

(No Model.)

V. STRAUB.  
SHOE.

No. 457,408.

Patented Aug. 11, 1891.

FIG. 1.

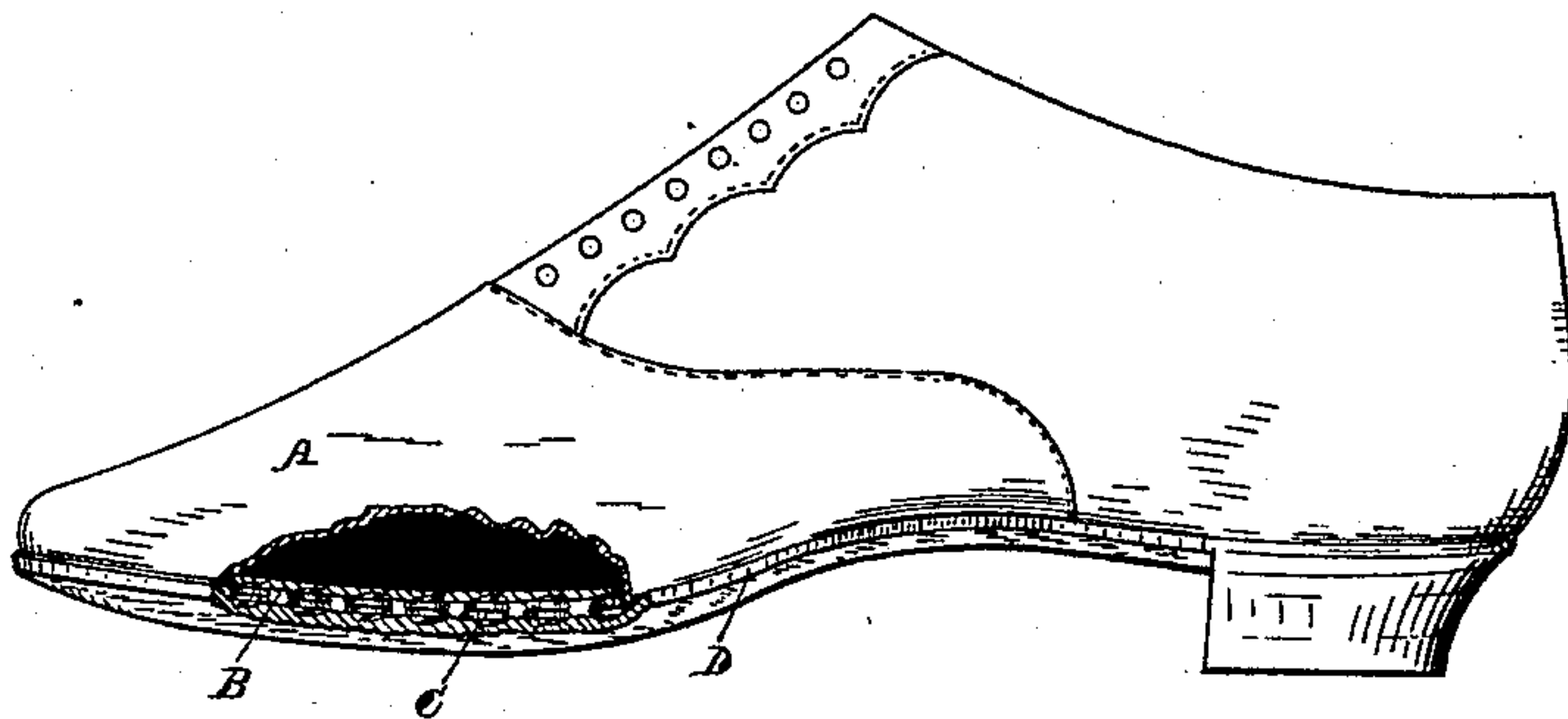


FIG. 2.

