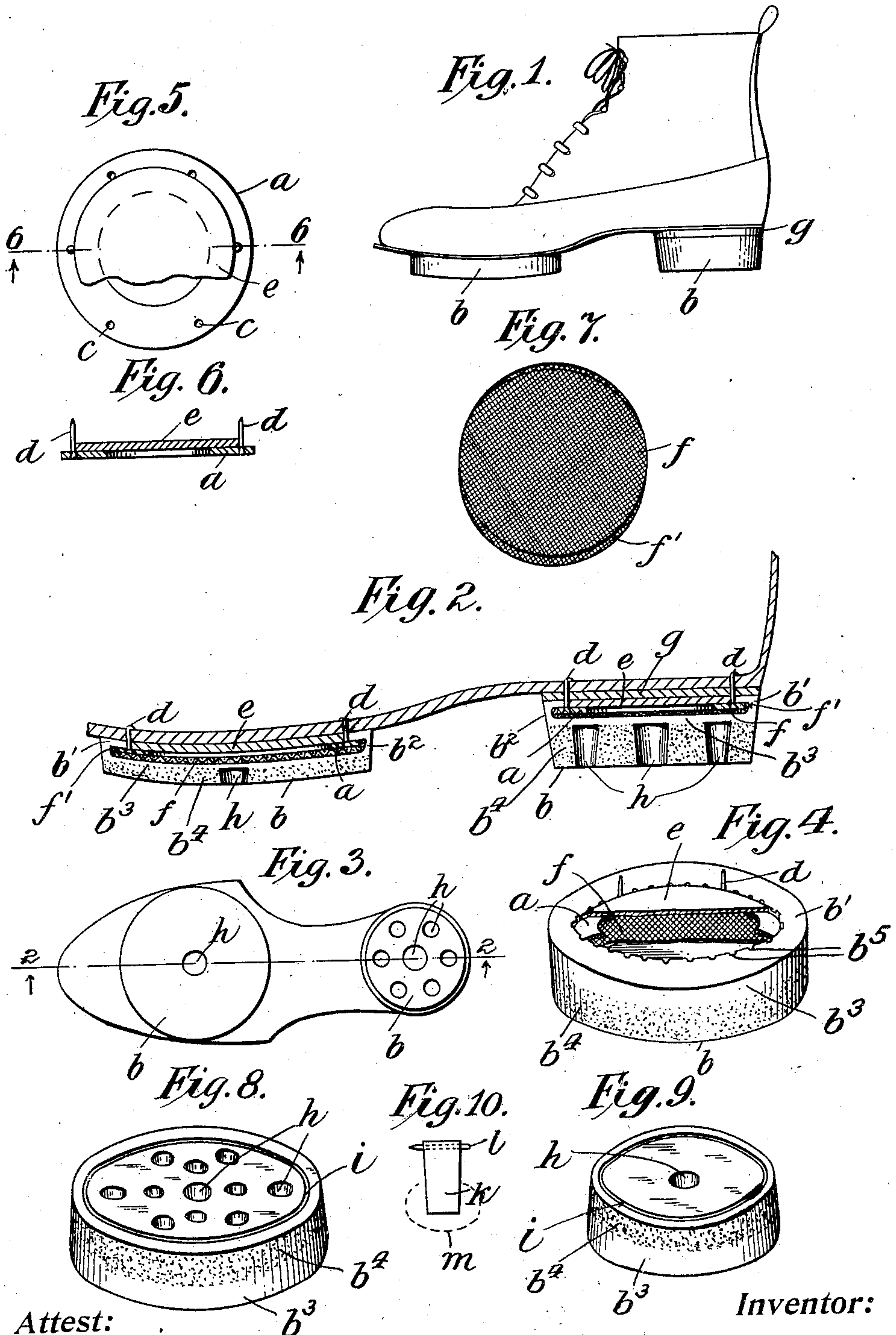


No. 898,145.

PATENTED SEPT. 8, 1908.

J. F. SCHULTZ.  
BOOT AND SHOE.

APPLICATION FILED APR. 26, 1907.



