Nov. 4, 1924. 1,514,154

A. HAJDÚCZKÝ ET AL

SPRING HEEL

Filed Feb. 7, 1924

FIG. 1.

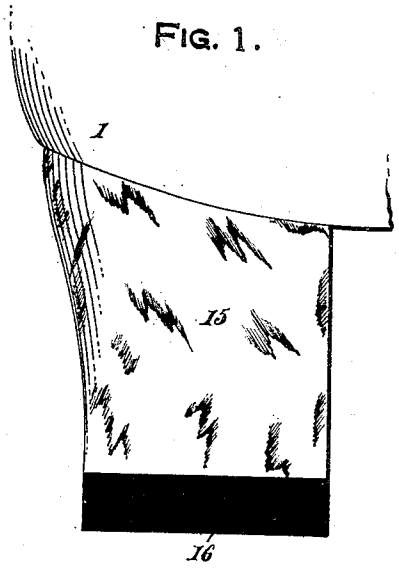



FIG. 2.

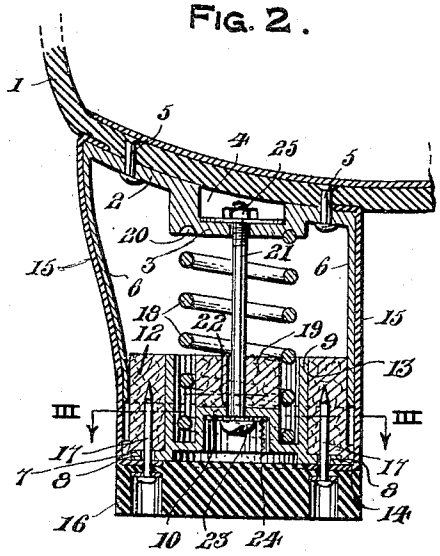



FIG. 4.

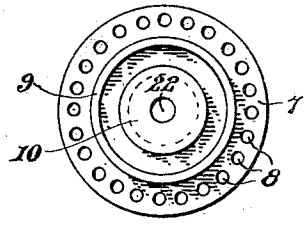



FIG. 3.

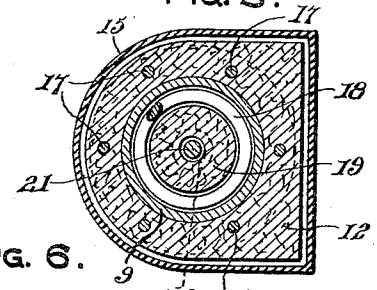



FIG. 6.

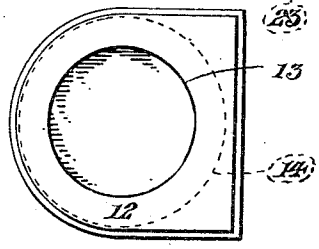



FIG. 5.

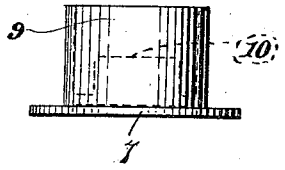
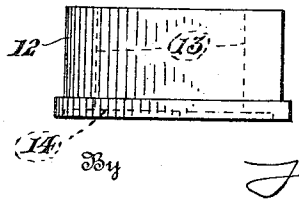



FIG. 7.




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# UNITED STATES PATENT OFFICE.

ANTAL HAJDÚCZKÝ AND EMIL SAKACSI, OF LONG ISLAND CITY, NEW YORK.

## SPRING HEEL.

Application filed February 7, 1924. Serial No. 691,135.

*To all whom it may concern:*

Be it known that we, ANTAL HAJDÚCZKÝ and EMIL SAKACSI, citizens of Czechoslovakia, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Spring Heels, of which the following is a specification.

This invention relates to certain new and useful improvements in spring heels wherein a metallic spring housed within a hollow shoe heel construction absorbs the shock incident to walking to provide an efficient cushioned heel.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists of the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing, wherein like reference characters designate corresponding parts throughout the several views,

Figure 1 is a side elevational view of a spring heel constructed in accordance with the present invention, the heel embodying telescopic sections that are covered by sheet leather as illustrated,

Figure 2 is a vertical longitudinal sectional view of the shoe heel showing the metallic spring between the upper and lower sections and the mounting for the lower end of the spring,

Figure 3 is a horizontal sectional view taken on line III—III of Fig. 2,

Figure 4 is a top plan view of the supporting member for the lower end of the spring,

Figure 5 is a side elevational view of the spring supporting member,

Figure 6 is a top plan view of the block in which the supporting member for the lower end of the spring is mounted, and

Figure 7 is a side elevational view of the block.

