

[13.]

C.A. Read. Rubber Heel for Leather Boots.

No. 119,407.

Patented Sep. 26, 1871.

Fig. 1.

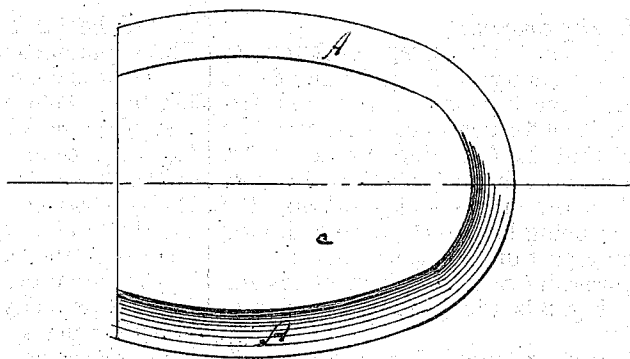
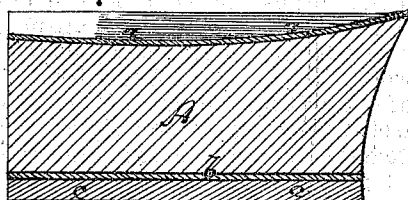


Fig. 2.



WITNESSES:

P. C. Dietrich.

Wm. H. C. Smith.

INVENTOR.

C. A. Read.

per. *Wm. H. C. Smith*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES A. READ, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN HEELS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 119,407, dated September 26, 1871.

To all whom it may concern:

Be it known that I, CHARLES A. READ, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Rubber Heel for Leather Boots; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a bottom view of my improved heel. Fig. 2 is a longitudinal section of the same.

Similar letters of reference indicate corresponding parts.

My invention consists in an India-rubber heel with a canvas covering vulcanized to the top and bottom of the heel. The nature of the rubber is such that, without the canvas being vulcanized to the top and bottom, the heel would be of no use and of no value for the purpose for which I propose to use it. The rubber is naturally brittle, and would break or tear by the rough usage received while being worn on a boot or shoe. The object, therefore, of vulcanizing the canvas to the bottom of the heel is to make it strong and tough, to knit it together, and to make it more solid, firm, and tenacious—like leather. Another object is to produce a firm and durable surface, to which can be cemented a "lift" (or layer) of leather, which, when worn out, can be removed without injury to the heel and allow a new lift (or layer) of leather to be cemented in place of it with but little trouble or expense. This could not be done as effectually or with as little trouble and expense without vulcanizing the canvas to the bottom of the heel. The object of vulcanizing the canvas to the top of the heel is to produce a firm surface, in order to cement it to the bottom of the boot or shoe; also, to enable the heel to be removed without being injured from a worn-out boot or shoe, making one heel outwear several boots or shoes.

Such heel A is made of rubber and vulcanized. The upper surface receives a covering of canvas, *a*, which is coated with rubber cement for securing to the sole of the boot or shoe. To the lower end of the heel is also secured, before vulcanization, a piece of canvas, *b*, to which, by means of rubber cement, a leather bottom, *c*, is secured. This leather bottom is preferably made of a single thickness, and serves to remove the actual wear from the rubber.

The advantage of the rubber-spring heel to the human body is to give relief to the frame and nervous system, holding the same direct communication and having the same relation thereto that the springs under cars, carriages, or wagons do to the vehicles themselves. It takes up the jar which the body receives when walking upon the hard pavement or floor. Every one has observed how easily the nervous system of a diseased or wounded person is shocked by unevenness of step or in lifting the legs when going up an incline. It is equally true, though in less degree, on a level. A great difference in the effect upon the frame is observable upon a concrete sidewalk. The elasticity of the walk causes you to feel relieved, because it is elastic and unlike the ordinary flag or brick walk. It is simply storing up the power of gravity used in putting down the foot and utilizing it to assist in taking it up.

Having thus described my invention, what I claim as new, and desire to protect by Letters Patent, is—

The rubber A, having the canvas *a b* respectively vulcanized to the upper and lower parts thereof, and the leather layer *c* cemented to the bottom, all arranged as and for the purpose specified.

CHARLES A. READ.

Witnesses:

SAM. B. SUMNER,
FRANCIS IVES.

(13)