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# UNITED STATES PATENT OFFICE.

JOHN F. SCHULTZ, OF BROOKLYN, NEW YORK.

## BOOT AND SHOE.

No. 898,145

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed April 26, 1907. Serial No. 370,495.

*To all whom it may concern:*

Be it known that I, JOHN F. SCHULTZ, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Round Rotating Heels and Soles for Boots and Shoes, of which the following is a specification.

10 The object of my invention is to lessen the expense for boots and shoes, especially repair expense, for everybody, by providing attachable, round, rotating heel and sole attachments, which every one can easily affix with-  
15 out nails, screws or cement, to original soles or more-or-less built-up heels, as often as necessary, without expense for skilled labor.

With the use of my invention, obviating old ways of resoling, always damaging the  
20 under-edge of uppers, the latter's life is often more than doubled and heels can always be kept straight and level. The invention may be used for heels alone, but for full benefit should also be used for soles, which need then  
25 no renewing, keep dry walking on wet grounds, thereby securing better health.

The invention generally consists of two parts:—a round, flat-metal, nail-holed ring and preferably a resilient tread-member with  
30 a flange adapted to embrace the free edge of said ring, after it is nailed over an intervening smaller lift of leather to the sole or more-or-less built-up heel of a shoe.

Reference is to be had to the accompanying  
35 drawings, which illustrate the preferred embodiment of my invention, in which drawings similar letters refer to similar parts throughout the views.

Figure 1 is a side elevation of a shoe  
40 equipped with my invention on both heel and sole. Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 3. Fig. 3 is a bottom plan view of the shoe. Fig. 4 is a detail perspective of the round heel attachment.  
45 Fig. 5 is a plan view of the round nail-holed, flat-metal ring. Fig. 6 is a sectional view on the line 6—6 of Fig. 5. Fig. 7 shows a perspective view of a disk of woven fabric with its edge turned up. Figs. 8 and 9  
50 show perspective views of undersides of heels. Fig. 10 shows a plug of cork for occasional use in center holes *h* as an additional anti-slipping device.

In Fig. 1 the letter *g* refers to a more-or-

less built-up heel; *b* to the affixed attachment.

In Figs. 2 and 4 the detailed description given of the heel applies also to the sole, only larger and thinner otherwise the same.

Fastened with clenching nails *d* to the  
60 more-or-less built up heel *g* of a shoe, the round metal ring *a* overhangs the intervening lift *e*. Said ring has its free overhanging edge embraced by an annular undercut flange *b'* of the attachment *b*. Said flange is formed  
65 integral with the attachment at the most effectual place: the outmost upper edge, to be sprung over the free edge of ring *a*, thus safely holding the attachment to the metal ring. The inside edge of flange *b'* being in-  
70 dented by notches *b<sup>5</sup>*, to catch on nails *d*, at the outside edge of leather disk *e*, prevents rotating of the attachment by itself, while in use, walking. The notches holding on nails  
75 *d* do not prevent forced rotating by hand of the attachment, to wear away level, while in use, walking. The neck of the flange *b'* lettered *b<sup>2</sup>*, is protected by the turned up edge  
80 *f'* of the woven fabric disk *f* against action of the edge of metal ring *a*. The overhanging part of the flange is left free of the fabric to remain elastic for attaching. Said disk *f* is embedded during vulcanization into the upper or inner end of the attachments *b* and serves principally as its anti-spreading de-  
85 vice.

The resilient tread member *b* is preferably made of two kinds of composition; one of more elastic or purer rubber for the flange with its neck, and enough of the same for sur-  
90 facing the upper or inner end of the tread member, covering all the holes *h*. These parts are shown blank or unmottled marked *b<sup>3</sup>* whereas the lower part *b<sup>4</sup>* is shown mottled and intended to represent a mixed composition of rubber and cut up hemp, cotton etc.,  
95 suitable to make the whole lower part of non-slipping material, the two kinds readily combining during vulcanization. All the holes *h* in all figures may be omitted if *b<sup>4</sup>* is  
100 made of non-slipping material. Otherwise plug *K* of Fig. 10 can be employed for the larger center holes on heels and soles, besides concrete filling for the other holes. All the  
105 holes *h* being tapered with larger inside end diameters than their outside ends, will hold concrete or asphaltum mixture plugs, if patrons of heels desire more durability; even



then the heels will be enough elastic on account of the layer of rubber over the concrete plugs.

