No. 801,549.

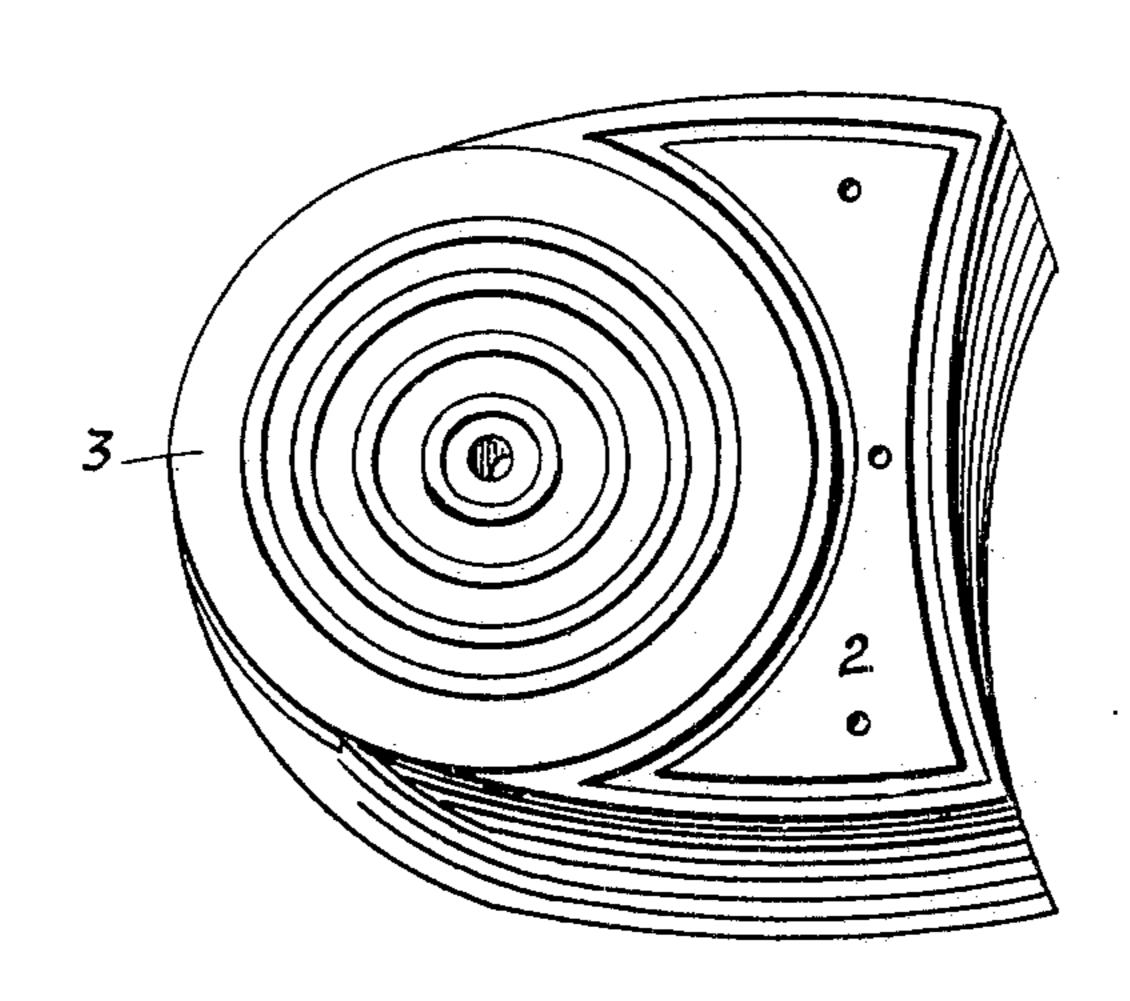
PATENTED OCT. 10, 1905.

