

(No Model.)

C. A. RIEDIG.
SHOE.

No. 508,978.

Patented Nov. 21, 1893.

Fig. 1.

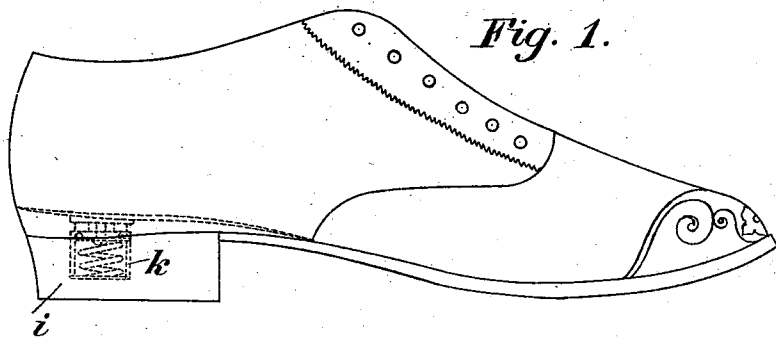


Fig. 2.

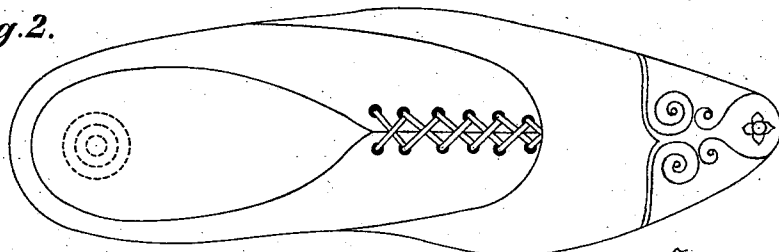


Fig. 3.

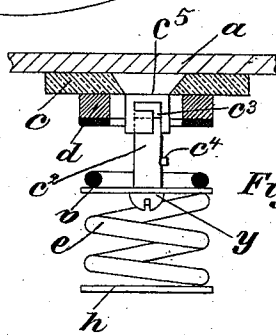
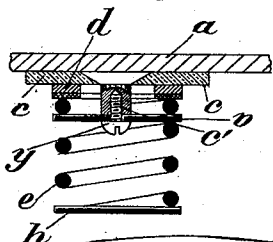
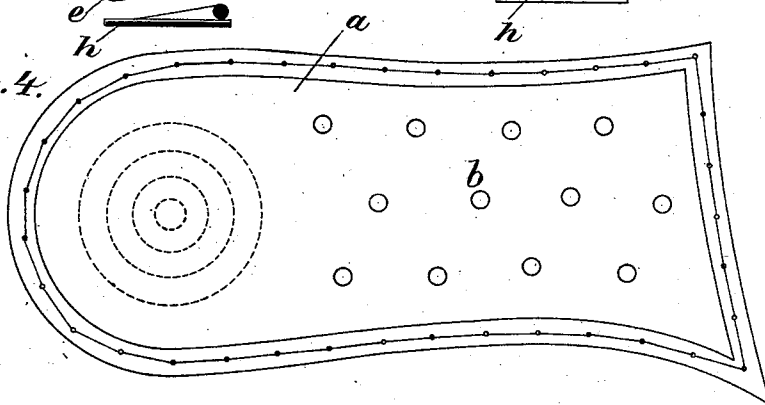


Fig. 5.

Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CARL AUGUST RIEDIG, OF CHEMNITZ, GERMANY.

SHOE.

SPECIFICATION forming part of Letters Patent No. 508,978, dated November 21, 1893.

Application filed June 14, 1892. Serial No. 436,658. (No model.)

To all whom it may concern:

Be it known that I, CARL AUGUST RIEDIG, merchant, of Königstrasse, Chemnitz, in the Kingdom of Saxony and German Empire, have invented a new and useful Improvement in All Kinds of Boots, Shoes, Slippers, &c., of Whatsoever Material, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in boots, shoes, and the like, and consists of the novel features hereinafter described and claimed.

The object of my invention is to provide a boot or shoe of the ordinary construction with a spring plate in the heel thereof to relieve the jar in walking.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters.

