

(No Model.)

E. F. BICKFORD.
RUBBER BOOT OR SHOE.

No. 401,246.

Patented Apr. 9, 1889.

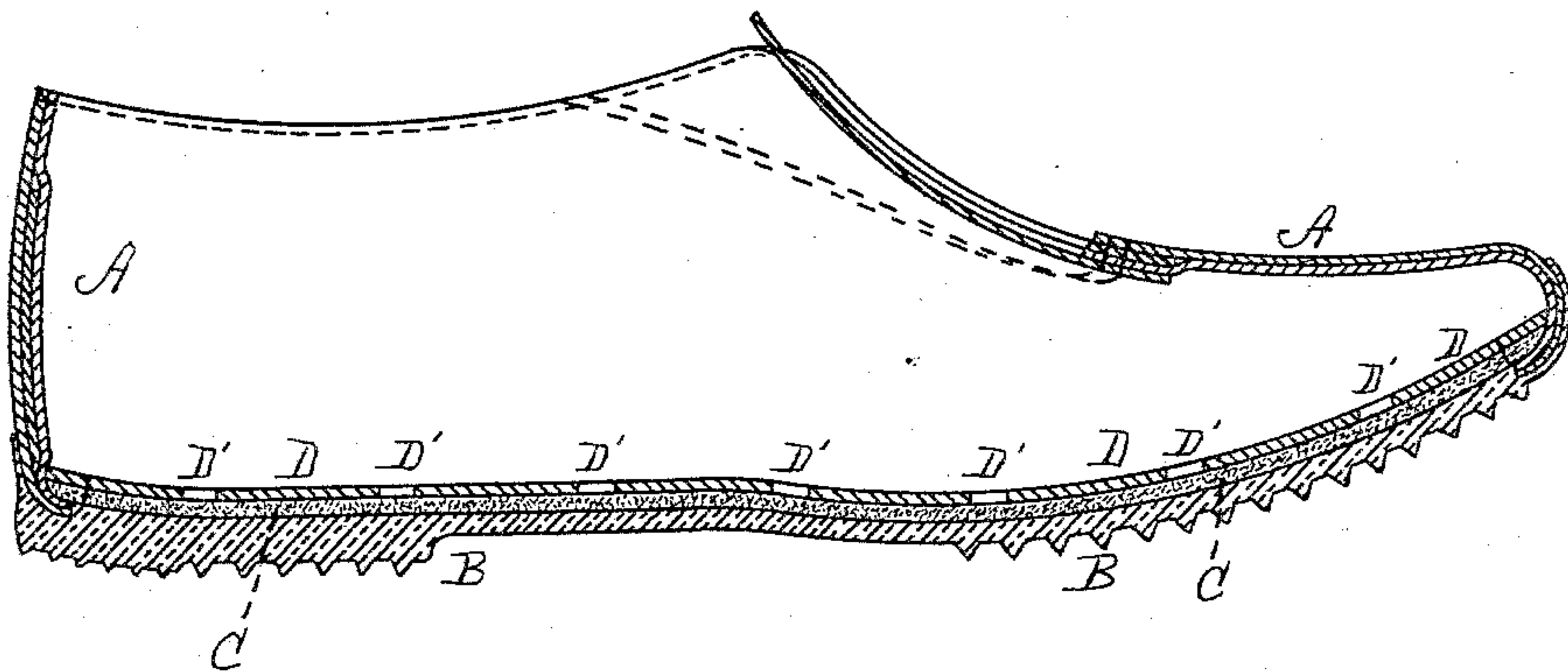


FIG. 1.

