

No. 726,405.

PATENTED APR. 28, 1903.

J. COFFMAN & G. DORN.
CUSHION HEEL FOR BOOTS OR SHOES.

APPLICATION FILED DEC. 24, 1902.

NO MODEL.

Fig. 1.

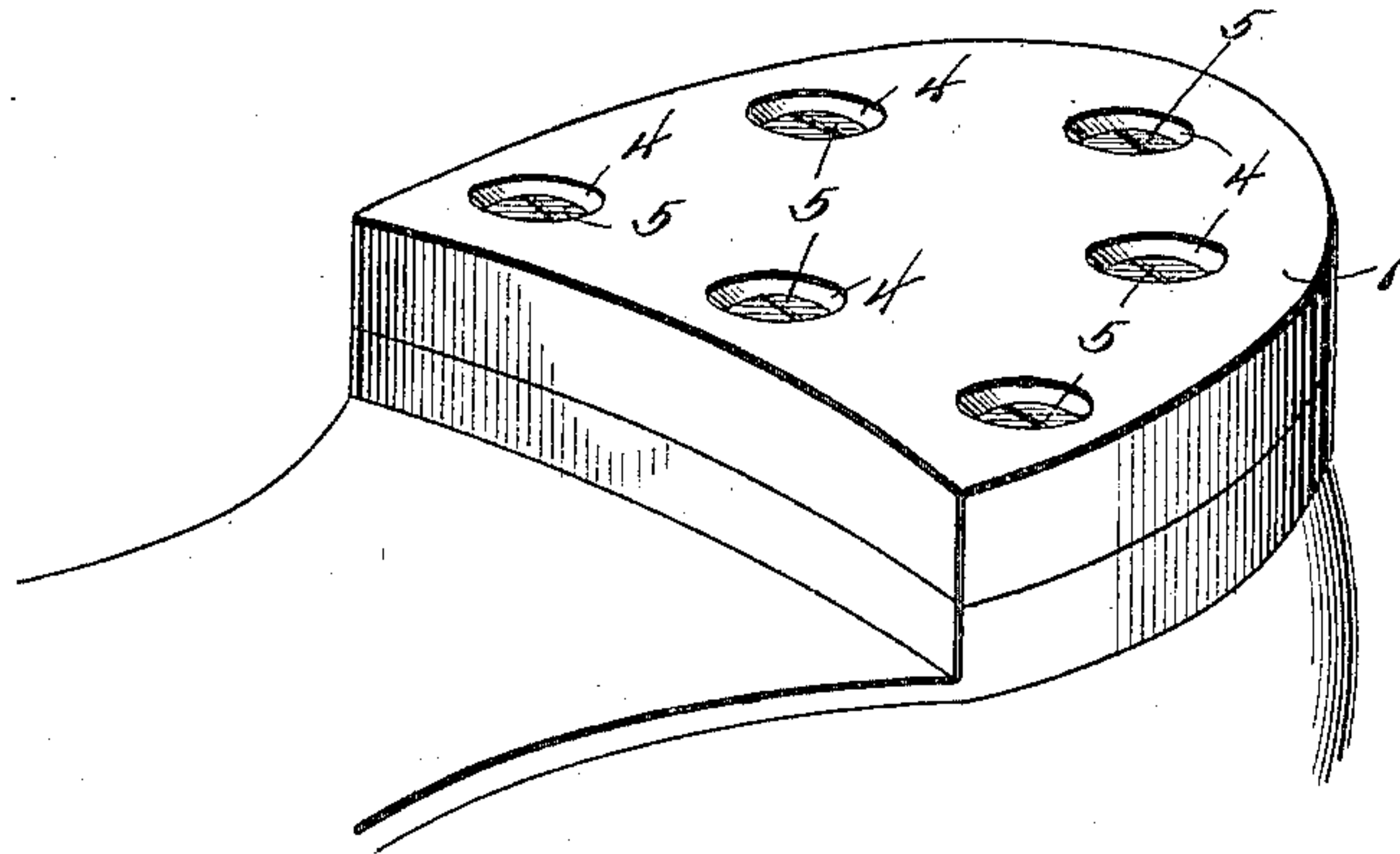


Fig. 2.

