

(No Model.)

F. RICHARDSON.  
Boot and Shoe Heel.

No. 236,087.

Patented Dec. 28, 1880.

Fig. 1.

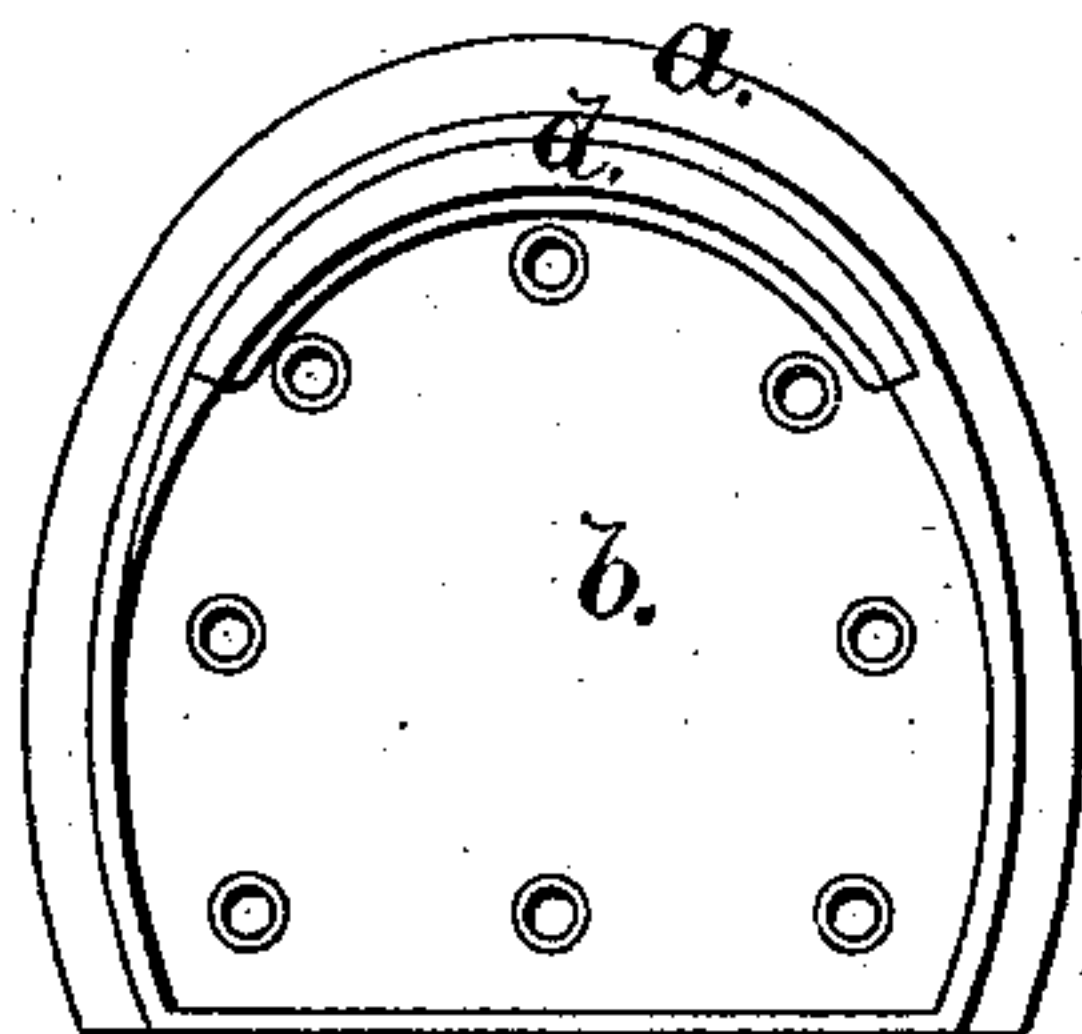


Fig. 2.

