No. 675,793. Patented June 4, 1901.

H. F. ROONEY.

CUSHIONED HEEL.

(Application filed Oct. 24, 1900.)

(No Model.)

Fig. 1

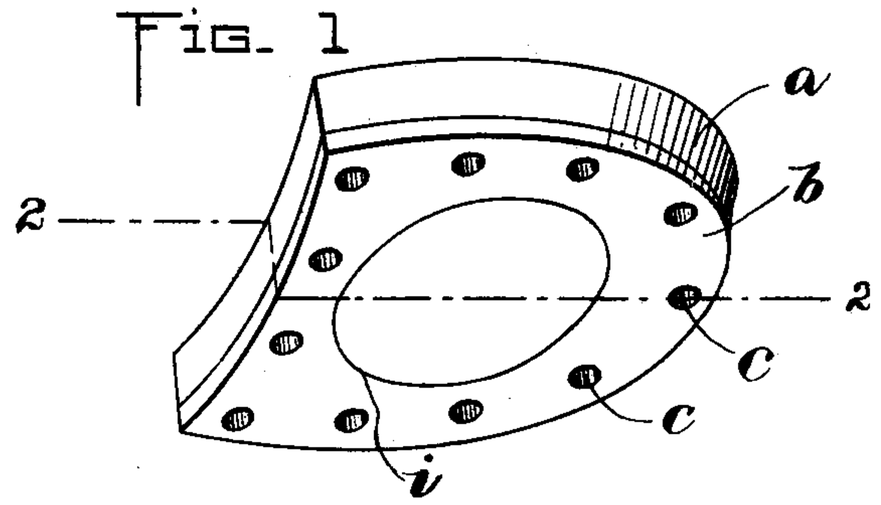


Fig. 2.

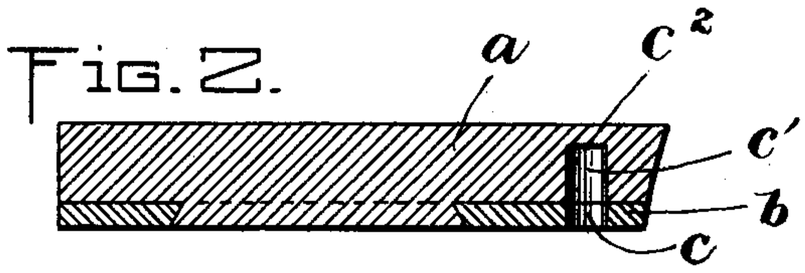


Fig. 3.

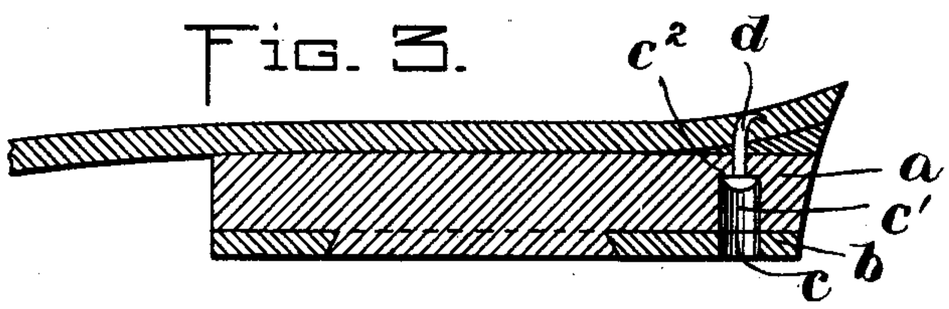


Fig. 4.

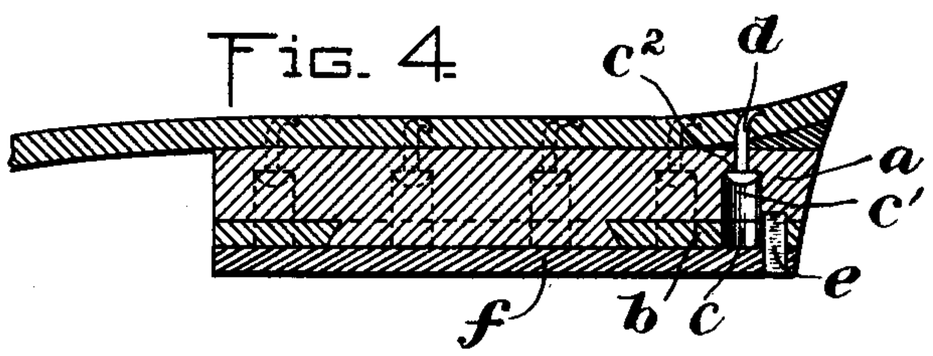
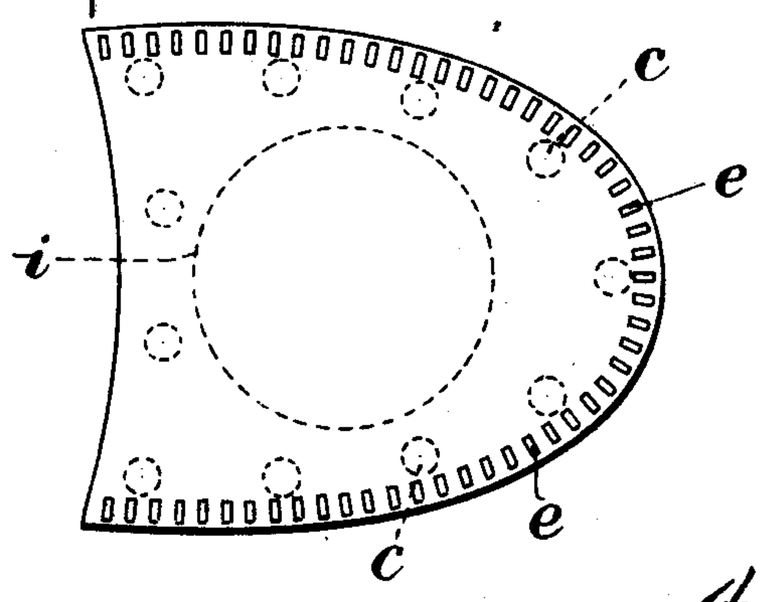


