E. J. EMERY.

RUBBER HEEL.

APPLICATION FILED JAN. 16, 1915.

1,165,235. Patented Dec. 21, 1915.

Fig. 1.

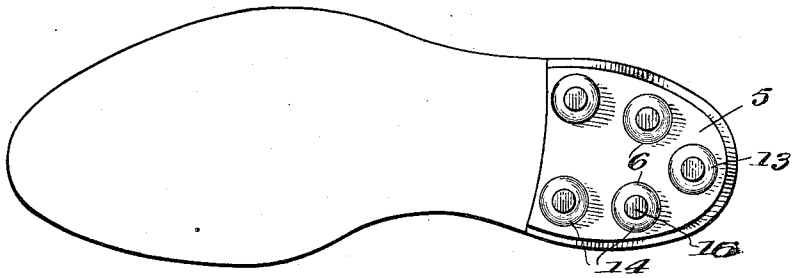


Fig. 2.

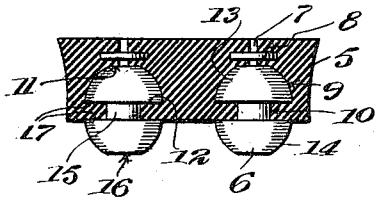


Fig. 3.

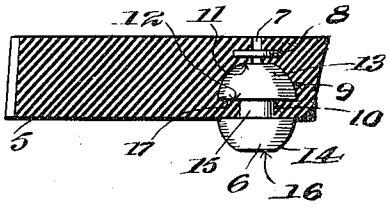
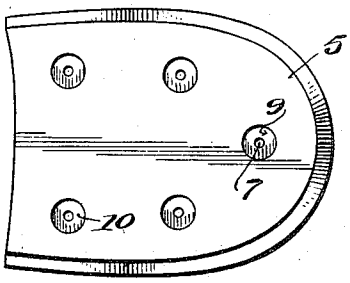


Fig. 4.



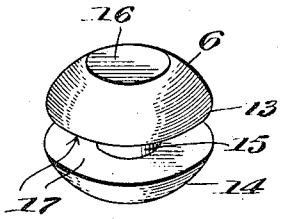


Fig. 5.

Inventor

Elias J. Emery

Witnesses

Frederick P. Moran

Edward Yeager

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

ELIAS J. EMERY, OF PORTSMOUTH, NEW HAMPSHIRE.

RUBBER HEEL.

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Application filed January 16, 1915. Serial No. 2,725.

To all whom it may concern:

Be it known that I, ELIAS J. EMERY, a citizen of the United States, residing at Portsmouth, in the county of Rockingham and State of New Hampshire, have invented new and useful Improvements in Rubber Heels, of which the following is a specification.

The present invention relates to improvements in rubber heels.

The invention aims to provide a heel of the above mentioned character possessing maximum resiliency, and constructed to reduce the friction of the heel while walking with a view of prolonging the life of the heel.

Another important object of the invention is the provision of a heel having a reversible wearing surface capable of being removed from the main body portion of the heel, and resecured thereto in reversed position without necessitating the removal of the heel proper from the shoe.

Other objects will appear when the nature of the invention is better understood from the following description taken in connection with the accompanying drawing.

A practical embodiment of the invention is disclosed in the drawing wherein like numerals of reference indicate similar parts in the several views and in which:

Figure 1 is a bottom plan view of the shoe showing my improved heel secured thereto. Fig. 2 is a transverse sectional view of the heel proper. Fig. 3 is a vertical sectional view through the same. Fig. 4 is a bottom plan view. Fig. 5 is a view of one of the removable plugs.

The heel comprises what may be termed a main body portion 5, and tread elements 6. The body portion 5 may be constructed from any suitable resilient material, and of any desired dimension to accommodate different size shoes. The body portion 5 is provided with a plurality of restricted bores 7 through which suitable fastening elements such as nails or the like (not shown) are driven for securing the heel proper to the shoe. Embedded in the rubber of the heel, at a point slightly above the transverse center of each of the bores 7, is a metal disk 8 centrally apertured, and extending within the bore to provide a bearing surface for the head of the fastening element that secures the heel to the shoe. The heel 5 is further provided with a plurality of air chambers or recesses 9 disposed between and in alinement with the bore 7 and communicating reduced openings 10 at the opposite side of the heel. The recesses 9 are semi-spherical in contour, except for having a flat top and bottom wall 11 and 12 respectively, the recesses being adapted to receive correspondingly shaped tread elements 13.

The tread surface of the heel as shown consists of resilient plugs, which when associated with the heel 5, the combined elasticity of both elements produces a heel of the character described possessing maximum resiliency. Each of the plugs comprises spaced semispherical members 14 integrally connected by a reduced shank portion 15, the members 14 being adapted to be singly presented for use and having a flat wearing surface 16. In other words the plugs are reversible in nature, with a view of prolonging the life of the heel. For instance when one of the members 14 of the plug is positioned within the recess 9, the other of said members 14 provides the wearing surface for the heel. When the wearing surface has become sufficiently worn, the plug can be removed from the heel, reversed, and the worn surface inserted in the recess, the opposite end of the plug or member 14 being then presented for use and providing a new wearing surface for the heel. By reason of the construction disclosed it will be obvious that this operation may be performed without necessitating the removal of the heel 5 from the shoe. The adjacent faces 17 of the members 14 are perfectly flat to provide shoulders, which are properly spaced to effectively engage the bottom wall 12 of the recess 9 and the outer face of the heel 5 to prevent wabbling of the plug within the recess and consequent casual disengagement therefrom. This is especially true when the plugs have been reversed and the worn surfaces 14 inserted in the recesses. This fact further permits of each of the members 14 being used until practically wholly worn out, before necessitating reversing of the plug, for the insertion of a new tread element. It will be further observed that the friction of the heel as a whole is materially reduced, as the plugs provide a wearing surface of less area than that of the heel proper. However it is to be understood that any number of the plugs may be employed as found desirable.

It is believed that from the foregoing de-

scription the nature and advantages of the invention will be thoroughly understood without requiring a more extended explanation and therefore the same has been omitted. However I desire to have it understood that various changes in the construction and arrangement of parts may be resorted to when desired as fall within the scope of the appended claims.

What I claim is:—

1. As a new article of manufacture, a heel for shoes having alined spaced restricted bores, and a relatively large intermediate recess establishing communication between said bores, a fastening element passed through the uppermost bore for securing the heel to the shoe, and a resilient plug having duplex tread portions adapted to be interchangeably fitted in said recess.

2. As a new article of manufacture, a heel for shoes having alined spaced restricted bores, and a relatively large intermediate recess of semispherical contour, said recess communicating with said bores and having a flat bottom, and a resilient plug having duplex tread portions of semispherical contour adapted to be interchangeably fitted within said recess, the adjacent faces of said tread portions being flat to engage the said bottom wall of the recess and outer face of the heel to effectively hold the plug operatively associated with the latter.

In testimony whereof I affix my signature in presence of two witnesses.

ELIAS J. EMERY.

Witnesses:

EFFIE B. WRIGHT,

WM. M. ROLLINS.