S. PETERSON.

HEEL FOR BOOTS AND SHOES.

APPLICATION FILED JUNE 2, 1909.

955,100. Patented Apr. 12, 1910.

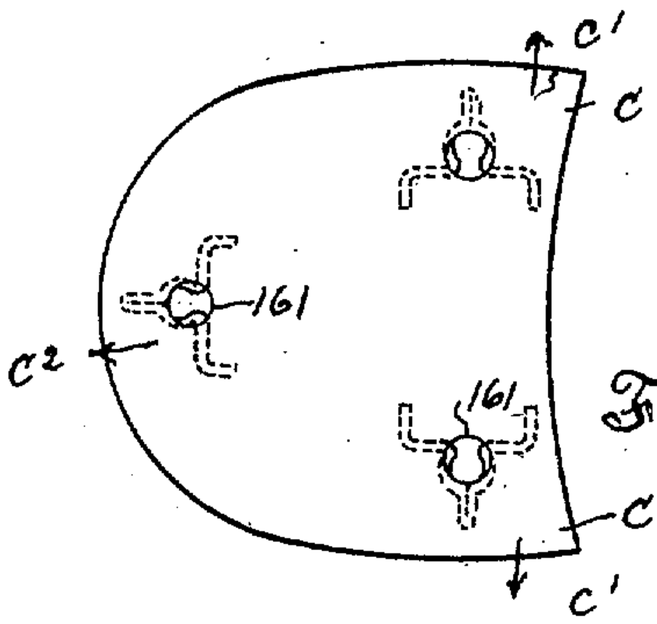

Fig. 1

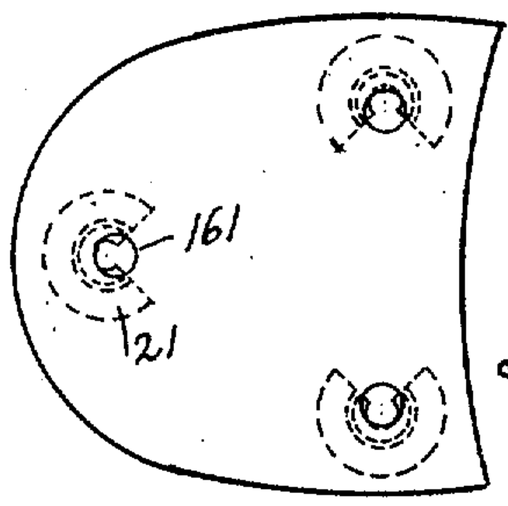

Fig. 7

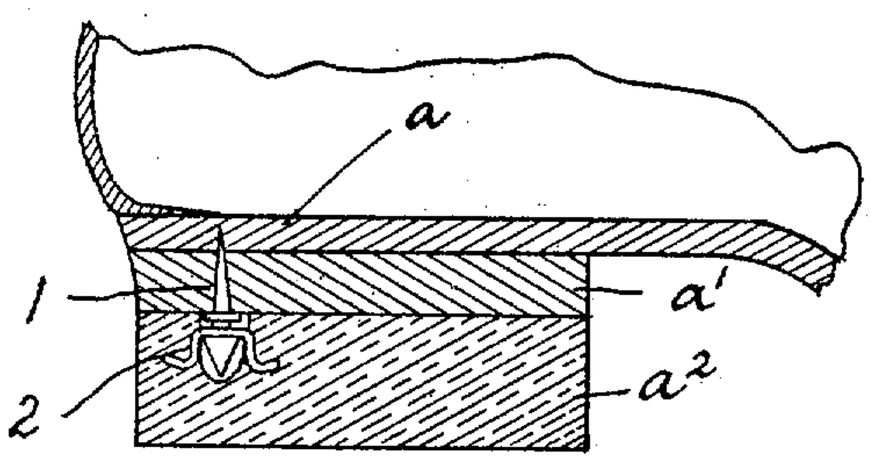

Fig. 2

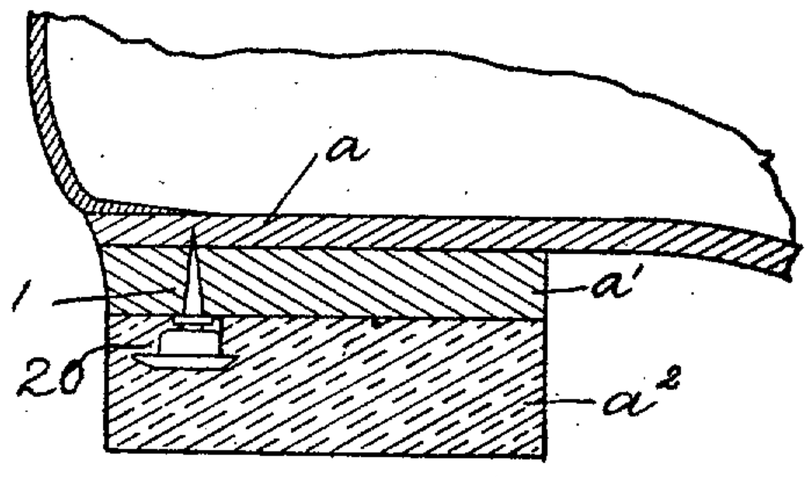

Fig. 8

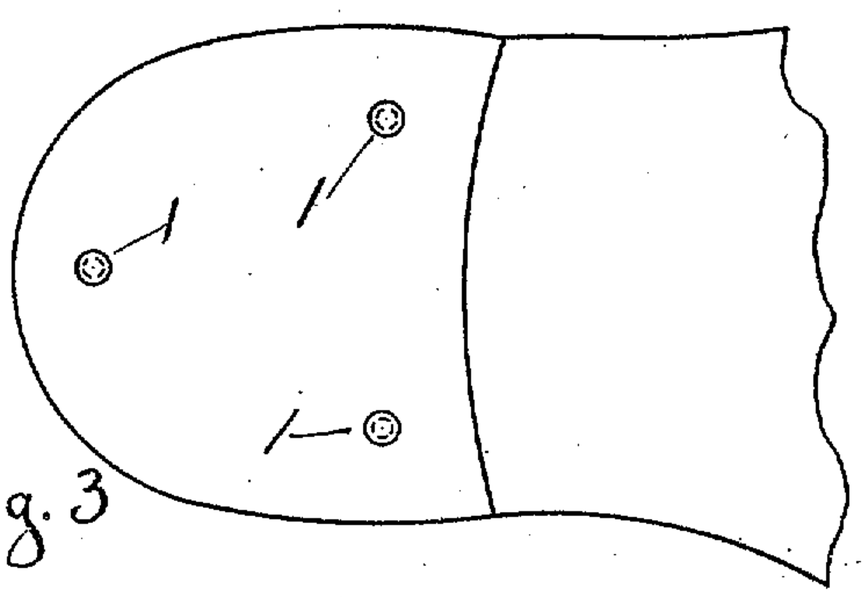

Fig. 3

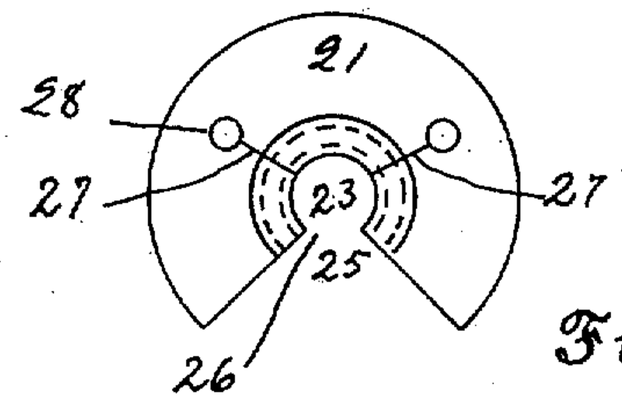

Fig. 9

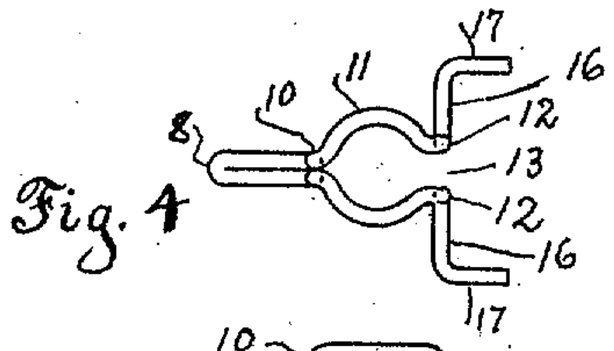

Fig. 4

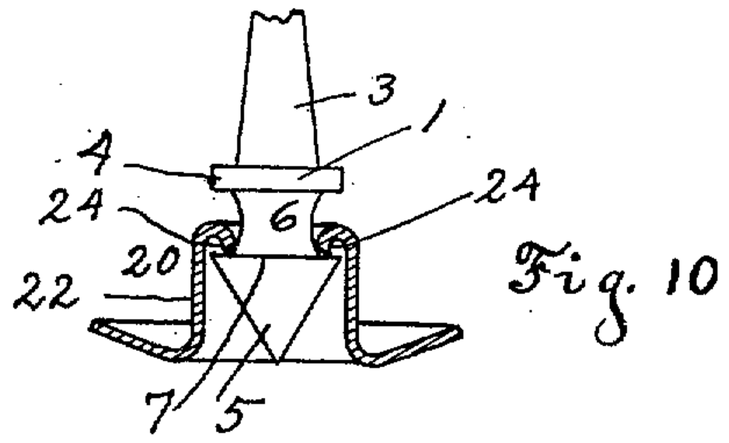

Fig. 10

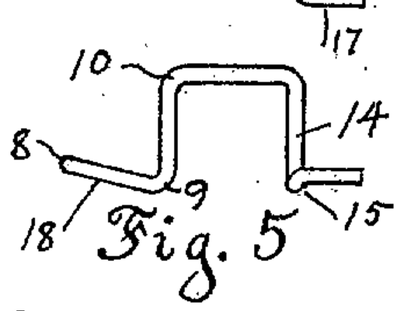

Fig. 5

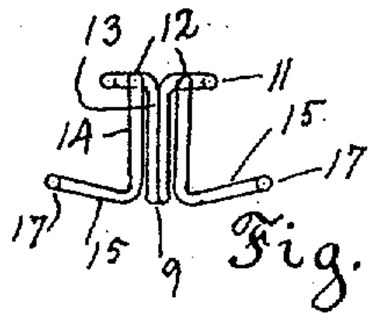

Fig. 6

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UNITED STATES PATENT OFFICE.

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HEEL FOR BOOTS AND SHOES.

955,100. Specification of Letters Patent. Patented Apr. 12, 1910.

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To all whom it may concern:

Be it known that I, SVANTE PETERSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Heels for Boots and Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to heels for boots or shoes and more particularly to certain improvements in rubber heels and the means for attaching them to boots and shoes.

It is now quite the common practice to provide leather boots and shoes with rubber heels and such heels are extremely popular and would be more so if it were possible to transpose the heels from the right to the left shoe as they become slightly worn away at the back upon one side.

