M. ROBLING.

Boots and Shoes.

No. 168,051. Patented Sept. 21, 1875.

FIG. 4.

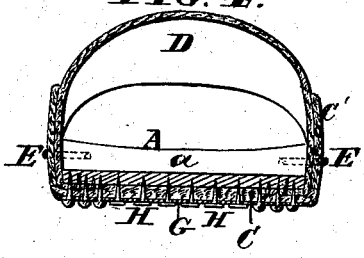


FIG. 1.

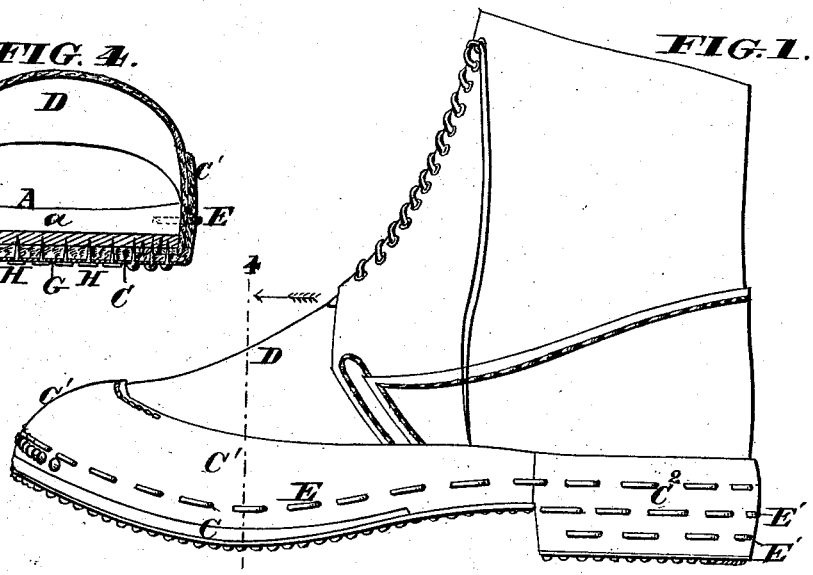


FIG. 5.

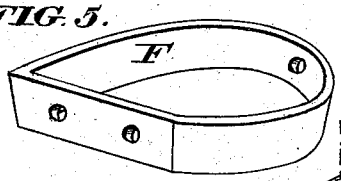


FIG. 2.

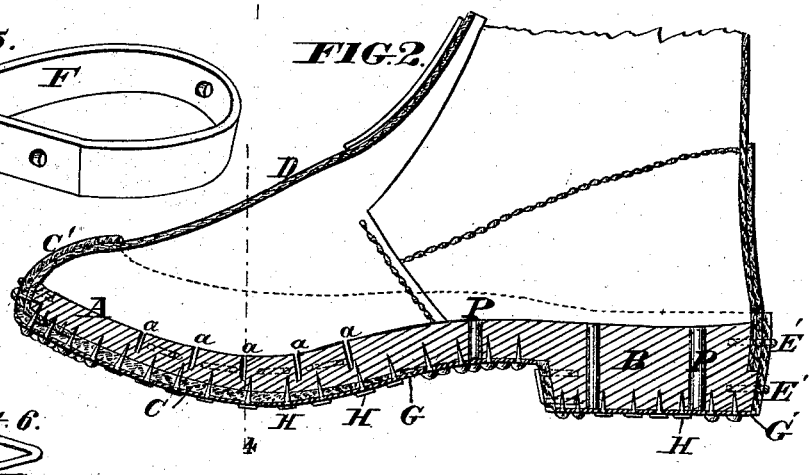


FIG. 6.

