

P. E. CHARLES.
 FOOT WARMING ATTACHMENT FOR ELECTROTHERMAL GARMENTS.
 APPLICATION FILED OCT. 12, 1910.

990,206.

Patented Apr. 18, 1911.

Fig. 1

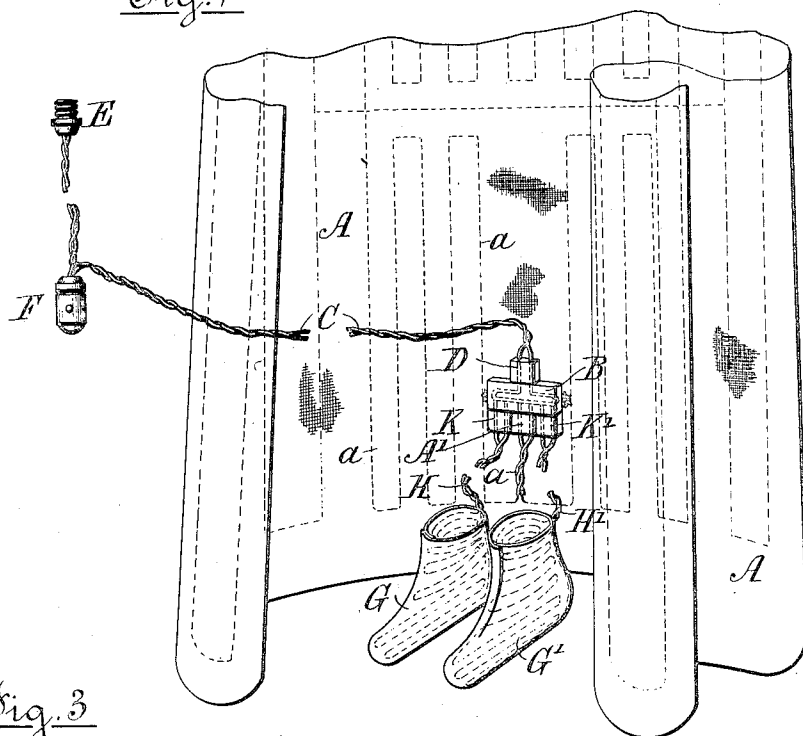


Fig. 3

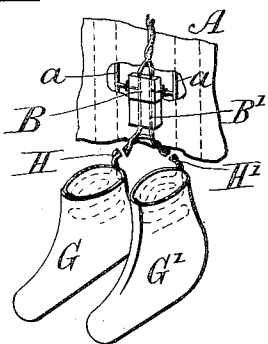
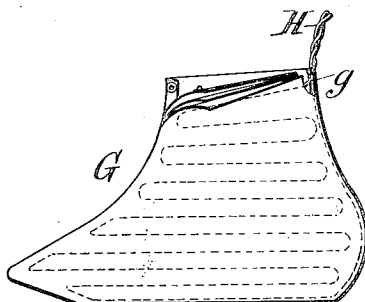


Fig. 2



Witnesses:
 George Tazewell
 Mary G. Kellogg

Inventor:
 Phyllis E. Charles,
 per Robt. A. Kellogg
 Attorney.

UNITED STATES PATENT OFFICE.

PHYLLIS E. CHARLES, OF PORTLAND, OREGON.

FOOT-WARMING ATTACHMENT FOR ELECTROTHERMAL GARMENTS.

990,206.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed October 12, 1910. Serial No. 536,722.

To all whom it may concern:

Be it known that I, PHYLLIS EMILY CHARLES, a citizen of the United States, residing at the city of Portland, in the county of Multnomah and State of Oregon, have invented a certain new and useful Improvement in Foot-Warming Attachments for Electrothermal Garments, of which the following is a specification.

My invention relates to that class of wraps or temporary enveloping garments for sick persons, or invalids, wired for the diffusion of electrical currents and heat through the body and members of the wearer whereby therapeutic effects are produced.

The improvement consists more particularly in the connection with a source of electrical energy in common with that energizing the garment proper, of such separable foot-wraps, flexible boots or slippers, as may be wired, and flexibly connected—either through the circuit or circuits of the body-robe, or direct with a source of electrical energy, as will diffuse electrical impulses and heat throughout such foot-wraps and thence to the feet of the wearer,—the object being to permit the wearer—without breaking the circuit in the garment proper, or in the foot-wraps themselves—to freely move the feet, and walk about if necessary, within an area only limited by the lengths of the connections with the garment proper, or with an electrical distributor such as the socket of an incandescent lamp.

