J. USTER.

Screws for Heels and Soles of Boots and Shoes.

No. 168,357. Patented Oct. 5, 1875.

Fig. 1.

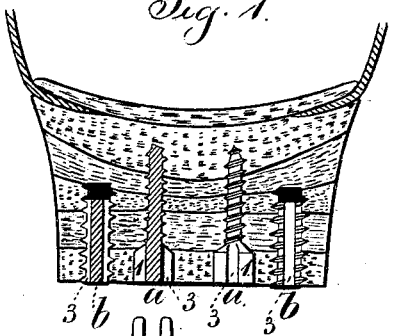


Fig. 2.

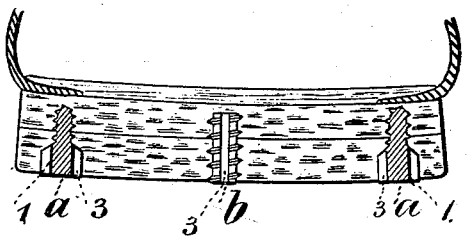
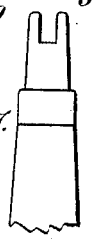


Fig. 7.



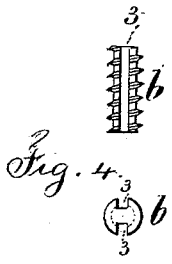


Fig. 4.

Fig. 3.

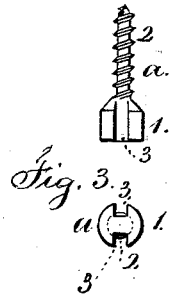
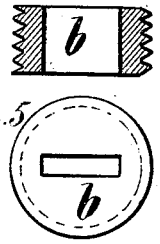


Fig. 5.



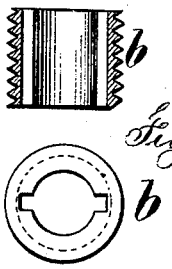


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN USTER, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN SCREWS FOR HEELS AND SOLES OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **168,357**, dated October 5, 1875; application filed March 20, 1875.

To all whom it may concern:

Be it known that I, JOHN USTER, of Brooklyn, E. D., Kings county, and State of New York, have invented an Improvement in Screws for Heels and Soles of Boots and Shoes, of which the following is a specification:

Metallic screws have been inserted into the soles of boots and shoes to protect them from wear, and such screws have been made with a thread upon the cylindrical surface, and in some instances heads have been used to the screws. In these cases the screws have been firmly fixed in place, and could not be unscrewed when worn, or for the purpose of removing the layers of leather, because the groove for the screw-driver is obliterated by wear.

My invention is made for allowing the screws to be removed with facility, whether more or less worn. The primary object of this construction is to allow the screw to be unscrewed and protected from time to time, as the end becomes worn, and thereby the wear will be upon the screw and not so much upon the leather. This will prevent the leather of the sole or heel running down at one side, and wearing unequally.

In the drawing, Figure 1 is a section of the boot-heel transversely. Fig. 2 is a section of the sole. Fig. 3 is an elevation and end view of the screw for attaching the layers of the heel. Fig. 4 is an elevation and end view of the wearing-screws, and Fig. 5 is a section and end view of the wearing-screw in a hollow cylindrical form.

The attaching-screws *a a* are made with cylindrical heads 1 and screw-shanks 2 to penetrate and hold the leather; but instead of making the head with a slot that is obliterated by the wear upon the end of the head, I make two slots, 3 3, in the sides of the head, and parallel, or nearly so, with the axis of the screw, so that said screw can be easily revolved by a screw-driver with two points, as in Fig. 7, whether the screw-head is worn more or less.

Layers of leather can be firmly connected and clamped, or removed and replaced by others whenever desirable, by using the attaching-screws *a a*, because the screws can be easily taken out, so long as the base of the cylindrical head remains.

The slots 3 3 in the cylindrical wearing-screws *b b* answer the same purpose as before named for receiving the ends of the forked screw-driver, and by means of such screw-driver the screw can be turned backward sufficiently to cause its end to project and take the wear in walking, and lessen the risk of the sole or heel becoming unequally worn, and when one set of these screws is worn out others can be inserted in their places.

It will generally be preferable to make these attaching and protecting screws of metal; but when made of horn or similar material the noise is lessened in walking.

A slot may be made across the end of the screw in addition to the longitudinal slots 3, and when horn or similar material is employed there may be a polygonal hole entirely through the screw to receive the screw-driver, as seen in Fig. 5.

By using a large hollow screw, as in Fig. 6, the same may be turned around to bring the higher edge into position to take the heavier wear, and this cylinder may be filled with a plug of wood or rubber.

I do not claim a screw for boots and shoes having a conical point and a tapering body, in which is a screw-thread and a longitudinal channel, as this has been used; but it is not adapted to being unscrewed from time to time as the end wears off, because the tapering body becomes loose in the hole in the leather as it is unscrewed. In my screw the threaded portion is a parallel cylinder, and hence the screw can be turned outwardly at any time without becoming loose in the hole.

I claim as my invention—

The screw for boot and shoe soles or heels, made with longitudinal slots or openings the entire length of the cylindrical portion for the reception of the screw-driver, as set forth.

Signed by me this 16th day of March, A. D. 1875.

JOHN USTER.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.