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY F. ROONEY, OF RANDOLPH, MASSACHUSETTS, ASSIGNOR TO MELLEN BRAY, TRUSTEE, OF NEWTON, MASSACHUSETTS.

CUSHIONED HEEL.

SPECIFICATION forming part of Letters Patent No. 675,793, dated June 4, 1901.

Application filed October 24, 1900. Serial No. 34,160. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. ROONEY, of Randolph, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Cushioned Heels, of which the following is a specification.

This invention has for its object to provide a strong and durable cushioned heel for boots and shoes which shall afford ease to the wearer by relieving shocks and jars incidental to the act of walking and shall be much more durable than ordinary cushioned heels, in which the elastic material of the cushion forms the tread-surface of the heel, besides being less liable to slip when used in wet weather.

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 perspective view of the body portion of a cushioned heel embodying my invention, the top lift being removed. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a view similar to Fig. 2, showing the heel attached to the heel-seat of a boot or shoe before the application of the top lift. Fig. 4 represents a view similar to Fig. 3, showing the top lift attached to the heel-body. Fig. 5 represents a bottom view of the completed heel.

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

In carrying out my invention I firmly and intimately unite by the process of vulcanization an elastic rubber heel-body *a* and a reinforcing lift or layer *b*, of leather or other relatively inextensible or inelastic material. The body *a* and the reinforcing-lift *b* may be united by first placing the lift *b* in a vulcanizing-mold, the lift having a series of orifices *c*, which receive pins or studs projecting from the bottom of the mold through the lift and above its upper surface. After this a sufficient quantity of unvulcanized rubber to make the body *a* is placed in the mold upon the lift *b* and upon the studs that project through the orifices *c*, and the mold is then closed and subjected to a sufficient degree of heat to vulcanize the rubber and cause it to adhere firmly to the lift *b*. The pins or studs above mentioned are of such length that they form cavities *c'* in the rubber body, the bottoms of said cavities being between the lift *c* and the upper surface of the body *a* and forming seats c^2 for the heads of nails *d* or other suitable headed fastenings used to attach the body *a* to the heel-seat of a boot or shoe. The orifices *c* in the reinforcing-lift are of substantially the same diameter as the cavities *c'* and constitute continuations of the latter. The line of union between the body *a* and lift *b*, caused by the operation of vulcanizing, therefore extends to the walls of the cavities *c c'* and confines the elastic material of the body *a* around the seats c^2 so closely that the material of the said seat is not liable to yield or be extended by any strain exerted upon it by the fastening devices *d* sufficiently to permit the said fastening devices to pull through the seats. The reinforcing-lift *b* therefore while not affecting the vertical compressibility of the body *a* materially increases the strength of the connection formed by the fastenings *d* between the elastic body and the heal-seat of the shoe. The reinforcing-lift *b* has another function—namely, it receives short nails or slugs *e*, used to secure to the heel a top lift *f*, said top lift covering the entire bottom of the heel and therefore concealing the cavities *c c'*.

I prefer to provide the reinforcing-lift *b* with a central orifice *i*, the wall of which is beveled, as shown in Figs. 2, 3, and 4, the said orifice receiving a portion of the material of the rubber body *a*, which portion is interlocked with the reinforcing-lift in consequence of the bevel of the walls of the orifice, a portion of the material of the body *a* projecting as a tenon into the said orifice.

It will be seen that the nail-head seats c^2 are sufficiently elevated above the top lift to prevent the latter from colliding with the nail when it approaches the latter in consequence of the compression of the rubber body.

I claim—

1. A cushioned heel comprising, first, a body of elastic rubber having nail-receiving cavities the bottoms of which form seats for the heads of attaching-nails; secondly, an inelastic reinforcing-lift vulcanized to the outer surface of the elastic body and having orifices coinciding with the said cavities and of

substantially the same diameter, said reinforcing-lift confining the portions of the elastic material of the body which include the nail-head seats, so that the said seats are prevented from expanding sufficiently to release the nail-heads; and thirdly, a top lift secured to the reinforcing-lift by suitable fastenings and covering the nail-receiving orifices, the said nail-head seats being elevated above the top lift, so that the latter can approach the nail-heads without colliding therewith when the elastic body is compressed.

2. A cushioned heel comprising, first, a body of elastic rubber having nail-receiving cavities the bottoms of which form seats for the heads of attaching-nails; secondly, an inelastic reinforcing-lift having a central orifice with a beveled wall and orifices coinciding with the said cavities and of substantially the same diameter, said lift being vulcanized to the rubber body; and thirdly, a top lift secured to the reinforcing-lift by suitable fastenings.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY F. ROONEY.

Witnesses:
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A. D. HARRISON.