The device here dealt with may be considered as a further development of the invention of my husband, Burton R. Charles, patented under No. 969,147 on the 30th day of August 1910, where he employs an electrically-energized foot-piece permanently and closely fastened to an electrothermal garment, and where it is only foldable upon the garment and does not permit of foot movement, or of the warming or treatment of one foot independently of the other, both of which latter named functions are efficiently performed by my present invention.

For full comprehension of the improvement, reference must be had to the accompanying drawings of a preferred form thereof, and forming part of this specification.

In said drawings similar letters of reference indicate like parts.

Figure 1 is an inside view of portion of an electrothermal garment and the two foot-

wraps or boots, with electrical connections whereby one or both of the latter may be included in the main circuit, and also suitable connections with any source of electrical energy. Fig. 2 is a detail view of one of the foot-wraps. Fig. 3 is a detail showing a modification of a simple form where both foot-wraps are in direct connection with the main garment-circuit.

Referring more particularly to Fig. 1:—A represents the lower part of a garment wired in any suitable manner for electrotherapeutic purposes, and having permanently fixed thereto a switch-block B, adapted to afford connection between the garment-circuit *a*, and the flexible wires C, leading from a plug D adapted to detachably contact said switch-block B. The wires C, lead to an electric-light plug E with an intervening switch F upon said wires within easy reach of the user's hand.

The foot-wraps G and G¹ are separable from the garment proper, and are made of any suitable fabrics wired internally for the diffusion of electrical currents therethrough in any preferred manner, such a circuit being indicated at *g* in Fig. 2, where the wires are connected to flexible insulated double cords H and H¹, leading to plugs K and K¹, respectively. These latter plugs are each adapted to form removable contact with the switch-block B affixed to the garment A, hence it will be seen that either or both foot-wraps G, G¹, may be thrown into the main circuit formed by the contact of the plug D with the switch block B and thus drawing the current from the flexible wires C extending from said plug D to the source of electrical energy, such as an electric-light tapped by the plug E.

A¹ is a removable plug adapted to connect the main circuit *a* with the switch-block B; if desired, this connection may be otherwise made.

Referring to the modification, Fig. 3, I show a simple contact block B fixed to the garment A and receiving the terminals of the garment circuit *a*. A similar block B¹ is adapted for removable contact with this fixed block B, and has connected thereto the wires H, H¹, leading from the wires and circuits employed in two foot-wraps or boots G and G¹.

In all cases the flexible connections are long enough to permit the free and inde-

pendent movement of the user's feet, the advantage and beneficial result of which arrangement over the old fixed styles of electrical foot-warming devices used in combination with electro-thermal garments, will be apparent.

I do not limit myself to the precise details of construction and arrangement shown, as these may be varied and modified without departing from the principle or sacrificing the advantages of my invention.

What I claim and desire to secure by Letters Patent is as follows:—

1. The combination with a source of electrical energy, and with a garment wired with a circuit for the diffusion therethrough of electrical currents,—of a contact block fixed to the fabric of said garment and receiving the terminals of its circuit wires,—a detachable contact block or plug and flexible electrical connections therewith,—and separable foot-wraps, or boots, wired also with circuits for the diffusion therethrough of electrical currents, such circuits having their terminals in said detachable block or plug,

whereby a common current may be directed through the body and feet of the user.

2. The combination with a source of electrical energy, and with a garment wired with a circuit for the diffusion therethrough of electrical currents,—of a contact block fixed to the garment,—a plug adapted to removably contact said block and having flexible connections with the source of electricity,—a removable plug having connections with the garment-circuit and adapted also to contact said fixed block,—separable foot-wraps, or boots, wired for the diffusion of electrical currents therethrough,—separate plugs adapted to contact the fixed block on the garment proper,—and flexible electrical connections between said plugs and the circuits of the separate foot-wraps or boots.

In testimony whereof, I have signed in the presence of the two subscribing witnesses.

PHYLLIS E. CHARLES.

Witnesses:

ESTHER H. KNAPP,
GEORGE TAZWELL.