Referring more in detail to the accompanying drawing, there is illustrated a spring heel secured to a shoe upper 1 and embodying upper and lower telescoping sections having a metallic spring interposed therebetween. The upper section of the spring heel embodies a curved plate 2 flatly engaging the adjacent portion of the shoe upper 1 and carrying a central depending protuberance 3 forming a pocket 4 at the upper side thereof as shown in Fig. 2. The plate 2 is secured as at 5 to the shoe upper and carries depending walls 6 of the general configuration of the outline of a shoe heel that extend downwardly the desired distance.

The lower section of the shoe heel embodies a disk 7 having a plurality of closely positioned openings 8 adjacent the peripheral edge thereof with an upstanding cylindrical wall 9 spaced from the peripheral edge. An inverted cup-shaped portion 10 is positioned centrally of the wall 9 and is located adjacent the lower end of said wall and connected thereto by the angle portion 11. A wooden supporting block 12 of the form illustrated in Fig. 3, and further shown in detail in Figs. 6 and 7 has a central opening 13 through which the wall 9 of the disk pin projects while the lower face of the block 12 is rabbetted as at 14 to receive the disk 7 and lie flush with the lower face thereof. The block 12 telescopes within the lower end of the depending wall 6 carried by the upper section of the heel.

A leather covering 15 is provided for the wall 6 of the upper heel section and has the lower edge thereof turned under the disk 7 and block 12, a rubber heel 16 being positioned below the disk and block and engaging the turned under edge of the leather covering 15 and is so retained by the spikes 17 passing through the rubber heel 16, the leather covering 15, desired openings 8 in the disk 7 and entering the block 12.

A coil spring 18 is interposed between the upper and lower sections of the heel, the lower end of the spring surrounding the cup 10 and the block 19 supported on the upper end of the cup, the upper end of the spring 18 being received in an annular groove 20 provided in the lower face of the protuberance 3. To limit the expansive force of the spring 18 and also to limit the separating movement of the heel section, there is provided a screw rod 21 passed through the opening 22 in the cup 10 and openings in the block 19 and protuberance 3, the headed end 23 of the screw bolt engaging the disk washer 24 while a nut 25 is threaded onto the upper end of the screw bolt within the pocket 4 of the protuberance.

From the above detail description of the invention, it is believed that the construction and operation thereof will at once be apparent, and while there is here in shown and described the preferred embodiment of

the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What is claimed as new is:—

1. In a spring heel, upper and lower telescoping heel sections, a flexible leather covering therefor, a coil spring interposed between the heel section, means associated with the heel sections for limiting the separating movement thereof and the expansive force of the spring, the lower section embodying a disk having a cylindrical wall surrounding an inverted cup-shaped member, a cushion tread carried by the lower section, means for clamping the lower edge of the flexible heel covering between the disk and tread, the lower end of the spring being disposed between the cylindrical wall and cup-shaped member, said movement limiting means including a screw rod having one end engaging the cup-shaped member, a protuberance depending from the upper heel section to which the upper end of the screw rod is attached, and a guide block supported on the cup-shaped member through which the rod extends.

2. In a spring heel, an upper section comprising a curved plate adapted to be secured to a shoe upper and having a protuberance depending therefrom, depending integral walls carried by the edges of said curved plate; a lower section comprising a disk having a cylindrical wall surrounding an inverted cup-shaped member, a tubular block mounted upon the inverted cup-shaped member, a screw rod passing through the bore of the tubular block for engaging the protuberance at one end and the inverted cup-shaped member at the other end to limit the separating movements of the upper and lower sections, resilient means for forcing said sections apart, a block resting upon the disk portion of the lower section and telescopically received within the depending walls carried by the upper section, and a cushion tread secured to the lower section by means passing through said disk for being embedded in the last mentioned block.

3. In a spring heel, an upper section comprising a curved plate adapted to be secured to a shoe upper and having a protuberance depending therefrom, and depending integral walls carried by the edges of said curved plate; a lower section comprising an apertured disk having a cylindrical wall surrounding an inverted cup-shaped member, a tubular block mounted upon the inverted cup-shaped member, a screw rod passing through the bore of the tubular block for engaging the protuberance at one end and the inverted cup-shaped member at the other end to limit the separating movement of the upper and lower sections, a coiled spring for forcing said sections apart by engaging the protuberance at its upper end and the disk of the lower section at its lower end, said coil spring encircling the tubular block and inverted cup-shaped member and positioned within the cylindrical wall, at its lower end, a block resting upon the apertured portion of the disk of the lower section, a flexible leather covering connected to said sections, and a cushion tread secured to the lower section by means passing through the apertures of said disk for being embedded into the last mentioned block.

In testimony whereof we affix our signatures.

ANTAL HAJDÚCZKY.
EMIL SAKACSI.