

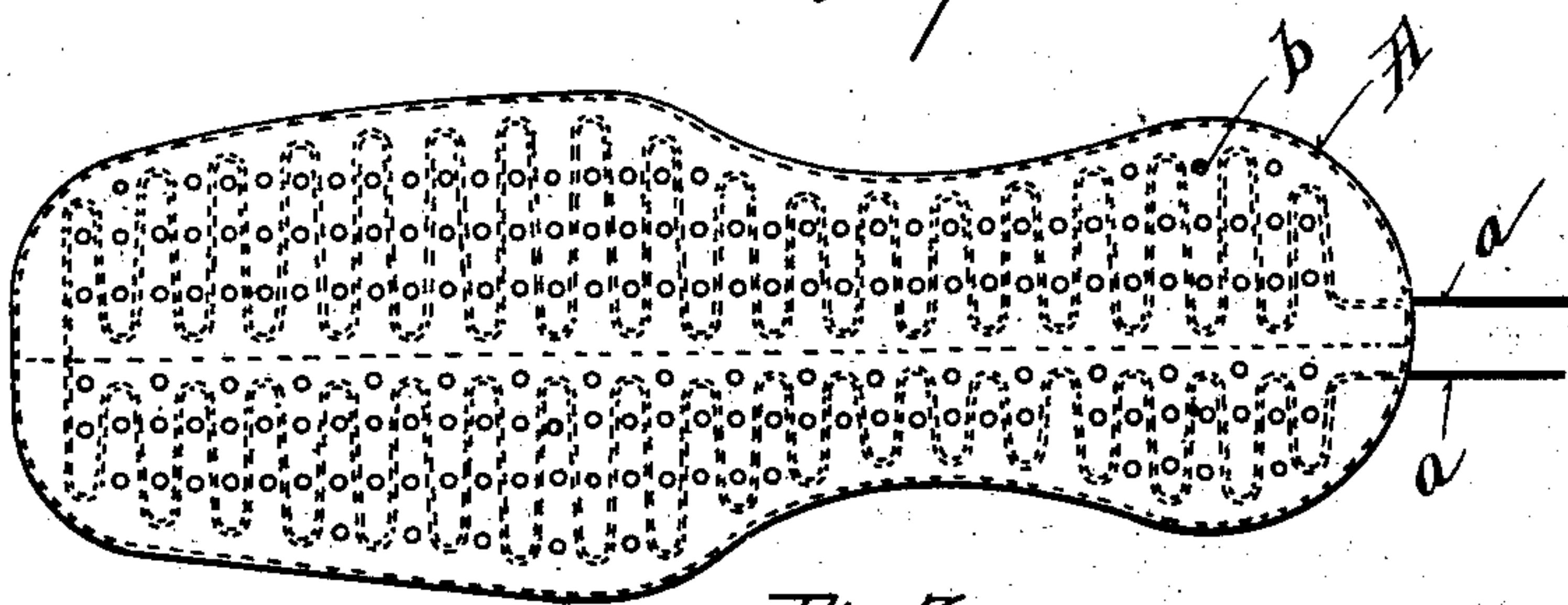
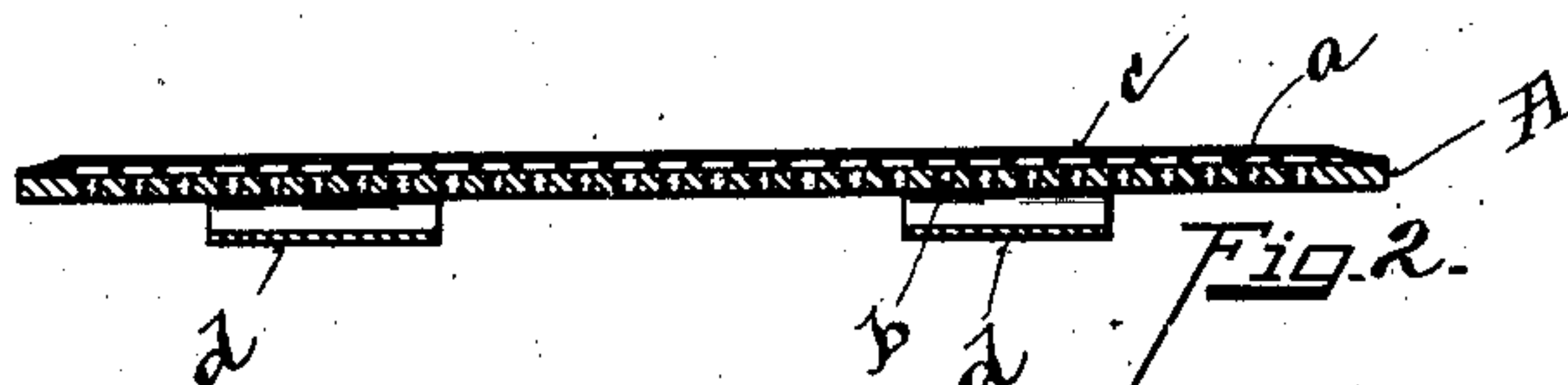
