(No Model.)

# J. J. UNBEHEND.

## RIVET ATTACHMENT FOR RUBBER BOOTS OR SHOES.

No. 345,555. Patented July 13, 1886.

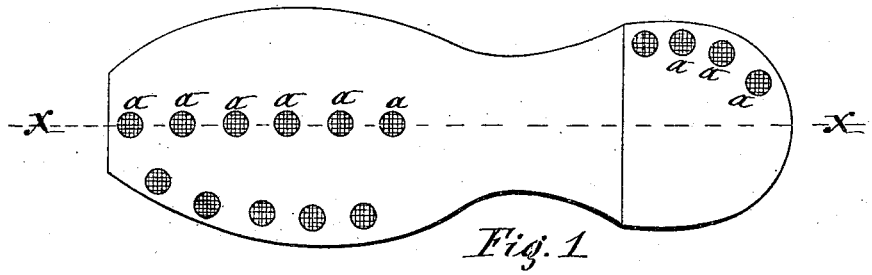


Fig. 1

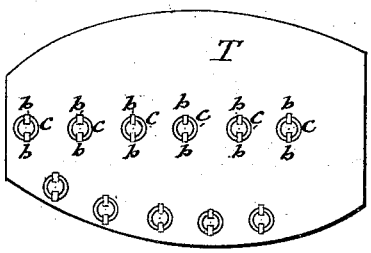


Fig. 2

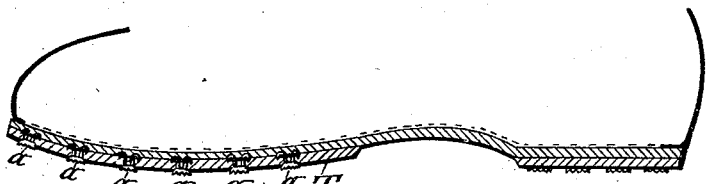


Fig. 3

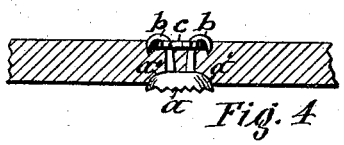

Fig. 4

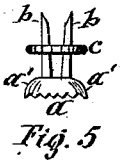

Fig. 5

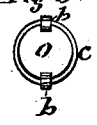

Fig. 6

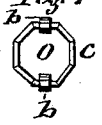

Fig. 7

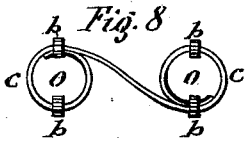

Fig. 8

WITNESSES

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Attys

# UNITED STATES PATENT OFFICE.

JACOB J. UNBEHEND, OF SYRACUSE, NEW YORK, ASSIGNOR TO JUDSON L. THOMSON & CO., OF SAME PLACE.

## RIVET ATTACHMENT FOR RUBBER BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 345,555, dated July 13, 1886.

Application filed March 29, 1886. Serial No. 196,912. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB J. UNBEHEND, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Attachment of Rivets to Rubber Boots or Shoes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the application of rivets to the sole and heel of rubber boots or shoes, to protect the same from wear and abrasion; and the invention consists in an improved construction and combination of a bifurcated rivet and a skeleton washer, upon which the prongs of the rivet are clinched, the skeleton washer being adapted to embed itself in the rubber, and thus become countersunk, so as to obviate undue projection on the upper side of the sole or heel, and at the same time effectually compress the rubber between the washer and rivet-head, and afford a secure hold for the clinching-prongs of the rivet, and, furthermore, leave between the prongs of the rivet and at the center of the skeleton washer a portion of rubber which is integral with the rubber sole or heel, and affords ample means for securely cementing said portion of the rubber sole or heel to the bottom of the boot or shoe.

In the annexed drawings, Figure 1 is a plan view of the under side of a rubber shoe provided with my improved rivets. Fig. 2 is a plan view of the upper side of a shoe-tap containing my improved rivets and their fastenings. Fig. 3 is a longitudinal section on line *x x*, Fig. 1. Fig. 4 is an enlarged sectional view illustrating more fully the application of my invention to a rubber sole or heel. Fig. 5 is a detached side view of my invention. Figs. 6, 7, and 8 are plan views of the skeleton washers, illustrating modifications of its form.

Similar letters of reference indicate corresponding parts.

My invention is adapted to be applied either to the primary sole and heel of a rubber shoe or boot or to a tap, T, as represented in the annexed drawings.

*a* represents the head of a bifurcated rivet. The back of this head is convexed or formed with a sloping circumferential marginal portion, as shown at *a'* in Figs. 4 and 5 of the drawings, for the purpose hereinafter explained.

*c* represents a skeleton metal washer, preferably formed of wire bent into any suitable shape to form an eye or central opening, *o*, in the washer. Three forms of the said skeleton washer are illustrated in the annexed drawings, Fig. 6 showing the form most preferred on account of its simplicity and cheapness of manufacture, Fig. 7 showing the washer of octagon shape, and Fig. 8 two circular washers formed of a single continuous piece of wire. The latter affords a greatly-increased bearing on the rubber; but the intervening portion of the wire which connects the two rings does not readily embed itself in the rubber, and is objectionable on that account.

The described skeleton washer or ring *c* is designed to be of approximately the same circumference as the sloping marginal portion *a'* of the rivet-head, and is placed on the upper side of the sole or heel of the rubber boot or shoe, and the prongs *b b* of the rivet pass through the sole or heel from the under side thereof, and through the eye or central opening of the skeleton washer *c*, and are clinched outward upon said washer, and in the operation of clinching the prongs the washer *c* becomes embedded or countersunk in the rubber, and at the same time compresses and wedges the rubber around the sloping marginal portion *a'* of the rivet-head. Said compression of the rubber renders the same more compact and solid, and thus affords a more secure hold for the washer *c* and prongs *b b*, clinched thereon, and also guards more effectually against the entrance of water through the sole or heel around the rivet-head. Furthermore, the central opening of the skeleton washers exposes ample rubber in the center of said washer to permit of securely cementing said portion of the rubber to the bottom of the boot or shoe.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a rubber sole or heel, a rivet having clinching-prongs extended through said sole or heel from the under side

thereof, a skeleton metal washer on the upper side of said sole or heel, and the ends of the clinching-prongs clinched upon said washer, as set forth and shown.

2. In combination with a rubber sole or heel, a rivet having clinching-prongs extended through said sole or heel from the under side thereof, a skeleton washer having a central opening and placed upon the upper side of said sole or heel, and the clinching-prongs passing through said opening and clinched outward upon the washer, substantially as described and shown.

3. In combination with a rubber sole or heel, a bifurcated rivet having the back of its head convexed and its prongs extended through said sole or heel from the under side thereof, a skeleton washer having a central opening and placed upon the upper side of the sole or heel, and the clinching-prongs passing through said opening and clinched outward upon the washer, as set forth.

4. In combination with a rubber sole or heel, a bifurcated rivet having the back of its head formed with a sloping circumferential marginal portion and its prongs extending through said sole or heel from the under side thereof, a ring on the upper side of the sole or heel and of approximately the same circumference as the aforesaid sloping portion of the rivet-head, and the prongs of the rivet passing through the eye of the ring and clinched outward upon said ring, substantially as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 26th day of March, 1886.

JACOB J. UNBEHEND. [L. S.]

Witnesses:
FREDERICK H. GIBBS,
C. BENDIXON.