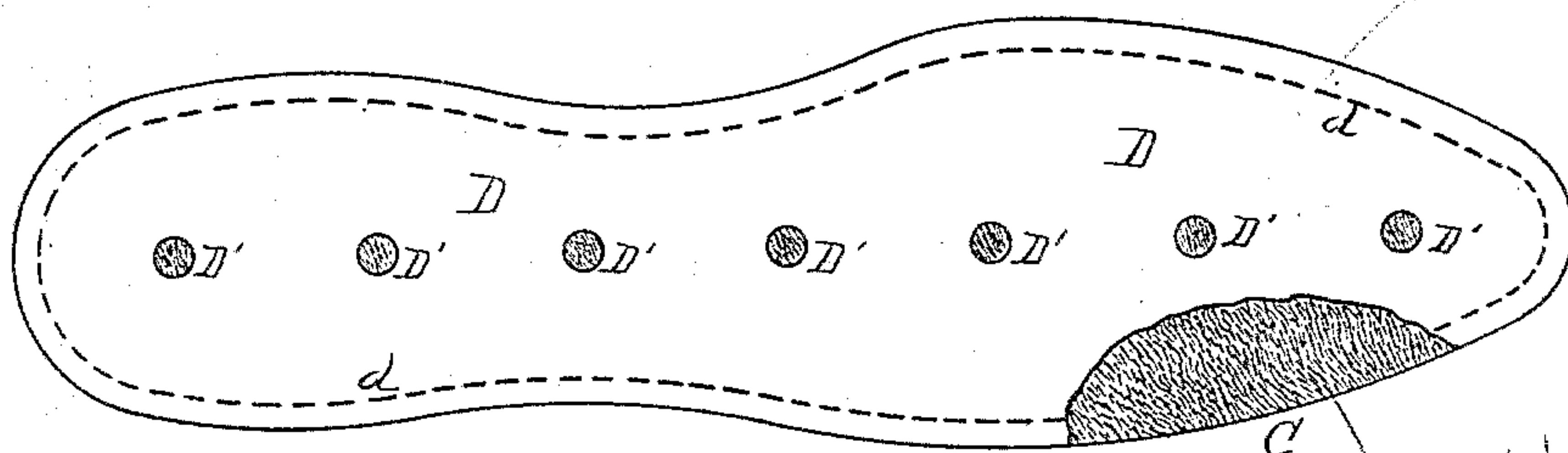


FIG. 2.

WITNESSES.

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By his Atty

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UNITED STATES PATENT OFFICE.

ERSKINE F. BICKFORD, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO THE
BOSTON RUBBER SHOE COMPANY, OF SAME PLACE.

RUBBER BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 401,246, dated April 9, 1889.

Application filed January 14, 1889. Serial No. 296,282. (No model.)

To all whom it may concern:

Be it known that I, ERSKINE F. BICKFORD, of Malden, in the county of Middlesex and State of Massachusetts, have invented a new and
5 useful Improvement in Rubber Boots or Shoes, of which the following is a specification.

This invention relates boots and shoes made principally of rubber, or whose soles
10 are of rubber; and it has for its object to prevent the rubber soles from "drawing" or sweating the foot, or causing it to become unduly tender or to swell.

In the accompanying drawings, in which
15 similar letters of reference indicate like parts, Figure 1 is a longitudinal vertical section of a rubber shoe embodying my invention—in this instance a tennis-shoe. Fig. 2 is a plan
20 view of the sole, a portion of the inner sole being represented as broken out.

A represents the upper, in the construction of which there is nothing new, and B is the main or outer sole, constructed of rubber, as
25 usual.

C is a sole next above the outer or main sole, B, and between it and the inner sole. This intermediate sole, C, is made of felt or
30 similar porous substance, is, say, three-sixteenths of an inch in thickness, and is cemented to the outer rubber sole, B.

D is an inner sole made of leather, say, one-eighth of an inch in thickness, and sewed at
35 to the felt intermediate sole, C. This inner sole is provided with a row of perforations, D', extending preferably centrally longitudinally along the sole, as shown. The perspiration from the foot, as well as the air, has an opportunity by means of these holes D' to
40 work down to the felt sole, where it is absorbed, and may evaporate through the same holes, and the foot is prevented from under-

going the unpleasant experience usually termed "drawing."

I am aware that the employment of felt in the manufacture of rubber boots and shoes is
45 not new, it having long been used as a lining both at the sole and next other portions of a rubber boot or shoe. In these instances the felt is necessarily next the foot, with the result that when the felt gets damp it becomes foul,
50 presses down, rolls up, and flakes off. In my improvement the felt is not a lining, but a sole, and is, moreover, an intermediate sole placed between a rubber outer sole and a
55 leather inner sole; hence it never comes in contact with the foot, being protected from it by the inner sole, with the effect that it never becomes foul, and retains its integrity, porosity, elasticity, and substantially its thickness, which, as above stated, is about three-
60 sixteenths of an inch. I do not claim, therefore, the employment of felt in a rubber boot or shoe; nor do I claim, broadly, a felt sole as new.

Having thus fully described my invention,
65 what I claim, and desire to secure by Letters Patent, is—

In a rubber boot or shoe, or a boot or shoe whose sole is of rubber, the combination, with the rubber outer or main sole, B, of the inner
70 leather sole, D, provided with a row of perforations, as D', and the intermediate sole, C, of felt or similar porous substance, said inner sole being permanently attached to the intermediate sole, and said intermediate sole being
75 attached to the rubber outer sole, substantially as and for the purpose set forth.

ERSKINE F. BICKFORD.

Witnesses:

HERRY W. WILLIAMS,
J. M. HARNETT.