## U. SANTINI.

## SEPARABLE HEEL FOR BOOTS AND SHOES.

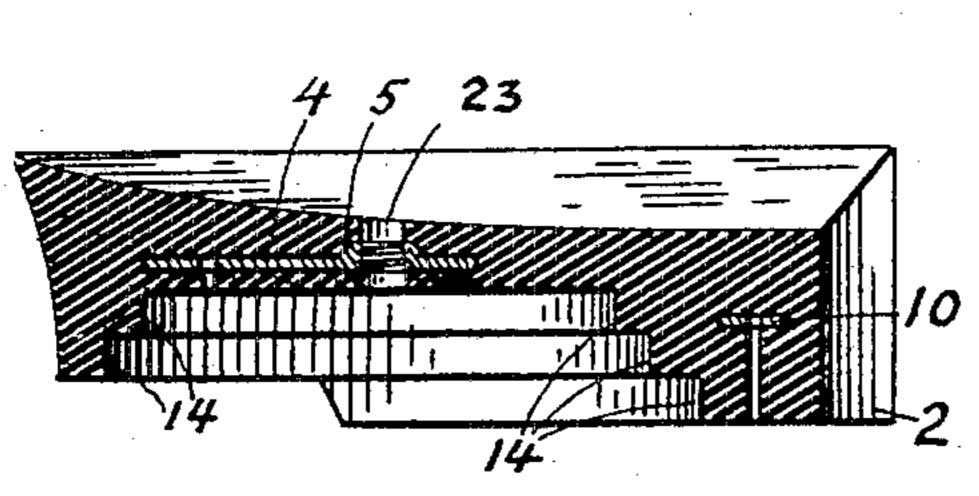
APPLICATION FILED AUG. 15, 1904.

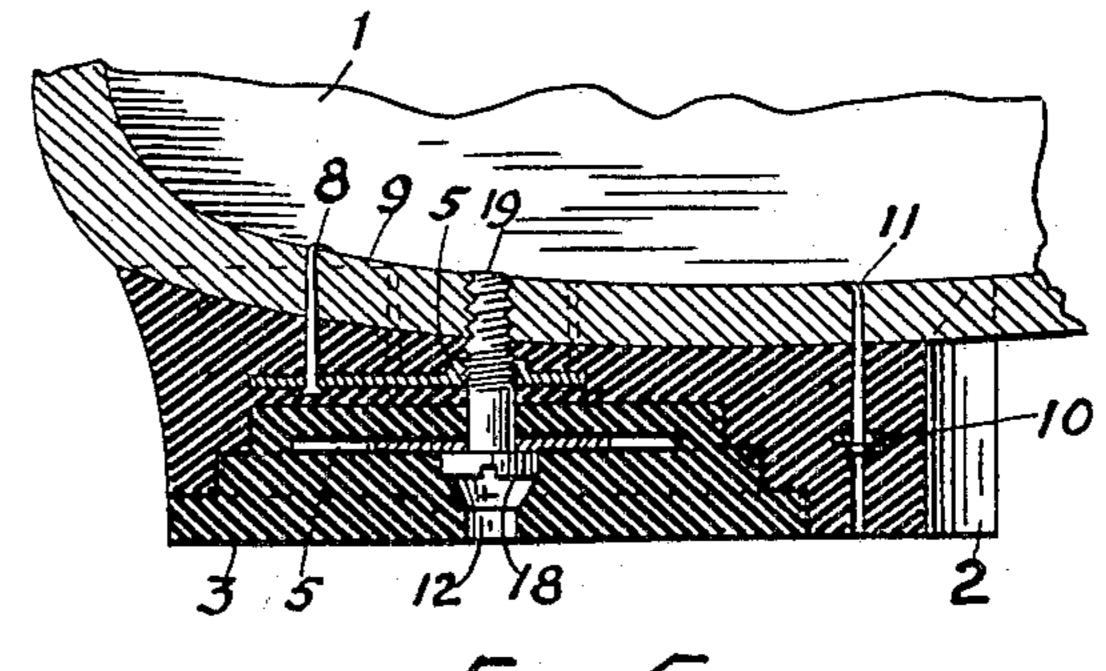
F15.1.



