

J. J. HEYS.
FLEXIBLE INSOLE.
APPLICATION FILED JAN. 28, 1911.

1,060,088.

Patented Apr. 29, 1913.

Fig. 1.

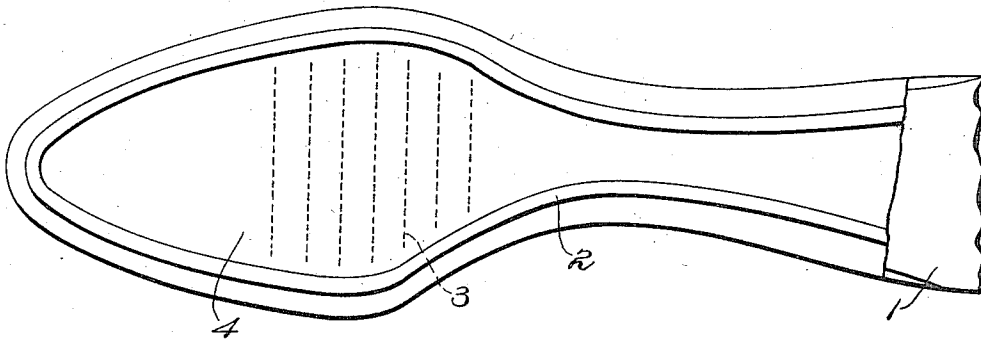
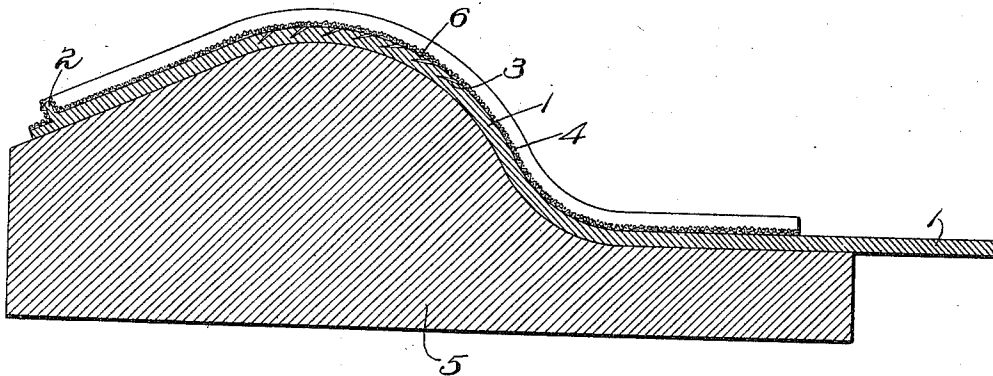


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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FLEXIBLE INSOLE.

1,060,088.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed January 28, 1911. Serial No. 605,189.

To all whom it may concern:

Be it known that I, JOHN J. HEYS, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Flexible Insoles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in flexible insoles.

It has been proposed to slash the surface of the insole along the ball inside of the turned-up lip portion, so as to render the ball portion of the insole more flexible. When the insole is flexed in walking, it is bent so that the slashes open up to allow the insole to bend about the ball of the foot. It is found in practice, however, that the filler, usually composed of ground cork and rubber cement, which is put between the insole and outsole in the finished shoe, works into the slashes and either wedges them open or else cements them together so that the flexibility of the insole is destroyed.

The object of the present invention is to provide a slashed insole such that its flexibility will not be impaired by the filler after the insole has been incorporated in the completed shoe.

With the above object in view, the present invention contemplates the use of a fabric, such as canvas, which acts to reinforce the upturned lip of the insole and which covers the slashed portion of the ball within the lip. The fabric acts in a combined capacity of reinforcing the lip and of protecting the slashes from the filler in the finished shoe. The fabric is preferably applied when the insole is flexed over a block or form to about the same amount that the insole is flexed as the foot of the wearer is bent at the ball in walking. The slashes are open when the insole is flexed and the fabric bridges over the open mouths of the slashes. After the fabric has been thus applied, and the insole is subsequently laid flat, the loose fabric over the mouths of the slashes is compressed or slightly gathered. The threads of a fabric, especially canvas, are so easily compressed that when the insole is laid perfectly flat, the fabric will present hardly any noticeable puckering over the slashes.

