

(Model.)

W. H. BUSSEY.

Shoe.

No. 231,398.

Patented Aug. 24, 1880.

Fig. 1.

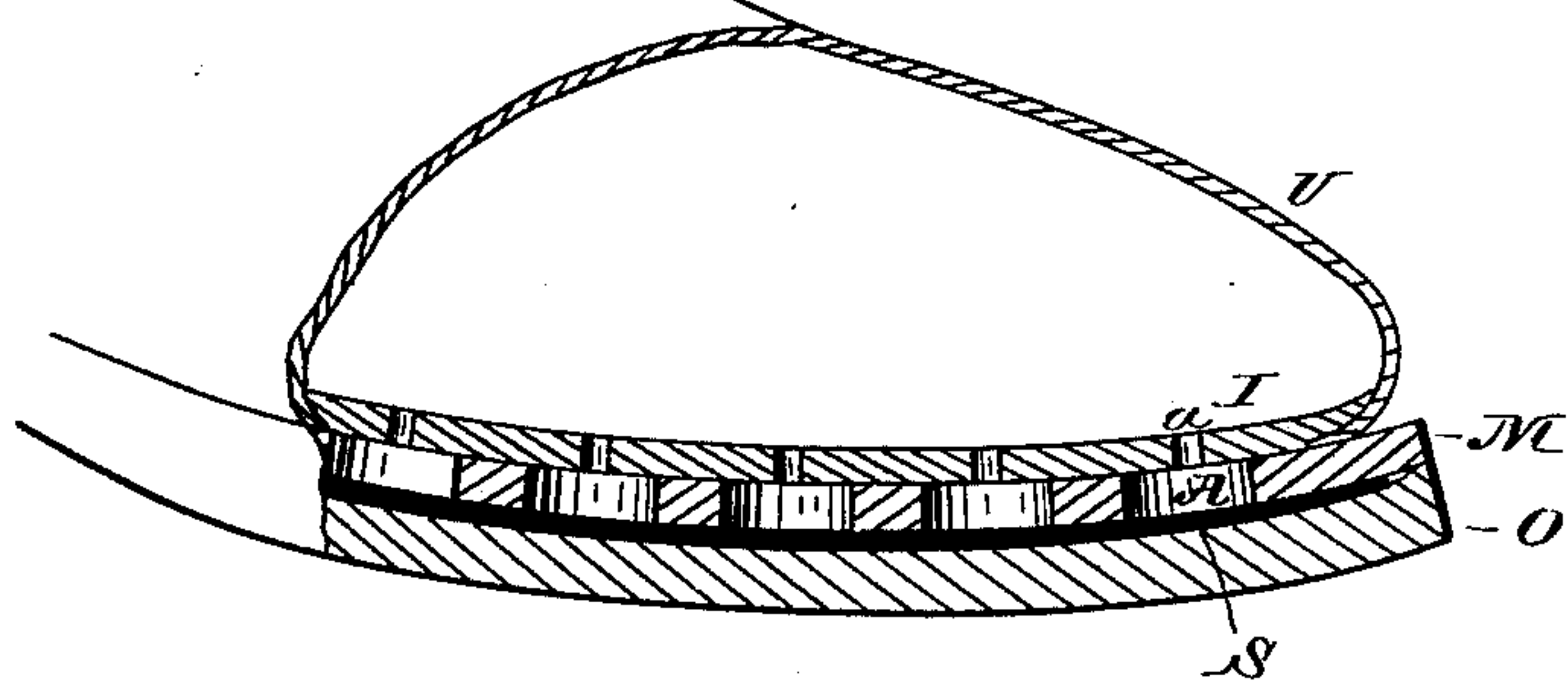
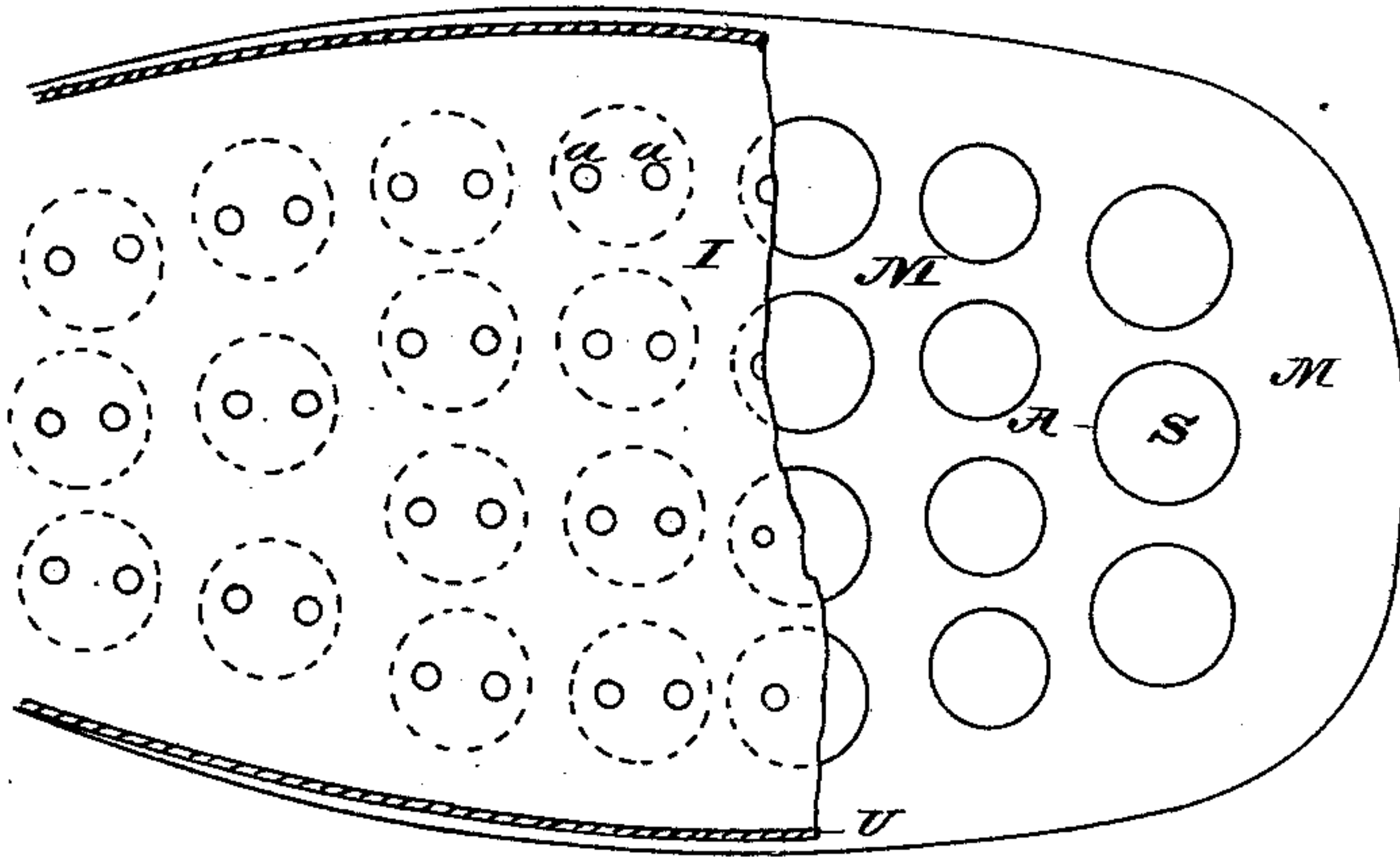


