

No. 607,086.

Patented July 12, 1898.

J. A. SAFFORD.  
CUSHIONED HEEL FOR BOOTS OR SHOES.

(Application filed Apr. 17, 1897.)

(No Model.)

FIG. 1.

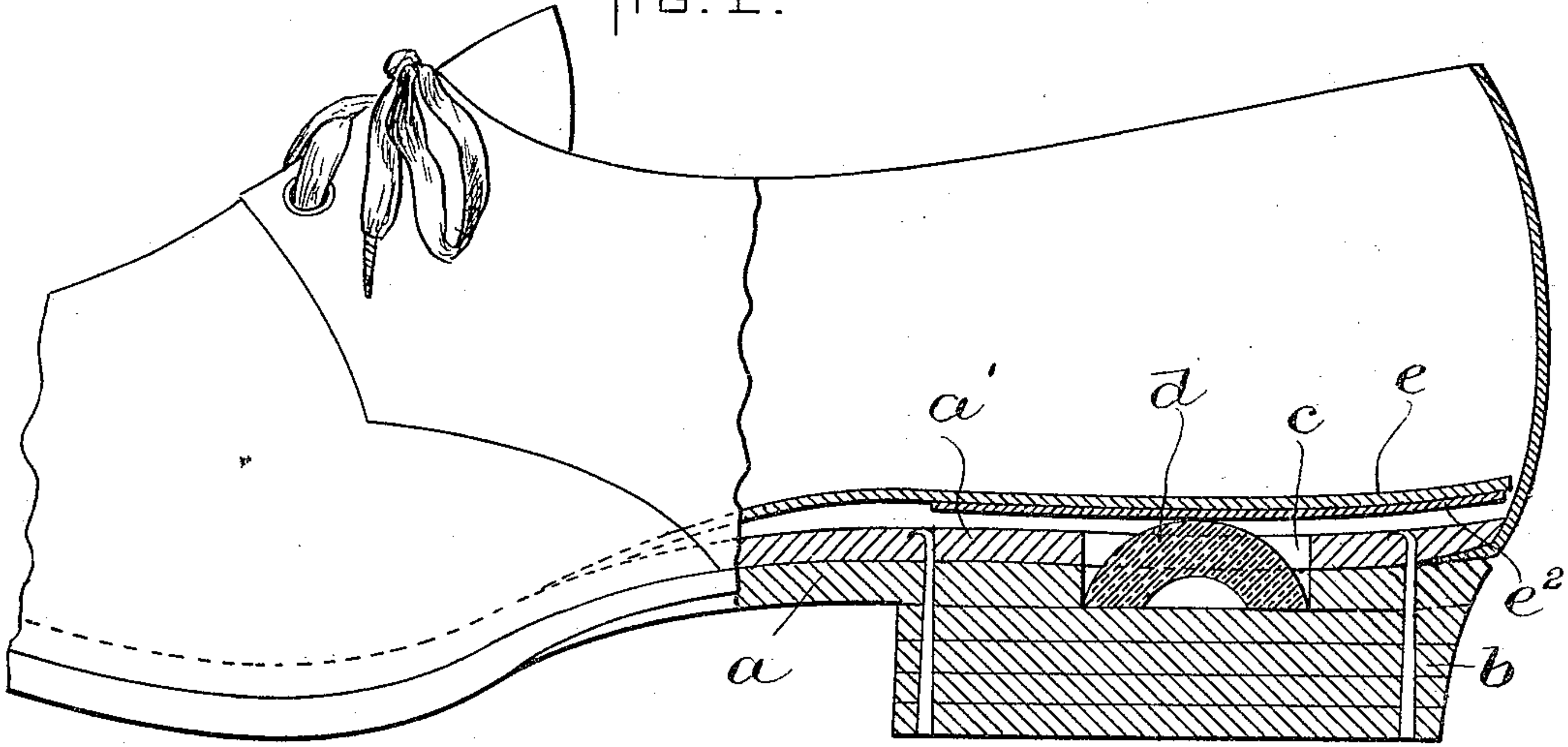


FIG. 3.

