

(No Model.)

F. RICHARDSON.

RUBBER SHOE.

No. 250,971.

Patented Dec. 13, 1881.

Fig. 1.

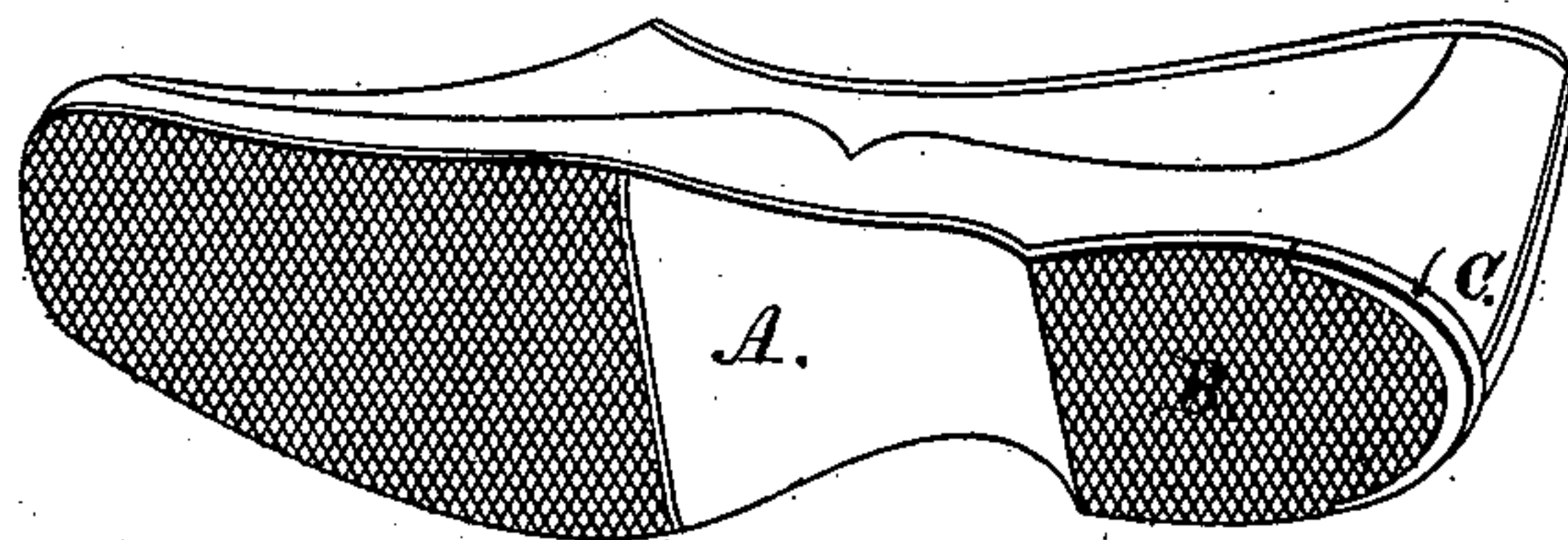


Fig. 2 .

