

No. 759,665.

PATENTED MAY 10, 1904.

H. W. BUFF.
SELF EQUALIZING HEEL.
APPLICATION FILED FEB. 24, 1902.

MODEL.

Fig. 1.

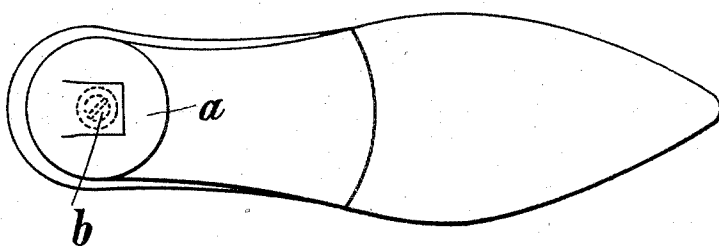


Fig. 2.

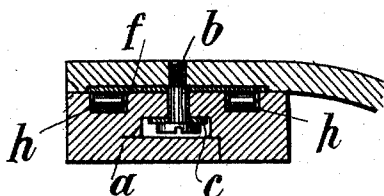
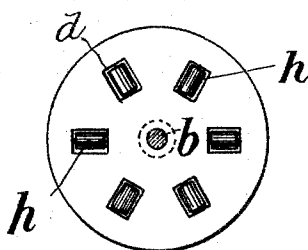


Fig. 3.



Witnesses.

Haroshi Mori.
Ludwig Felsen.

Inventor.

Huldreich Wilhelm Buff
by J. J. Singer.

Att'y.

UNITED STATES PATENT OFFICE.

HULDREICH WILHELM BUFF, OF HERISAU, SWITZERLAND.

SELF-EQUALIZING HEEL.

SPECIFICATION forming part of Letters Patent No. 759,665, dated May 10, 1904.

Application filed February 24, 1902. Serial No. 95,349. (Model.)

To all whom it may concern:

Be it known that I, HULDREICH WILHELM BUFF, a citizen of the Republic of Switzerland, residing at Herisau, Canton Appenzell, in the Republic of Switzerland, (whose post-office address is 898 Säge, Herisau aforesaid,) have invented a certain new and useful Self-Equalizing Heel, (for which I have made application for patents in Switzerland, filed January 25, 1902; in France, filed January 28, 1902; in Belgium, filed January 30, 1902; in Sweden, filed January 30, 1902; in Norway, filed January 30, 1902, and in Denmark, filed January 30, 1902,) of which the following is a specification.

My invention relates to improvements in and connected with coverings for the feet.

Hitherto in coverings for the feet made of leather, wood, or other material the heels have been rigidly attached thereto by nails, rivets, stitching, or adhesive material. Such heels are prone to wear unevenly, according to the gait or walk of the wearer, and hence it has heretofore been proposed to construct heels with rotatable treads which when worn in one place might be revolved a little to present a fresh wearing-surface either by the application of a suitable instrument or by hand. These, however, are not perfect in practice, since they are apt to be worn away so far on one spot before the necessity for adjustment is perceived that the defect is felt thereafter in an uneven tread.

The object of this invention is to automatically render the wear of said latter class of heels uniform, to which end I utilize the slight circular movement which accompanies the act of lifting the foot in walking to slightly rotate the tread of the heel for each step, thereby presenting the wearing-face in a different relation for the succeeding step. By this means I obtain a self-regulating or self-equalizing heel, which is turned step by step as the wearer walks and wears evenly, since any inequality is immediately compensated for by the more effective revolving action superin-

duced by that inequality itself. I attain this object, for example, in the manner as illustrated in the accompanying drawings, in which—

Figure 1 shows a bottom plan view of a boot or shoe. Fig. 2 shows a sectional view through the heel of the same; and Fig. 3, a top plan view of the heel removed, the view showing the pivot-screw in section.

Similar letters refer to similar parts throughout the several views.

a is the heel; *b*, a screw by which the heel is secured to the sole of the covering and which serves also as a pivot for the heel. In order to reduce friction, and thus cause the heel to turn easily, a washer *c* is placed between the heel and the screw-head. The upper portion of the heel *a* is provided with radial recesses *d*, in which are mounted bearing-rollers *e*, also radially disposed. A plate *f* is secured in the bottom of the sole and is adapted to engage with the rollers *e* and provide a smooth surface for said rollers to run on.

The heel described turns very easily around its pivot, the rollers reducing the friction to a minimum. During each step in walking the movement of the foot causes the heel to turn slightly and present the tread or wearing-surface in a fresh relation for the succeeding step precisely as the circular ink-platen of a job-press is moved for each impression to present the ink-surface in a new relation.

In lieu of arranging the whole of the heel to turn, as shown, the portion of heel next the actual wearing-surface may only be adapted to turn, as will be readily understood.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a rotary self-equalizing heel for shoes or the like, the combination of a circular heel member *a* having cut-away portion therein, a hole therethrough, and radially-disposed recesses in the upper surface thereof, a screw *b* having its head in said cut-away portion and projecting upward through said hole to engage with the sole of the shoe and form a pivot

for said heel, a flap covering said cut-away
portion of the heel to protect the head of said
screw, a metallic plate rigidly secured to the
bottom of the sole and surrounding said screw,
5 bearing-rollers $\frac{1}{2}$ inserted in said recesses, and
having their axes also on radial lines from
said pivot-pin and secured in said heel, said
rollers being adapted to engage with the me-

tallic plate on said sole whereby the heel is
free to turn without friction. 10

In witness whereof I have hereunto set my
hand in presence of two witnesses.

HULDREICH WILHELM BUFF.

Witnesses:

E. BRUGGE,

CARL MÜLLER.