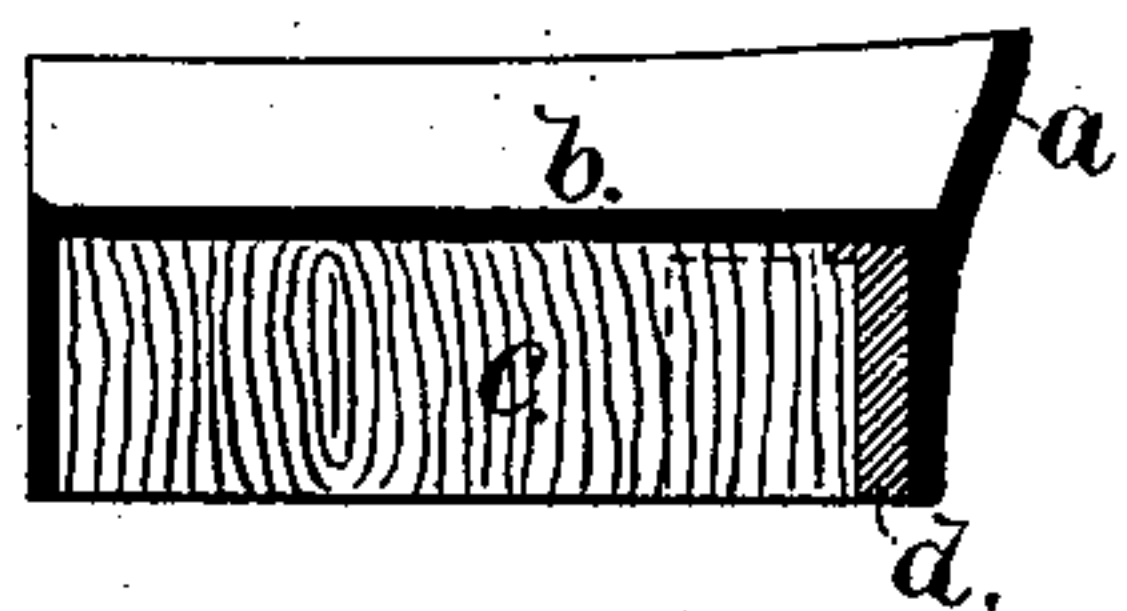


Fig. 3.



Fig. 4.