When the sole of the shoe is flexed by the wearer, the slashes in the insole open up and the protecting fabric is extended to its original length, while, when the sole of the shoe is straight, the slashes close again and the fabric is slightly compressed over their mouths.

Referring to the drawings, in which a preferred embodiment of the invention is illustrated, Figure 1 is a view looking at the face of the insole which is lowermost in a finished shoe, and Fig. 2 is a cross section taken longitudinally through the insole and showing the block over which the insole is preferably flexed when the reinforcing fabric is applied.

In the drawings, 1 indicates a leather insole which is provided with the usual upturned lip 2 or projecting portion through which is sewn the stitching which unites the insole with the welt and upper of a shoe. The surface of the insole along the ball portion thereof within the lip is cut with slashes 3 which are transverse to the length of the insole and preferably oblique to its surface, so that the insole is rendered more flexible at this point. After the lip is turned up and the slashes are cut, a reinforcing layer of canvas 4 is cemented to the insole and is tucked about the upturned lip 2 to reinforce it. The canvas extends across the shoe between the upturned lips on either side so that it entirely covers and protects the slashes 3 from the filler which is placed on the insole to fill in the space within the upturned lips before the outsole is applied. The canvas 4 is cemented to the leather insole while the insole is laid over a form or block 5 which flexes the ball portion approximately the same amount that the insole is flexed by the foot of the wearer in walking. This flexing causes the tongues 6 to slide over the opposite sides of the slashes and open up the mouths of the slashes. The cement secures the canvas to the leather between the slashes and the canvas bridges over the mouths of the slashes as illustrated in Fig. 2. After the canvas has been cemented, the insole may be removed from the block and laid flat. When the insole is laid flat, the tongues slide back over the opposite sides of the slashes, and the canvas which bridged the opened mouths of the slashes is loose, being slightly compressed or gathered at these points.

The amount of gathering, however, is so small that it is hardly noticeable, and causes no objectionable puckering when the insole is laid flat. After the canvas has been applied, the insole is ready to be incorporated into the shoe, as will be readily understood by one skilled in the art. The canvas not only reinforces the lip to better sustain the stitching therein, but also protects the slashes of the insole from the filler working into them or the cement in the filler from sticking them together, and by virtue of the manner in which it is applied allows a free working of the tongues 6 over the opposite sides of the slashes to permit the slashes to open when the insole is flexed, so that the insole retains its flexibility after the shoe is completed and has been worn.

The invention having thus been described, what is claimed is:—

1. As an article of manufacture, an insole for boots and shoes having an upturned lip or projecting portion and having the ball portion within said lip cut with transverse slashes to cause the ball portion of the insole to be flexible, and having reinforcing fabric applied to the insole to reinforce the upturned lip and extending across the insole within said lip to cover and protect the slashes from the filler which is applied between the insole and the outsole of the

finished shoe, said fabric being cemented to the insole between the slashes and being gathered or puckered over the mouths of the slashes to permit the slashes to open when the sole is flexed, substantially as described.

2. As an article of manufacture, an insole for boots and shoes having an upturned lip or projecting portion and having the ball portion within said lip cut with a number of transverse slashes inclined to the surface of the insole so that the tongues formed between the slashes and the surface of the insole slide over the opposite sides of the slashes and open up the mouths of the slashes to cause the ball portion of the insole to be flexible, and having reinforcing fabric applied to the insole to reinforce the upturned lip and extending across the insole within said lip to cover and protect the open mouths of the slashes from the filler which is applied between the insole and outsole of the finished shoe, said fabric being gathered or puckered over the mouths of the slashes to permit the tongues to slide and open the slashes when the shoe is flexed, substantially as described.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."