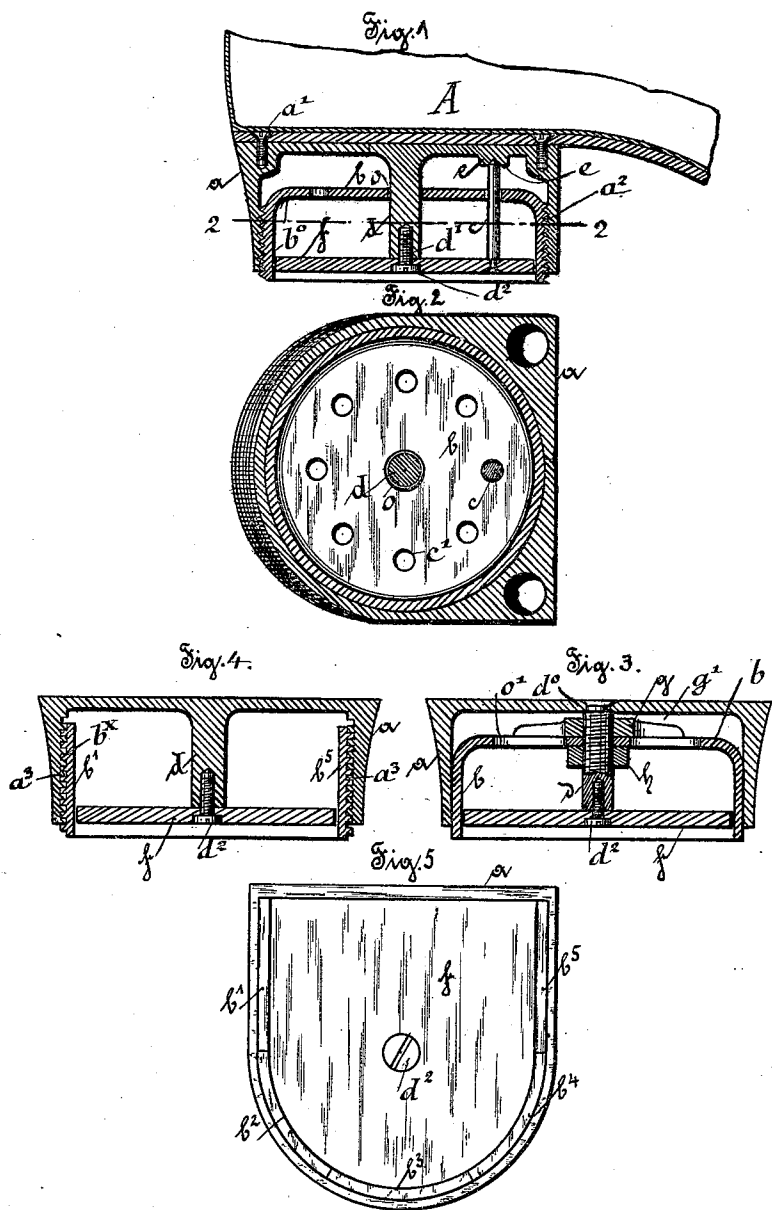


(No Model.)

N. BECKER.  
HEEL.

No. 542,790.

Patented July 16, 1895.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

NIKOLAUS BECKER, OF FUERTH, GERMANY, ASSIGNOR TO MICHAEL SCHWEIGER, OF SAME PLACE.

## HEEL.

SPECIFICATION forming part of Letters Patent No. 542,790, dated July 16, 1895.

Application filed February 6, 1895. Serial No. 537,461. (No model.)

*To all whom it may concern:*

Be it known that I, NIKOLAUS BECKER, a subject of the German Emperor, and a resident of Fuerth, Bavaria, Germany, have invented certain new and useful Improvements in Heels for Boots or Shoes, of which the following is a specification.

My invention relates to a heel for boots and shoes, the object of the same being to provide a heel which contains a wear-piece, which is adapted to be adjusted outwardly to compensate for the wear of the heel in walking.

My invention consists of an outer shell which resembles the appearance of the usual heel and which contains an adjustable wear-piece adapted to be adjusted outwardly, so as to compensate for the wear on the heel, a cover-plate, means for securing the cover-plate within the hollow wear-piece, and means for securing the wear-piece in position within the hollow outer shell.

My invention consists, further, of certain features of construction to be hereinafter described and then finally claimed.