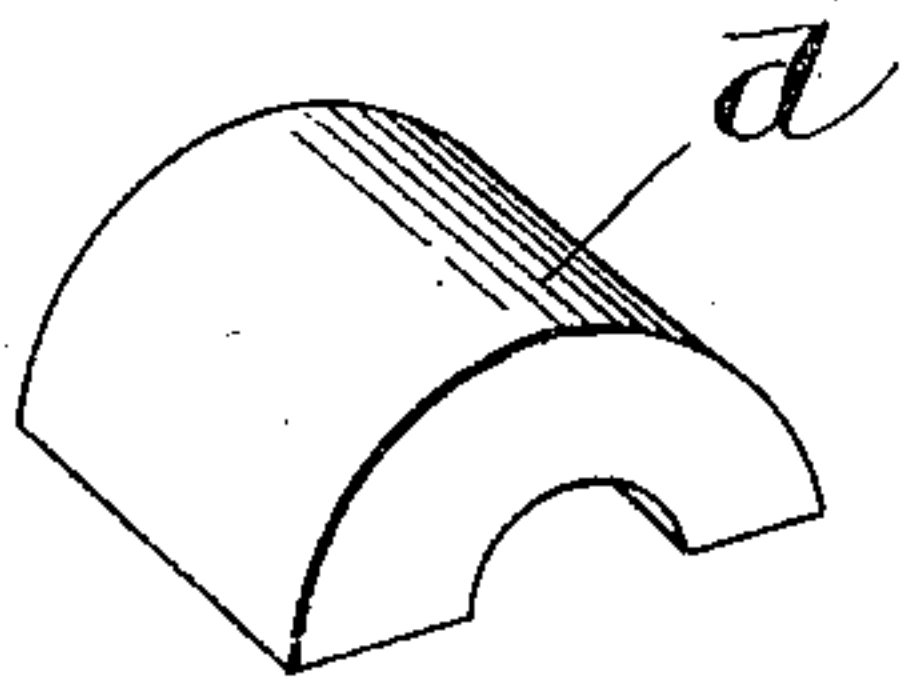


FIG. 2.

