

E. KEMPSHALL.
 HEEL FOR BOOTS AND SHOES.
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1,027,255.

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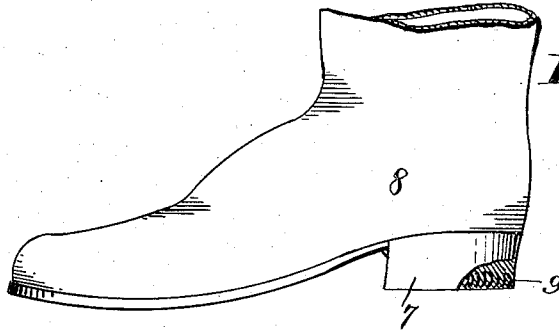


Fig. 1.

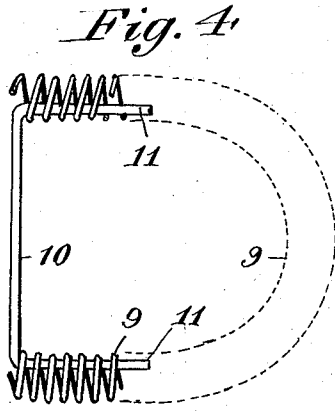


Fig. 4.

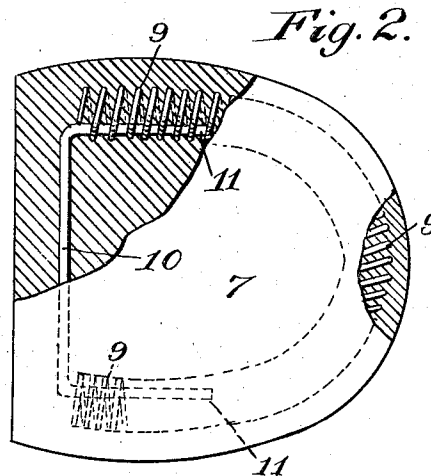


Fig. 2.

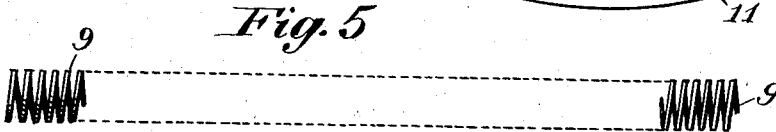


Fig. 5.

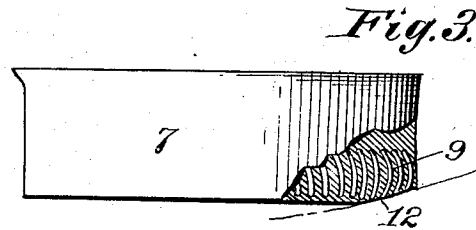


Fig. 3.

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HEEL FOR BOOTS AND SHOES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELEAZER KEMPSHALL, a citizen of the United States, and a resident of Garden City, in the county of Nassau and State of New York, have invented new and useful Improvements in Heels for Boots and Shoes, of which the following is a specification.

This invention relates to heels of boots, shoes and the like, and particularly to the use of rubber heels, in which a wear-resisting member is embedded in the tread thereof to constitute the wearing surface or tread as the heel begins to wear down or run over. It has been the usual practice to embed in the heel just below the wearing surface a metal plate considerably thickened at the rear. However, as the heel is worn away and the plate begins to wear there is a tendency of the plate to tear away from the heel with the consequent result that the heel must be renewed.

It is the object of the present invention to provide a heel of this character that is cheap and simple in construction, and in which the wear-resisting member is so constructed that when it is embedded in the heel there is no tendency of the same tearing away as the heel begins to wear, but will wear away with the gradual wear of the heel proper. For this purpose I embed in the tread of the heel a spirally wound member to extend around the side and rear edges only of the wearing surface, the material of the heel engaging in and filling the interstices between the convolutions of the spiral member, thus firmly maintaining the member in the material of the heel, and gradually wear away with the heel proper.

In the drawings accompanying and forming a part of this specification, Figure 1 is a side elevation of a portion of a boot with my improved heel applied thereto, the heel partly shown in section to show the wear-resisting member embedded therein. Fig. 2 is an enlarged bottom view of a heel, partly in section, to illustrate the manner of locating the wear-resisting member therein. Fig. 3 is a side elevation of a heel, partly in section, and showing the heel as partly worn or run over. Fig. 4 is a detail view of the wear-resisting member. Fig. 5 is a detail of the wear-resisting member showing the same

before it is bent upon itself to assume the shape it will occupy when embedded in the heel.

Similar characters of reference designate like parts throughout the different views of the drawings.

In Fig. 1 of the drawings I have shown an embodiment of my invention in connection with the heel 7 of a boot 8 or the like, which heel may consist of a suitable plastic material such as rubber or vulcanite. A wear-resisting member consisting of a spiral member 9 is embedded in the material of the heel just below the wearing surface to extend around the side and rear edges only of the wearing surface, the material of the heel due to the pressure applied as it is being vulcanized causing the material of the heel to flow into and fill the interstices or spaces between the convolutions or windings of the spiral and when vulcanized firmly setting therein. This member 9 may consist of a spirally wound spring of a suitable length, as shown in Fig. 5, and then bent upon itself and retained in such position by a bar or rod 10 to extend across the front of the heel with its ends bent at right angles, as at 11, and engaging in the coils of the free ends of the member 9, as clearly shown in Figs. 2 and 4. This rod 10 retains the member 9 in proper position in the plastic mass as the heel is being molded and vulcanized. Furthermore, the member 10 prevents any tendency of the ends of the spiral member 9 to spring outwardly when vulcanized in the heel and as it begins to wear down.

While the member 9 is preferably made of spring metal and then bent upon itself and retained in bent position by the bar 10, it may be wound of untempered metal into the desired lengths, then bent into the desired shape and tempered. In this case it will be obvious that the bar 10 need not be employed as the member 9 will retain its bent shape after being tempered.

In Fig. 3 I have shown the heel 7 as partly worn down or run over, as shown at 12, and a portion of the member 9 forming the tread or wearing surface. It will be noted that the material of the heel engages all around the coils or convolutions of the member 9 and that it wears down with the gradual wear of the material of the heel

with no liability of its tearing away from the heel proper. The member 9 being constructed of metal retards or prevents the too rapid wear of the heel.

- 5 While I have illustrated my wear-resisting member in connection with the rubber heel of a boot, usually consisting of a hard rubber or vulcanite, the same is also applicable to elastic or cushion heels for boots
10 and shoes usually comprising the top lift of the heel and consisting of a rubber composition having a high degree of elasticity. When used in connection with heels of this character, as the heel begins to wear and the
15 wear-resisting member becomes the tread or wearing surface, the said member being constructed of spring or resilient metal will readily give and cushion or absorb the shock of the heel as it comes in contact with the
20 surface walked upon.

Variations may be resorted to within the scope of my invention.

Having thus described my invention, I claim:

In heels for boots or shoes, the combination of a spiral spring embedded in the heel with the material of the heel engaging in and filling the interstices between the convolutions of the spring, said spring being rounded at its rear and the ends being extended forwardly to form two substantially parallel legs, and a rod extending across the front or breast end of the heel and embedded therein to connect the front ends of the legs of the springs.

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Witnesses:

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