W. J. WATKINS.

BOOTS AND SHOES.

No. 189,819. Patented April 17, 1877.

Fig. 1.

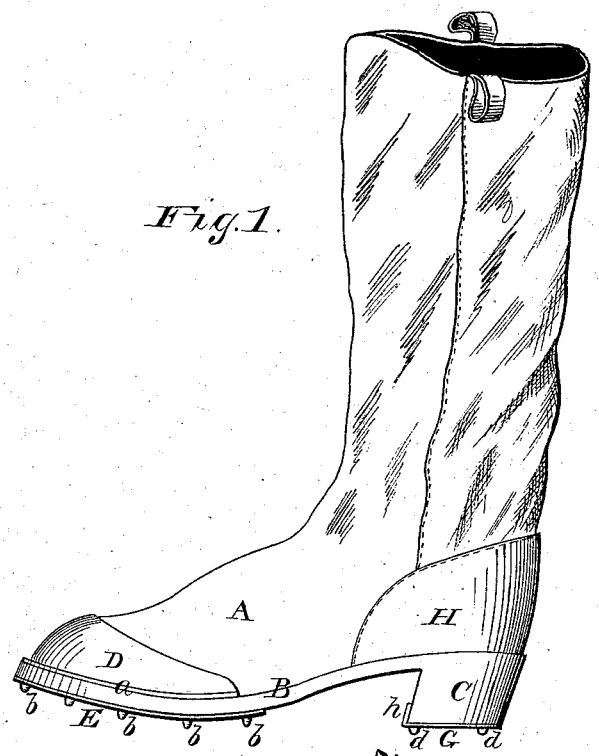


Fig. 2.

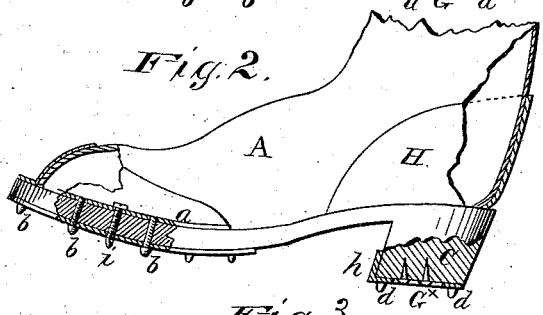
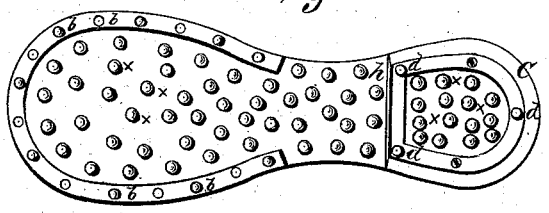


Fig. 3.



WITNESSES

F. L. Durand

C. H. White

INVENTOR

Wm. J. Watkins.

T. H. Alexander

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM J. WATKINS, OF MAHANOY CITY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH HUGHES, OF SAME PLACE.

IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. **189,819**, dated April 17, 1877; application filed October 17, 1876.

To all whom it may concern:

Be it known that I, WILLIAM J. WATKINS, of Mahanoy City, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in the Construction of Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates particularly to miners' boots; and it consists in the means for protecting and strengthening the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my improved miner's boot. Fig. 2 is a partial section of the same, and Fig. 3 is a bottom view thereof.

A represents the foot, B the sole, and C the heel, of a heavy boot, such as are used by miners. At the toe of the boot is a tip, D, made of brass, as the sulphur or mine water will not affect it nor rust it as it will iron. Under the sole B, around the edge, is a steel plate, E, as shown. The tip D is formed with a flange, *a*, around its edge, which lies on the projecting edge of the sole B. *b b* are rivets passing through said flange and sole, and through the steel plate E underneath, and riveted fast into both metals, thereby binding the sole tight, and preventing it from getting soft and swelling in water. These rivets are of steel, and the heads will serve as sprigs or catches underneath the toe to aid the miner in climbing up heavy pitching veins.

Under the heel C, around the edges, is a plate, G, also provided with sprigs *d d*, to prevent slipping, &c. This plate is cut out of sheet-steel, and is formed with a flange, *h*, extending across the fore part of the heel, which is of great importance as it prevents the coal from cutting and wearing the heel. Without this flange the coal and other things would have a good hold upon the tacks at the edge of the heel, and one after another they are all kicked out. This plate will also protect the heel from wearing one side before the other.

On the outside of the counter of the boot is sewed a heel-stiffener, H, of sole-leather, to protect the counter from the cutting of the coal, &c. The ends of this piece are extended past the side seams toward the hollow of the foot for two reasons.

By setting the ends in the seams and sewing them there the seams would become too bulky and hurt the sides of the foot or ankle, and it prevents water from working in at those places.

Instead of the rivets *b* I may use steel screws *i*, which can be attached quicker, and in such case the heads of the screws would be up, and the points extend through the steel plate E about one-sixteenth of an inch, so as to act as sprigs to prevent slipping. The sole and heel are provided with a number of studs, *x*, as is usual in this class of boots.

This invention is applicable not only to miners' boots, but also to any heavy working boots and shoes.

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

1. In combination with a boot or shoe, the brass tip D, with flange *a*, the bottom steel plate E, and rivets or screws passing through the sole and said metal parts, as and for the purposes herein set forth.

2. The horseshoe-shaped heel-plate G, formed of sheet metal, with the flange *h*, to extend across the breast of the heel, and provided with sprigs *d*, as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM J. WATKINS.

Witnesses:

JOSEPH HUGHES,

JOHN HUGHES.