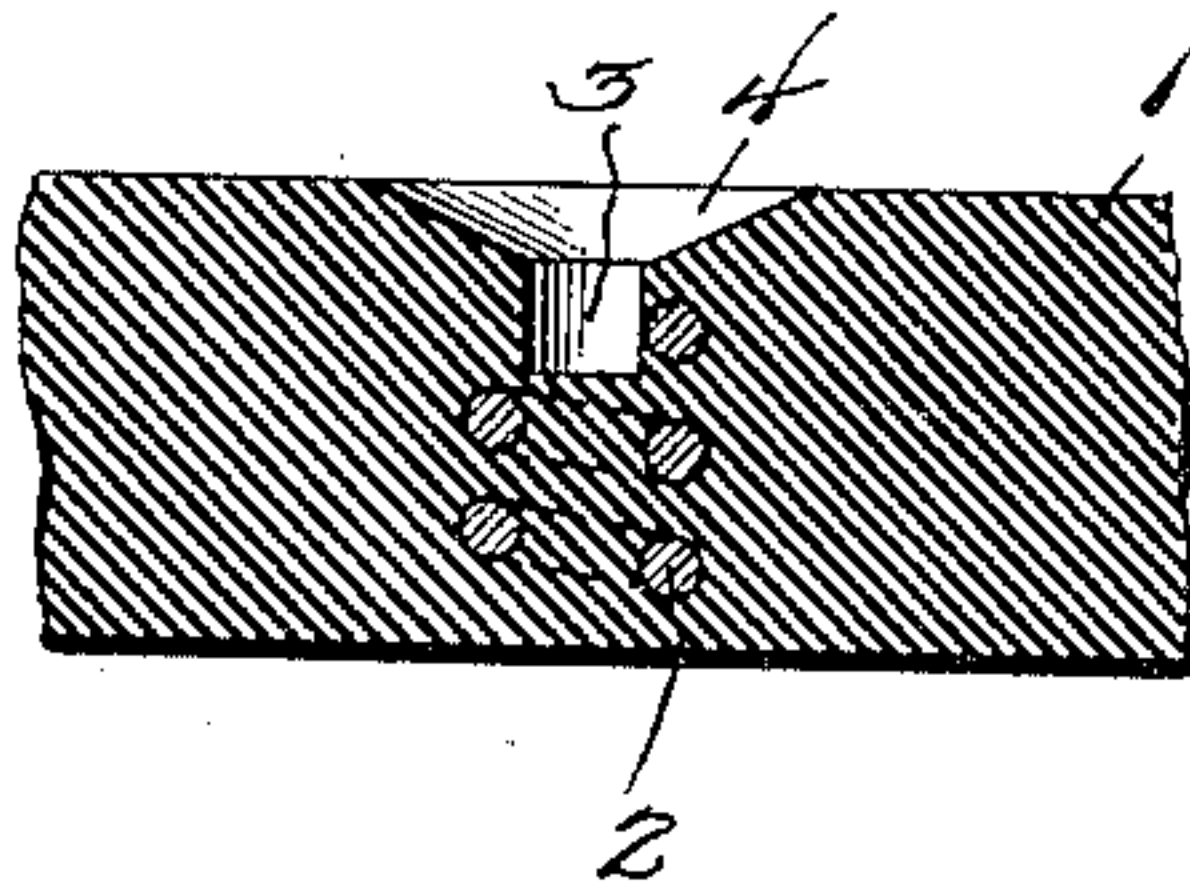


Fig. 3.