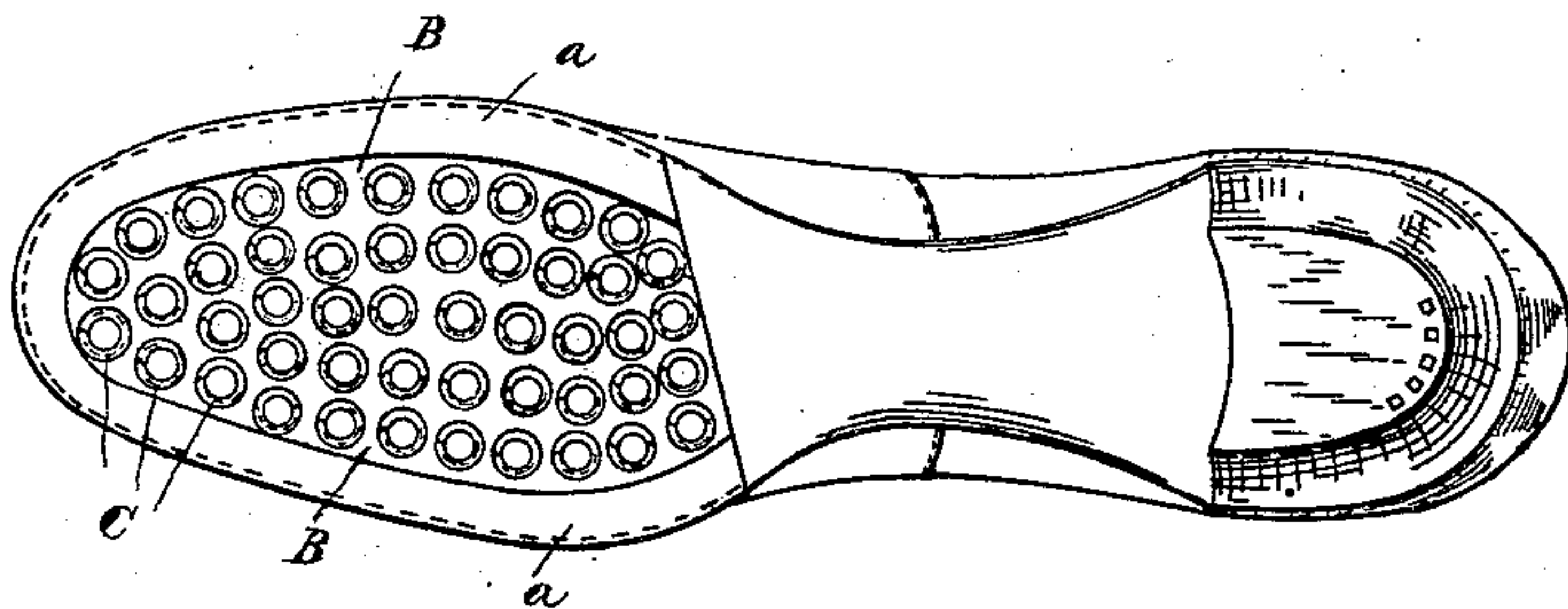
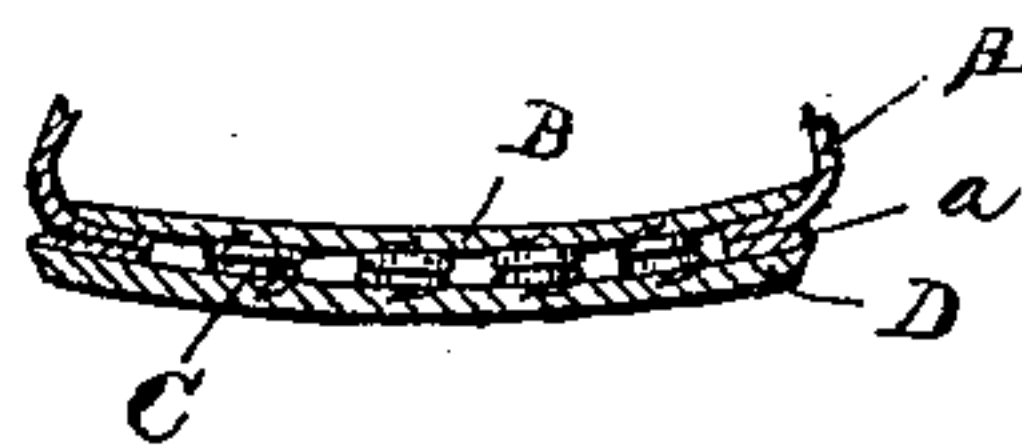


FIG. 3.