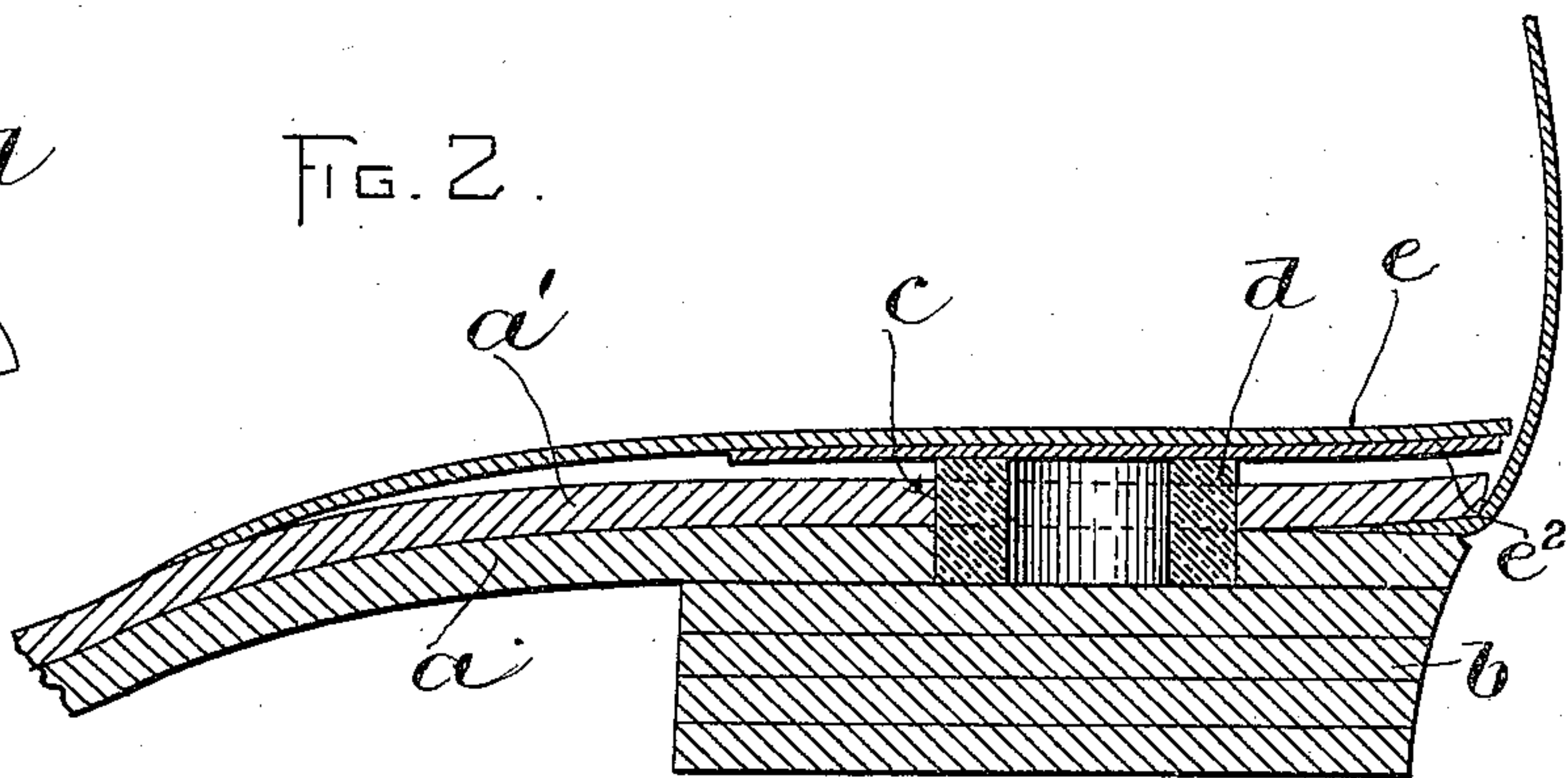


FIG. 4.