Fig. 4 shows the notches  $b^5$ , on the inside edge of  $b'$ , nails  $d$ , on the outside edge of  $e$ ; metal ring  $a$ , and woven fabric disk  $f$  are also partly shown in proper position. The metal ring  $a$  of Fig. 5 is often essential for surrounding the bulging centers of low trimmed down heels and all soles.

Figs. 8 and 9 show perspective views of undersides of heels with and without extra holes  $h$ . The double lined circle  $i$  shows a groove for ornamentation.

Fig. 10 shows a plug of cork, a bottle stopper, with a pointed metal pin through one end of it, for retaining it in the center holes  $h$ . It serves occasionally as an additional anti-slipping device, on walks slippery for rubber from ice and rain. Broken line  $l$  shows the cork may have the shape of a champagne bottle cork, leaving the larger end outside the center holes  $h$ .

What I claim as new and desire to secure by Letters Patent is:

1. In round, rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member; a nail-holed, flat-metal ring; clenching nails and an intervening, round, leather lift; the said metal ring fastened with the clenching nails over said smaller leather lift, to the more-or-less built-up heel or sole of a shoe; the said tread member having at its outmost upper edge a flange integral with it; said flange having its inside edge notched for the purpose described, and being above its neck inwardly overhanging, adapted to embrace the free edge of said metal ring wherewith to rotatably connect it with a shoe.

2. In round, rotating attachments for undersides of shoes, the combination of a round, flanged, resilient tread member; a woven fabric disk; a nail-holed flat metal ring; clenching nails and an intervening, round, leather lift; said metal ring fastened with clenching nails over the said smaller leather lift, to the more-or-less built-up heel or sole of a shoe; the said tread member having at its outmost upper edge a flange integral with it, and having embedded on its upper or inner end and neck of its flange the said woven fabric disk; said flange being above its neck

inwardly overhanging, adapted to embrace the free edge of said metal ring, wherewith to rotatably connect it with a shoe.

3. In round, rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member; a woven fabric disk; a nail-holed, flat, metal ring; clenching nails and a leather lift for spacing the metal ring from the shoe; said metal ring fastened with clenching nails over said smaller leather lift to the heel or sole of a shoe; the said tread member having at its upper edge a notched flange integral with it and in its upper or inner end and neck of its flange the said woven fabric disk embedded; said flange being above its neck inwardly overhanging, adapted to embrace the free edge of said metal ring wherewith to rotatably connect it with a shoe.

4. In round rotating attachments for undersides of shoes, the combination with a shoe of a round, flanged, resilient tread member having its lower part of non-slipping material and its upper part of more elastic substance; a woven fabric disk; a nail-holed, flat metal ring; clenching nails and a round lift of leather for intervening; said metal ring fastened with clenching nails over said smaller, intervening lift, to the heel or sole of a shoe; the tread member having the said woven fabric disk embedded on its upper or inner end and neck of its notched flange; the latter being above its neck inwardly overhanging, thus adapted to embrace the free edge of the metal ring, wherewith to rotatably connect tread-member with a shoe.

5. In round, rotating attachments for undersides of shoes, a round projection on the underside of the shoe; a tread member having an upwardly projecting annular portion adapted to engage the projection on the shoe; a fabric disk lining the upperface of the tread member and the neck of the annular portion, thereby forming an antispreading and protecting member.

Signed at Brooklyn, in the county of Kings, and State of New York this 17th day of April A. D. 1907

JOHN F. SCHULTZ.

Witnesses:

HENRY G. YOUNG,  
JOHN C. HARTUNG.