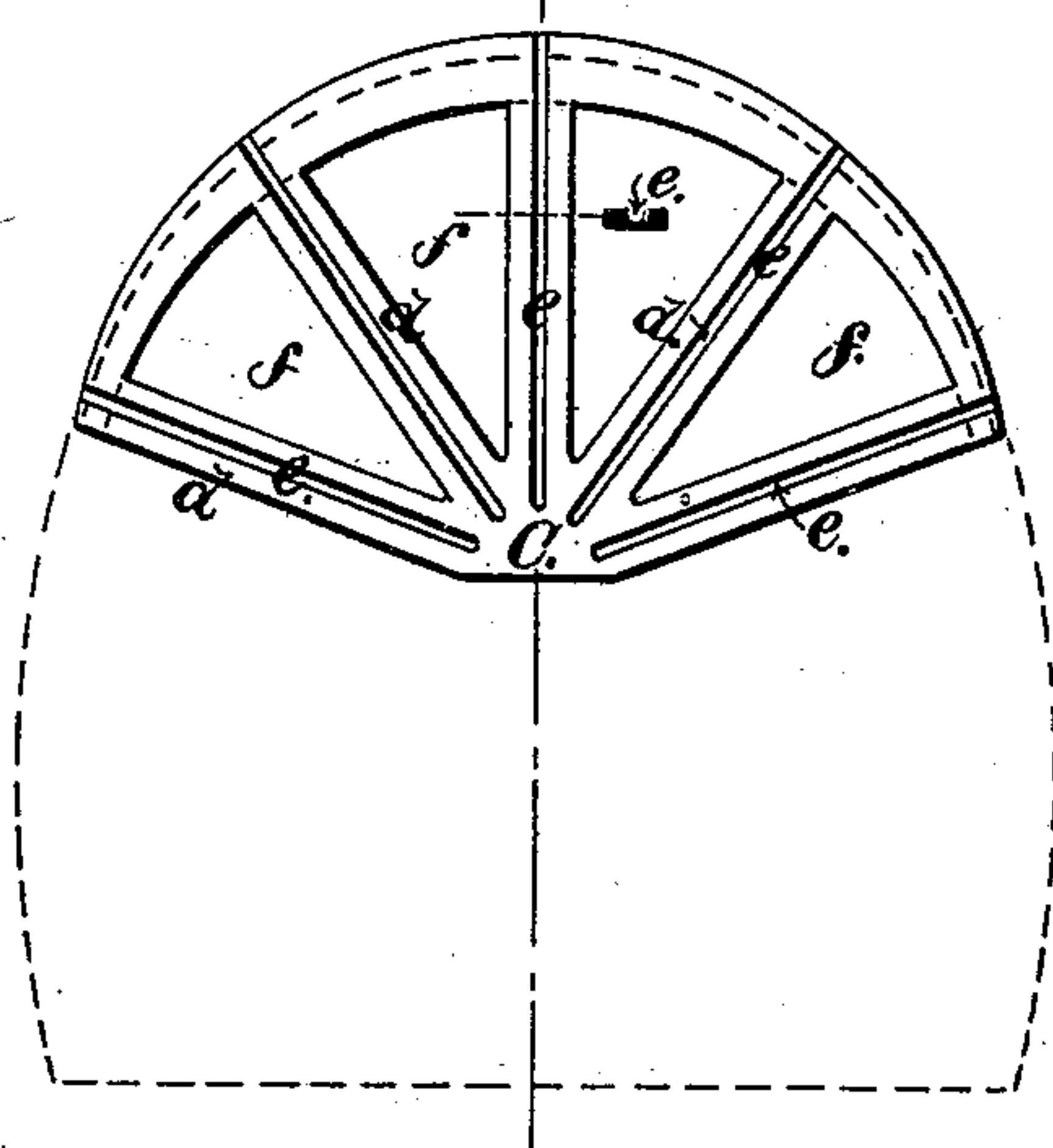


Fig. 3.

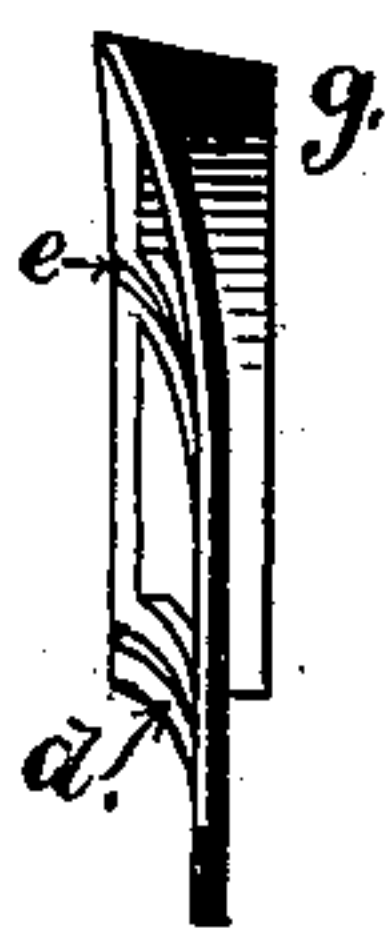


Fig. 4 .

