

(No Model.)

W. T. MILHOLLAND.

METALLIC SOLE FOR BOOTS OR SHOES.

No. 330,140.

Patented Nov. 10, 1885.

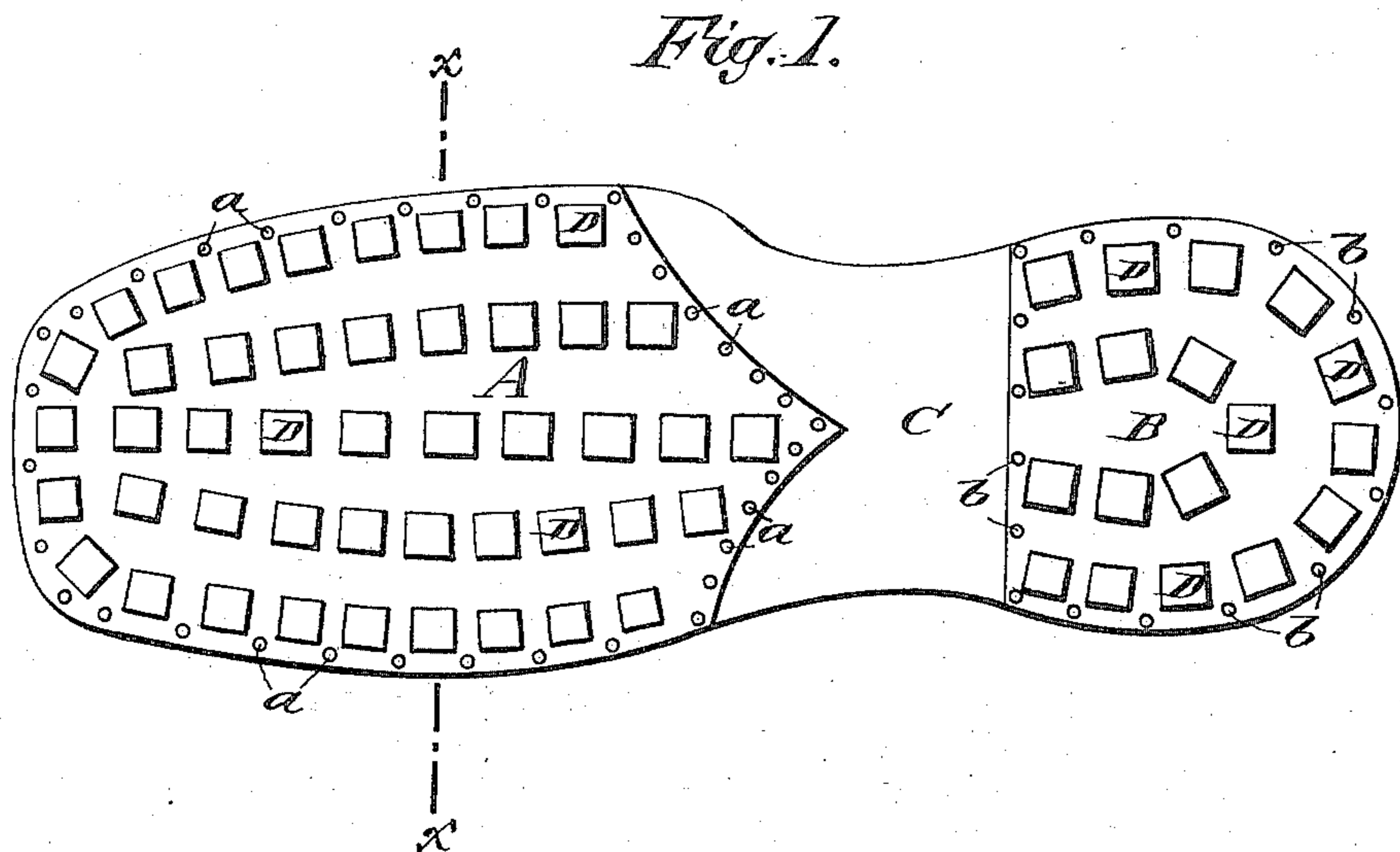
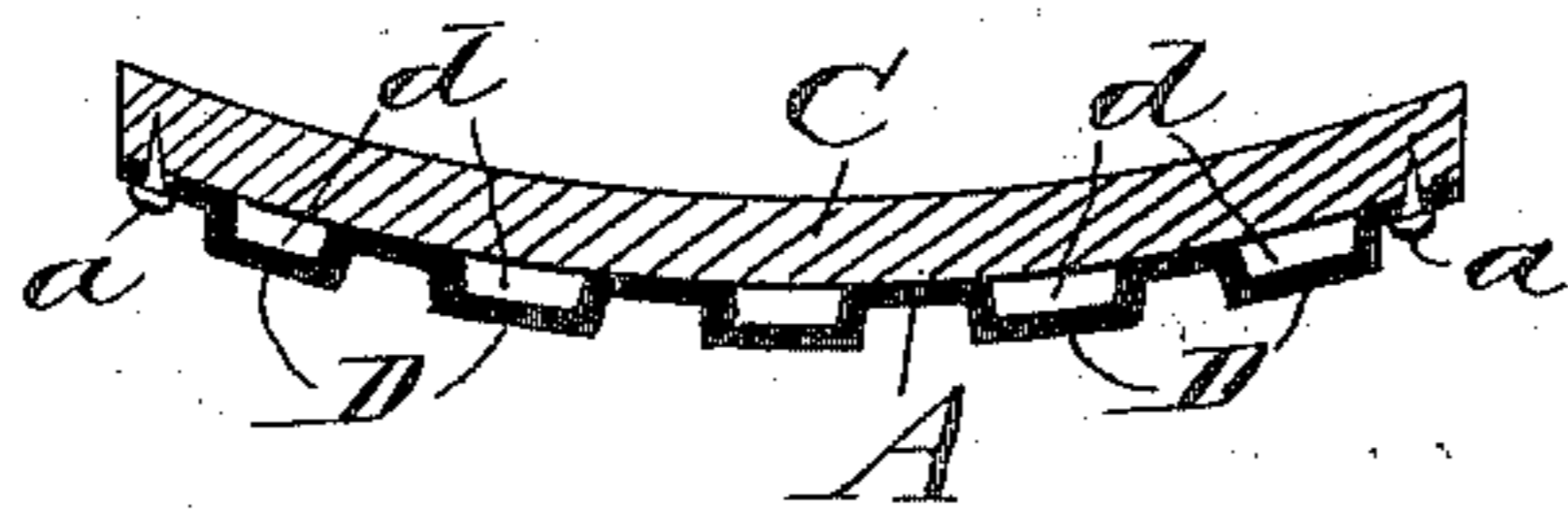


