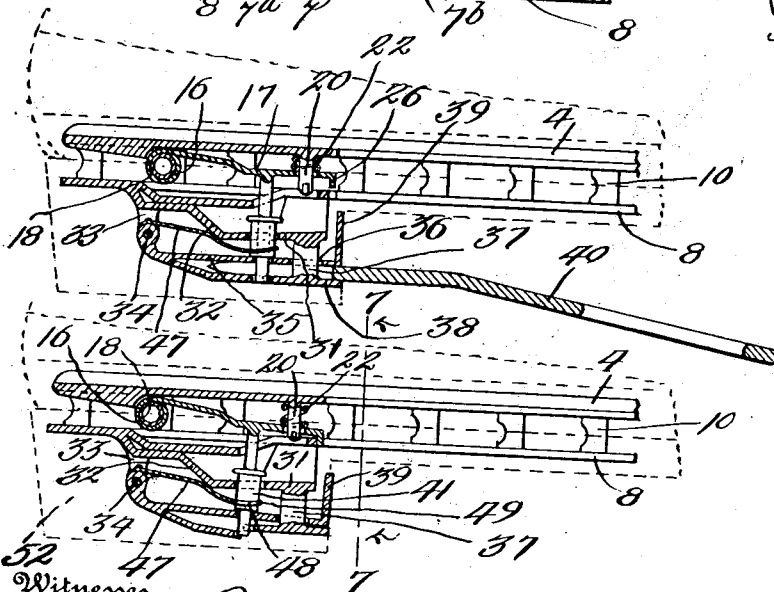
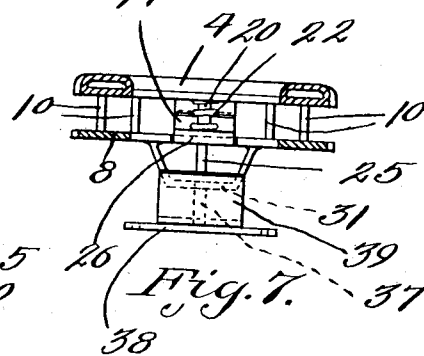
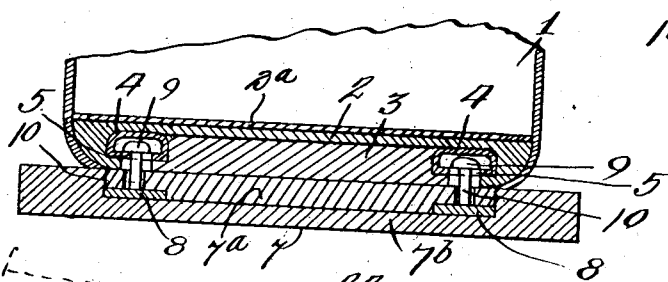
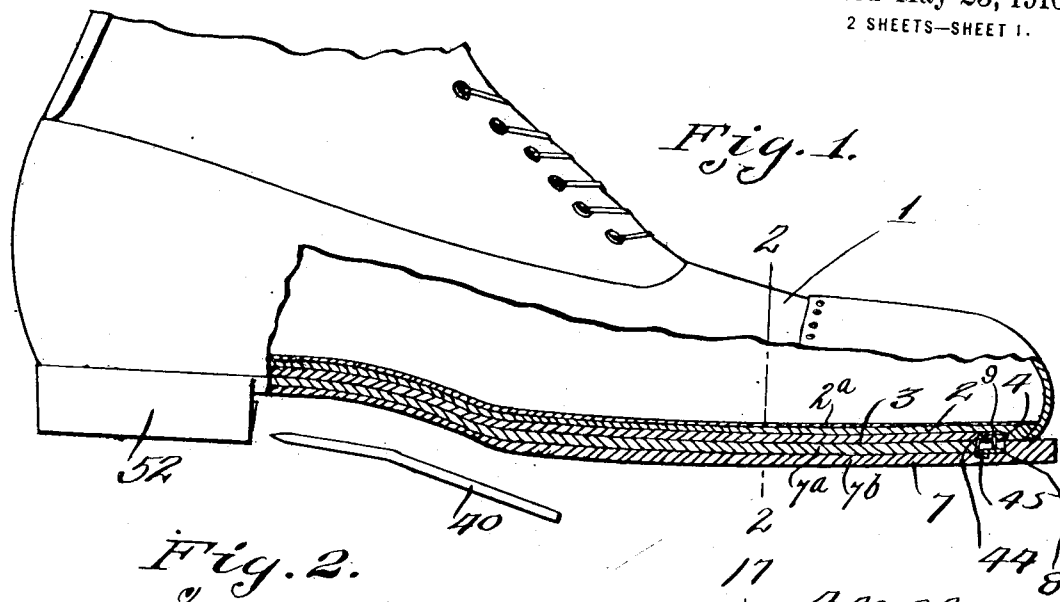


1,184,702.