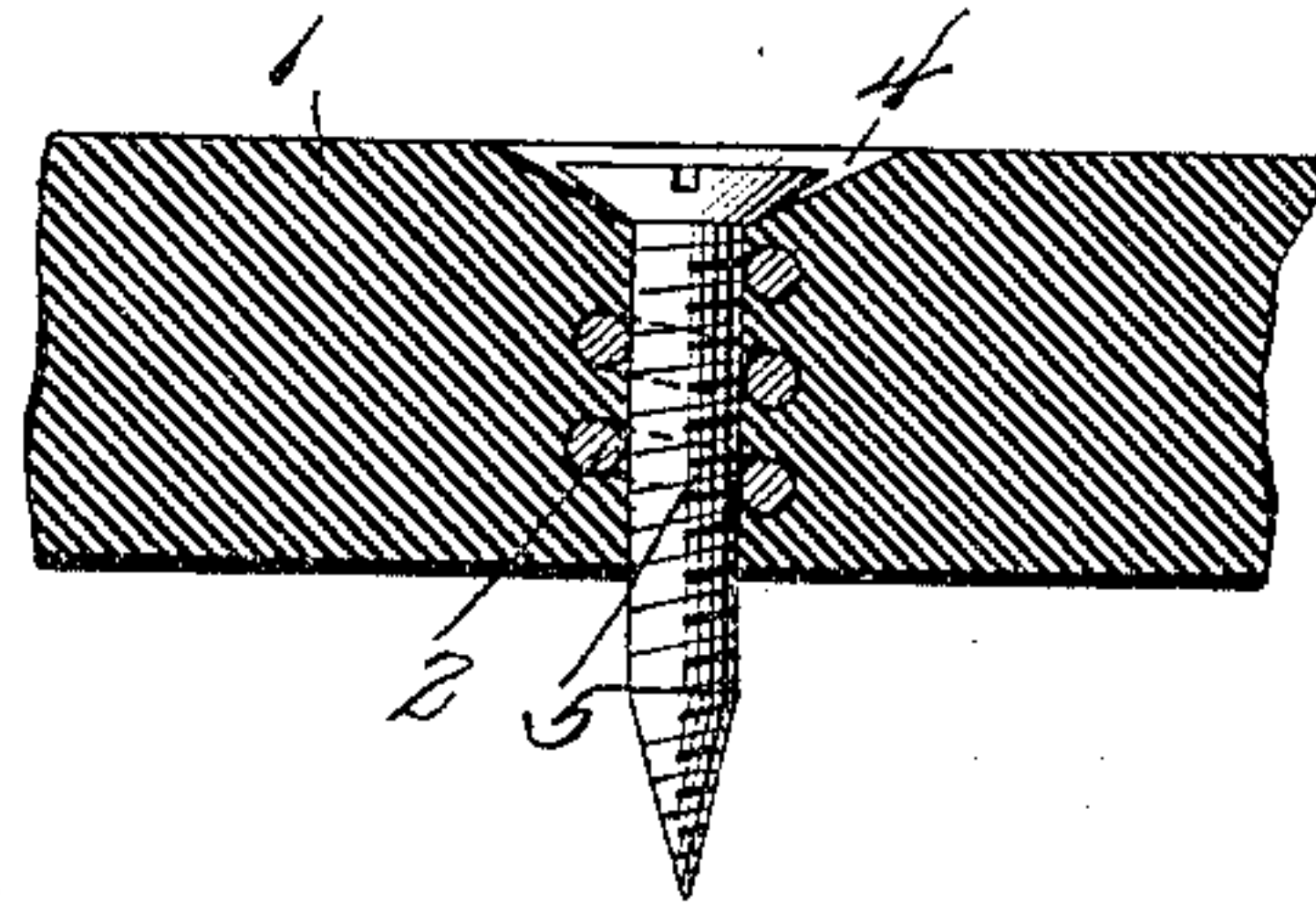
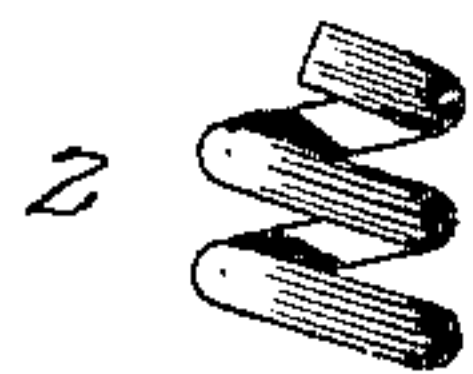


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN COFFMAN AND GEORGE DORN, OF YOUNGSTOWN, OHIO.

CUSHION-HEEL FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 726,405, dated April 28, 1903.

Application filed December 24, 1902. Serial No. 136,430. (No model.)

To all whom it may concern:

Be it known that we, JOHN COFFMAN and GEORGE DORN, citizens of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Cushion-Heels for Boots or 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 sole and heel attaching means for boots and shoes, and has special reference to attaching means of this character possessing special utility in connection with the rubber or cushion heel-lifts which are applied for cushioning purposes, as the top lift for the heel of a boot or shoe.

To this end the invention contemplates an improved fastening or attaching means for effectively securing a rubber lift in position upon the shoe without appreciably interfering with the yielding or cushion effect thereof, besides obviating the prevalent tendency of the ordinary rubber lifts from tearing out and away from their fasteners after becoming slightly worn.

Considerable difficulty is usually experienced in permanently attaching rubber lifts to boots and shoes, inasmuch as when sewing is resorted to the stitches cut the rubber material, while nails, screws, rivets, or equivalent metal fastenings soon grind the rubber body away and the lift quickly becomes loose and easily torn off. Also in the employment of holding-washers, such as have been heretofore used and embedded directly in the body of the rubber, the same frequently pull through the rubber after it has been worn somewhat and allow the entire lift to drop off while the screws remain in the heel of the shoe.

