

(No Model.)

F. HAAG.  
INSOLE.

No. 424,195.

Patented Mar. 25, 1890.

Fig. 1.

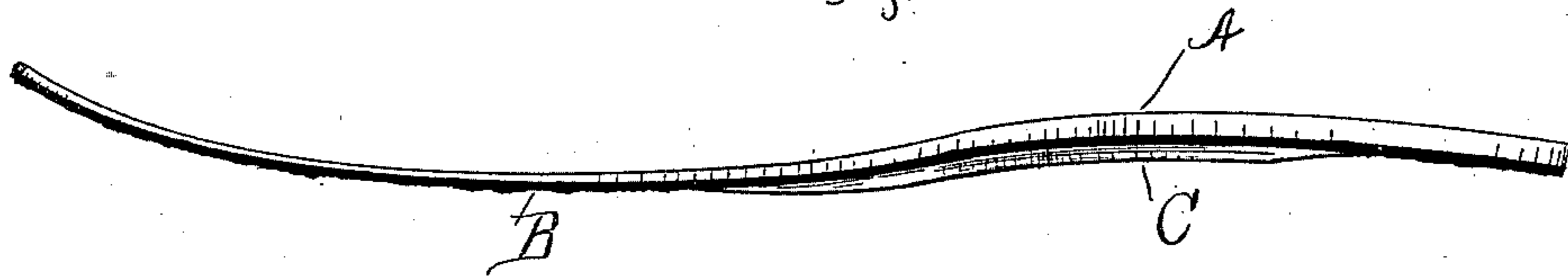


Fig. 2.

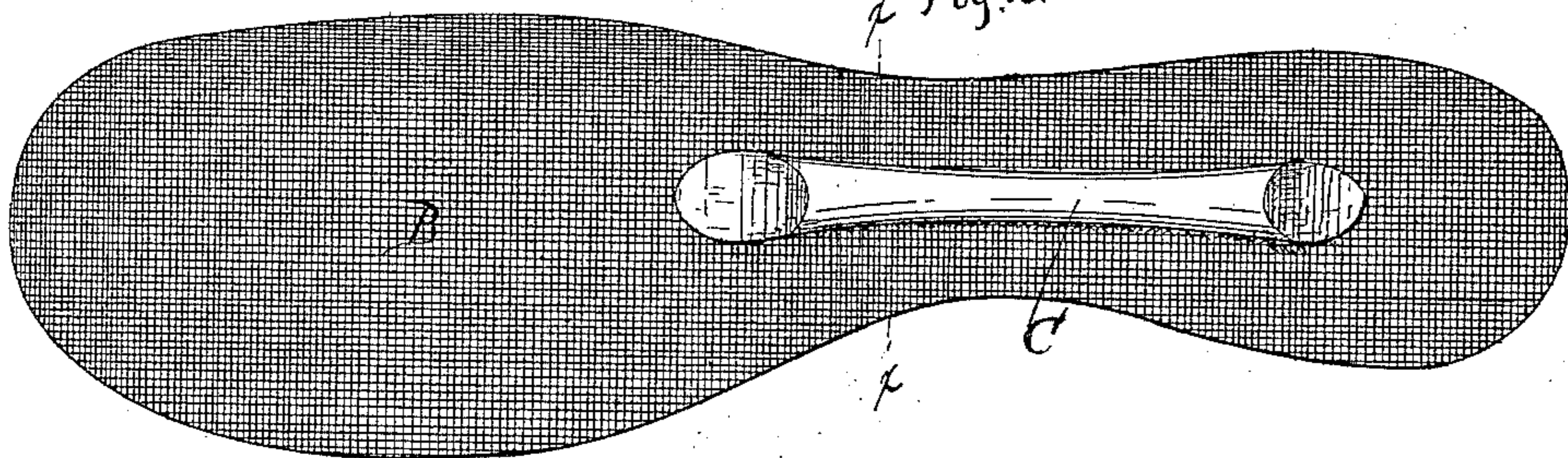


Fig. 3.