Patented May 23, 1916.
2 SHEETS—SHEET 1.



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Patented May 23, 1916.
2 SHEETS—SHEET 2.

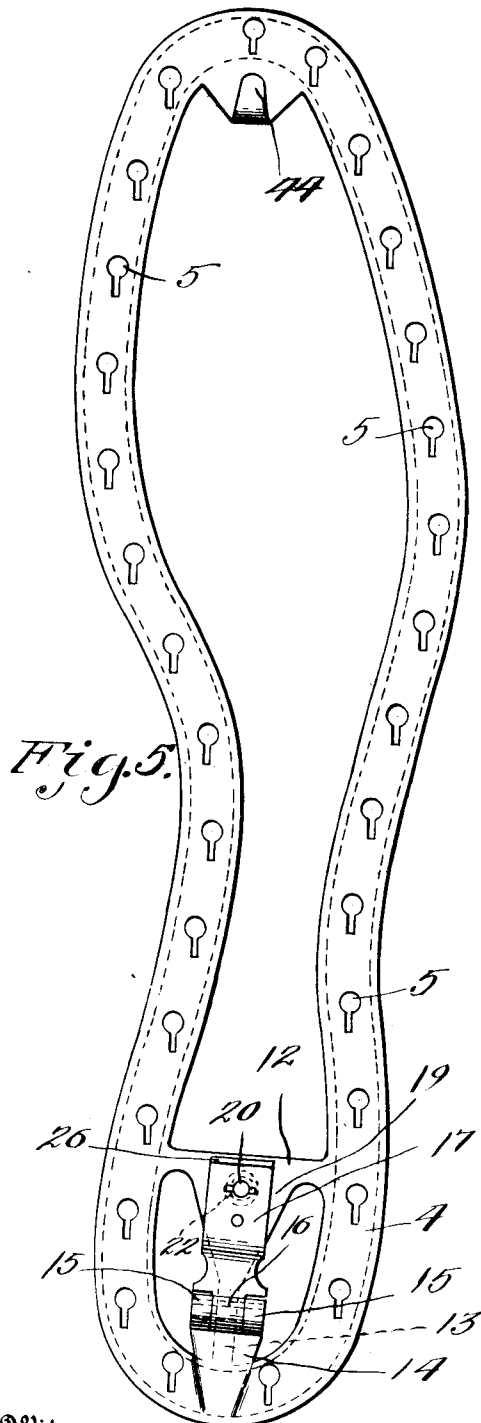


Fig. 5.

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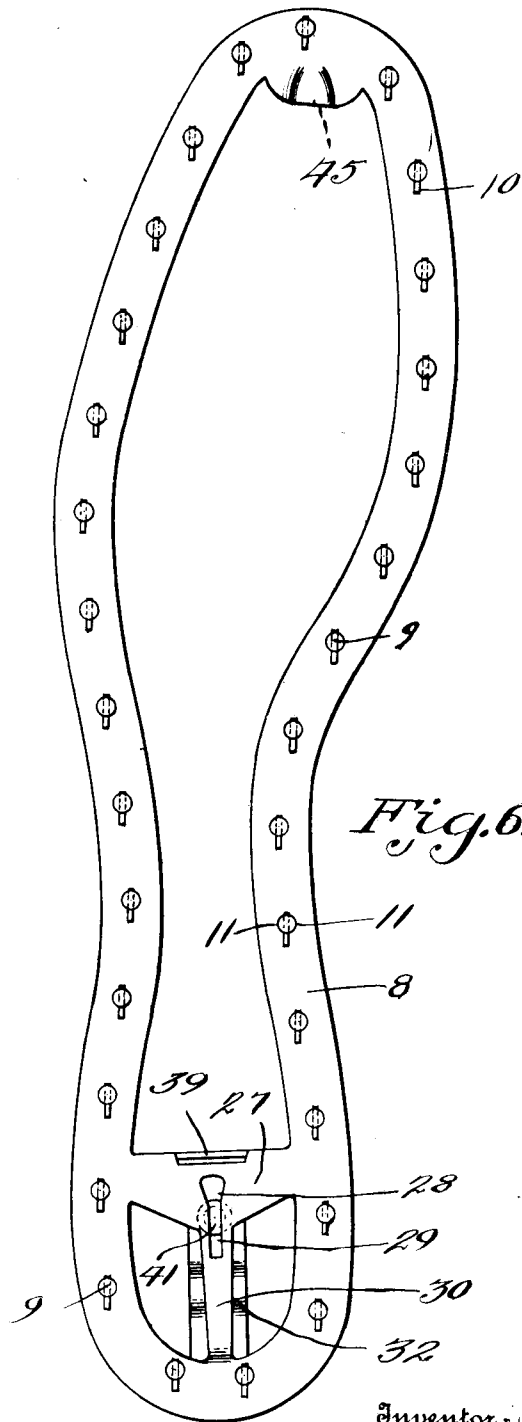


Fig. 6.

