

W. H. WATSON.
CUSHION HEEL.
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972,088.

Patented Oct. 4, 1910.

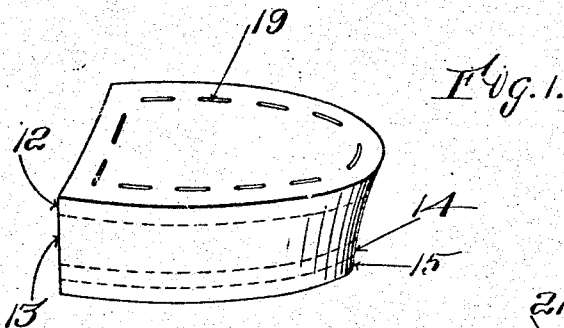


Fig. 1.

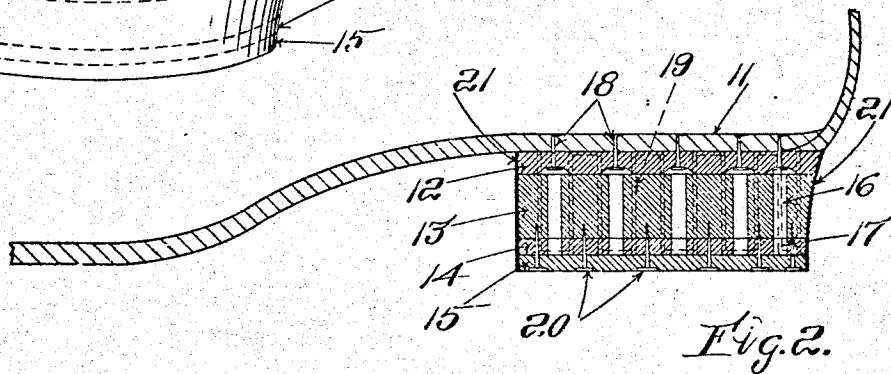


Fig. 2.

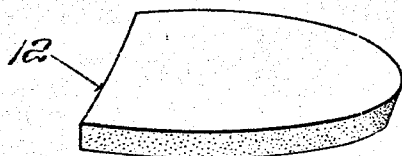


Fig. 3.

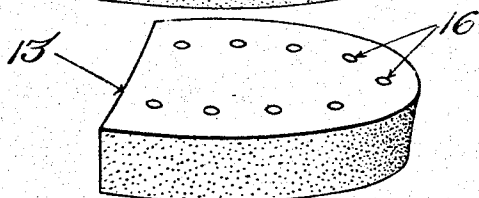


Fig. 4.

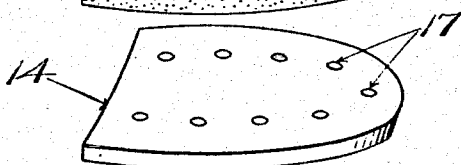


Fig. 5.

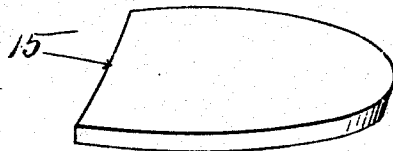


Fig. 6.

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UNITED STATES PATENT OFFICE.

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CUSHION-HEEL.

972,088.

Specification of Letters Patent.

Patented Oct. 4, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM H. WATSON, a citizen of the United States, residing at Keene, in the county of Cheshire and State of New Hampshire, have invented a certain new and useful Improvement in Cushion-Heels, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object a new and improved cushion heel of the kind now frequently employed on boots and shoes with the object of relieving the wearer of the injurious jar occasioned by the employment of a rigid or substantially rigid heel such as is produced from lifts of leather nailed together and to the shoe.

I am aware that cushion heels of a large variety of forms have already been made, but so far as is known to me, all of these heels are subject to certain defects to which my improved heel is not subject. This is true even of the rubber heels with fabric plugs inserted in them to prevent slipping. Furthermore, the rapidly increasing cost of rubber makes the price of rubber heels containing rubber of a quality good enough to be thoroughly effective as a cushion so high that their sale is greatly reduced.

Heels embodying my invention can be produced at a price considerably less than that of rubber heels of the cheapest grade, while at the same time they have the elastic cushioning qualities of rubber heels and are not subject to certain defects of rubber heels and other cushion heels.

Heels embodying my invention consist essentially of layers of felt intermediate the leather bottom lift and the heel seat and the whole secured together in such a manner that the elasticity of the heel is not impaired thereby.

