





# UNITED STATES PATENT OFFICE.

GEORGE FRANCIS FISCHER, OF ROCHESTER, NEW YORK.

## SHOE-HEEL.

SPECIFICATION forming part of Letters Patent No. 737,915, dated September 1, 1903.

Application filed September 2, 1902. Serial No. 121,771. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE FRANCIS FISCHER, a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, have invented a new and Improved Shoe-Heel, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a shoe-heel of the cushion type and means for attaching the heel to the insole of a shoe and, further, to so mount the tread-section of the heel that it may be shifted to bring to the rear the forward or side sections, which are comparatively unworn, to take the place of the rear section of the heel, which has become unduly worn, and to vertically adjust such tread-section, so that the tread-section can be worn throughout the major portion of the depth of the heel.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a bottom plan view of a shoe having the improved heel applied. Fig. 2 is a vertical longitudinal section through the heel portion of the shoe. Fig. 3 is a plan view of a fastening-plate used in connection with the heel.

A represents the insole of a shoe, B the main sole, C the lower edge of the upper, and C' the lower portion of the counter of the shoe, in connection with which parts the improved heel is to be employed.

The heel consists of a shell D of the customary shape and made of any suitable material. The upper portion of the shell is shown open, and at the bottom portion of the shell a circular opening 10 is made, which extends at the rear portion of the sides and the rear portion of the heel, as is shown in Figs. 1 and 5, and in front of the said opening 10 a segmental tread-surface 11 is provided, which may be and preferably is of the same material as the body of the shell and is an integral portion of the same. The walls of the opening 10 in the bottom of the shell

are gradually tapering to the rear from the forward tread-surface 11 of the shell, so that at the rear portion of the shell a recess 12, formed by the tapering of the walls of the opening, is much deeper than at the forward portion of the heel. A shank 13 is attached to or made integral with the upper forward portion of the shell D, is given a suitable curve in a forward direction, and is provided with a longitudinal slot or opening 14 therein, preferably wider at its ends than at its center, as is shown in Fig. 1.

The upper portion of the shell D of the heel is covered by a fastening-plate 15, of metal or like stiff material. This plate is not attached to the shell D, yet it assists in holding the heel in position, as will be hereinafter described, and the said fastening-plate extends over the shank 13, conforming in outline thereto. The fastening-plate 15 is best shown in Fig. 3 and is provided with a suitable number of upwardly-extending spurs 16, adapted to penetrate the insole A and to be clamped thereon, as is shown in Fig. 2, and the said fastening-plate 15 is further provided with a marginal series of downwardly-extending spurs 17, which are passed through and are clamped upon the under surfaces of the upper C and counter C' of the shoe, as is also shown in Fig. 2.

At the central portion of the heel-section of the fastening-plate 15 a downwardly-extending screw 18 is attached or secured in any suitable or approved manner, and this screw 18 extends down centrally in the opening 10 at the bottom of the shell D of the improved heel. On this screw 18 a circular block 19, of rubber, leather, or other elastic material, is located, although wood may be employed instead of leather or rubber, if desired. The said block 19, which is the actual tread-surface of the heel, extends at its lower surface flush with the undersurface of the fixed tread-section 11 of the shell, as is shown in Fig. 2, and consequently extends down below the wall of the recess 12 in the bottom of the said shell. This tread-block 19 when it becomes worn at the rear portion of its bottom or tread surface can be revolved to bring another portion of the block to the rear, where the most wear is to be sustained, and as the tread-block wears away it can be adjusted down-



ward on the screw 18. The tread-block 19 can thus be worn until it is practically too thin to be useful.

The tread-block 19 is held in its adjusted position by means of a pin 20 or its equivalent, passed through the front of the shell D and into the said tread-block, as is shown in Figs. 1, 2, and 5. The fastening-plate 15 at its shank portion is provided with a downwardly-extending lug 15<sup>a</sup>, adapted to enter the openings 14 in the shank-section 13 of the heel, and the shank-section of the fastening-plate and the shank-section of the heel are securely held in close relation by set-screws 15<sup>b</sup> or their equivalents, passed through the said lug 15<sup>a</sup>, the heads of the set-screws having ample bearing upon the shank 13 at the side margins of the opening 14 therein.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A heel for boots and shoes, consisting of a shell having its bottom portion partially open and a recess in the lower portion of its side and back, the bottom of the said shell being closed at its forward section, the said closing section at the bottom of the shell being provided with a segmental tread-surface, a tread-section mounted to turn within the said shell, extending downward flush with the under face of the closing portion of the bottom of the shell, a shank integral with the said shell, a plate having means for attachment to the upper and the insole of a shoe, a stud attached to the heel portion of the said plate, extending downwardly therefrom, upon which stud the tread-section of the heel is mounted to turn, a retaining device passed through the shell into the adjustable tread-section to hold the latter in adjusted position, and means, substantially as described, for attaching the shank extension of the shell to the said plate, for the purpose set forth.

2. A heel for shoes, consisting of a shell having its bottom portion partially open and a recess in the bottom portion of its side and

back, the bottom of said shell being closed at its forward section, the said closing section at the bottom of the shell being provided with a segmental tread-surface, a shank extending from the forward portion of the shell, a plate having means for attachment to the upper of a shoe and its insole, which plates extend over the top of the shell and over the shank extension of the same, a screw extending downward from the heel portion of the said plate within the shell, a tread-section mounted to turn on the said screw within the shell, extending downward substantially flush with the under face of the closing portion of the bottom of the shell, a retaining device for the adjustable tread portion of the heel, passed through the shell to an engagement with a side of the adjustable tread portion, and locking devices passed through the shank extension of the shell and into the said plate located above the shell and shank, for the purpose described.

3. A shoe-heel consisting of a shell provided with a shank having a longitudinal opening therein, a fastening-plate extending over the heel and the shank, being provided with means for attachment to the insole and to the upper of the shoe, said fastening-plate being also provided with a lug extending downward into the opening of the shank of the heel, set-screws passed into the said lug and engaging with the shank of the heel, a screw extending downward from said fastening-plate within the shell of the heel, the bottom of the shell being partially open, and a tread-block mounted within the shell on the said shoe and extending to the under surface of the shell of the heel, for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE FRANCIS FISCHER.

Witnesses:

ALBERT H. STEARNS,  
CARLETON SIAS.