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UNITED STATES PATENT OFFICE.

ALOIS STAUBACH, OF CHICAGO, ILLINOIS, AND GEORGE VUNAK, OF BLAIR STATION, PENNSYLVANIA.

DETACHABLE SOLE AND HEEL FOR SHOES.

1,184,702.

Specification of Letters Patent.

Patented May 23, 1916.

Application filed November 10, 1914. Serial No. 871,294.

To all whom it may concern:

Be it known that we, ALOIS STAUBACH and GEORGE VUNAK, citizens of Austria-Hungary, residing, respectively, at Chicago and Blair Station, in the counties of Cook and Allegheny and States of Illinois and Pennsylvania, have invented a new and useful Detachable Sole and Heel for Shoes; and we 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.

This invention relates to the art of shoes, and particularly to an improved detachable sole and heel.

As an object of the invention it is the aim to provide means for enabling a sole and heel to be attached and detached, whereby a leather sole and heel may be removed, and a rubber sole and heel substituted and vice versa, and as required or desired by the wearer.

One of the features of the invention is the provision of a skeleton frame embedded in the inner sole, and a correspondingly shaped skeleton frame embedded in the sole and heel, there being inter-engaging lugs and recesses or depressions for connecting the two frames, and a key controlled lock mechanism for locking the two frames together in such wise as to prevent the lugs and recesses or depressions from accidental disengagement.

In practical fields the details of construction may necessitate alterations, falling within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a longitudinal sectional view through a shoe, showing the same equipped with the improved mechanism for attaching and detaching the sole and heel. Fig. 2 is a transverse sectional view on line 2—2 of Fig. 1. Fig. 3 is an enlarged detail sectional view showing parts in elevation of the two skeleton frames and the locking mechanism between the frames in coöperation, and showing the shoe in dotted lines. Fig. 4 is a view similar to Fig. 3, showing a key inserted, whereby the locking mechanism between the two frames may be unlocked. Fig. 5 is a plan

view of the skeleton frame, which is carried between the inner part of the inner sole and the bottom part of the inner sole. Fig. 6 is a plan view of the skeleton frame having the lugs 9, and which is embedded in the detachable sole. Fig. 7 is a sectional view on line 7—7 of Fig. 3.

Referring more particularly to the drawings, 1 designates the upper of a shoe having an insole, consisting of two parts 2 and 3, which are so constructed and arranged together as shown in the drawing as to receive a skeleton frame 4, in the manner illustrated, which frame 4 is provided with a plurality of recesses or depressions 5. Arranged on the part 2 of the insole is a sock lining 2^a. These recesses 5 are provided with enlarged portions and narrow portions. The sole 7 of the shoe consists of the two parts 7^a and 7^b, the part 7^a being arranged within the part 7^b, and embedded between the two parts 7^a and 7^b is a frame 8 corresponding in shape and contour to the frame 4 and which is provided with a plurality of lugs 9 having narrow portions 10. When the two plates are placed adjacent one another, the said lugs enter the recesses, and the narrow portions 10 engage the narrow parts of said recesses and the extensions 11 engage beyond the narrow portions of the recesses, thereby preventing the two frames from separating. The frame 4 is provided with a transverse bar 12, reinforced by the short longitudinal bar 13 extending to the extreme heel of the frame. Extending slightly forwardly from the under portion of the extreme heel of the frame 4 is an extension 14 terminating in a pair of rolls 15, between which the roll 16 of the latch 17 is pivoted upon the sleeve 18. Where the two bars 13 and 12 are formed integral an enlargement 19 is provided, downwardly from which the pin 20 extends and through the opening of the latch 17. The end of the pin 20 is provided with a head to limit the downward pivotal movement of the latch 17, there being a spring 22 between the enlargement 19 and the latch 17, on which latch a lug 25 is formed. The latch 17 is provided with a downwardly extending flange 26. The frame 8 adjacent the heel thereof is provided with a transverse bar 27 having a recess 28 and an opening 29, which is also formed in the longitudinal bar 30, which integrally connects the ex-

treme heel portion and said bar 27. Mounted upon and secured to the under portion of the bar 27 is an arched plate 31, and extending rearwardly from the arch is an extension 32, bent downwardly toward and secured to the extreme heel of the frame 8 in any suitable manner, such as by soldering. The arched plate may be secured to the bar 27 in any suitable manner, for instance by soldering. The extension is provided with two downwardly extending ears 33, in which a pin 34 is mounted. Pivoted on the pin 34 is a latch releasing member 35, the forward portion of which is provided with a slot 36 through which the neck 37 between the plate 38 and the arch 31 is received. The forward portion of the latch releasing member 35 engages over the plate 38, and is provided at its extremity with an upwardly extending flange 39.