Heels constructed in the manner which I will now describe have all the cushioning effect of rubber relieving the wearer of all jar and strain. They do not slip on wet pavements having a leather surface which comes in contact with the pavement. They do not chip off or run over at the sides as do rubber heels, and they keep their shape by reason of the fact that the compression takes place between the bottom lift and the heel seat and, therefore, the bottom lift always presents a flat surface to the pavement. The felt of which the larger portion of the heel is composed is of a fibrous char-

acter and is capable of treatment with a variety of substances or compounds so that it has the appearance of leather and may be blacked or polished in the same way. In order that it may not absorb water or be softened or decomposed thereby, I thoroughly waterproof it by applying to the heel or the material composing the heel some suitable water-proofing solution or compound or by causing the heel or the material therefor to be thoroughly permeated by the said water-proofing solution or compound.

Heels embodying my invention can be made at an expense much below that of any other cushion heel so far as is now known to me.

The invention will be understood from the following description taken in connection with the accompanying drawings, and the novel features thereof will be pointed out and clearly defined in the claim at the close of the specification.

In the drawings,—Figure 1 is a view in perspective of a heel embodying my invention. Fig. 2 is a longitudinal section of a heel embodying my invention showing a portion of the shoe to which it is attached and the mode of securing it thereto. Fig. 3 is a view in perspective of the upper lift of the heel. Fig. 4 is a similar view of the intermediate lift of felt by means of which the main cushioning effect is secured. Fig. 5 is a similar view of the intermediate lift of leather. Fig. 6 is a similar view of the bottom or lower lift of leather.

Referring to the drawings,—the heel seat of the shoe is shown at 11, see Fig. 2, and against this the heel embodying my invention is secured. The heel itself is preferably composed of two layers 12 and 13 of felt and two layers of leather 14 and 15. The relative thickness of the layers of felt and leather is dependent upon the amount of cushioning effect desired, but I find it convenient to make the felt lift 12 which is next the heel seat relatively thin and the intermediate lift 13 relatively thick so as to obtain the cushioning effect to a high degree. The two leather lifts 14 and 15 are preferably made of a thickness just sufficient to furnish the necessary resistance to wear. The layers or lifts 12 and 13 are made from felt having a high degree of density and elasticity, such felt being readily obtainable in the market, and I prefer to treat the said felt with some suitable water-proof-

ing substance before the parts of the heel are assembled. The intermediate lifts of felt 13 and of leather 14 are perforated as shown at 16 and 17 respectively with holes which register with each other but the upper and lower lifts 12 and 15 are not so perforated. This construction allows the heads of the nails 18, by means of which the heel is attached to the shoe, to seat themselves on the under side of the upper lift 12 and thus the nails do not diminish the cushioning effect of the felt. The three lifts 12, 13 and 14 are secured together by means of stitching 19 passing through the said three lifts. This stitching 19 is pulled very tight compressing the felt slightly, and holds the parts of the heel securely together but does not diminish in the least the effectiveness of the layers of felt as a cushion. The heel is then nailed onto the shoe by means of the nails 18 inserted through the holes 16 and 17. This work may be done by a heel nailing machine if desired. The bottom lift or tread 15 which is also of leather is then attached to the heel by means of the short nails or tacks 20. The leather layer 14 affords a proper hold for the tacks 20 by which the outer lift or layer 15 is attached to the heel, and the said outer lift or layer closes the holes in the lifts or layers 13 and 14 through which the nails by which the heel is attached to the shoe are inserted. It will be seen that this bottom lift or tread 15 receives all the wear, and that the felt is not subjected to any attrition but only to compression due to the weight of the wearer. The tread 15 covers the stitching 19 and protects it from wear. It will also be seen that the bottom lift or tread 15, being made of leather and somewhat stiff, tends to distribute the compression over the entire area

of the heel and also tends to remain flat. I find in actual practice that this results in a minimum of wear on the heel, and that the heel does not tend to lose its shape. Also as the surface presented to the ground is of leather, the heel has little or no tendency to slip on wet pavements as do rubber heels. After the parts of the heel have been assembled, the outer surface may be waxed, as shown at 21, or treated with rubber solution or any other suitable substance to afford a surface capable of being blacked or polished. When so treated and finished, my improved heel has the appearance of a leather heel. I also find that although the tread surface of my improved heel is of leather, it is almost noiseless by reason of the noise-deadening qualities of the felt.

I claim as my invention:

A cushion heel comprising a relatively thin lift or layer of felt through which the fastening nails by which the heel is attached to the shoe may pass, a relatively thick lift or layer of felt provided with a series of holes, and a lift or layer of leather also provided with a series of holes registering with the holes of the thicker felt layer, and through which holes the fastening nails may be inserted, these several lifts or layers being secured together by stitching, and the said heel, when completed, having, in addition to the lifts or layers aforesaid, an outer lift or layer of leather properly secured in place.

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

WILLIAM H. WATSON.

Witnesses:

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ALICE H. MORRISON.