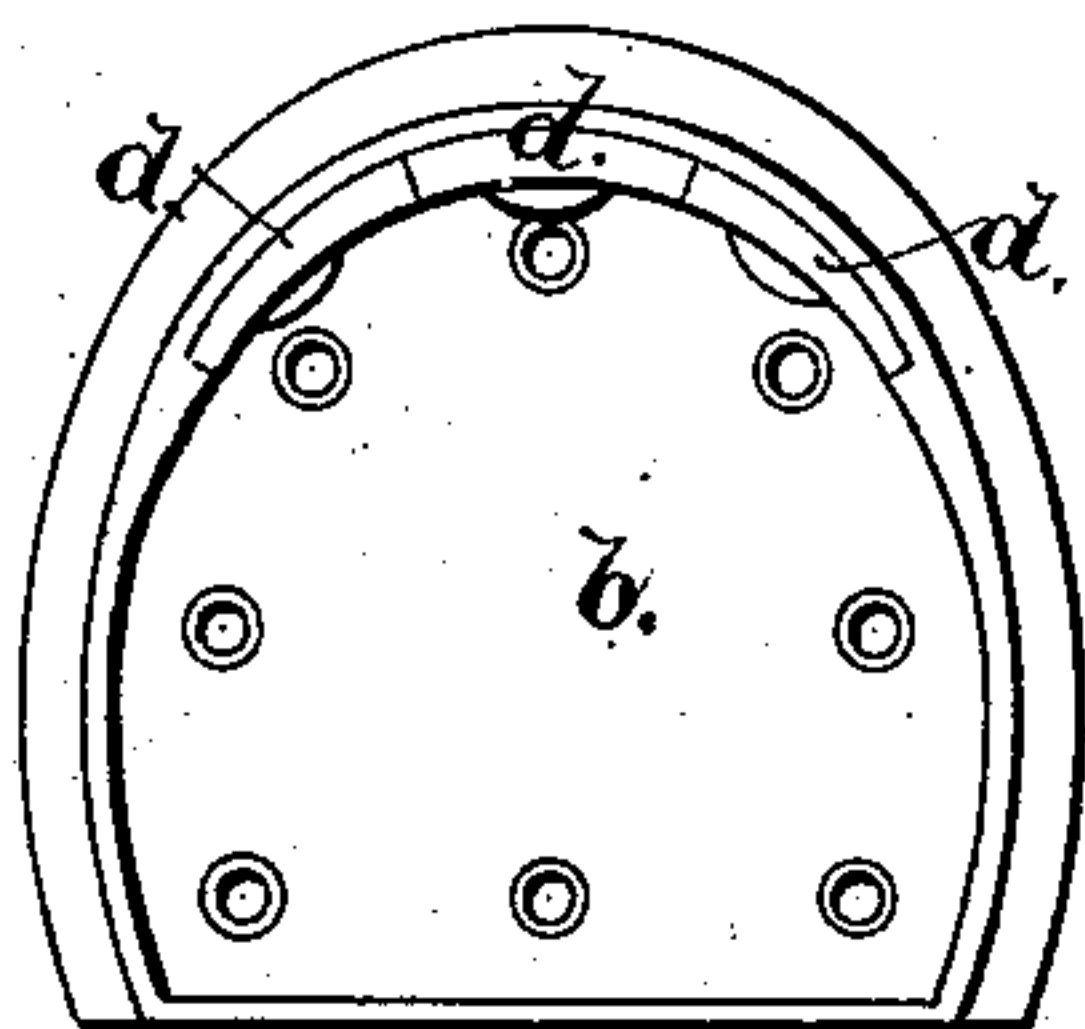


Fig. 5.

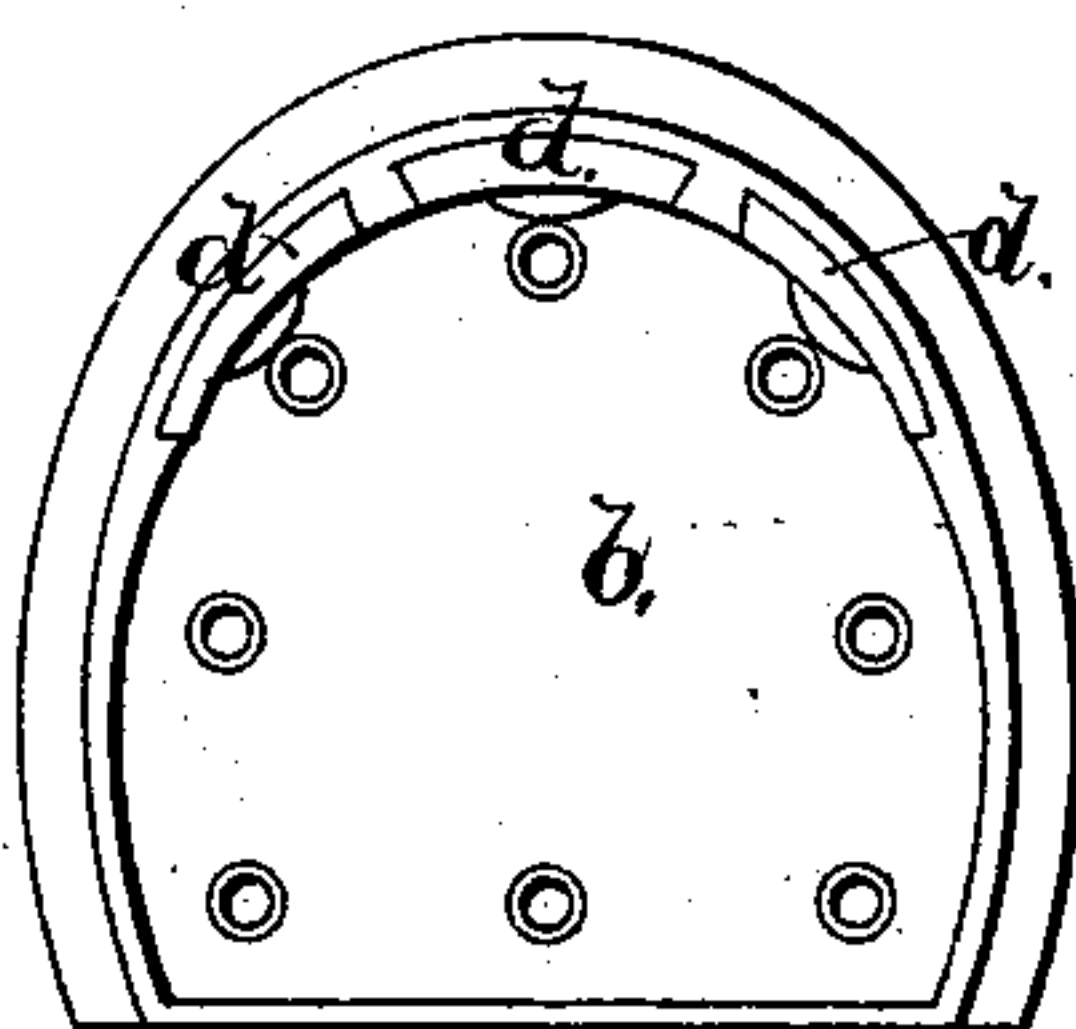


Fig. 6.