The object of the present invention is to produce a rubber heel having fastening means so constructed and arranged as to provide for the quick attachment of the rubber heel in position, and whereby they may be readily detached at will for the purpose of transposing the heels from one shoe to the other.

To the above ends my invention consists of the heel and its attaching means which will now be described and claimed.

My invention is shown in the accompanying drawing in which:—

Figure 1 shows a top plan view of the heel removed from the shoe and embodying one form of spring socket fastening. Fig. 2 shows a vertical sectional view through the back portion of a shoe with the heel of Fig. 1 attached thereto. Fig. 3 shows a bottom plan view of a portion of the back part of a shoe showing the stud members of the fastenings. Fig. 4 shows a top plan view of the socket fastening used in Fig. 1. Fig. 5 shows the same fastening in side elevation. Fig. 6 shows the same fastening in front elevation. Fig. 7 shows a view similar to Fig. 1, but showing a modified form of socket fastening. Fig. 8 shows a view similar to Fig. 2 with the socket fastening shown in Fig. 7. Fig. 9 shows a top plan view of the socket fastening used in Figs. 7 and 8. Fig. 10 shows a complete fastening, including one of the studs and the socket member shown in Fig. 9, the latter being shown in vertical section.

Similar reference characters will be employed throughout the specification and drawing to designate corresponding parts.

In the drawing *a* indicates the rear or heel end of the boot or shoe, and *a'* a portion of the usual leather heel, to which is removably secured my improved rubber heel a^2.

The attaching means consists of a plurality of stud members 1 secured in the heel portion *a'* and a corresponding number of spring socket members 2 located in the rubber heel a^2. The stud members 1, one of which is shown in enlargement in Fig. 10, comprises an attaching shank 3 suitably constructed to be readily inserted in and securely fastened to the under surface of the heel part *a'*, or as may be desired in the under face of the rear end of the sole *a*. To this end the shank 3 may be screw threaded or as shown in Fig. 10 simply pointed for the purpose of being driven into the leather and frictionally held.

A collar 4 limits the extent to which the shank 3 may be inserted and insures a uniformity of projection of the fastening studs. The stud or head 5 is formed as an inverted cone and is connected to the collar 4 by a contracted neck portion 6, thus producing a shoulder 7 which is engaged by the spring socket members as will be described.