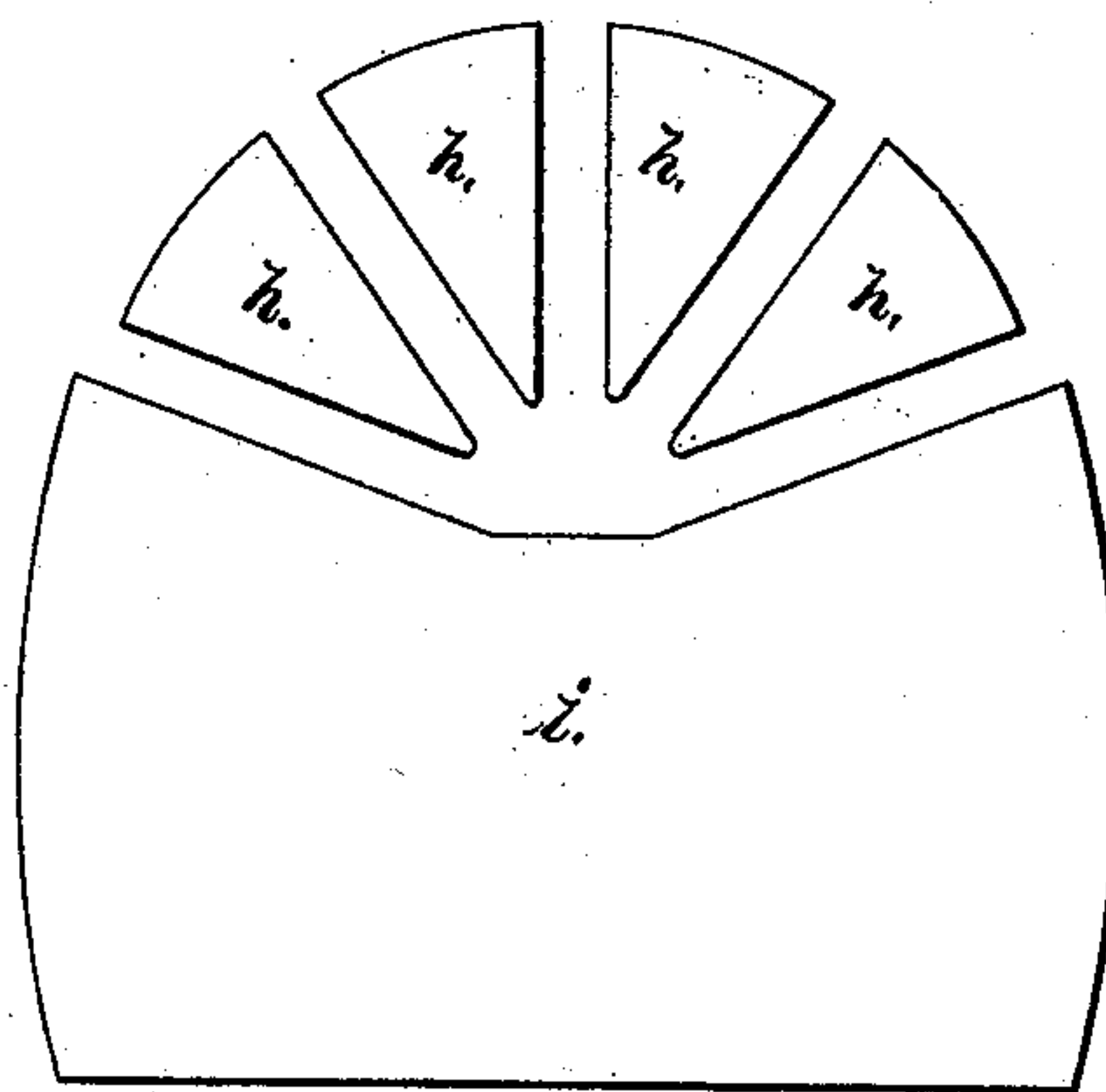
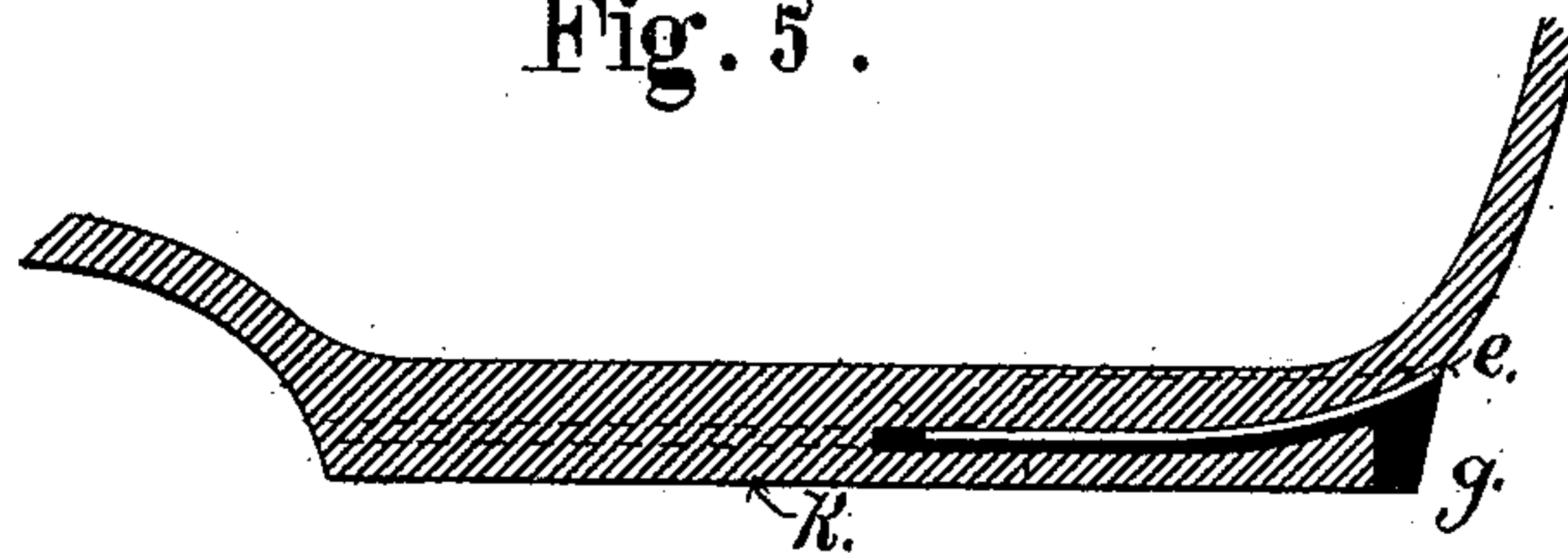