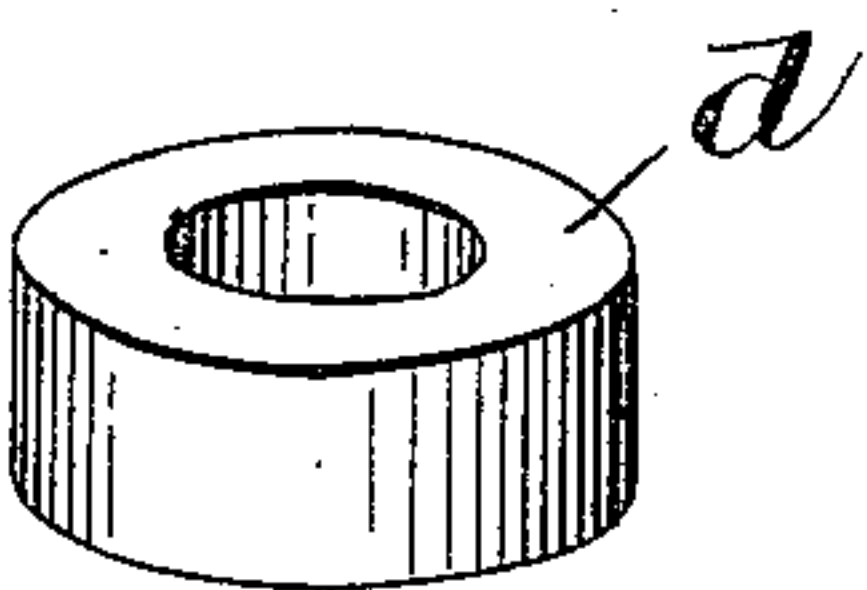
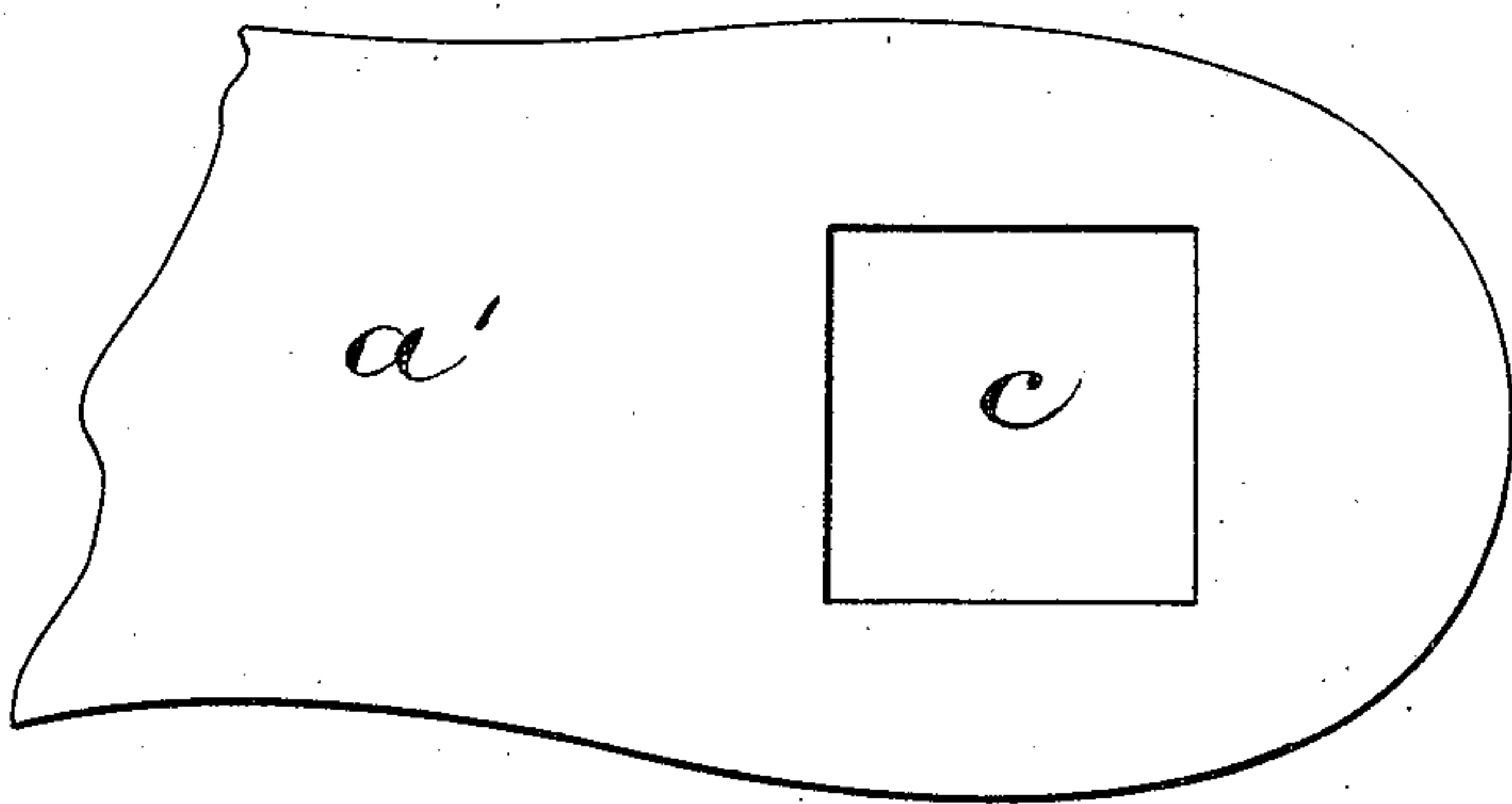


FIG. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEPH A. SAFFORD, OF MALDEN, MASSACHUSETTS.

## CUSHIONED HEEL FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 607,086, dated July 12, 1898.

Application filed April 17, 1897. Serial No. 632,651. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. SAFFORD, of Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Cushioned Heels for Boots or Shoes, of which the following is a specification.