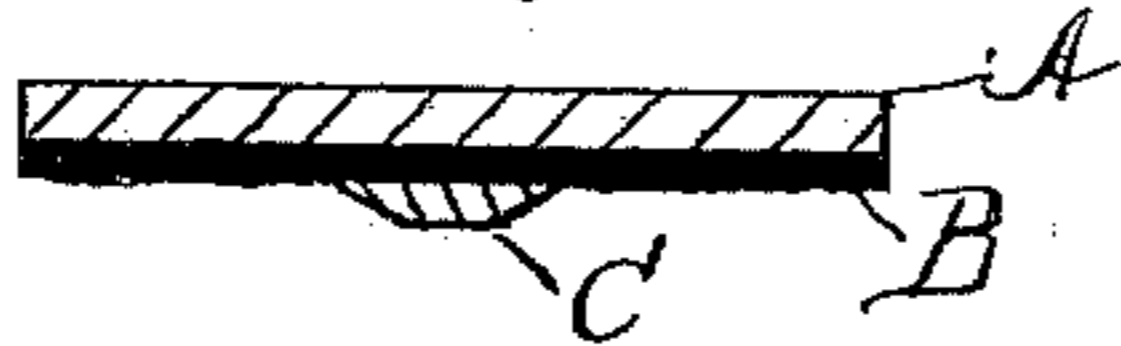


Fig. 4.

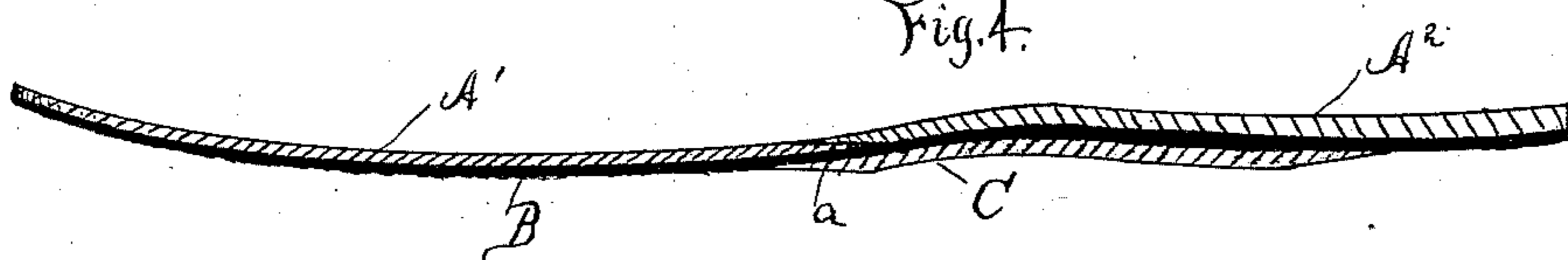


Fig. 5.



Witnesses:  
Fred F. Church.  
Alex. Stewart

Inventor:  
Ferdinand Haag.  
by Church & Church  
his Attorneys

# UNITED STATES PATENT OFFICE.

FERDINAND HAAG, OF ROCHESTER, NEW YORK.

## INSOLE.

SPECIFICATION forming part of Letters Patent No. 424,195, dated March 25, 1890.

Application filed August 16, 1889. Serial No. 320,964. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND HAAG, of the city of Rochester, county of Monroe, and State of New York, have invented certain  
5 new and useful Improvements in Insoles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and  
10 to letters of reference marked thereon.

My present invention has for its object to improve the construction of insoles for boots and shoes, whereby they will not only facilitate the operation of lasting the shoe, permitting the use of cement instead of lasting  
15 tacks, as heretofore employed, but also rendering the shoe water-proof, effectually preventing moisture in the outer sole from reaching the foot of the wearer.

It has, further, for its object to provide an insole that can be made cheaply and which will possess sufficient flexibility at the sole portion to permit its use on the lightest of women's shoes, and also a sufficient strength  
25 at the heel portion to permit the use of tacks in the operation of lasting, if desired, and as it is strengthened longitudinally and laterally in the shank not only obviates the necessity of employing a wood or steel shank-stiffener, but also permits a smaller and more flexible counter to be employed.

To these ends the invention consists in a certain improved insole, hereinafter described, the novel features being pointed out in the  
35 claims at the end of this specification.

In the drawings, Figure 1 is a side view of an insole constructed in accordance with my invention; Fig. 2, a bottom plan view of the same; Fig. 3, a cross-sectional view on line  
40 *xx* of Fig. 2. Figs. 4 and 5 longitudinal sectional views of modifications.