Figure 1 is a side elevation of a shoe showing my spring device in dotted lines. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged longitudinal sectional view of the heel plate and spring attached thereto, showing the lower part of the spring in elevation and the several parts in place ready to be put into a shoe. Fig. 4 is a plan view of the same. Fig. 5 is an enlarged section of the device showing a modified form of connection for the spring and showing the several parts disconnected.

a represents the heel plate made of metal, leather, or other suitable material, and provided with holes or perforations b . These holes are for admitting air, but they may be omitted if desired.

c designates a supporting plate secured to the heel plate a ; this plate c has a hole in its center through which passes a post c' having an enlarged head c^2 which fits in the upper countersunk portion of the central opening in the plate c as shown in Fig. 5, the plate a holding the said head in position. The post c' is interiorly screwthreaded to receive a headed screw y . An elongated plate v is placed through the spring e below its upper coil and the screw y passes through a central opening in the said plate and enters the lower end of the post c' . A circular disk or washer d of rubber or other compressible material is provided between the spring e and plate c to

give elasticity to the joint. When the screw y is screwed up it causes the upper coil of the spring e to be held firmly between the plate v and the compressible disk d , thus making a very secure and at the same time elastic joint. A disk f (shown in dotted lines in Figs. 3 and 5) may be interposed between the disk d and the upper coil of the spring e if found desirable in practice. The spiral spring e is provided with a base plate h which rests on the bottom of a hole or socket k in the heel i of the shoe. The plate a is made to conform to the shape of the shoe and of the foot, and may be made as shown in the drawings or may constitute a whole inner sole for the shoe. This plate need not be secured to the shoe at all, as it will be obvious that the weight of the wearer will keep the spring e in place within the socket k , and no displacement will be possible when being worn, although it may be removed at any time when the shoe is off the foot.

In Fig. 5 I have shown a modified form of connection for the spring which consists of a bayonet joint constructed as follows: In lieu of permanently securing the post c' to the supporting plate c , a sleeve c^5 is rigidly secured to the said plate, and has a bayonet slot c^3 in which engages a pin upon a post c^4 which latter sleeve is adapted to be placed in the sleeve, and held in position by the said pin in the bayonet slot c^3 as will be readily understood. The post c^4 is interiorly screwthreaded to receive the screw y which passes through the elongated plate v , thus securing the said plate v to the lower end of the post c^4 . The post c^4 with plate v attached is inserted in the upper coil of the spring e so that the said plate will extend through the spring below the upper coil; the post c^4 is then placed in the sleeve c^5 , the pin upon the post entering the bayonet slot c^3 ; and is pushed home and secured by a turn in the bayonet slot as will be readily understood.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a boot or shoe, the combination with the boot or shoe of a spring device provided in the heel thereof, consisting of a heel plate, a post secured to said heel plate and interiorly screw threaded at one end, a spiral spring ar-

5 ranged round the said post, a plate engaging the upper coil of the spring, and a screw passing through the latter plate into the post to bind the upper coil of the spring between the said plates, substantially as described.

10 2. In a boot or shoe, the combination with the boot or shoe of a spring device provided in the heel thereof, consisting of a heel plate, a post secured to said heel plate and interiorly screwthreaded at one end, a spiral spring ar-
15 ranged round the said post, a plate engaging the upper coil of the spring, a screw passing through the latter plate into the post to bind the upper coil of the spring between the said plates, and a compressible disk or washer
20 substantially as described.

3. In a boot or shoe, the combination with

the boot or shoe, of a spring device provided in the heel thereof, consisting of a heel plate, 20 having a spiral spring attached thereto by means of a post, a plate *v* secured to the lower end of the post and inserted beneath the upper coil of the spring; a sleeve *c*⁵ secured to the plate *c* and having a bayonet slot *c*³ to en- 25 gage a pin on the said post to hold the sleeve and post firmly together, and an elastic washer between the upper coil of the spring and the plate *c*, substantially as described.

In witness whereof I have hereunto set my 30 hand in presence of two witnesses.

CARL AUGUST RIEDIG.

Witnesses:

R. E. JAHN,
EUGEN A. FRAISSINET.