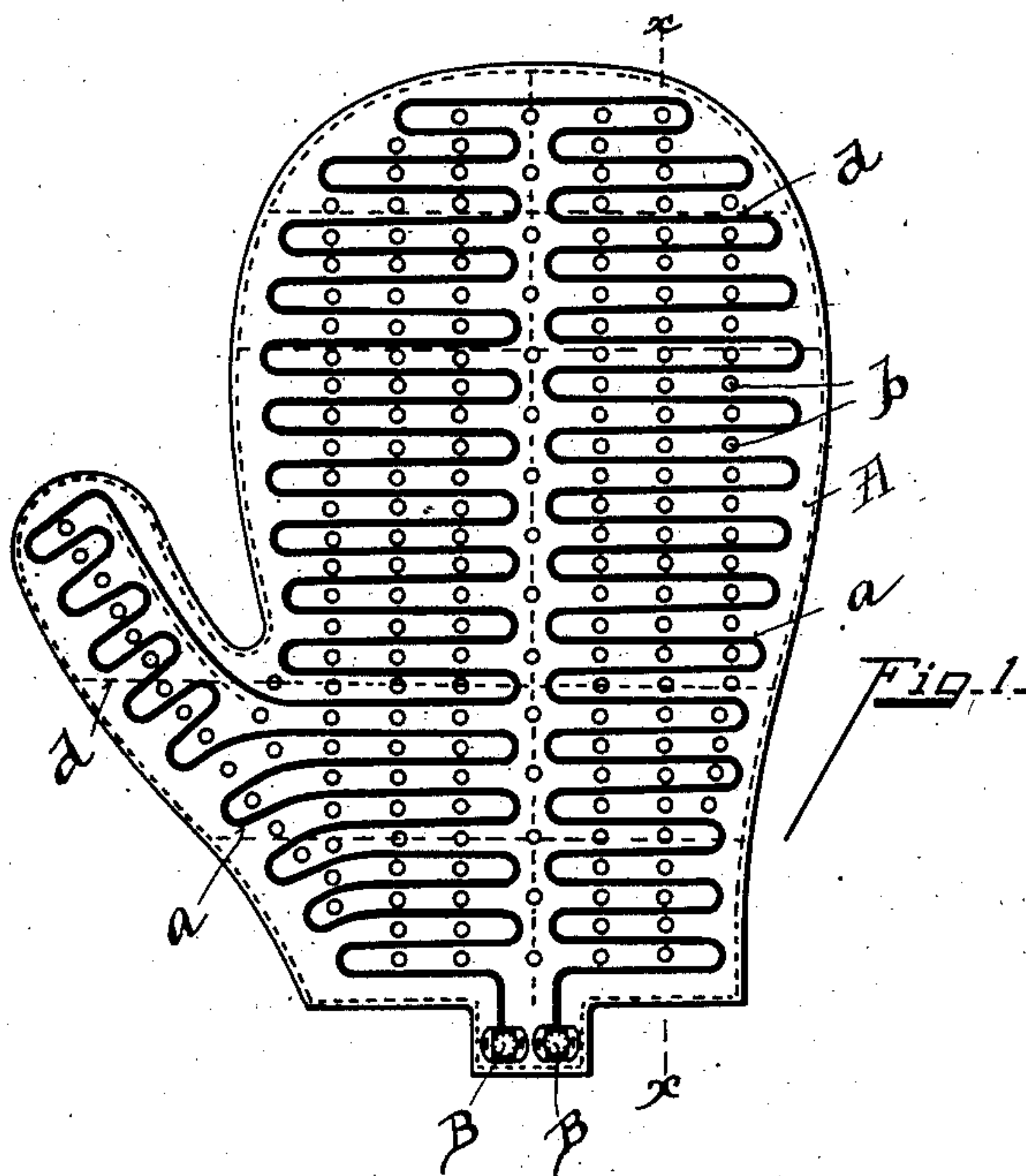
No. 721,270.