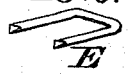
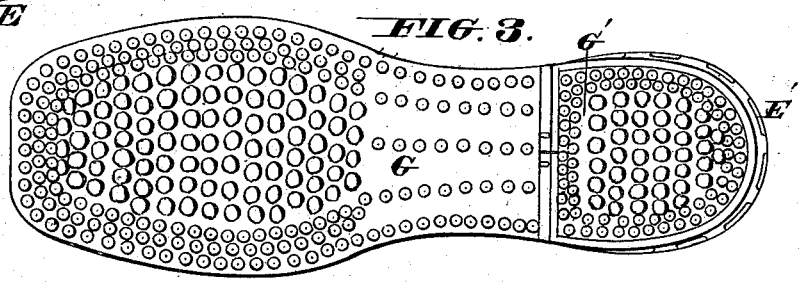


FIG. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

MATHIAS ROBLING, OF SCRANTON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO PETER ROBLING, OF SAME PLACE.

IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. **168,051**, dated September 21, 1875; application filed June 18, 1875.

To all whom it may concern:

Be it known that I, MATHIAS ROBLING, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Boots and Shoes, of which the following is a specification:

The invention relates to boots and shoes with soles made in part of wood, and, under the illustration hereinafter described, is designed primarily and especially for miners' shoes.

The invention consists in cutting a number of parallel transverse grooves or slits from the upper surface of the sole, penetrating nearly to the lower surface to impart flexibility under the ball of the foot.

The invention further consists in combining with a wooden sole, constructed as above set forth, an outer casing of sole-leather, covering this with copper or other sheet metal, securely nailed thereon, incasing the lower part of the upper with a band of sole-leather, and securing the said casing-band to the wooden sole by horizontal staples, said staples being, at the grooved portion of the sole, so applied as not to span or cross the grooves, so as not to impair the flexibility of the grooved sole. The wooden heel is incased in a metallic band, secured by nails, screws, or rivets. As a substitute for this band a sole-leather band may be applied around the heel.

In the accompanying drawing, Figure 1 is a side elevation of a miner's shoe, illustrating the invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is an under-side view. Fig. 4 is a transverse section on the line 4, Figs. 1 and 2. Fig. 5 is a perspective view of a metallic heel-casing. Fig. 6 is a perspective view of one of the attaching-staples.

In a cheap shoe of the kind shown, the main body of the sole A and heel B are made in one piece of elm or other suitable wood, which has great capacity for absorbing moisture, and possesses the peculiarity of acquiring great ductility when moist. To increase the flexibility of the sole a number of parallel transverse grooves, *a*, are cut from the upper surface, as shown in Fig. 2, nearly to the lower part, leaving the bottom of the sole intact. C represents a covering of sole-leather applied over the lower surface of the sole beneath the toe and ball of the foot A, and extended upward, C, over, and around the lower portion of the upper D, so as to protect the latter from wear and the rough usage to which this portion of the shoe is exposed when in use by miners. The upper portion of the sole-leather casing C^1 is stitched to the upper B in front, as shown in Fig. 1. The entire casing is secured to the sole A and heel B by horizontal staples E extending completely around the sole and heel, so applied as not to cross or span the grooves or slits *a*. One of these staples is shown detached at Fig. 6. The sole-leather casing C^1, or a separate sole-leather band, C^2, may extend downward, so as to completely cover the vertical sides of the heel, as shown in Figs. 1 and 2, being secured thereto by additional rows of staples E′, or, if preferred, a metallic rim or casing, F, Fig. 5, may encircle the lower part of the heel. The under surfaces of the sole and heel are completely covered by sheets of copper G G′, secured thereto by nails H, which are applied in sufficient numbers to take the wear. The sole is drilled and plugged with wood to prevent the sole from splitting. The heel-plugs give additional strength at that point.

The following is claimed as new:

1. The combination of the wooden sole and heel A B, with transverse grooves or slits *a*, the sole-leather casing or foxing C^1, the upper D, and the horizontal staples E E′, applied as specified, to secure the parts together without crossing or spanning the grooves *a*.

2. The combination of the wooden sole A B, sole-leather casing or foxing C^1, and sheet-metal covering G, as set forth.

In testimony of which invention I have hereunto set my hand this 20th day of May, 1875.

M. ROBLING.

Witnesses:
WALTER ALLEN,
CHAS. J. GOOCH.