F15.4

FIG. 2





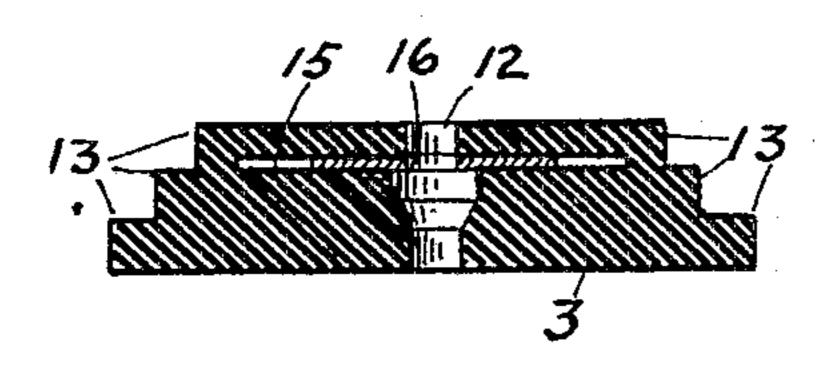
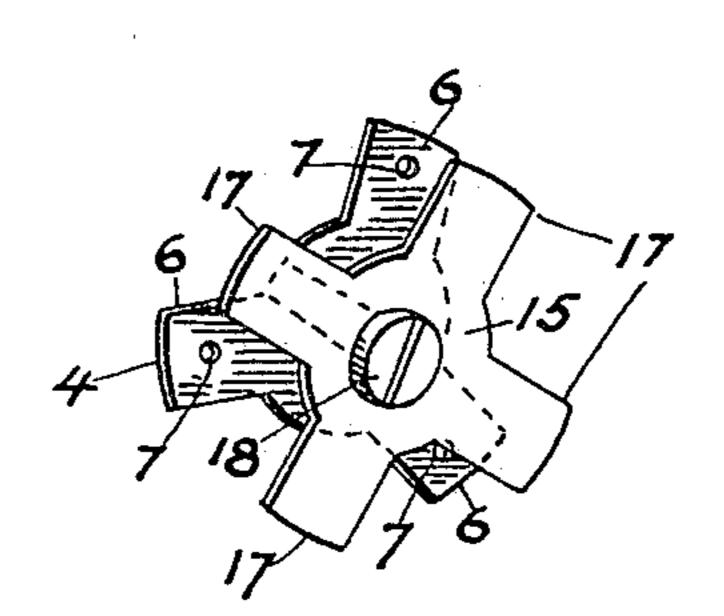


FIG. 3



WITNE55E5:

N. M. Harding Leon Boillo INVENTOR: Uliose Sautini By Fre, Wright Otty.

## ITED STATES PATENT OFFICE.

ULISSE SANTINI, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO SANTINI & CO., A FIRM.

## SEPARABLE HEEL FOR BOOTS AND SHOES.

No. 801,549.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed August 15, 1904. Serial No. 220,692.

To all whom it may concern:

Be it known that I, Ulisse Santini, a citizen of the United States, residing at San Francisco, in the county of San Francisco and 5 State of California, have invented certain new and useful Improvements in Separable Heels for Boots and Shoes, of which the following

is a specification.

My invention relates to improvements in 10 separable heels for boots and shoes, the object of my invention being to so construct a heel that the detachable portion shall be held more securely and immovably than in those heretofore provided, said construction also permit-15 ting the detachable portion of the heel to be turned to allow of its being worn evenly all round.

My invention, therefore, resides in the novel construction, combination, and arrangement 20 of parts for the above ends hereinafter fully specified, and particularly pointed out in the

claims.

In the accompanying drawings, Figure 1 is a perspective view of the heel detached and 25 inverted. Fig. 2 is a vertical section of the fixed section of the heel detached. Fig. 3 is a similar view of the detachable section of the heel, also detached. Fig. 4 is a similar view of the rear lower portion of a shoe with the 30 heel in position. Fig. 5 is a detailed perspective view of the anchor-plates detached.

Referring to the drawings, 1 represents the rear portion of the sole of a shoe, 2 a fixed section of the heel having a cavity in its un-35 der side, and 3 a detachable section thereof fitting in said cavity. Both of these sections are here shown as made of rubber; but they may be made of leather, composition, or any suitable material. The upper section 2 con-40 forms in horizontal configuration to the common fixed heel—that is, it is rounded at the rear and flattened or concave at the front. It has embedded therein a metallic anchor-plate 4, (shown in detail in Fig. 5,) having a circular 45 hub or threaded portion 5 and three wings 6, each apertured, as shown at 7, to permit nails 8 to pass through and secure the plate to the leather sole 9, the ends of said nails being then clenched, as shown. Said upper section of the 50 heel has also small anchor-plates 10 embedded therein near the front edge of the heel, also apertured to receive nails 11, by which the heel is secured to the sole.

