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W. F. DOHEMANN

1,551,245

CUSHION HEEL

Filed Jan. 30, 1924

Fig. 1.

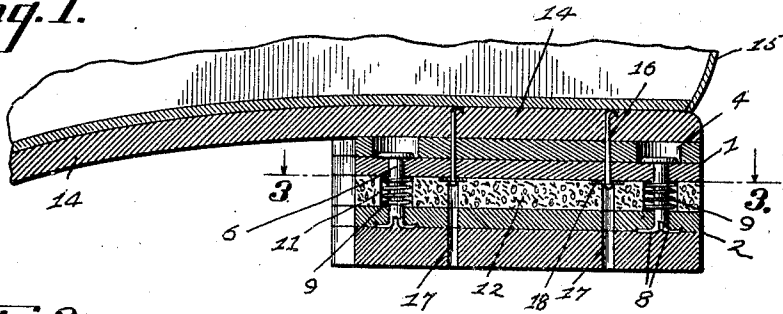


Fig. 2.

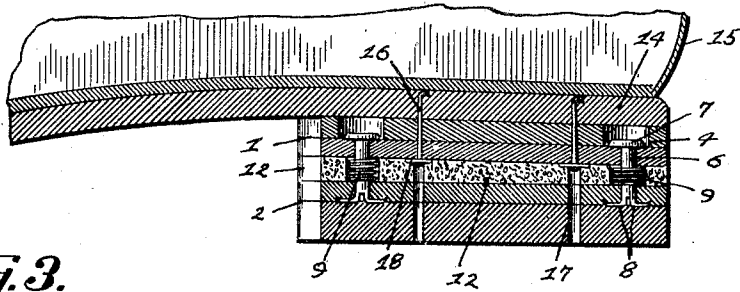


Fig. 3.

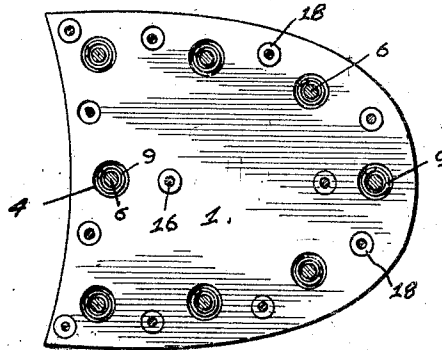
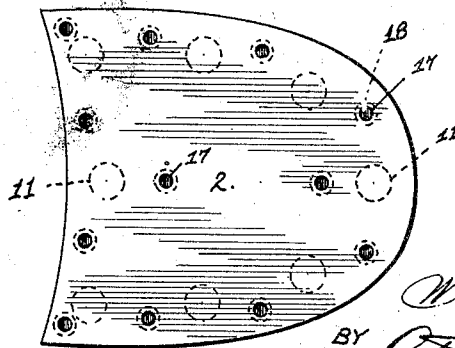


Fig. 4.



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CUSHION HEEL.

Application filed January 30, 1924. Serial No. 689,545.

To all whom it may concern:

Be it known that I, WILLIAM F. DOHEMANN, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented a new and useful Improvement in a Cushion Heel, of which the following is a specification.

My invention relates to improvements in heels for shoes and the like wherein inner and outer portions are separated by a compressible cushion adapted to resiliently support the weight of a wearer.

The primary object of my invention is to provide an improved resilient heel for shoes and the like.

Another object is to provide an improved construction adapted to give increased resiliency.

A further object is to provide an improved device of the character described which will present a neat and attractive appearance.

A still further object is to provide an improved construction which may be economically manufactured and which may be easily and effectively attached upon a shoe.

I accomplish these and other objects by means of the device disclosed in the drawings forming a part of the present specification wherein like characters of reference are used to designate similar parts throughout said specification and drawings and in which,

Fig. 1 is a broken longitudinal section of the heel of a shoe showing my improved resilient heel construction.

Fig. 2 is a similar view showing the manner in which the cushion is compressed.

Fig. 3 is a horizontal section taken upon the line 3—3 of Fig. 1 in the direction indicated.

Fig. 4 is a view showing the bottom of the heel.

Referring to the drawings my improved heel will be seen to consist of inner and outer heel portions designated in general by the numerals 1 and 2 respectively. The inner portion consists preferably of two lifts of leather, or other suitable material secured in proximate matching relation in any suitable manner. Apertures 3 are formed through the inner portion 1 of the heel, said apertures 3 having enlarged counterbored portions 4 formed in the inner lift.