WITNESSES.

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per C. E. W. Bradford,  
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# UNITED STATES PATENT OFFICE.

VINCENT STRAUB, OF INDIANAPOLIS, INDIANA.

## SHOE.

SPECIFICATION forming part of Letters Patent No. 457,408, dated August 11, 1891.

Application filed April 13, 1891. Serial No. 388,625. (No model.)

*To all whom it may concern:*

Be it known that I, VINCENT STRAUB, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Shoes, of which the following is a specification.

My said invention relates to improved construction of soles for boots and shoes, whereby the strain upon the shoe-uppers is lessened, the durability of the shoe increased, and a sole provided which will not "soak water" as readily as those of the common construction; and it consists in interposing between the outer and inner soles a series of short coiled springs set in close proximity to each other, and practically filling the space within the welt, one end of each spring being inserted in the inner sole and the other end in the outer sole, whereby they are maintained in an unvarying relative position at all times, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a shoe constructed in accordance with my invention, a portion of the side being broken out to show the interior construction of the sole; Fig. 2, a plan view of the same, showing the bottom of a shoe before the outer sole is placed thereon, and Fig. 3 a cross-section through the finished sole.

In said drawings the portions marked A represent the upper; B, the inner sole; C, the springs, and D the outer sole. The upper A and inner sole B are or may be of any construction for any boot or shoe desired. The springs C are short coiled springs with the points of the wire of which they are composed projecting in a direction to readily engage with the surface of the soles, and they are preferably arranged in close proximity to each other, filling the space within the welt *a* of the sole, being preferably placed in position with their inner ends inserted in shallow appropriately-formed holes in the inner sole before the outer sole is applied, the shoe shown in Fig. 2 being at such a stage of the construction and ready for the outer sole. The outer sole D may be single or double, as desired, and is applied to the shoe, as shown in

Fig. 2, in the ordinary manner, being either sewed or pegged thereto and drawn down tightly upon the welt *a* surrounding the edges of the inner sole, thus compressing the springs and forming a neat finish and appearance, in no way differing from the appearance of a shoe constructed without my improvement. The outer points of the springs work into the inner surface of the outer sole as it is pressed upon them in being secured in position, thus adding but a trifling amount of extra labor or expense to the usual cost of the shoe, while affording an elastic sole, which in use operates to prevent the usual strain upon the upper, thus increasing the durability thereof and at the same time contributing to the comfort of the wearer. The springs also operate to maintain a space between the outer and inner soles, and thus prevent moisture in the outer sole from being transmitted to the inner sole, which prevents the feet of the wearer from getting damp in such cases as they would with the shoes of the common construction.

I am aware that patents already issued show spring devices attached to the soles of shoes for various purposes, and other forms of spring devices interposed between the soles of shoes; but in each case said constructions are cumbersome and expensive and not adapted for use in the manufacture of fine goods of a neat appearance. I therefore do not claim a spring-sole shoe, broadly, but limit myself to the particular construction and arrangement herein shown and claimed.

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

A sole for a boot or shoe composed of an inner sole and an outer sole united around their edges and having a series of short coiled springs interposed in a space between the adjacent faces of said two parts, one end of each spring being caught into the inner sole and the other end into the outer sole, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 8th day of April, A. D. 1891.

VINCENT STRAUB. [L. S.]

Witnesses:

E. W. BRADFORD,  
FRANK W. WOOD.