May 13, 1924. 1,493,565

E. RABONI

SHOE

Filed July 13, 1922

Fig. 1.

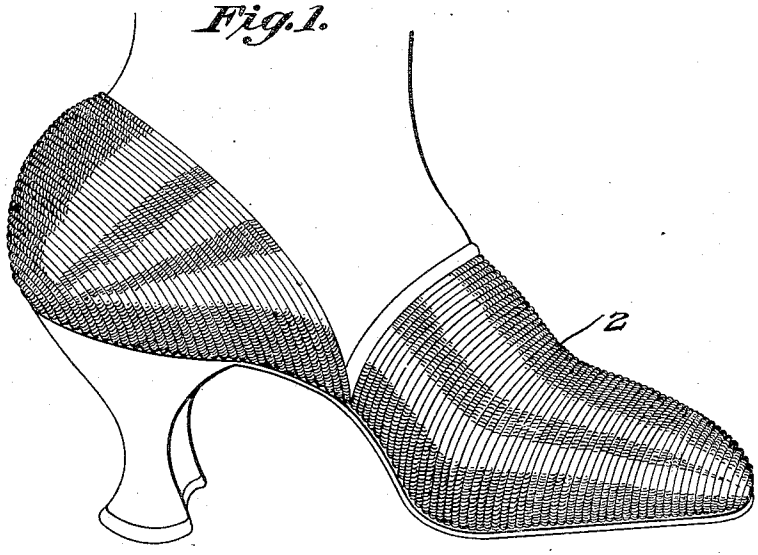


Fig. 2.

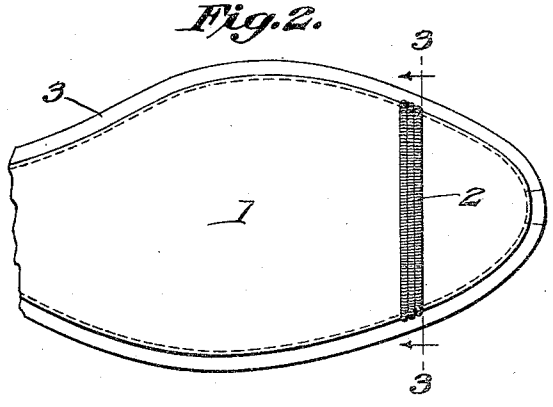


Fig. 3.

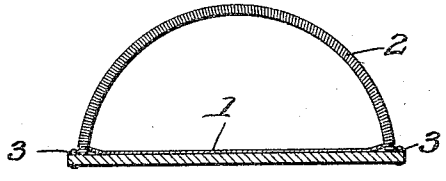
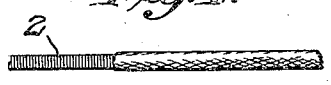


Fig. 4.



Inventor:

Eduardo Raboni,

by Spear, Middleton Donaldson & Hall.

Attys.

Patented May 13, 1924. 1,493,565

UNITED STATES PATENT OFFICE.

EDUARDO RABONI, OF MONTEVIDEO, URUGUAY.

SHOE.

Application filed July 13, 1922. Serial No. 574,659.

To all whom it may concern:

Be it known that I, EDUARDO RABONI, a citizen of the Republic of Uruguay, and a resident of Montevideo, Uruguay, have invented certain new and useful Improvements in Shoes, of which the following is a specification.

This invention relates to a novel shoe construction and aims to produce an article which will be light, cheap to manufacture, of few parts, which will accomodate itself to the feet of the wearer, and which may be put on and taken off without undoing the fastening means.

Another object of my invention is the provision of a material from which the shoe is made, which is elastic in its nature, but having the maximum amount of wearing quality.

Still another object of my invention is the utilization of this material of which the body of this shoe is composed for a closure means.

I have illustrated in the drawings one embodiment of my invention which has been found to be satisfactory, but I do not wish to be limited to the structural details as obviously these may be carried out in a manner other than that shown.

In these drawings:

Fig. 1 is a perspective of a finished shoe according to my invention.

Fig. 2 is a plan view of the insole and supplemental strip with three spring elements.

Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

Fig. 4 is a detail of a spring element showing a covering.

My invention consists primarily in the provision of a tightly wound spiral spring which may be of any desired size or material having these qualities. This spring member I utilize to form the shoe upper by arranging a plurality of these members side by side, extending from one side of the shoe to the other, the loops thus formed increasing in extent from the ends towards the center, as may be found desirable to accommodate the foot of the wearer.

Certain other instrumentalities are provided whereby the spring members are attached to the shoe sole which will be more fully hereinafter described.

Referring now more particularly to these drawings, I have illustrated a shoe insole at 1 which is preferably of metal. A spring member 2 composed of tightly wound convolutions is made to engage the insole by extending the latter between convolutions, the spring tendency of the member 2 gripping insole 1 and securing the two together. A plurality of these loops formed by the member 2 are provided, each abutting its fellow, and increasing in size as found desirable to accommodate the foot of the wearer.

A metallic strip 3 is provided attached to the member 2 in a like manner as in the case of the insole, except that it enters the convolutions from the opposite side with the result that the spring member is prevented from having outward or upward movement. The strip 3 may then be secured to the ordinary outsole in any desired manner.

If found desirable a thin, flexible, metallic sole might be substituted for the ordinary sole, thus forming the entire shoe of metal.

Such a shoe is of extreme simple construction and where the spring member of fine gauge is used, will be of a lightness, less than that of the leather shoe, and favorably comparable to one of cloth or satin.

It will be obvious that such a shoe requires no fastener inasmuch as the inherent spring quality of the member 2 tends to keep the shoe on the foot. This spring quality above referred to will also allow the shoe to stretch to accommodate itself to the various movements of the wearer's foot in walking, thus insuring great comfort and ease in walking.

It may be found desirable to cover the spring elements forming the shoe upper with cloth, or individually with a woven tubular member. This obviously will protect the stocking of the wearer from undue wear, while at the same time affording a variety of colors, designs, and materials with which the exterior of the shoe may be ornamented.

I claim:

1. A shoe including a sole and an upper secured thereto said upper comprising a series of individual disconnected strands of spring material.

2. In combination, a shoe having an in-

sole, a shoe upper composed of spring material secured to the insole, and a supplemental strip adjacent the insole, said spring member being held between said supplemental strip and said insole.

3. The device of claim 2, said strip being secured to the outsole.

4. In combination, a shoe having a sole and a plurality of loops of spring material extending from side to side of said sole.

5. The device of claim 4, said spring material including a tightly wound spiral spring.

6. In combination, a shoe including an insole, a supplemental strip in proximity to the insole, secured to an outsole, a length of spring material including a tightly wound spiral spring engaging the supplemental strip and the insole.

7. The device of claim 6, said strip and said insole engaging adjacent convolutions of the spring member.

8. A metallic shoe including an upper composed of a plurality of elastic members, a metallic insole and a metallic strip adjacent said insole, said last named member being secured to a metallic outsole each elastic member being held between the strip and the insole.

9. The device of claim 4, said loops being covered with fabric.

In testimony whereof, I affix my signature.

EDUARDO RABONI.