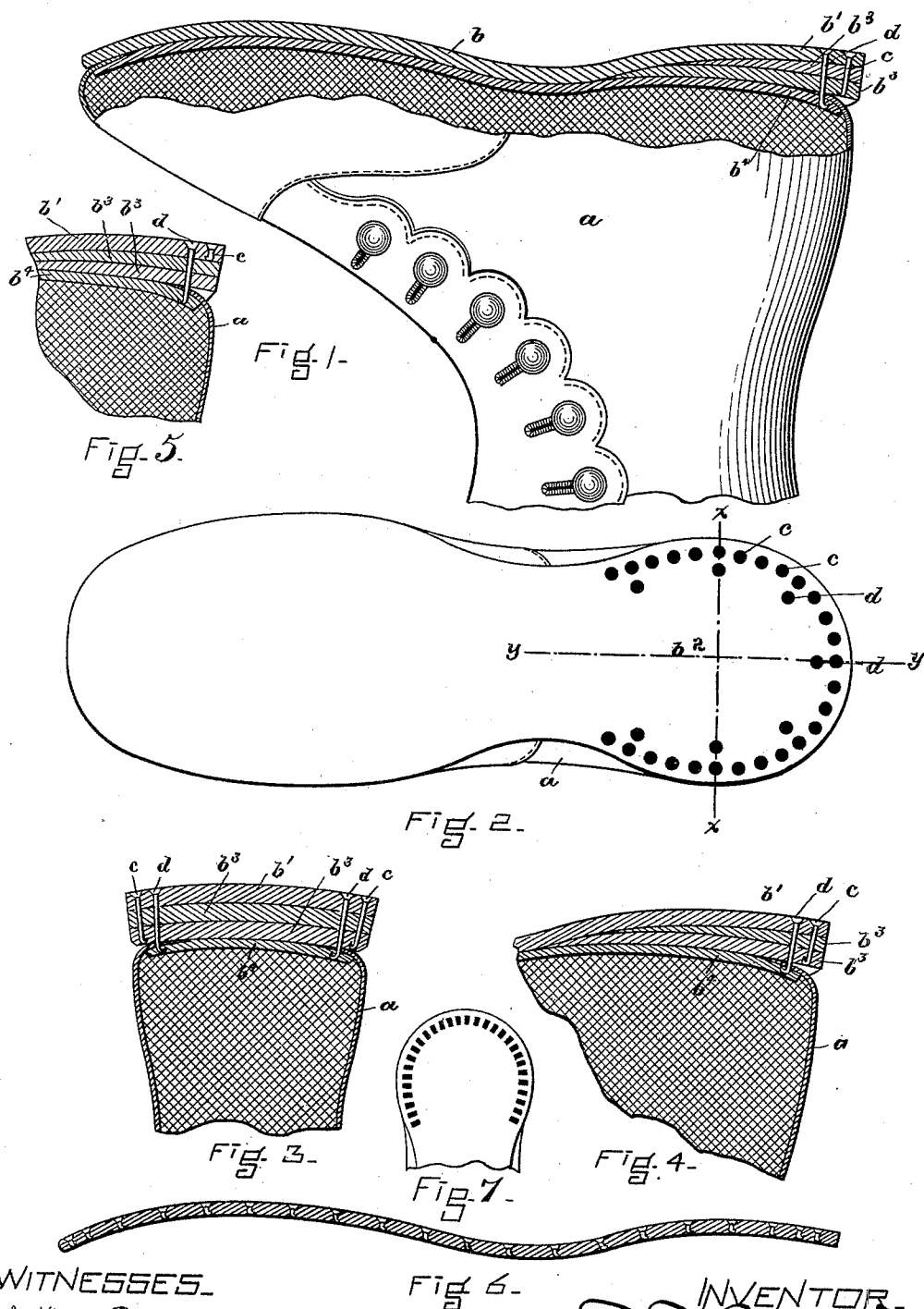


(No Model.)

F. F. RAYMOND, 2d.
SPRING HEEL BOOT OR SHOE.

No. 412,896.

Patented Oct. 15, 1889.



WITNESSES.

J. W. Dolan

E. P. Small.

Fig. 6.

INVENTOR.

F. F. Raymond

UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

SPRING-HEEL BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 412,896, dated October 15, 1889.