The present invention provides simple means for obviating these objections to the ordinary methods of attaching a rubber lift to a boot or shoe and also provides means for insuring the holding of the fasteners, as well as the holding of the rubber body itself permanently in position until practically worn away.

With these and many other objects in view, which will more readily appear as the nature

of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, which will be hereinafter more fully described, illustrated, and claimed.

The essential feature of the invention involved in the employment of an open skeleton formation of holding-bushing is necessarily susceptible to some modification without departing from the spirit of the invention. The preferred embodiment thereof, however, is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the heel portion of a shoe equipped with a rubber or cushion lift held in place by the attaching means contemplated by the present invention. Fig. 2 is an enlarged detail sectional view of a portion of the rubber or cushion lift, showing a practical arrangement of one of the open spiral-coil holding-bushings arranged in the plane of the fastener-hole. Fig. 3 is a similar view showing a threaded fastener pierced through the body of the rubber material to provide its own hole through the holding-bushing. Fig. 4 is a detail elevation of the preferable form of spiral-coil holding-bushing that is employed in the plane of each fastener-hole.

Like reference-numerals designate corresponding parts throughout the several figures of the drawings.

In a general aspect the invention has in view improved fastening or attaching means for effectively securing a rubber lift, whether for the sole or heel, in position upon the boot or shoe; but as the improvement is specially applicable to rubber lifts of the type commonly known as "cushion" or "rubber" heels the same will be described with particular reference to such use.

Referring to the disclosure of the drawings, the numeral 1 designates the rubber or cushion body made in the general form and sizes of the ordinary rubber or cushion heels and which is intended to be applied to the body of the heel as the top lift thereof. The invention contemplates no change in the manner of forming the rubber or cushion body itself except in the particular of the employment of a holding-bushing 2 in the plane of each fastener-hole.

The distinctive feature of the present invention resides in the holding-bushing 2. This bushing is of an open or skeleton formation and is intended to be embedded or cured
 5 directly in the body of the lift during the process of vulcanization, so that the rubber material will become directly vulcanized or set around within and between the interstices of the bushing. A practical and preferable
 10 form of the bushing is shown in the drawings, the same consisting of an open spiral wire coil whose coils are separated to provide the open formation and which is of such extent as to be located wholly within the rubber or
 15 cushion body between the planes of the opposite surfaces thereof.

As stated, each of the spiral-coil holding-bushings 2 is cured or vulcanized in the rubber body in the plane of each fastener-hole,
 20 and in order to indicate the position for each fastener, so that it may accurately be forced through the bushing cooperating therewith, it is preferable to provide the rubber body in the outer surface thereof with a plurality of
 25 starting-holes 3, extending a sufficient distance into the body to start the fastener in position for passing through the bushing. These starting-holes 3 are usually countersunk at their outer ends, as at 4, in order that
 30 the heads of the fasteners 5 may be carried below the outer tread-surface of the lift.

The starting-holes 3 are each arranged within the plane of a holding-bushing 2, and the fasteners 5 employed are preferably of the
 35 threaded type, such as an ordinary headed screw. These fasteners are preferably of substantially the same external diameter as the internal diameter of the holding-bushings 2, so as to completely fill the bores of the latter
 40 and have a binding fit therein. The fasteners pierce their own hole through the bushing, as well as through the rubber material below the same, and as the said bushings are completely enveloped by the rubber material
 45 between and about the coils thereof the same while receiving the binding stress of the fasteners at the same time hold the rubber body to the shoe and also hold the fasteners themselves without the possibility of the bushings

becoming readily torn out of the rubber material. 50

From the foregoing it is thought that the construction, use, and many advantages of the herein-described attaching means will be readily understood without further description. 55

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof. 60

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. As an article of manufacture a cushion-lift consisting of a rubber body, and a skeleton fastener-receiving bushing having lateral interstices opening into the longitudinal bore of the bushing, the latter being embedded in the body and having its bore and all the interstices filled by the material thereof. 65 70

2. As an article of manufacture, a cushion-lift having a rubber body, and a coiled holding-bushing embedded in and held by the material of said body. 75

3. As an article of manufacture, a cushion-lift having a rubber body, and a spiral-coiled holding-bushing embedded in and held by the material of said body.

4. As an article of manufacture, a cushion-lift having a rubber body, and an open spiral-coiled holding-bushing embedded in and held by the material of said body. 80

5. In combination with a threaded fastener, of a cushion-lift having embedded in the body thereof a spiral-coiled holding-bushing whose coils are separated and having an internal diameter corresponding to the external diameter of the fastener, said bushings being enveloped by and filled with the rubber material of the lift. 85 90

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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