Fig. 2.



WITNESSES:

Wm. Meyer
C. Sedgwick

INVENTOR:

W. T. Milholland

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM T. MILHOLLAND, OF McKEESPORT, PENNSYLVANIA.

METALLIC SOLE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 330,140, dated November 10, 1885.

Application filed February 25, 1885. Serial No. 157,036. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. MILHOLLAND, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Metallic Sole for Boots or Shoes, of which the following is a full, clear, and exact description.

The object of my invention is to protect the soles of boots or shoes worn by mill-men or miners from the heat radiated from the floors of the mill or mine; also, to prevent injury to the feet from the heat, and to increase the durability of the boots or shoes.

The invention consists in metallic sole-plates adapted for attachment to the ordinary soles of the boots or shoes, and provided with projections from their outer faces, which projections inclose air-spaces, the metallic sole-plates having marginal perforations through which the fastening nails or screws pass, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a bottom view of a boot or shoe with my improved metallic sole-plates applied; and Fig. 2 is a cross-section through the boot-sole and the outer metallic sole-plate, taken on the line *x x*, Fig. 1.

The letters A B indicate, respectively, the metallic sole and heel plates, which are applied beneath the leather or ordinary sole, C, of the boot or shoe, and are fastened thereto by nails or screws *a b* passing through holes near the margins of the plates, as shown.

I make the plates A B with a series of projections, D, which are pressed, rolled, or stamped outward from the body of metal of the plates, so that an air-space, *d*, is formed between each of the projections D and the leather sole C of the boot.

It is evident that the air-spaces *d* have a direct tendency to keep the leather sole C cool, and consequently prevent overheating of the foot of the wearer of the shoe while he stands on hot plates or floors in metal-rolling mills or

in mines or other places, and the shoe-sole C will not be quickly cracked by the heat, owing to the protection afforded by the sole-plate, which covers the outer surface of the sole; hence my improved sole-plates have obvious advantages over the use of hob-nails inserted in leather soles, as these nails conduct the heat to the leather and to the wearer's foot, and do not protect the leather sole from the heat, and are constantly falling out, and make the shoe colder to wear in winter.

My improved sole-plates are not to be confounded with sole-plates having projections stamped out from the plates and open at their tops to form burrs, as these latter plates allow the heat to pass through the projections directly to the leather sole, while in my plates the tops of the projections D are imperforate and exclude the heat of the floor from the air-spaces *d* behind or back of them, and consequently afford better protection to the shoe-sole and to the foot.

The plates A B may be made of any desired size and thickness, by any preferred process, and will effectually protect the ordinary sole until the tops of the projections D are worn away.

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

1. As an improved article of manufacture, a metallic sole-plate for boots and shoes, consisting of a plate provided with closed hollow projections on its outer face, the said projections being struck from the body of the metal of the plate, as set forth.

2. The combination, with the sole C of a boot or shoe, of a metallic sole-plate having imperforate projections D, substantially as described, whereby, when the said plate is secured to the sole by suitable fastening devices, dead-air spaces *d* are formed, as set forth.

WILLIAM T. MILHOLLAND.

Witnesses:

ROBERT E. LEE,
SAMUEL S. WOOD.