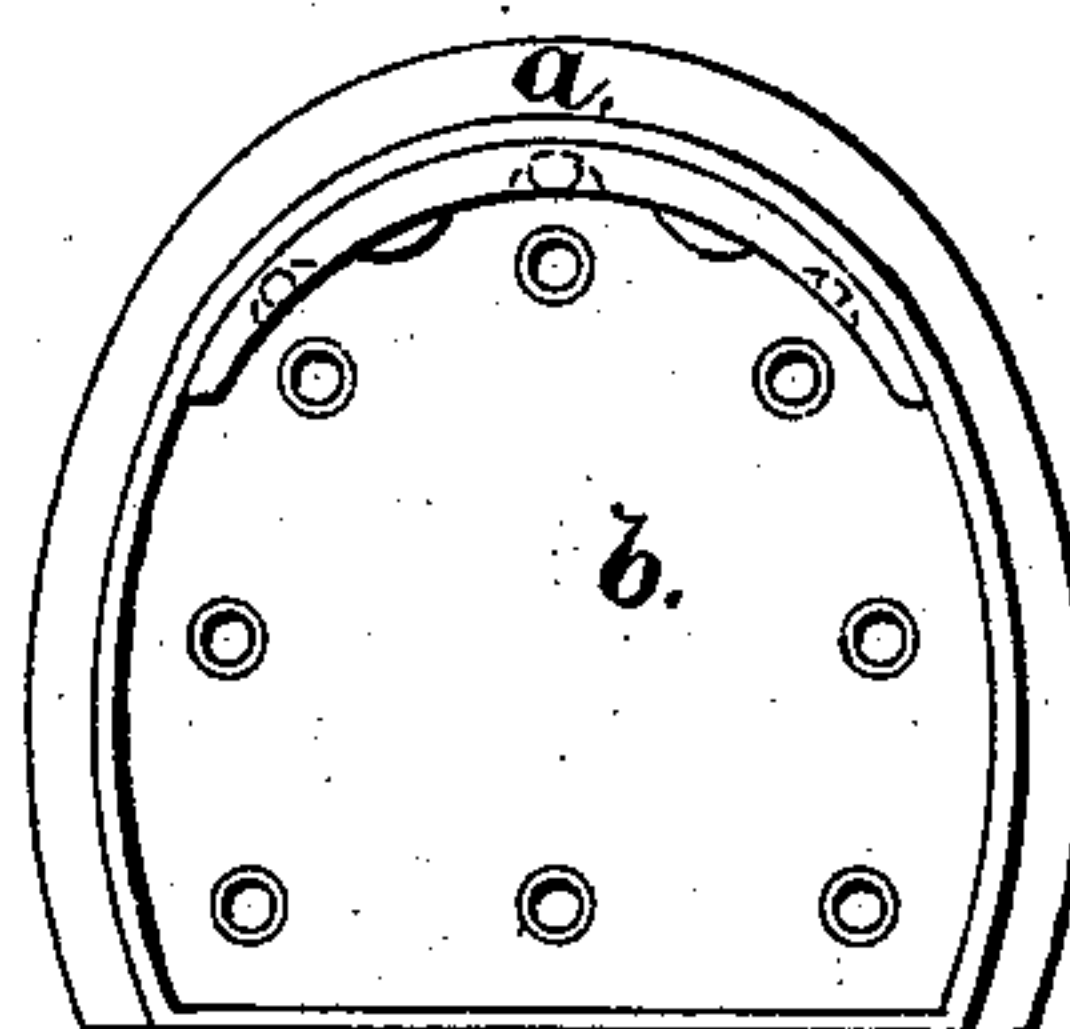
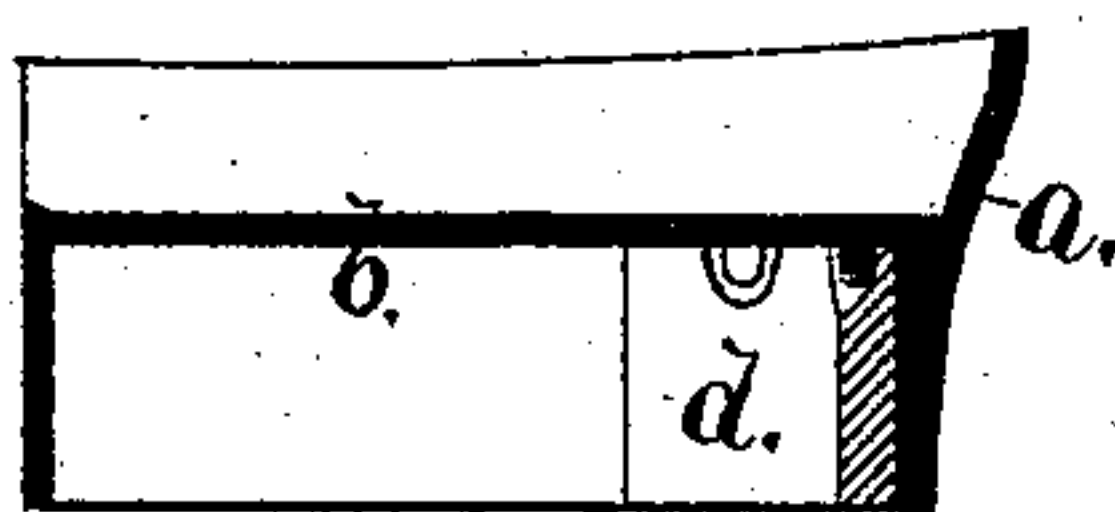