Application filed January 19, 1888. Serial No. 261,235. (No model.)

To all whom it may concern:

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Spring-Heels for Boots or Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification in explaining its nature, in which—

Figure 1 is a view in vertical section of a spring-heel boot having the features of my invention. Fig. 2 is a plan view of the sole thereof. Fig. 3 is a section upon the line xx of Fig. 2. Fig. 4 is a section upon the line yy of Fig. 2. Fig. 5 illustrates in section a slight modification. Figs. 6 and 7 represent the application of the invention to outsoles.

It is very desirable that a spring-heel should project beyond the sides and back of the shoe or boot upon which it is used quite a little in order to provide the sole with a large wearing-surface; and it is also desirable that the edge of the outsole forming a part of the heel should be studded with nails set closely to the edge thereof to form a metal wearing surface or section, and also for ornamentation. On account of the lateral extension of the spring-heel it is practically impossible to set the attaching-nails, or those nails or fastenings which secure the spring-heel to the upper and insole, as closely to the edge of the sole as desired; and to overcome this trouble I have provided the spring-heel with a line or row of metal nails or slugs which do not extend into the upper and insole, and consequently can be placed as closely to the edge of the heel as may be desired. These slugs or nails may be driven into the heel end of the outsole and the lifts forming the spring-heel before the sole is attached to the insole and upper of the boot or shoe of which it forms a part or afterward; and the spring-heel may be secured to the upper and insole by sewing or by independent metal fastenings placed inside the line of wearing or ornamental nails and having their heads exposed or concealed, as may be preferred.

Referring to the drawings, a represents the upper; b , the outsole; b' , the spring-heel.

The spring-heel comprises the rear section b^2 of the outsole, which is made to extend beyond the sides and back of the shoe, and one or more lifts b^3 , which are interposed between the sections b^2 and the insole b^4 . (See Fig. 1.) I prefer that the section b^2 of the outsole and the lifts b^3 be united or secured together by the metal slugs, nails, or fastenings c before the outsole is attached to the insole; but this line of slugs or nails may be driven after the attachment of the outsole to the insole, and, if desired, during the nailing of the heel-seat to the insole. It will be seen that this line of nails or slugs c is placed closely to the outer edge of the spring-heel, so closely, in fact, that if made of sufficient length to extend through the heel they would not enter the insole, and possibly would not enter the upper; consequently the nails c must not extend beyond the surface of the lift next the insole.

In Figs. 1, 3, and 4 I have shown the nails or fastenings as extending through the outsole and the two lifts. It is not necessary, however, that they should extend through the same, for they may be inserted into the outsole only, as represented in Fig. 5. The spring-heel I have represented as attached or secured to the upper and insole by the independent line of fastenings d , driven through the spring-heel into the upper and insole; but it may be united to the insole by sewing or in any other desired way. I would also say that the entire outsole may be provided with metal wearing or ornamental slugs or sections c , placed closely to the edge thereof for the purpose of ornamenting it and also for the purpose of increasing its wear or life, but not for the purpose of attaching it.

I am aware of Patent No. 32,122, dated April 23, 1861, granted to Crane, and No. 201,070, dated March 5, 1878, granted to Van Benschoten. The first of these patents describes a heel-blank bolted to the sole and having conical plugs of metal inserted in the heel-blank in lieu of attaching-nails. The second of these patents describes a way of providing a heel or sole with a continuous metal wearing-edge set in a shoulder formed in the edge of the heel or sole by means of a peculiarly and specially shaped device; but

I do not bolt my soles together, neither do I use conical plugs in lieu of attaching-nails, and I do not provide a means of providing a heel or sole edge with a continuous metal border; and I therefore consider that the said patents do not describe or contain the subject-matter of my invention.

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

The combination, in a boot or shoe, of the insole, the outsole, a spring-heel having the line of metal nails or slugs *c* placed closely

to the edge thereof and adapted to form a wearing-surface and an ornamental finish thereto, but not to attach it, and the line *d* of attaching-nails for securing the spring-heel to the insole, placed inside the line of wearing nails *c*, with considerable space between each nail, as set forth, substantially as described.

FREEBORN F. RAYMOND, 2d.

Witnesses:

J. M. DOLAN,
E. P. SMALL.