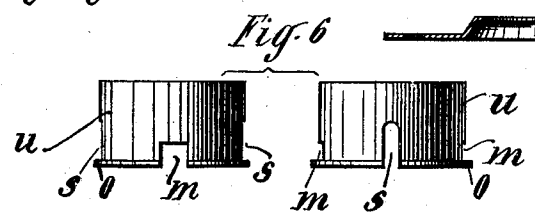
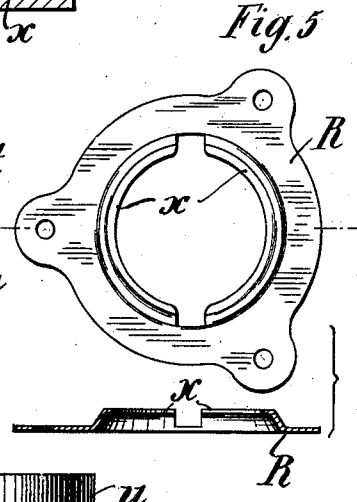
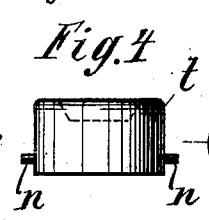
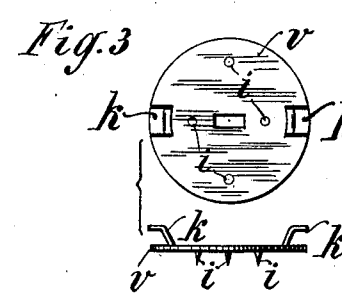
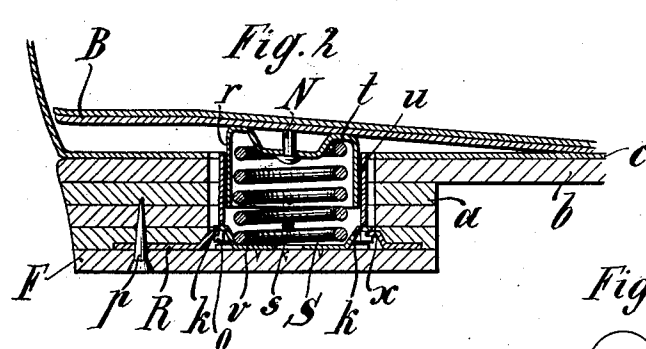
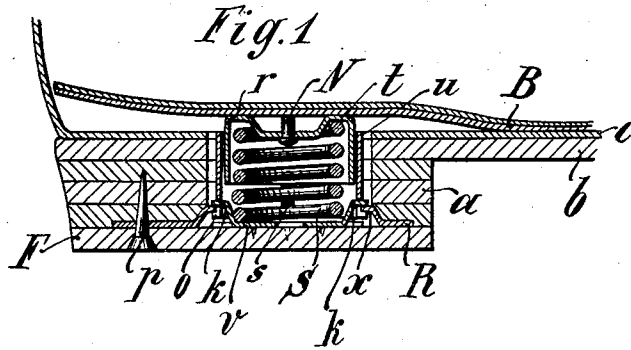


B. LÖDERER.  
HEEL.

(Application filed July 24, 1899.)

(No Model.)



Witnesses:  
*Berthold Päsche*  
*Maximilian*

Inventor:  
*Bela Löderer*  
*by Carl Reichel*  
 Attorney

# UNITED STATES PATENT OFFICE.

BÉLA LÖDERER, OF BUDAPEST, AUSTRIA-HUNGARY.

## HEEL.

SPECIFICATION forming part of Letters Patent No. 683,054, dated September 24, 1901.

Application filed July 24, 1899. Serial No. 725,015. (No model.)

*To all whom it may concern:*

Be it known that I, BÉLA LÖDERER, a citizen of the Empire of Austria-Hungary, and a resident of Budapest, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in and in Connection with Heels for Boots or Shoes, of which the following is a specification.

This invention relates to spring-action heels and is represented in the accompanying drawings.

Figures 1 and 2 show vertical longitudinal cuts through different modifications of such heels built on the same principle. Fig. 3 shows the bottom plate in plan and elevation. Fig. 4 is the capsule covering the spring. Fig. 5 shows the frame used for fastening the whole to the sole in plan and cross-section. Fig. 6 shows two side views of the ring embracing the spring.

The heel proper, *a*, consisting of several layers of leather, is perforated to receive the spring-action device. The perforation is closed at the bottom by a plate *F*, of leather or any other material. The heel with its upper part is fastened in the usual way to the sole *b* and the upper *c*. The inner sole is reinforced by a sheet-metal plate *B*. This latter has fastened to its lower side by aid of a rivet *N* a capsule *t*, Fig. 4, covering the spiral spring *S* and engaging with lateral pins *n* in vertical slots *s* of a ring *u*, Fig. 6, embracing the spring *S*, the lower end of which rests on a bottom plate *v*, Fig. 3. This plate has several points *i* pressed into the leather bottom plate *F* and preventing a turning movement of plate *v*. Two projections *k* are punched in the edge of plate *v*, and between these upturned projections and the flat brim of the ring *u* is inserted the upturned inner

edge *x* of the frame *R*, Fig. 5, this frame forming a crampit, retaining the ring *u* and the plate *v*, this latter being pressed downward by the spring *S*, while the ring *u* is drawn upward by the capsule *t*. The notches *m* serve to receive the projections *k* of plate *v*. The frame *R* and bottom plate *F* are secured to the heel by aid of screws *p*.

The modifications shown in Figs. 1 and 2 differ in so much as the capsule *t* in the first instance is equally high all around, while in the modification shown in Fig. 2 the fore part of the capsule is a little lower than the back part, thus causing the inner sole to slope gently forward. This arrangement is especially intended for use with flat feet.

Having thus fully described the nature of my invention, what I claim is—

In a spring-action heel, the combination with the loose inner sole and a metal plate protecting same of a hollow leather heel, a capsule inclosed in said heel, lateral pins fastened to the capsule, a ring having an upturned brim at its lower edge, said ring embracing said capsule and having vertical slots, a spiral spring being inclosed in said capsule, a circular plate forming the resting-place for the spring, upturned projections being punched in the edge of said plate, a frame having its inner edge upturned, said edge being inserted between the projections on the plate and the brim of the ring mentioned above, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

BÉLA LÖDERER.

Witnesses:

ENGELSMAN RUDOLF,  
LAVO BÄIER.