Similar letters of reference in the several figures indicate similar parts.

In the preferred form of insoles shown in  
45 Figs. 1 to 3 the inside or main portion A is composed of a piece of suitable leather with its forward portion skived off thin, the reduced part extending from about the shank to the toe, as shown, thereby rendering it  
50 flexible and easy to the foot. To the lower or outer side of this sole A, I secure a thin

covering *b*, of felt or similar material, preferably saturated with rubber cement, and also preferably extending the whole length of the sole. This felt covering is cemented  
55 securely to a sole A, and, being water-proof, effectually prevents moisture from soaking into the sole A from the outer sole. Upon the outer side of the shank of the insole thus formed, and preferably extending from near  
60 the middle of the heel to the inner end of the forward or sole portion is cemented a re-enforced or stiffener piece C, of relatively stiff leather, preferably slightly rounded on its outer side and skived off at the ends, as  
65 shown, which for women's light shoes is sufficiently stiff for all purposes and obviates the necessity of employing the wooden or steel shank-stiffeners sometimes employed. This re-enforce or stiffener, being cemented to the  
70 insole itself, not only facilitates the manufacture of the shoe, but, forming part of it, braces said insole laterally and permits the employment of a lower and less stiff counter than is at present required where the insoles  
75 are very thin and afford practically no lateral support to the counter, which latter has to be made very stiff, oftentimes rendering a shoe very uncomfortable to the wearer.

By extending the felt covering over the  
80 whole of the outer surface of the insole a rough surface is secured, to which the edges of the upper or vamp can be more readily and firmly cemented in the operation of lasting than where leather insoles alone are em-  
85 ployed.

By making the heel portion of the insole stiffer or of heavier material than the toe not only is greater flexibility secured the latter, but if desired to employ nails at the heel  
90 they are not so liable to tear out as when a uniformly thin insole is employed. In some instances I prefer to form the insole of two pieces of leather A' A<sup>2</sup>, as in Fig. 4, having their proximate ends skived off, as at *a*, and  
95 cemented together, and the forward portion A' being (either previous or subsequent to being secured together) skived off thinner than A<sup>2</sup>, as shown. This portion is then covered with a piece of felt B, in a manner similar to the first-described portion A, and a  
100 stiffener C cemented to it, as before, thereby

making an insole possessing the advantages ascribed to the first-mentioned one, though requiring more operations to form it. Still this is sometimes advantageous, as it enables  
5 me to utilize pieces of leather that otherwise would be wasted, and for most purposes the inner portion of the sole thus formed may be deemed the equivalent of the one first described, inasmuch as even when made of two  
10 pieces of material cemented together and the forward one afterward skived off thin it is practically a single piece. In this construction the stiffener C performs the same functions as before.

15 In Fig. 5 is shown another modification in, which the sole A is skived off or made thinner on both faces of the sole portion, the lower or outer face being left with a short flap *b*, and in this instance instead of placing the  
20 felt covering B over the whole of the face I place it over the sole or forward part only, cement it in place, cement the short flap *b* down upon it, and secure the re-enforce or stiffener C in place, as before, the latter serving  
25 now not only as a re-enforce, but as it extends a short distance over covering B holds the end of the latter down in position and effectually prevents its separating from portion A when the insole is bent at a sharp  
30 angle, as will be understood. In some instances I prefer to dispense with the outer

felt covering for the insole altogether and secure the advantages of the shank-stiffener by cementing the latter directly to one side of the insole shown, which is preferred for  
35 obvious reasons; but it may be used in connection with an insole of any approved construction.

Other advantages than those mentioned, as well as modifications, will present themselves to  
40 those skilled in the art, and I do not therefore desire to be confined to the precise construction shown.

I claim as my invention—

1. In an insole, the combination, with the  
45 inner leather portion thinner at the toe than heel and the outer covering of felt saturated with rubber and cemented to it, of the shank-stiffener secured to the outer portion of said insole, substantially as described. 50

2. In an insole, the combination, with the inner leather portion consisting of two parts secured together, the sole being thinner than the heel portion, of a covering of felt saturated with rubber, extending over the whole  
55 outer surface, and the shank-stiffener secured to the insole and connecting the sole and heel parts, substantially as described.

FERDINAND HAAG.

Witnesses:

FRED F. CHURCH,  
S. E. TRUE.