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C. V. Littlepage, Electric Foot Warmer.

PATENTED MAY 17 1870

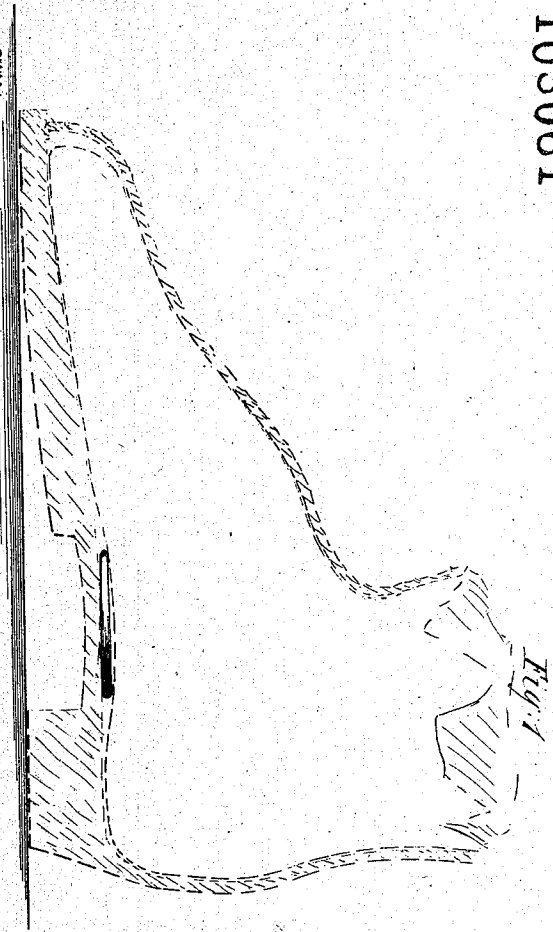


Fig. 1



Fig. 2

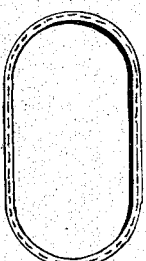


Fig. 3

Witnesses:

Wm. H. Brooks
John A. Tate

Inventor:

C. V. Littlepage
PER *Wm. H. Brooks*
Attorney.

United States Patent Office.

CALEB V. LITTLEPAGE, OF AUSTIN, TEXAS.

Letters Patent No. 103,061, dated May 17, 1870.

IMPROVEMENT IN ELECTRIC FOOT-WARMERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CALEB V. LITTLEPAGE, of Austin, in the county of Travis and State of Texas, have invented a new and improved Electric Foot-Warmer; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to electric foot-warmers, and consists in a detachable voltaic sole, of suitable form, to be located in the hollow of the foot.

Figure 1 represents a sectional elevation of a shoe and foot, showing the application of one of the pairs of plates.

Figure 2 is a transverse section through one of the pairs, and

Figure 3 is a plan view of the same.

Similar letters of reference indicate corresponding parts.

It is found by practical experiment that a small voltaic pair of plates of zinc and copper, or other suitable metal worn in the shoe, will, by the chemical action of the acid arising from the perspiration, generate galvanic currents, which, being given off to the feet, will intensify the circulation, and warm and invigorate the feet, lower limbs, and other parts of the body; and I therefore propose to make use of such batteries in this way for the purpose of warming the feet in cold weather.

I cover them on one side with thin cloth, or other

substance, to prevent the feet from direct contact with the metal, and I use them either under the stocking or inside of it, and at the hollow part between the heel and the ball.

I have found that, when worn in this way, intermittent currents will be given off to the feet and legs, as the connections of the feet with the plates are closed and broken in walking.

The strength of the currents may be varied by varying the size of the plates or number in the battery.

Either the zinc or copper plates may be worn uppermost, and good results may be obtained by wearing one of each kind uppermost or against the foot.

In making these plates, I connect them together by turning the edge of one over the other, and, at the same time, secure the cloth covering by folding the edge thereof under the edge of the plate turned over.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

A detachable electric sole plate, of the form shown in figs. 2 and 3 of drawing, the plates and cover being connected and attached together, and the article being shaped to fit beneath the hollow of the foot, all as specified.

The above specification of my invention signed by me this 4th day of November, 1869.

C. V. LITTLEPAGE.

Witnesses:

GEO. W. MABEE,
ALEX. F. ROBERTS.