In one form of my invention the spring socket member 2 is formed of wire, as shown clearly in Figs. 4 to 6, and is produced by taking a piece of wire of suitable length and bending it as shown at 8, from which point the two members of the wire extend in close parallel relation to the point 9, where they are again bent and extend vertically to the point 10. At 10 the wire members are bent horizontally and in a curve as shown at 11, forming the spring gripping jaws which approach each other as shown at 12, leaving the passage or channel as shown at 13 for a purpose to be described. At 12 the wire members are bent down as shown at 14 to the points 15 and thence outwardly in opposite directions as shown at 16, and at the ends will be preferably turned upwardly as at 17. The portion 18 extending from 8 to 9 will also extend slightly upward, as shown clearly in Fig. 5. By thus forming the

socket member there is produced a fastener having an anchoring base formed by the arms 18 and 15 and a spring socket formed by the upwardly extending portions having the clamping jaws 11 and the opening channel or passage 13 leading thereto.

As shown in Figs. 1 and 2 these socket members will be securely anchored in the rubber heel a^2 by molding them therein with the open passage or channel 13 upon the inside or facing the center of the heel.

Suitable openings 161 will be left upon the inner surface of the rubber heel a^2 leading to the clamping jaws of the socket members.

The heel end of the shoe having been provided with the desired number of stud members 1 corresponding in number and location to the number of socket members in the heel, the heel a^2 is attached by forcing the conical ends 5 of the stud members into the openings between the clamping jaws 11, which yield to permit the heads 5 to pass below the clamping jaws 11 which will thereupon grip the necks 6 back of the shoulders 7 thus effectually connecting the rubber heel to the shoe.

Should it be desired to remove the rubber heel a^2 for the purpose of transposing them from one shoe to the other, this may be done by grasping the heel at one of the corners, say at c, and exerting a pull in the outward direction as shown by the arrows c' in Fig. 1, thus the rubber heel stretching or yielding somewhat for the purpose, the necks 6 of the studs 1 pass out of the socket members through the channels or passage-ways 13. The corners of the heel having been released the rear end is detached in a similar manner by pressing backward in the direction of the arrow c^2.

The socket members 20, shown in Figs. 7 to 10 inclusive, are struck up from sheet metal, forming the anchoring flange 21 and the upwardly extending tube-like socket 22, which at its upper end is provided with the socket opening 23 and the inturned gripping jaws 24. The whole is cut out as at 25 forming the passage or channel as at 26, and the tube-like socket 22 will be preferably slit as at 27, which slits end at the holes 28 in the anchoring flange 21. In this form the socket members will be embedded in the rubber of the heel a^2 by molding the heel about the same and the conical heads 5 of the stud members will pass into the openings 23, thus causing the jaws 24 to engage the neck 6 back of the shoulder 7.

The removal of the heel is accomplished in this form in the same manner as heretofore described, by pulling upon the heel in a direction to cause the studs to pass out through the channels or passages 26.

The socket members will be so positioned in the heel a^2 with relation to the upper surface of the heel as to cause a slight compression of the rubber of the heel when the fastenings are connected, thus causing the clamping jaws to forcibly pull against the shoulders of the studs to a slight extent.

It is to be noted that the fastening device of my invention consists of two members which are designed to be coupled by a direct axial movement toward each other, and that by reason of the shoulder 7 of the stud member engaging the inturned flange 24 of the socket member they cannot be uncoupled by an axial movement away from each other, but only by a relative lateral movement in parallel planes in such a manner as to cause the neck 6 of the stud member to pass out of the passage of the socket member.

From the foregoing description it will be noted that I have produced a simple form of fastening for quickly and immovably attaching rubber heels, and one which at the same time will permit the heel to be quickly removed when desired.

Having described my invention, I claim as new and desire to protect by Letters Patent of the United States;—

1. A shoe heel formed of rubber, a spring socket member having an inturned clamping flange secured in said heel, a headed stud having an engaging shoulder connected to the shoe sole, the locking members arranged to be coupled by direct axial movement and uncoupled only by a relative lateral movement, and a passage or channel leading laterally from the opening between the clamping jaws of the socket member, substantially as described.

2. A shoe heel formed of rubber, a stud and socket fastening for connecting said heel to a shoe, means for coupling the members of said fastening by a direct axial movement, means to prevent the uncoupling of said members by an axial movement, means to produce an axial pulling engagement between the members of the fastening and means for disengaging said members by relative lateral movement, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

SVANTE PETERSON.

Witnesses:
T. HART ANDERSON,
MARGARET GALLIVAN.