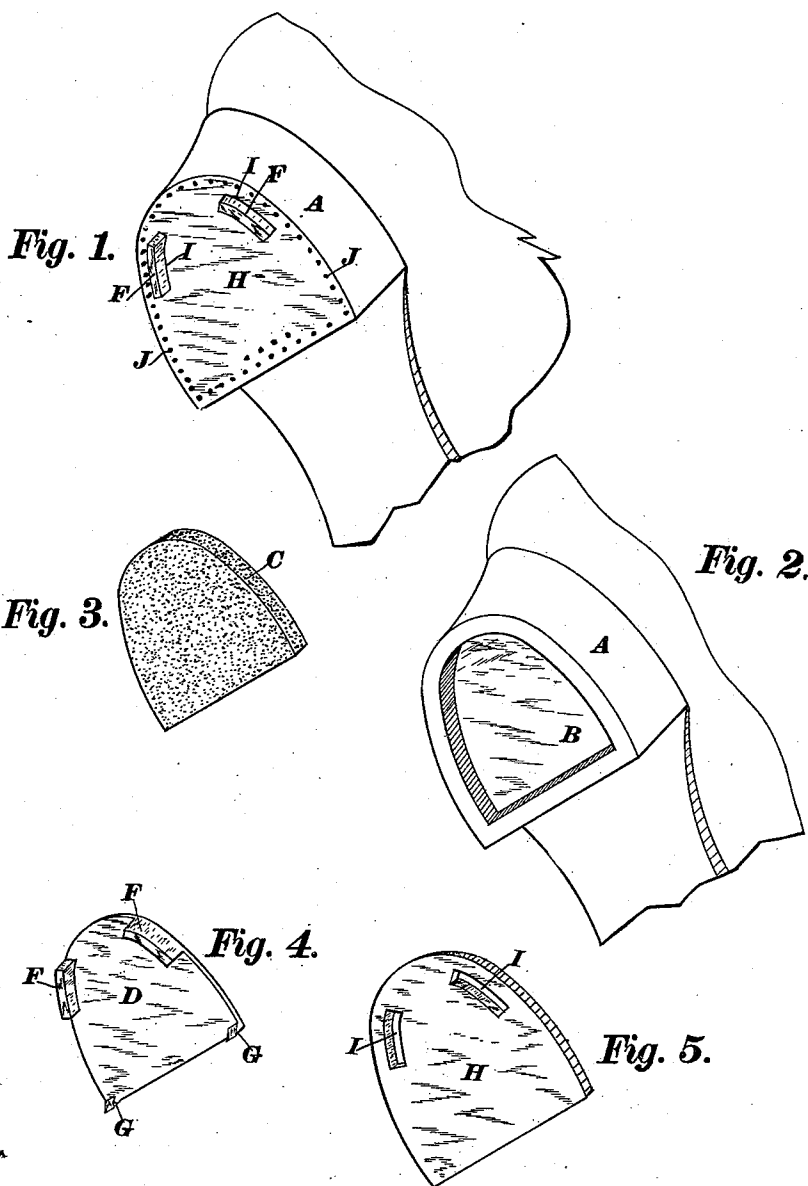


(No Model.)

E. D. MILLER.
HEEL FOR BOOTS OR SHOES.

No. 469,746.

Patented Mar. 1, 1892.



Witnesses

W. L. Brown,
Ansel W. Gale

Inventor

Edward S. Miller
By his Attorney Oscar S. Hall

UNITED STATES PATENT OFFICE.

EDWARD D. MILLER, OF CHICAGO, ILLINOIS.

HEEL FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 469,746, dated March 1, 1892.

Application filed June 3, 1891. Serial No. 394,907. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. MILLER, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Heels for Boots or Shoes, of which the following is a specification.

This invention relates to improvements in heels of foot wearing-apparel, and has for its objects the relief of the feet and legs of the wearer from concussions incident to walking upon hard surfaces and, incidentally, to keep the heel in proper shape and not wear away at the sides or back, and also to prevent slipping when walking upon very smooth or icy surfaces. These objects are attained by the construction shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a shoe-heel with a greater part of the shoe broken away and embodying my improvement; Fig. 2, same as Fig. 1, but with the top lift and the operative parts removed. Fig. 3 is a rubber spring; Fig. 4, a metal plate having projections; and Fig. 5 the top lift of the heel, all of which will be fully described hereinafter.

Similar letters refer to like parts throughout the several views.

A is a heel of a boot or shoe.

B is a cut-out portion at the bottom of the heel.

C is a piece of rubber or caoutchouc, which occupies all or a part of the cut-out portion B of the heel.

D is a metal plate, whose size longitudinally and transversely, and general conformity in these directions is the same or somewhat smaller than the piece of rubber C. This metal plate has two segmental projections F and two smaller projections G, as shown.

H, Fig. 5, is a detached view of the top lift of the heel, which has two segmental perforations I to register with the projections F of plate D.

When the several parts are to be assembled, the piece of rubber C is placed in the

cut-out portion B of the heel, which it fills level with the face thereof. Next the metal plate D is placed against the lift, Fig. 5, with its projections F in position through the segmental perforations I, when the lift, with plate D under it, is secured to the heel by nails J or other means, when the heel will present the appearance shown in Fig. 1.

It will be understood that in the act of nailing on the last lift H the two small projections G will be caused to enter the under side of the lift; or the plate D can be driven upon the lift previous to securing the lift in its position on the heels.

It is obvious in using this improved heel that the metal projections will bear the first contact of the foot with the pavement, and that being backed or in contact with the rubber spring C will resist the first contact of the foot with the pavement, but in a slight degree, then gradually yielding until the heel receives the whole weight of the body and perfectly obviating the shocks incident to the use of ordinary unyielding heels. The metal projections contacting with the pavement first in walking save the heel from wearing away on the back, since the projections lift the rear of the heel above the pavement until the whole foot is straightened out in completing the step. Then when the pressure of the body upon the foot forces the projections back into the heel the whole face thereof is in contact with the pavement and provides the necessary side stability.

It has been found in practice that shoes provided with this improvement will not slip when the wearer steps upon an orange or banana peel and that ice and other similar slippery surfaces can be walked over with impunity.

I claim as my invention—

1. A heel for a boot or shoe, having a cut-out portion B, substantially as described, said cut-out portion provided with a filling of elastic substance, plate D, contacting the outer surface of said elastic substance, lift H, secured near its marginal edges to the heel and covering said plate D, lift H being provided

with one or more holes I, through which operate projections F of plate D, the whole operating in combination for the purpose substantially as shown and described.

- 5 2. The plate D, held in position against the outer face of elastic substance C by the superimposed lift H, said plate having projec-

tions F, which pass through holes I in lift H, and projections G, which enter the substance of said lift in the manner described.

EDWARD D. MILLER.

Witnesses:

H. S. BROWN;

OSCAR SNELL.