

UNITED STATES PATENT OFFICE.

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INNERSOLE.

1,370,212.

Specification of Letters Patent.

Application filed June 25, 1920. Serial No. 391,574.

To all whom it may concern:

Be it known that I, PETER IACUILI, a citizen of the United States, and a resident of Boston, in the county of Suffolk and Com-5 monwealth of Massachusetts, have invented certain new and useful Improvements in Innersoles, of which the following is a full,

clear, and exact specification. The object of this invention is the effect-

- 10 ing of improved means for preventing the protruding of nails within the heels of boots and shoes and thereby guarding against any tearing of hose, irritation of the feet, and even the infection and blood poisoning lia-15 ble to be caused thereby.
- To this end I prefer to split the heel portion of the inner sole and introduce therein a thin metallic plate, attaching it to the under section of the sole and laying the upper 20 section down over the plate but with or
- without attaching the same thereto. In the drawings forming part of this specification, Figure 1 is a side view of a
- specification, Figure 1 is a side view of a shoe, showing the heel portion provided
 25 with my improvement, such heel portion being in section. Fig. 2 is a perspective view of an inner sole embodying my improvement. Fig. 3 is a transverse section of the same. Fig. 4 is a fact rise of the same.
- of the same. Fig. 4 is a face view of the 30 metal shield plate. Fig. 5 is a perspective view of the under side thereof. Fig. 6 is a perspective view of a shank piece for turn shoes provided with my improvement.

The inner sole 1 has its heel portion 2 35 split parallel with its top and bottom sur-

- faces, but somewhat nearer the top than the bottom surface, thus making a thin flap 3. The thin steel shield plate 4 is made approximately a tenth of an inch smaller in 40 radius than the heel 2 in order to provide a
- marginal space between the edges of the shield and heel.

For attaching the guard plate 4 to the heel 2 of the inner sole, I prefer to form the plate with a plurality of spurs 5 struck up at right angles thereto, as shown in Fig. 5. 45 The plate being pressed down upon the heel to force the spurs 5 through the latter, the points of the spurs can then be bent against 50 the under surface of the heel and the plate

thereby made secure. A thin cushion 6 may be cemented upon the plate 4, and then the flap 3 cemented upon the cushion, or the flap may be cess mented directly upon the plate and the cushion omitted.

For shoes with wooden heels, the spurs 5 may be dispensed with and nails driven down through the holes 7 shown in Fig. 6, into the heels. This Fig. 6 also shows the 60 same arrangement of plate adapted for the shank piece of a turn shoe.

Patented Mar. 1, 1921.

The forward edge of the plate 4 is made with a sharp concavity or reentrant angle 9, thus bifurcating the plate at its front por- 65 tion, each leg or arm 10 thus formed being rounded, as shown most clearly in Fig. 4. This-is a quite important feature, for I have found that when the front edge of the plate is straight across, such edge will wear and 70 cut the sole thereat and frequently cause it to break; but by providing the bifurcations 10, this wear and breakage is entirely prevented, the bifurcations being sufficiently yielding to insure against such damage. At 75 the same time, the plate is rendered lighter than it would otherwise be, while it fully shields against the points of any nails which have been driven up from the heel below into the heel portion of the sole, and which 80 would otherwise be forced up through the inner sole by the wearing away of the heel.

Thus shielded, the wearer's foot will be insured against irritation, injury, and pos-sible infection; and from the wearing and **85** tearing of his hose; walking will be ren-dered easier and more comfortable, and standing less tiresome. What I claim is:

1. A shoe or the like having an inner sole, 90 a sheet metal plate attached to the heel portion of the inner sole, and a flap covering said plate, the forward edge of said plate being formed with a reëntrant angle.

2. A shoe or the like having an inner sole, 95 a sheet metal plate attached to the heel portion of the inner sole, and a flap covering said plate, the forward portion of said plate terminating in terminally rounded bifurcations.

3. A shoe or the like having an inner sole, a sheet metal plate having spurs for attaching it to the heel portion of the sole, a marginal space being provided between the edges of the plate and the rounded edges of 105 the said heel portion, and a flap covering said plate, the forward edge of the plate being formed with a V-shaped recess.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 110 19th day of June, 1920.

PETER IACULLI.

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