Fig. 7.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON, OF PROVIDENCE, RHODE ISLAND.

## BOOT AND SHOE HEEL.

SPECIFICATION forming part of Letters Patent No. 236,087, dated December 28, 1880.

Application filed May 12, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK RICHARDSON, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Boot-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.

10 This invention has reference to an improvement in metallic boot and shoe heels; and it consists in providing such metallic heels with hard-metal wearing-surfaces, as will be more fully set forth hereinafter.

15 Figure 1 is a view of my improved metallic heel-shell, showing an extra piece of metal inserted in the rear portion of the heel. Fig. 2 is a sectional view, showing the heel and the inserted piece in section. Fig. 3 is a perspective view of the inserted piece. Figs. 4, 5, and 20 6 represent different ways for securing metallic wearing-surface in metallic heels so as to be retained by the central wooden core. Fig. 7 is a sectional view of Fig. 6.

25 In boot and shoe heels in which a metallic shell is used the metal must be tough, and therefore soft enough to prevent the breaking of the shell when nailed to the boot or shoe. Such metal is therefore liable to wear away 30 rapidly when in use, and particularly at or near the rear end of the heel. To obviate this difficulty I insert within the metallic shell, near the edge, and particularly near the rear end of the heel, hard-metal pieces, which can be 35 easily inserted and secured by the central wooden core, thus furnishing a durable surface, by which the softer edges of the heel are protected and the durability of the heel materially increased. This extra wearing-surface 40 may vary in form, and also in the manner in which it is secured, the main object being to secure such extra metallic surface within the shell by the wooden central core.

45 In the drawings, *a* represents the metal shell, forming the heel or the outer portion of the same.

*b* is the partition-plate dividing the upper portion, in which the sole rests, from the lower portion, forming the heel proper. The plate *b* is provided with holes, through which the 50 nails pass by which the heel is secured to the boot or shoe.

*c* is the wooden core forming the wearing-surface of the heel. It is secured within the shell by nails passing through the core *c* and 55 the holes in the plate *b* into the boot or shoe.

*d d* represent metal pieces, which are constructed so that they can be inserted into the heel-shell, and are provided with lips or projections of any desired form, so that the core 60 *c*, when secured, will retain the said inserted pieces *d d*. These pieces may be made of any hard metal that is found the best or cheapest for this use, as, for instance, cast-steel or gun-metal; or they may be cast of selected iron, 65 with the wearing-edge on a chill, so as to secure a durable surface, and they may extend around the edge of the entire heel, so as to form a rim between the wooden core *c* and the heel-shell; or they may be made to protect 70 only a part of the heel-shell.

I do not wish to confine myself to any particular form or location of these hard-metal wearing-plates, as they may be varied, as hereinbefore described. 75

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

1. The combination, with the metallic boot or shoe heel shell and its wooden core, of a hard- 80 metal wearing-piece inserted between the core and shell and held in place by such core, substantially as described.

2. The hard-metal piece *d*, having projections or lips, in combination with a wooden 85 core, *c*, and a metal heel-shell, substantially as described.

FREDERICK RICHARDSON.

Witnesses:

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