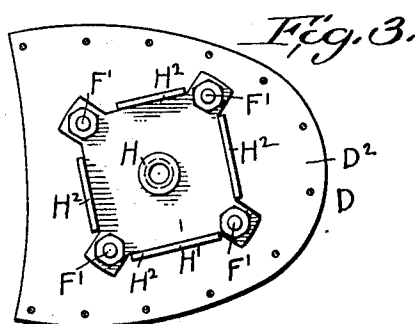
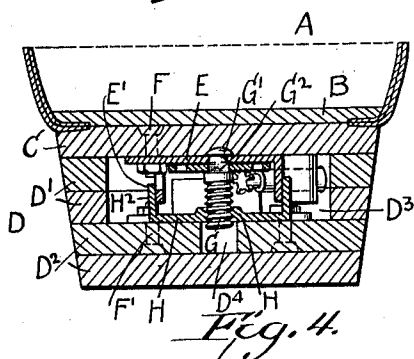
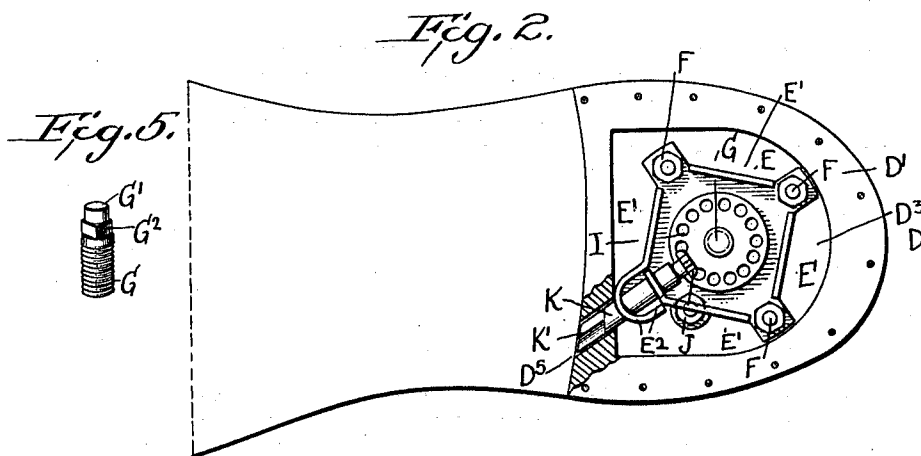
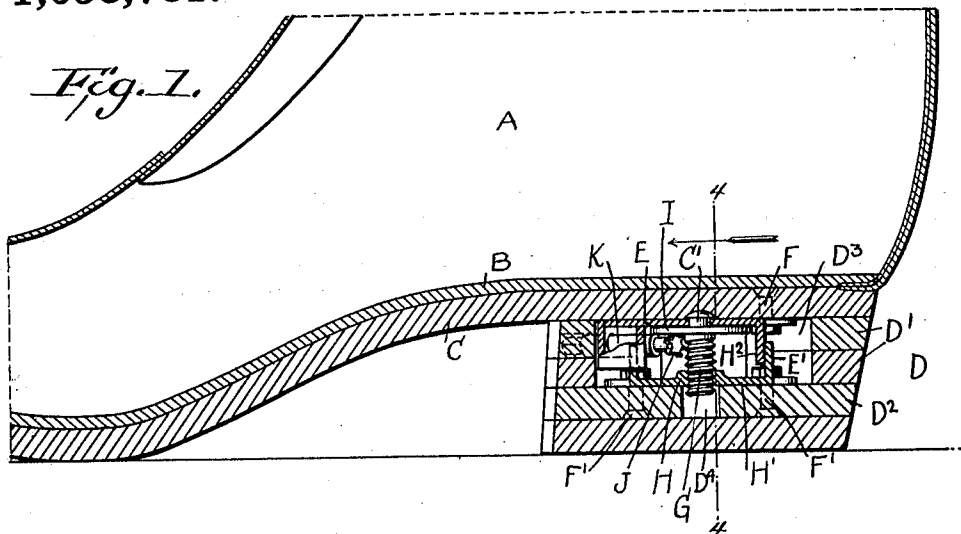


L. KALINA.
 REMOVABLE HEEL.
 APPLICATION FILED DEC. 9, 1912.

1,053,731.

Patented Feb. 18, 1913.



WITNESSES

Oliver H. Holmes
Neely H. Foster

INVENTOR
 Loeser Kalina,
 BY *Mumford Co.*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

LOESER KALINA, OF NEW YORK, N. Y.

REMOVABLE HEEL.

1,053,731.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed December 9, 1912. Serial No. 735,664.

To all whom it may concern:

Be it known that I, LOESER KALINA, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Removable Heel, of which the following is a full, clear, and exact description.

The invention relates to boots and shoes, and its object is to provide a new and improved removable heel arranged to permit the user of the boot or shoe to conveniently and quickly replace the worn out heel by a new one.

For the purpose mentioned, use is made of a plate attached to the outsole of the boot or shoe at the heel portion thereof, a vertical screw rod journaled in the said plate and provided with a gear wheel, a nut attached to the heel and in which screws the said screw rod, and a manually-controlled shaft provided with a pinion in mesh with the said gear wheel so that in turning the shaft the screw rod is turned to draw the heel up into position.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal vertical section of the removable heel as applied to a boot or shoe; Fig. 2 is an inverted plan view of the same with the bottom section of the heel and its nut removed, part of the upper heel section being in section; Fig. 3 is a plan view of the lower heel section and the nut attached thereto; Fig. 4 is a transverse section of the removable heel as applied, the section being on the line 4-4 of Fig. 1; and Fig. 5 is a perspective view of the screw rod.