In the accompanying drawings, Figure 1 is a longitudinal section through the rear portion of a boot or shoe provided with a heel constructed according to my invention. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section of a modified form of heel. Fig. 4 is a similar construction of another modified form, and Fig. 5 is an under side view of the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* indicates the outer shell, which is in the form of the usual heel and which constitutes the main body of the heel, the same being preferably attached to the boot or shoe by means of screws or other fastenings *a'*. The outer shell *a* is preferably colored, painted, or provided with a separate cover of leather, so as to have an appearance which will harmonize with the boot or shoe *A* to which it is attached. The inner wall of the hollow shell *a* is, as is shown in Figs. 1 and 2, provided with a screw-thread *a<sup>2</sup>*, which is adapted to receive a corresponding screw-thread on the circumference of the wear-piece *b<sup>0</sup>*, which consists of a disk *b* and an annular flange *b<sup>0</sup>*, on which said screw-threads

are turned. The wear-piece has at the center of its disk *b* an opening *o*, which receives a post *d* that projects downwardly into the shell *a* from the closed top thereof. This wear-piece is made preferably of very hard steel or of some other sufficiently-hard material. In the end of the post *d* is an axial screw-threaded bore *d<sup>1</sup>*, in which is screwed a screw *d<sup>2</sup>*, whereby a cover-plate *f*, which corresponds substantially to the area of the space formed by the annular flange *b<sup>0</sup>* of the wear-piece, is confined against the end of the post *d*, so that dirt, snow, &c., are prevented from accumulating within the hollow portions of the heel, and rust and deterioration of the parts is thereby prevented.

For the purpose of securing the wear-piece against rotation when the parts are set in proper position a locking-pin *c* is firmly attached to one face of the cover-plate *f*, which pin passes through one of the circular series of openings *c'* that are formed in the disk *b* of the wear-piece, its outer end being suitably formed so as to be received within a socket *e* cast on the under side of the top plate of the outer shell of the heel. It will be seen that by removing the screw *d<sup>2</sup>* from the post *d* and the cover-plate *f*, the cover-plate may be removed, as well as the pin *c* from the socket *e* and the opening *c'* in the wear-piece, through which it passes, so that a rotation may be imparted to the wear-piece *b<sup>0</sup>*, and the same adjusted outwardly, so as to elevate the heel to the proper height. A complete rotation can be imparted to the wear-piece or the wear-piece may be partially rotated on account of inequalities in the wearing-edge of the same, and then the wear-piece may be locked in its adjusted position by replacing the cover-plate *f* and the locking-pin *c*, and then setting the screw *b<sup>2</sup>* tightly into the bore of the post *d*. The partial rotation of the wear-piece and the locking of the same in adjusted position is permitted by reason of the circular series of openings *c'* in the disk *b* of the same.

In the modification shown in Fig. 3, the locking-pin *c* is dispensed with, while upon the exterior of the post *d* a screw-thread *d<sup>0</sup>* is formed. The screw-threads on the shell *a* and the wear-piece *b* are also dispensed with, the meeting surfaces of the same being

smooth. In order, however, that the wear-piece may be adjusted as before, I provide two nuts  $g$   $h$ , respectively, which are screwed onto the post  $d$ , the nut  $g$  setting against one face of the disk  $b^0$  of the wear-piece, while the other nut  $h$  sets against the opposite face of the same. By removing the cover-plate  $f$  access to the nuts  $h$   $g$  may be obtained, so that nut  $h$  may be turned for lowering the wear-piece and the nut  $g$  may be turned by inserting the fingers through openings  $o'$  formed in the disk of the wear-piece for the purpose of setting the same in its lower position.

In the last modification, (shown in Figs. 4 and 5,) the inner wall of the shell  $a$  is formed with a circumferential series of ribs  $a^3$ , which receive corresponding ribs  $b^x$  on the outer faces of the removable plates  $b'$ ,  $b^2$ ,  $b^3$ ,  $b^4$ , and  $b^5$ , which constitute the wear-piece. The plates  $b'$ ,  $b^2$ , &c., which constitute the wear-piece, are held in position by means of a cover-plate  $f$ , post  $d$ , and set-screw  $d^2$ , as in the main form of the invention. It will be seen that in this modification should one of the lower edges of the plates  $b'$ ,  $b^2$ , &c., be worn more than either of the other plates, the same may be adjusted outwardly by removing the cover-plate  $f$ .

As a heel for boots and shoes constructed according to my invention is formed substantially of hollow members of steel or like hard material its weight will not be materially, if any, greater than that of the ordinary leather heels now in use.

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 an outer shell provided with a screw-thread on its inner wall, a hollow wear-piece provided with a corresponding screw-thread on

its outer periphery for engaging with the screw-thread of the outer shell, a cover-plate, means for securing the cover-plate within the hollow wear-piece, and means for securing the wear-piece in its adjustable position, substantially as set forth.

2. A heel for boots and shoes, consisting of an outer shell adapted to be attached to the boot or shoe, a post projecting downwardly into the shell from the top of the same, a wear-piece adapted to be adjusted outwardly in said shell and provided with a central opening receiving said post, a cover-plate, a set-screw for securing the cover-plate to the post and within the wear-piece, and means for securing the wear-piece in adjusted position, substantially as set forth.

3. A heel for boots and shoes, consisting of an outer shell adapted to be attached to the boot or shoe, and provided with an interior screw-thread, a post projecting into the shell from the top thereof, a wear-piece provided with an exterior screw-thread adapted to take into the screw-thread of the shell, said wear-piece being constructed with a central opening adapted to receive said post and with a circular series of openings around the central opening, a cover-plate, a set-screw screwing into the post and securing the cover-plate within the wear-piece, and a locking-pin extending from the cover-plate and adapted to pass through one of the circular series of openings and to seat against the top of the outer shell, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

NIKOLAUS BECKER.

Witnesses:

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