This invention relates to boots and shoes the heel portions of which are provided with provisions for affording a yielding support to the heel of the wearer; and it has for its object to provide a simple, durable, and efficient construction whereby the desired result may be attained.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a longitudinal section of a portion of a boot or shoe embodying my invention. Fig. 2 represents a similar view showing a different form of spring or cushion from that shown in Fig. 1. Figs. 3 and 4 represent, respectively, views of the two forms of cushion shown in Figs. 1 and 2. Fig. 5 represents a top view of the heel portion of the sole.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* and *a'* represent, respectively, the outer and inner soles of a boot or shoe, the whole constituting what I hereinafter denominate the "sole," and *b* represents the heel, which is attached, as usual, to the corresponding part of the sole.

*c* represents a pocket or cavity which is formed by cutting an orifice in the heel portion of the sole before the attachment of the heel thereto, the heel when subsequently attached forming the bottom of the pocket.

The pocket *c* is of such form that its edges are separated from the margin of the heel portion by sufficient material to receive the nails which attach the heel *b* to the heel portion of the sole. In the pocket *c* is inserted a spring or cushion *d*, which is preferably made of rubber, and in the arched form shown in Figs. 1 and 3 the ends or abutments of the arch resting on the bottom and two sides of the pocket *c*, as shown in Fig. 1. This form of spring gives a high degree of elasticity and is therefore very desirable. It is also free from liability to be displaced from its opera-

tive position and does not require to be fastened in the pocket *c*, owing to the side portions of said spring bearing against the side walls of the pocket.

In Figs. 2 and 4 I show a spring made in tubular form, the axis of the tube being vertical and the side portions thereof bearing against the side walls of the pocket. In this case the central opening gives the cushion or spring the desired elasticity.

It will be seen that by cutting an orifice in the heel portion of the sole of a boot or shoe before the attachment of the heel thereto and then attaching the heel, so that it will extend across the orifice, a spring-receiving pocket or cavity is formed without sacrificing the strength of the attachment of the heel to the sole. The rubber spring or cushion inserted in said pocket and projecting above the sole furnishes an elastic bearing for the heel of the wearer, reducing the jar which attends the impact of the heel against the pavement, and thus greatly conducing to the comfort of the wearer.

In both of the forms of spring shown the inner and outer walls are curved. This insures the leaving of a sufficient space into which the rubber can be forced by the wearer, so as to increase the elasticity over what would be inherent in a solid spring. With the form shown in Fig. 1 the free spaces are shown as under the center of the spring and above each end thereof, while in the form shown in Figs. 2 and 5 the spaces are in each corner of the pocket *c* and also in the center of the spring.

I prefer to introduce a slip-sole *e* between the cushion *d* and the foot of the wearer. Said sole may be formed to extend the entire length of the interior of the boot or shoe or may terminate just forward of the heel. Its under side is preferably reinforced by a metallic plate *e'*, which prevents the slip-sole from yielding or buckling where it bears on the cushion.

Owing to the orifice or pocket extending through the sole to the top of the heel said pocket is made deep enough to receive a rubber spring of sufficient size and strength for the purpose desired without making such orifice of great area. In other words, the pocket is small and does not interfere with the ordi-

nary attachment of the heel and the sole in the usual manner.

I claim—

1. A boot or shoe having an orifice formed  
5 in the heel portion of the sole, a heel attached to the said portion in position to extend across the orifice, said orifice and the heel forming a pocket, a rubber spring having curved inner and outer walls and inserted in said pocket  
10 and projecting above the sole and bearing against the side walls of said pocket, and a slip-sole having a metal reinforcement formed to bear on said cushion.

2. A boot or shoe having an orifice formed  
15 in the heel portion of the sole, a heel attached

to the said portion in position to extend across the orifice, said orifice and the heel forming a pocket, and an arched piece of rubber inserted in said pocket, the ends or abutments of the arch bearing on the bottom and two 20 sides of the pocket, while its crown projects above the sole and forms a yielding support.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 7th day of 25 April, A. D. 1897.

JOSEPH A. SAFFORD.

Witnesses:

A. D. HARRISON,  
P. W. PEZZETTI.