

(No Model.)

F. RICHARDSON.
HEEL PLATE FOR RUBBER SHOES.

No. 296,455.

Patented Apr. 8, 1884.

Fig. 1.

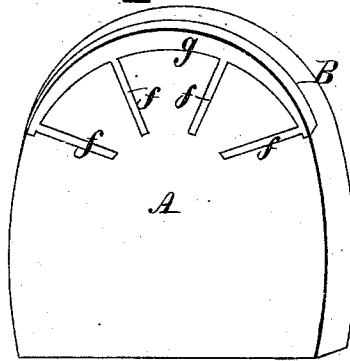


Fig. 2.

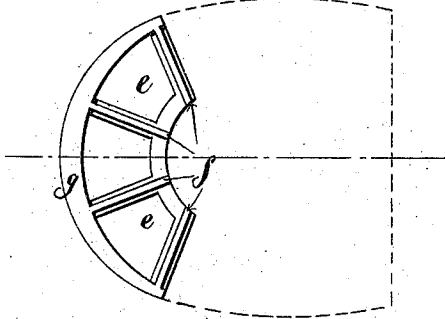


Fig. 3.

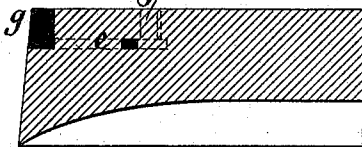
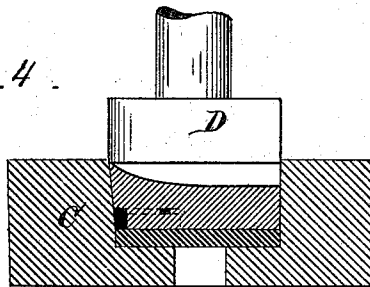


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON, OF PROVIDENCE, RHODE ISLAND.

HEEL-PLATE FOR RUBBER SHOES.

SPECIFICATION forming part of Letters Patent No. 296,455, dated April 8, 1884.

Application filed May 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK RICHARDSON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Wearing-Plates for Rubber Heels; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in the construction of that class of wearing-plates which are designed to be embedded in the heel, and which are provided with wearing-surfaces extending to the tread of the heel.

The object of my invention is to render the action of the wearing-plate more efficient.

My invention consists in the provision of a wearing-plate provided on its under side with elongated wearing-surfaces extending downward to the tread of the shoe, as hereinafter described and claimed.

Figure 1 is a perspective view of my improved heel, showing the metallic wearing-surface. Fig. 2 is a view of one form of metallic frame provided with ribs and a flange, forming the tread of the heel. Fig. 3 is a sectional view of the heel, showing the metal frame embedded in the rubber of the heel. Fig. 4 is a sectional view of the mold in which the heel is pressed, showing the wearing-plate embedded in the rubber.

In the drawings, A represents the rubber heel; B, the metal plate as a whole; C, the mold; D, the plunger.

The metal plate B consists of a skeleton plate, *e*, formed of bars with openings between them, which plate is embedded in the green rubber, and is provided with the rear flange, *g*, forming the rear edge of the heel and protecting the same, and the ribs *f f*, which, extending to the tread of the heel, protect the rubber against wear. The heel is made by placing the metal plate B into the mold C, forcing the green rubber around the plate, and forming the heel. The heel is now vulcanized, either before or after it has been secured to the boot, and the whole becomes one homogeneous mass, the metal protecting the rubber, and the rubber firmly holding the metal in place.

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

1. As an improved article of manufacture, the skeleton plate B, formed with the rim *g*, and the bars *e*, provided with the ribs *f*, substantially as and for the purposes set forth.

2. The combination, with a rubber boot or shoe, of the skeleton plate B, embedded in the heel thereof, and formed with the rim *g*, and the bars *e*, provided with the ribs *f*, substantially as and for the purposes set forth.

FREDERICK RICHARDSON.

Witnesses:

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