A boot or shoe A of any approved construction is provided with the usual insole B and the outsole C, to the heel portion of which is attached a heel D made in an upper section D' permanently secured to the outsole C, and a bottom section D² adapted to be drawn up in position on the under side of the upper heel section D' by the mechanism presently to be described in detail. As shown in the drawings, the heel sections D' and D² are each made of two lifts but only one or more lifts may be used on each heel section. The plate E is fas-

tened by bolts F or other fastening means to the under side of the outsole C at the rear portion, and this plate E extends within an opening D³ formed in the upper heel section D'. In the plate E is journaled the upper round end G' of a depending screw G screwing in a nut H formed centrally on a plate H' secured by bolts F' to the upper lift of the lower heel section D². The nut plate H' is provided with upturned flanges H² slidably engaging depending flanges E' integral on the plate E so that the nut H is held against turning and is guided in its movement toward and from the plate E on turning the screw rod G in either direction. Thus when turning the screw rod G in one direction the nut H and with it the bottom heel section D² is moved upward so that the upper surface of the bottom heel section D² moves in firm contact with the under surface of the lower heel section D'. When turning the screw rod G in the opposite direction the nut H with the bottom heel section D² is moved downward to finally permit removal of the lower heel section and the nut to allow of detaching the nut H from a worn out lower heel and reattaching the said nut to a new bottom heel section. The upper lift of the bottom heel section D² is provided with a central opening D⁴ to accommodate the lower end of the screw rod G.

In order to turn the screw rod G in either direction the following arrangement is made: The screw rod G is provided immediately below the upper round section G' with a polygonal portion G² on which fits a gear wheel I in mesh with a pinion J secured on a shaft K journaled in bearings E² formed on the two adjacent guide flanges E', as will be readily understood by reference to Fig. 2. The shaft K is disposed obliquely and its outer polygonal end K' extends into an opening D⁵ formed in the front of the upper heel section D' to permit the user of the boot or shoe to apply a wrench or similar tool to the said polygonal end K' with a view to turn the shaft K in either direction. When it is desired to fasten the lower heel section D² in position then the shaft K is turned in one direction to rotate the screw rod G with a view to draw the nut H and with it the lower heel section D² until the latter is in firm position against the upper side of the upper heel section D'. The tool is then removed from

the polygonal end of the shaft K. When the lower heel section D² is worn out the tool is re-applied on the polygonal end K' of the shaft K, and the latter is then turned 5 in an opposite direction to cause the nut H to unscrew from the screw rod G, and then the nut H is detached from the worn out heel and attached to the new heel section D², after which the latter is drawn to position on the upper heel section D' in the 10 manner above explained.

From the foregoing it will be seen that the mechanism is very simple in construction and a worn out heel section can be removed 15 and replaced by a new one without the aid of skilled labor. It will also be noticed that in case the heels of a pair of boots or shoes are both worn down, say on one side, then the heels can be readily interchanged to 20 allow of wearing down the other side.

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

1. The combination of an outsole having 25 a plate at the heel portion thereof, a screw rod journaled in the said plate and depending therefrom, a heel, a nut secured to the said heel and in which screws the said screw rod, and a manually-controlled gearing connected with the said screw rod for turning 30 the latter to draw the said heel up in position.

2. The combination of an outsole having 35 a plate at the heel portion thereof, a screw rod journaled in the said plate and depending therefrom, a heel, a nut secured to the said heel and in which screws the said screw rod, a gear wheel secured to the said screw rod, a pinion in mesh with the said gear 40 wheel, and a manually-controlled shaft carrying the said pinion.

3. The combination of an outsole having 45 a plate at the heel portion thereof, a heel made in upper and lower sections, of which the upper section is attached to the heel portion of the outsole and is provided with an opening in which extends the said plate,

a screw rod journaled in the said plate, a nut secured to the lower section of the heel and in which screws the said screw rod, and 50 manually-controlled means for turning the said screw rod.

4. The combination of an outsole having a plate at the heel portion thereof, a heel 55 made in upper and lower sections, of which the upper section is attached to the heel portion of the outsole and is provided with an opening in which extends the said plate, a screw rod journaled in the said plate, a nut secured to the lower section of the heel 60 and in which screws the said screw rod, the said nut and the said plate having holding and guiding means for holding the nut against turning and for guiding the said nut 65 in its movement toward and from the said plate, and manually-controlled means for turning the said screw rod.

5. The combination of an outsole having a plate at the heel portion thereof, a heel 70 made in upper and lower sections, of which the upper section is attached to the heel portion of the outsole and is provided with an opening in which extends the said plate, a nut secured to the lower section of the heel and in which screws the said screw rod, a 75 gear wheel on the said screw rod, a pinion in mesh with the said gear wheel, a shaft carrying the said pinion, flanges depending from the said plate and provided with a bearing for the said shaft, the upper heel 80 section being provided at the front with an opening into which extends the outer end of the said shaft, and flanges rising from the said nut and slidingly engaging the said plate flanges to hold the nut against turning 85 and to guide the nut in its movement toward and from the said plate.

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

LOESER KALINA.

Witnesses:

THEO. G. HOSTER,
PHILIP D. ROLLHAUS.