Fig. 2.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

WILLIAM H. BUSSEY, OF CHICAGO, ILLINOIS.

## SHOE.

SPECIFICATION forming part of Letters Patent No. 231,398, dated August 24, 1880.

Application filed March 9, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. BUSSEY, of Chicago, State of Illinois, have invented certain new and useful Improvements in Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to a class of shoes having air-spaces in the leather beneath the foot, the object of said invention being to secure the advantages of warmth and dryness obtainable from the use of such spaces without at the same time sacrificing the ordinary slightly appearance of the shoe or materially increasing its cost. In other words, I have sought to devise a shoe having the special merits mentioned and possible of adoption by all classes of ladies and gentlemen.

To this end my invention consists in the features of construction hereinafter described, and pointed out in the claims.

Figure 1 of the drawings is a vertical section of a shoe-front containing my improvement, and Fig. 2 is a horizontal section through the upper and near the insole, showing a portion of the insole removed to expose the middle or slip sole.

U is the upper, I the insole, M the middle sole or slip, and O the outsole, of the shoe, being the ordinary elements in their ordinary relation in the common double or slip soled shoe. The figures more accurately represent a pegged or a single-seam machine-sewed shoe, and not a welted sewed shoe of the hand-made order. The invention may, however, be as readily applied to the last mentioned as to the others, as will be explained.

Generally my improvement requires that the shoe be double-soled. In the middle sole, M, I cut any desired number of holes—say one-half inch in diameter, if circular—preferably close together, but leaving a net-work of leather between them sufficient to support the insole I. Through the insole are similarly cut a number of smaller holes, *a*, connecting the spaces A with the interior of the shoe. By these means two objects are effected: first, a body, or more properly numerous bodies, of air, in

contact with the foot through the stocking, are interposed between the foot and the shoe-bottom, which air, being of its nature a non-conductor of heat, serves to preserve the natural warmth of the foot; second, the moisture of the perspiration will in large measure settle through the air of the spaces and condense at the bottom or on the walls of such spaces, instead of being wholly absorbed by the stocking or the surface of the insole in contact with the foot, as in an ordinary shoe, where it really facilitates the abstraction of heat from the foot when the shoe-sole is cold.

Double-soled shoes have now become popular as working-shoes. There is therefore nothing objectionable in the thickness of sole made necessary by my disposition of the air-spaces. On the other hand, while sustaining the foot the desired distance from the ground, the sole of my shoe, apertured in its middle sole, as shown, has substantially the same flexibility as a single sole. There being in fact but a single sole, O, available for actual wear, I insert the rubber or other water-proof slip S between the soles O M, which slip may be embraced in the marginal seam, if not extended to the very edge of the finished sole. This slip being applied as described, the outer sole may be worn entirely through without exposing the foot to dampness from the bottom, and this is as much as any shoe should be worn before repair. A hand-sewed or welted sewed shoe need not in fact show more than the outsole and the welt at the edge, the apertured slip being inserted in the place of the ordinary bottom-filling. The welt may be made extra heavy, and thus give all the thickness required to this apertured piece while preserving evenness of the bottom, or a full-width apertured slip may be employed, as above described. When filling is applied to the bottom it should, of course, be punctured.

In making a shoe having my improvements the apertures or spaces A of the middle sole should be cut before fastening the sole in place. Then, by means of a punch set in said apertures A, the underlying filling and insole may be pierced on the last with the holes *a a*, or numerous holes may be simultaneously punched at random in the insole before putting it on the last, near enough together to insure prac-



tically the communication of the spaces A with the interior of the shoe, as described. The spaces A may be connected with each other, if desired.

5 The application of a porous bottom-lining covering the upper surface of the insole will not materially interfere with the proper function of the connecting-spaces A, as described.

Having thus described my invention, I  
10 claim—

1. The combination, in a boot or shoe, of an outer sole, a middle sole provided with apertures or openings A, and an inner sole having perforations connecting with said apertures

or openings in the middle sole, substantially 15 as and for the purpose described.

2. In a boot or shoe, the combination, with the outer sole and apertured middle sole, of the water-proof sheet or strip, as shown and described, for the purpose stated. 20

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

WM. H. BUSSEY.

Witnesses:

M. E. DAYTON,  
PETER J. ELLERT.