June 20, 1939. H. SCHRÖDER 2,163,158

SHOE

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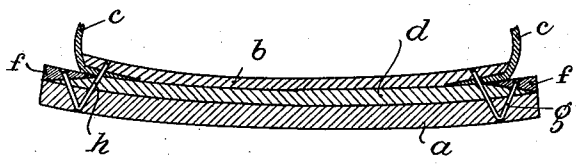


Fig. 1.

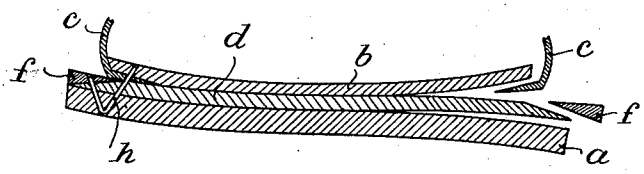


Fig. 2.

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SHOE

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1 Claim. (Cl. 36—19)

The invention relates to McKay shoes. These shoes include a top part comprising an insole and an upper lasted thereover, a bottom part comprising an outsole, and a fastening seam which traverses all three elements to hold them together. There is not a separate seam holding the upper to the insole, and another holding the insole to the outsole, but a single seam the stitiches, nails or staples of which pass through all three elements. Such a shoe is of an elegant character and suitable for town wear. It has however certain disadvantages which it is the object of the invention to overcome without loss of the general elegant character of the shoe.

1. The opening of the seam which binds outsole, insole and upper leather together has its origin in the fact that the seam is exposed to friction due to the constant movement of the seam during wearing of the shoe.

2. Each of the three superposed layers, namely, insole, upper leather and outsole during wearing of the shoe is bent to a different radius. The differences exert their effect mainly at the toe end, because the outsole is bent to a greater radius than the insole and the difference amounts to from 1 to 3 mm. according to the wearer's walk.

3. Further differences occur through the washing and rubbing out of the tanning and filling substances which fill the pores of the leather and preserve it, these differences occurring in the insole through the intermittent swelling thereof occasioned by foot moisture with subsequent drying. In the outsole similar action occurs through washing out of tanning and filling substances occasioned by wear in rain and through shrinkage during drying.

Through the above mentioned actions, the means binding the several layers of leather together are continually being moved in their positions and as a result loosen, tear or break.

The object of the invention is to overcome these faults.

I. A layer of rubber is secured, for example by vulcanizing on, over the whole or part of the inner surface of the outsole, the rubber layer being bevelled off round the edge in such a way that it is not visible or at any rate not noticeable on the outside edge and leaves room for a dummy welt if such is required, the welt being formed so that when attached it is correctly aligned with the outsole.

II. The dummy welt can be made externally as wide as desired, but inwardly must only reach the margin of the upper leather so as not to interfere with attachment, described below, of the rubber layer to the upper leather on the margin of the shoe.

III. The rubber layer with the outsole vulcanized thereto is secured to the upper leather by the same method as used for attaching it to the outsole and afterwards secured by the fastening seam which holds the bottom part and the top part of the shoe together. No filling apart from the rubber layer is provided.

The accompanying drawing illustrates by way of example an embodiment of McKay sewn shoe according to the invention, in diagrammatic cross section.

Figure 1 shows a shoe provided with a dummy welt.

Figure 2 shows a similar construction to Figure 1 but with the several layers shown separated on the right hand side.

In the figures, *a* is the outsole, *b* the insole and *c* the upper leather. Between the outsole *a* and the insole *b* a layer *d* of rubber is arranged, which is vulcanized to the outsole *a* and to the upper leather *c*. The margin of the rubber layer *d* is bevelled off to a feather edge and the dummy welt *f* lies upon this margin, the welt externally completely covering the rubber layer and its edge aligning with the edge of the outsole. The insole *b*, the upper leather *c*, the rubber layer *d* and the outsole *a* are secured together by the stitches *h*, by nails, or any other suitable means, and a separate seam *g* binds the dummy welt *f* and the outsole *a*.

By the vulcanization of the rubber layer *d* to the upper leather *c* the upper leather and the sole are inseparably united, yet the two can move relatively at the mid part of the sole, where the insole *b* lies over the rubber layer.

The construction of the shoe can also be such that the rubber layer *d* is only arranged at intervals between the outsole *a* and the insole *b*.

The advantages of the invention are:

1. That the rubber layer forms a connecting layer between the leather outsole and the upper leather, which owing to its elasticity and extensibility equalizes the movements and friction between the upper leather and outsole, and which encloses and protects the seam stitches and thereby increases their resistance so that opening of the seam is prevented.

2. That through the vulcanizing of the rubber layer on to the leather outsole, the inner side of the sole is covered in airtight manner so that the pores of the sole cannot permit the passage of water which would wash out the tanning and

filling substances contained in the pores, the sole thus being better preserved and therefore wearing longer.

3. The rubber layer forming a connecting piece between the upper leather and outsole, prevents the leather outsole from shortening or lengthening because washing out of tanning substance is prevented and the sole retains its original form; the upper part of the shoe is protected from below and the whole shoe even under arduous use retains its shape better than a shoe of conventional construction.

4. The rubber layer forming a connecting piece between the upper leather and the outsole also enables the filling employed in shoes of conventional construction between the insole and outsole to be omitted because the rubber layer takes the place of the filling material, and the shoe is more flexible than when filling is used.

5. The rubber layer forming a direct connection with the upper leather enables the full thickness of the leather outsole to be worn away without separating in the last stages from the upper leather so that the shoe can be worn longer without damage.

What I claim is:

In a McKay shoe including a top part comprising an insole and an upper lasted thereover, a bottom part comprising an outsole, and a fastening seam traversing all three constituent elements, the combination of a rubber layer located between said top part and said bottom part and vulcanized to both and traversed by said fastening seam, said rubber layer having its margin projecting beyond the edge of said top part and bevelled off so that its edge is substantially invisible from the outside of the shoe, a dummy welt upon the upper face of said projecting margin, and an additional seam securing said dummy welt to said margin.

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