The outer heel portion 2 also preferably consists of two lifts of leather or other suitable material. The outer portion 2 is connected to the inner portion 1 by means of connecting elements 6 secured to the outer portion 2 and slidably engaging the inner portion 1 of the heel. In the preferred construction disclosed in the drawings the elements 6 are preferably split rivets having heads 7 received within the counterbores 4. The shanks of the rivets are slidably mounted within the apertures 3 and the outer split ends 8 of the rivets are expanded and clinched into the inner lift of the outer heel portion 2, the clinched ends of the rivets being covered by the outer lift of said heel portion.

Springs 9 are mounted upon the shanks of the rivets between the inner and outer heel portions 1 and 2, said springs being adapted to hold said portions in normal spaced relation and to support the weight of a wearer. The space between the inner and outer portions is filled by a compressible filler 12 mounted between the inner and outer heel portions 1 and 2, said filler being made from sponge rubber or other suitable material of a resilient compressible character, adapted to normally be slightly compressed so as to completely fill the space. Openings 11 are formed in the filler 12 to receive the springs 9, the springs being thus fully enclosed within the filler. The filler is preferably cemented to the inner and outer portions of the heel to effectively exclude all moisture and foreign matter from the springs thereby protecting said springs from injury and deterioration.

The heel is secured upon the sole 14 of a shoe 15 by means of nails 16 or other suitable securing members driven through the inner portion 1 of the heel and into the sole 14, said nails being clinched in the ordinary manner. Openings 17 are formed through the outer portion 2 and the filler 12 of the heel through which the securing members 16 may be introduced and driven without damage to the outer portion or interference to the operation thereof, thereby permitting the heel to be easily and quickly applied to a shoe to replace the ordinary heel provided upon the shoe. Washers 18 are inserted between the filler 12 and the heel portion 1 in alignment with the openings 17 to receive the heads of the nails 16 and prevent

the same from being drawn through the leather.

The cushioning effect obtained by my improved heel is due to the combined resilience afforded by the springs 9 and the filler 12. The weight of the wearer is normally carried upon the cushion formed by the springs and the filler which are made of a character adapted to be only slightly compressed under the weight of the wearer when evenly applied. When an extra pressure is applied as by the shock occurring when the heel strikes the ground in walking, the springs and filler are compressed to a greater degree as shown in Fig. 2 of the drawings thereby absorbing to a large degree the force of impact and relieving the wearer from the sudden jolt commonly suffered. Furthermore the springs and filler cooperate to absorb vibration from a surface upon which the wearer may be standing, thereby affording great relief to trainmen and others compelled to stand upon vibrating surfaces.

While I have shown and particularly described the construction which I now deem to be most practical, I do not wish to restrict myself to the exact details shown, but desire to avail myself of such modifications as may fall within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is,

1. A heel for shoes and the like comprising inner and outer portions; connecting elements secured to one portion and slidably engaging the other portion of the heel; springs mounted around said connecting elements between the inner and outer portions of the heel to hold the same in spaced relation; and a filler formed from sponge rubber mounted between the inner and outer heel portions to enclose the springs to resiliently support the weight of a wearer, said filler having its edges matching with the edges of the inner and outer portions of the heel and entirely filling the space there-

between to exclude foreign matter from the springs.

2. A heel for shoes and the like comprising inner and outer portions; connecting elements secured to one portion and slidably engaging the other portion of the heel; springs mounted around said connecting elements between the inner and outer portions of the heel to hold the same in spaced relation; and a filler formed from sponge rubber mounted between the inner and outer heel portions to enclose the springs and cooperate with the springs to resiliently support the weight of a wearer, said filler having its edges matching with the edges of the inner and outer portions of the heel and entirely filling the space therebetween to exclude foreign matter from the springs; the filler and outer heel portion having apertures therethrough whereby securing means may be applied through said apertures to secure the inner portion upon the heel of the shoe.

3. A heel for shoes and the like comprising inner and outer portions; a plurality of split rivets having their heads slidably mounted within recesses formed upon the upper side of the inner portion and their split ends secured within the outer heel portion to slidably connect said portions; springs mounted around the rivets between the inner and outer portions to resiliently hold the portions in spaced relation; and a filler formed from sponge rubber mounted between the inner and outer portions of the heel to enclose the springs and to cooperate with the springs to resiliently support the weight of a wearer, said filler having its edges matching with the edges of the inner and outer portions to form a continuous surface therewith and entirely filling the space between said inner and outer portions to exclude foreign matter from the springs.

In witness whereof I hereunto set my signature.

WILLIAM F. DOHEMANN.