a perspective view of the cushion as seen from above. Fig. 2 is a bottom plan view of the cushion. Fig. 3 is a more or less schematic representation of a shoe with the cushion installed, the shoe being broken away to reveal the cushion.

In accordance with the present invention there is provided a cushion 1 which, as is customary, is made relatively thick at the rear end 2 and relatively thin at the front end 3, and in outline is made to conform quite closely to the shape of the heel portion of footwear represented by a shoe 4 illustrated in Fig. 3. The shoe 4 is to be taken as indicative of any type of foot covering with which the heel cushion would be useful, and by the term shoe is to be understood other footwear than that specifically included by the term.

The cushion 1 is formed of a single piece of material, of the kind known as sponge-rubber, appropriately shaped as a more or less elongated and approximately oval pad tapering or thinning toward one end where the end instead of being rounded, as would occur with a true oval, is more or less incut, as indicated at 5, although this particular shape is not obligatory. That portion of the pad which constitutes the top thereof when introduced into the shoe, and which also constitutes the foot supporting surface is provided with an impervious skin or rind 6 formed of the same kind of rubber as the body of the pad, except that the cellular structure characteristic of sponge rubber is absent, and a relatively smooth surface is provided. This rind is continued around the edges, but is wholly omitted from the bottom surface of the pad; that is, the surface indicated at 7, which contacts directly with the insole of the shoe, and this surface has the multitude of interstices or cells characteristic of sponge rubber cut across and exposed. This provides a great number of minute cups, some quite shallow, and others quite deep, and the mouths of these cups are brought into direct engagement with the insole against which the cushion is forced by the weight of the user. The consequence is that air normally contained within the cups is forced out to an extent by the weight of the user and partial vacuum conditions are established in these cups, thereby causing the cushion to cling to the insole of the shoe with great tenacity and most effectively resist any tendency of the cushion to creep or slip under the conditions of use. At the same time the cushion is particularly lively as a cushion due not only to the natural elasticity of the rubber, but to the high elasticity of the multitude of minute bodies of entrapped air, each of which becomes in itself a pneumatic cushion of very high elasticity. The impervious skin or rind prevents any escape of the air through the upper surface of the cushion, and at the same time prevents the entrance

of any moisture from the foot of the wearer into the interior of the cushion, thus keeping the cushion free from contamination.

What is claimed is:—

An inside heel cushion for foot coverings, comprising a block of sponge rubber of a size and shape to lodge in the heel portion of the foot covering and tapering in thickness toward the toe portion of the foot covering, said block having the surface designed to receive the heel of the wearer provided with a skin or rind integral with the block and extending about the margins of the block to the bottom surface thereof, and said bottom surface being composed of a multitude of freely exposed interstices of the sponge rubber to engage the insole of the foot covering, whereby the numerous air cups thus formed cause tenacious adherence of the cushion to the insole of the foot covering under the weight of the wearer to thereby prevent slipping of the cushion and avoiding the use of fastening means for such purpose, and the skin or rind interposing as a moisture proof medium integral with the block between the sponge portion of the block and the heel of the wearer.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES W. ARROWSMITH.

Witnesses:

DAVID F. BARKMAN,

ROBERT E. MURPHY.