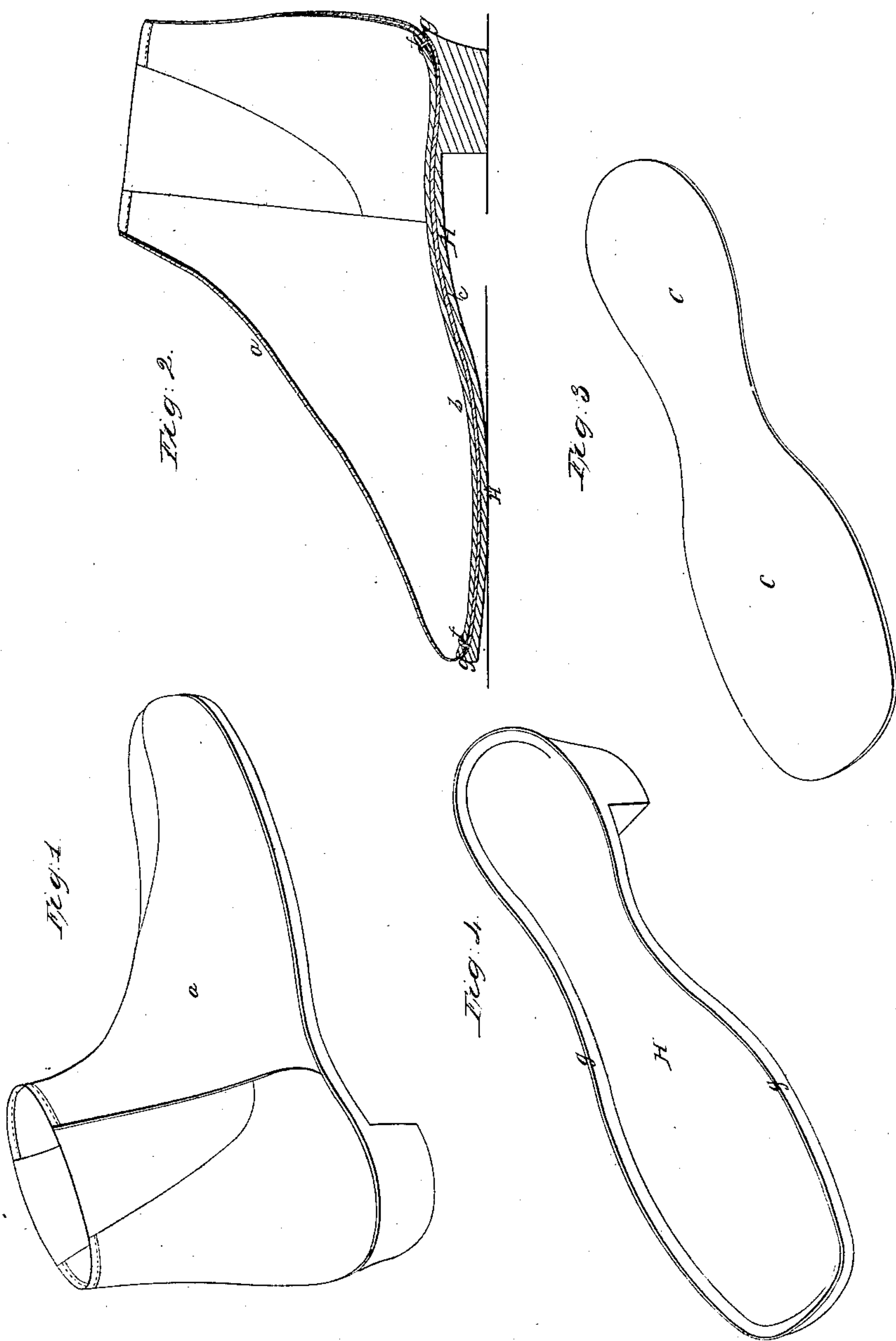


E. BROWN.
WATERPROOF SOLE FOR BOOTS AND SHOES.
No. 34,086. Patented Jan. 7. 1862.



UNITED STATES PATENT OFFICE.

EDWARD BROWN, OF SOUTH READING, ASSIGNOR TO JOHN W. PIPER, OF LYNN; SAID PIPER ASSIGNOR TO B. D. GODFREY, OF MILFORD, MASSACHUSETTS.

IMPROVEMENT IN BOOTS OR SHOES.

Specification forming part of Letters Patent No. 34,086, dated January 7, 1862.

To all whom it may concern:

Be it known that I, EDWARD BROWN, of South Reading, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Water-Proof Soles for Boots or Shoes; and I do hereby declare that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a perspective view of a shoe with my improved sole attached. Fig. 2 is a section through the same. Fig. 3 is a view of the inner lift of the outer sole; and Fig. 4, a view of the outer lift of the same.

To enable others to understand my invention, I will proceed to describe the manner in which I have carried it out.

For the purpose of making the soles of boots or shoes water-proof, rubber and other water-proof soles have been nailed to the upper-leather, the nails being riveted upon an iron-plated last; but such soles were clumsy in appearance and finish and were found to be unsightly and not calculated to meet the public demand. The rubber sole has also been applied directly to the leather and secured thereto by cement; but as the india-rubber adhered but imperfectly to the leather the joint was not tight and the two surfaces soon became loosened from each other. To remedy these difficulties a sole of india-rubber has been nailed to the upper-leather and inner sole, and to the sole thus secured a second sole of india-rubber has been secured by means of cement, the adhesion between the two soles of india-rubber being sufficient to hold them permanently and securely together; but the edges of such a sole presented an unsightly appearance, as it was not found prac-

ticable to make the joint between its two portions perfectly uniform or to trim their edges with sufficient neatness after they were applied to the shoe. My present invention has for its object to remedy this latter difficulty; and it consists in so forming the outer sole that its edge shall project up outside the middle sole and conceal it, as will now be more fully explained.

In the said drawings, *a* represents the "upper," made of leather, cloth, or any other suitable material, which is drawn down over the inner sole *b* and temporarily secured. A thin sheet *c*, of india-rubber, is then applied, and the three (the inner sole, the upper, and the thin sheet of rubber) are secured together by riveting, nailing, pegging, seaming, or otherwise. In the shoe represented in the accompanying drawings small nails *f* are employed for the purpose, which are riveted by being driven against an iron-plated last. To the surface of the india-rubber sheet thus nailed on I secure by means of india-rubber cement an outer sole *H* of vulcanized india-rubber, which is held in position by pressure a sufficient length of time to cause it to adhere. The edges of this sole *H* are turned up all around at *g*, so as entirely to conceal the edge of the middle sole, to which it is cemented.

A sole thus made and applied, while it is entirely water-proof and is secured firmly to the shoe, presents but a single smooth edge, and may be applied to shoes of the highest style of finish. Gutta-percha may be employed in lieu of india-rubber for the middle and outer soles.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The double india-rubber sole formed as described, the edge of the outer sole being turned up to conceal the edge of the middle sole, for the purpose set forth.

Boston, September 2, 1861.

EDWARD BROWN.

Witnesses:

EDMUND MASSON,
DANIEL DOLAND.