PATENTED FEB. 24, 1903.

A. ZECKENDORF.
ELECTRIC HAND OR FOOT HEATER.

APPLICATION FILED DEC. 22, 1902.

NO MODEL.



Inventor

Witnesses

Edw. J. Lucas
Oliver B. Kaiser

By

Alois Zeckendorf
Wood & Wood

Attorneys

UNITED STATES PATENT OFFICE.

ALOIS ZECKENDORF, OF CINCINNATI, OHIO.

ELECTRIC HAND OR FOOT HEATER.

SPECIFICATION forming part of Letters Patent No. 721,270, dated February 24, 1903.

Application filed December 22, 1902. Serial No. 136,155. (No model.)

To all whom it may concern:

Be it known that I, ALOIS ZECKENDORF, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Electric Hand or Foot Heaters, of which the following is a specification.

The object of my invention is to produce an electric heating boot, shoe, or mitten primarily adapted for street-car motormen.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of the rear of the device applied to a mitten, showing the outer covering removed. Fig. 2 is a section on line *xx*, Fig. 1. Fig. 3 is a bottom plan view of my invention applied to a boot.

I desire to produce a pad which can be conveniently used with any ordinary boot or glove, which will permit of the free movement of the hand or foot, in which there is a thorough circulation of air, and means for preventing the pad from becoming saturated with perspiration from the hand or foot of the wearer.

Another object of my invention is to produce a pad with such construction as to be used with a boot, shoe, or glove or easily removed therefrom, so that the glove or shoe can be used without it.

A represents a pad, of some flexible insulated material, such as asbestos fabric. In Fig. 1 I have shown a pad shaped to fit a glove; in Fig. 3 shaped to fit a shoe, in which latter case it constitutes, as it were, an insole.

B B represent binding-posts in the wrist of the glove or the heel of the shoe, to which branch wires may be connected to the source of the supply.

a represents a coil of wire which extends up one-half of the glove and down the other and connects with the binding-posts.

b represents perforations in the pad between the laps of the coils.

c represents a covering-strip stitched over the wires to the edges of the pad, as shown in Fig. 2.

d represents straps on the under face of the pad for the insertion of the fingers and thumb.

If a mitten is to be used, the pad is placed on the back of the hand with the perforated surface contacting the hand, the wires are properly connected to the binding-posts in the wrist of the pad, and an ordinary mitten is drawn over the hand and pad and the current turned on. The heat generated passes through the perforations, warming the inside of the glove, and these perforations also afford a thorough circulation of air and prevent the pad from becoming saturated with perspiration. This method of ventilation is important, because it not only heats more efficiently by inducing air circulation, but prevents undue perspiration. A mitten without such provision would stimulate perspiration, soon soaking the pad and causing it to deteriorate, as well as giving it partial conductivity. It would also corrode the wires, short-circuiting them or otherwise destroying the efficiency of the glove in a short period of time.

When this pad is used as an insole for the foot, the binding-posts may be projected through the heel, carried up to the top of the shoe, or otherwise fixed in a suitable place.

Though primarily adapted for the use of street-car motormen, this pad is useful for the shoes or mittens of drivers or others particularly exposed to cold weather, and a small storage battery or other suitable source of electricity may be employed.

Having described my invention, I claim—

1. A heating-pad adapted to be inserted in a shoe or mitten, said pad consisting of a flexible, non-conducting material, having binding-posts at one end, wires extending in U-shaped undulations from one binding-post to the other, in parallel laps through the length of the pad, ventilating-orifices inserted in the pad between said laps of the wire, substantially as described.

2. A heating-pad adapted to be inserted in

a shoe or mitten, said pad consisting of a flexible, non-conducting material, having binding-posts at one end, wires extending in U-shaped undulations from one binding-post to the other in parallel laps, through the length of the pad, ventilating-orifices inserted in the pad between said laps of the wire, the said wires being firmly secured to the pad, and a covering fabric stitched to the edges of the

pad, over the wire ends, substantially as described. 10

In testimony whereof I have hereunto set my hand.

ALOIS ZECKENDORF.

Witnesses:

OLIVER B. KAISER,
IDA J. LUCAS.