The lower section of the heel is made of a

general conical form, having a central hole 12 55 and also having a series of cylindrical steps or shoulders 13, which register with a corresponding series of internal steps or shoulders 14 in the cavity of the upper section. The advantage of this construction of coreg- 60 istering steps is that a better support is provided for the detachable section of the heel within the upper section. The detachable section 3 also has embedded therein a metallic anchor-plate 15, having a central aperture 16 65 and four wings 17. These wings distribute the strain upon the plate.

A screw 18 is passed through the aperture 16 in the plate 15, then through the remainder of the hole 12 in the lower section of the heel, 7° then through a hole 23 in the upper section, which alines with the threaded hub of the plate 4, and is then screwed into the leather of the sole. For this purpose said screw has two threads of different pitch, one of coarse pitch, 19, screwed 75 into the sole-leather, and one of fine pitch screwed into the hub of the metallic plate. It will be seen that with this construction a very firm and secure fastening and support is provided for the heel. In the first place, 80 the upper section of the heel is firmly secured to the sole by means of the three clenched nails 8 through the plate embedded in the heel, also by means of the three clenched nails 11 through the small plates near the front 85 edge of the heel, and also by means of the large screw screwed both into the embedded plate and into the sole-leather; secondly, the lower section of the heel is firmly held within the upper section by means of the screw which 9° binds the two anchor-plates together, these plates being embedded, respectively, in the two sections of the heel and having very extended bearing-surfaces in said sections, and, furthermore, by reason of the step-like contour of 95 the lower section fitting within a corresponding contour in the cavity of the upper portion.

As the lower surface of the heel becomes worn, it can from time to time be adjusted by loosening the screw, turning said lower sec- 100 tion around, thus providing a fresh wearingsurface, and tightening the screw again.

By providing the plate in the upper section with three wings and that in the lower section with four wings the wings are out of register 105 with each other vertically, and thus the elasticity of the heel is not impaired.

It is not necessary that the two sections of

the heel should be made of the same material. Thus a convenient form of construction is that the upper section be made of leather and the lower or rotatable section be made of rubber.

I claim—

1. A heel for boots and shoes comprising an upper section fixedly secured to the leather of the sole, a revoluble lower section, anchorplates embedded in said upper and lower sections and having apertures alining with each other vertically and with the center of the lower section, the apertures of the upper section being threaded, and a screw passed through the aperture of the lower plate and screwed into the aperture of the upper plate, said screw at its upper end entering the leather of the sole substantially as described.

sole, substantially as described.

tially as described.

2. A heel for boots and shoes comprising an upper section fixedly secured to the leather of the sole, a revoluble lower section, anchorplates embedded in said upper and lower sections and having apertures alining with each other vertically and with the center of the lower section, and a screw passed through the aperture of the lower plate and screwed into the aperture of the upper plate, said screw having at its end an upper thread coarser than the lower thread and screwed into the sole-leather, said thread being sufficiently coarse to hold firmly in said sole-leather, substan-

3. A heel for boots and shoes comprising an upper section fixedly secured to the leather of the sole, a lower section, said sections having coregistering circular series of steps or shoul- 35 ders, anchor-plates embedded in said upper and lower sections and having apertures alining with each other vertically and with the center of the lower section, said lower plate having wings to distribute the pressure, and a con-40 nection between said plates through said aper-

tures, substantially as described.

4. A heel for boots and shoes comprising an upper section fixedly secured to the leather of the sole, a lower section, anchor-plates em- 45 bedded in said upper and lower sections and having apertures alining with each other vertically and with the center of the lower section, the plate in the upper section having wings and nails passed through said wings and 50 clenched to the sole-leather, and the plate in the lower section having wings out of register with the upper wings, and a connection between said plates through said apertures, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing wit-

nesses.

U. SANTINI.

Witnesses:

F. M. Wright, E. Annis.