Fig. 5 .



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
THE REVERSIBLE HEEL COMPANY, OF SAME PLACE.

RUBBER SHOE.

SPECIFICATION forming part of Letters Patent No. 250,971, dated December 13, 1881.

Application filed May 9, 1881. (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 Rubber Shoes; 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.

This invention has reference to an improvement in rubber shoes, and is particularly designed for rubber overshoes.

Rubber overshoes designed to be worn over the ordinary leather shoes have soles of nearly uniform thickness, and the heel is but little thicker than the sole. In use the rear portion of the heel is subjected to the most wear, and when worn makes the whole shoe useless. To prevent this rapid wear and to strengthen the shoes is the object of this invention.

Figure 1 is a perspective view of a rubber overshoe. Fig. 2 is a plan view of my improved heel-guard. Fig. 3 is a sectional view of the same. Fig. 4 represents sheets of rubber cemented into the openings in the heel-guards; and Fig. 5 is a sectional view of the heel portion of a rubber shoe, showing the heel-guard secured therein.

In the drawings, A represents the shoe, B the heel, and C the heel-guard, which consists of arms *d d*, radiating from the center to the edge of the heel, where they unite with a curved rim, leaving triangular open spaces *f f* between the arms. The arms *d d* are curved so as to conform to the shape of the rubber to which they are to be cemented, and in their upper surface the grooves *e e* are made to form vents for the escape of the air. A strong projecting rim, *g*, extends from the curved rim downward to form the rear portion of the heel and protect the heel against wear.

h h are triangular pieces of rubber or rubber-covered cloth cut to fit the spaces *f f*, and *i* is a piece of rubber or rubber-covered cloth placed on the heel in front of the guard.

When the rubber overshoe is made and the sole has been placed on and cemented to the upper the heel-guard C is pressed into the soft rubber. This should be done so as to carefully expel all the air, and the guard is therefore provided with the grooves *e e*, so that the air can readily escape. After the guard has been secured the pieces *h h* are cemented into the spaces *f f* and the piece *i* is secured to the heel, and the shoe is ready for vulcanization, during which process the soft-rubber surfaces flow together and become one mass, which, as soon as the sulphur melts, commences to harden.

The metal guard, by its peculiar construction, becomes firmly embedded in the rubber mass and forms one whole with the same. The protecting-rim *g* guards and protects the weakest part of the shoe, and thus more than doubles the wearing quality of the shoe.

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

1. In a metal heel-guard constructed to be secured by cementation in the heel, as described, the grooves *e e*, constructed for the escape of the air, as described.

2. The combination, with the sole of a rubber overshoe, of the heel-guard C, consisting of the arms *d* and projecting rim *g*, the pieces *h h* and *i*, and the piece *k*, all secured together by cementation, as described.

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