The latch releasing member 35 is provided with a key pocket, to receive the key 40, which is inserted in the pocket between the plate 38 and the latch releasing member, thereby forcing the latch releasing member upwardly, causing the headed pin 41 (which is guided in the opening of the rear extension 32) to contact with the lug 25 of the latch, so as to press the latch upwardly, thereby removing the flange 26 from the path of the bar 27 of the frame 8. After pressing the latch 17 in this manner, a longitudinal forward movement may be imparted to the frame 8, so as to permit the plurality of headed lugs of the frame 8 to disengage said recesses of the frame 4. The lugs and recesses are not only disengaged in this manner, but also the lug 44 of the frame 4 is disengaged from the recess 45 of the toe portion of the frame 8. The headed pin 41 is actuated against the action of the leaf spring 47.

The pin 41 is provided with oppositely disposed recesses or notches 48 to receive the forks 49 of the leaf springs 47, thereby in this manner holding the extension of the pin 41 in the latch releasing member. The key 40 is slotted so as to receive the extension of the pin 41, when the key is inserted in the pocket. As will be observed the latch releasing member, the plate 38 and the pin 41 and the arched plate 31 are substantially embedded in the heel 52 of the sole.

The invention having been set forth, what is claimed as new and useful is:—

1. The combination with a shoe, of a pair of correspondingly shaped skeleton frames, one carried by the inner sole and the other by the outer sole, one of said frames having a series of recesses and the other of said frames having a series of lugs arranged to engage said first-mentioned frame in said recesses for locking said frames together, said frames being adapted to be moved relatively to each other to unlock said frames

and permit the withdrawal of said lugs from said recesses, the frame carried by the outer sole having a keeper bar, the frame carried by the inner sole having a latch arranged to engage said keeper bar to prevent relative movement between said frames, and a pivoted member carried by the heel of the shoe arranged to be actuated to release said latch from said keeper bar.

2. The combination with a shoe, of a pair of correspondingly shaped skeleton frames, one carried by the inner sole and the other by the outer sole, one of said frames having a series of recesses and the other of said frames having a series of lugs arranged to engage said first-mentioned frame in said recesses for locking said frames together, said frames being adapted to be moved relatively to each other to unlock said frames and permit the withdrawal of said lugs from said recesses, the frame carried by the outer sole having a keeper bar, the frame carried by the inner sole having a latch arranged to engage said keeper bar to prevent relative movement between said frames, a pivoted member carried by the heel of the shoe, and a spring associated with said pivoted member, said pivoted member being arranged to be actuated in opposition to said spring by a key to release said latch from said keeper bar and having a pocket to receive the end of said key.

3. The combination with a shoe, of a pair of correspondingly shaped skeleton frames, one carried by the inner sole and the other by the outer sole, one of said frames having a series of recesses and the other of said frames having a series of lugs arranged to engage said first-mentioned frame in said recesses for locking said frames together, said frames being adapted to be moved relatively to each other to unlock said frames and permit the withdrawal of said lugs from said recesses, the frame carried by the outer sole having a keeper bar, the frame carried by the inner sole having a latch arranged to engage said keeper bar to prevent relative movement between said frames, and a pivoted member carried by the heel of the shoe arranged to be actuated to release said latch from said keeper bar, said latch having a downwardly extending pin, the pivoted member having an upwardly extending headed pin to engage the pin of the latch, so that when the pivoted member is moved upwardly, the two pins will co-act to release said latch from said keeper bar.

4. The combination with a shoe, of a pair of correspondingly shaped skeleton frames, one carried by the inner sole and the other by the outer sole, one of said frames having a series of recesses and the other of said frames having a series of lugs arranged to engage said first-mentioned frame in said recesses for locking said frames together,

said frames being adapted to be moved relatively to each other to unlock said frames and permit the withdrawal of said lugs from said recesses, the frame carried by the
5 outer sole having a keeper bar, the frame carried by the inner sole having a latch arranged to engage said keeper bar to prevent relative movement between said frames, said latch having a downwardly extending
10 pin, a pivoted member carried by the heel of the shoe and provided with a key receiving pocket so that said member may be moved upwardly on its pivot by a key inserted in said pocket to release said latch
15 from said keeper bar; and a spring against

which said pivoted member is actuated, said pivoted member having an upwardly extending headed pin to coöperate with the pin of the latch.

In testimony whereof we have signed our names to this specification in the presence of subscribing witnesses.

ALOIS STAUBACH.
GEORGE VUNAK.

Witnesses:

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AUSTIN D. STEVENS.