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ELECTRICALLY HEATED FOOT WARMER.

APPLICATION FILED APR. 9, 1912.

Patented Feb. 17, 1914.

1,087,593.

Fig. 1.

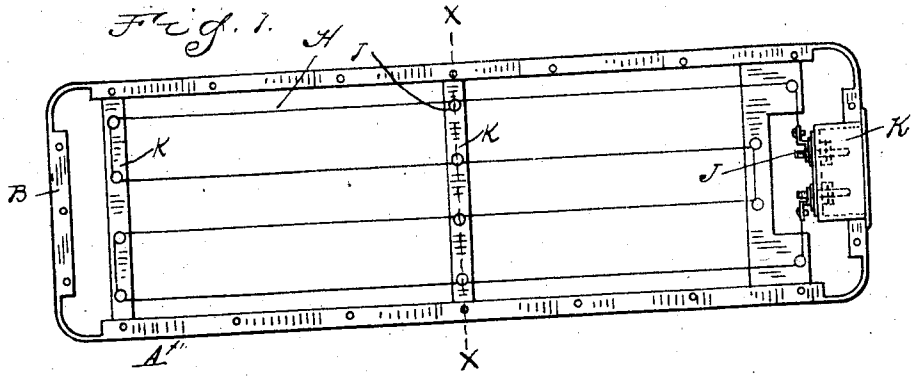


Fig. 3.

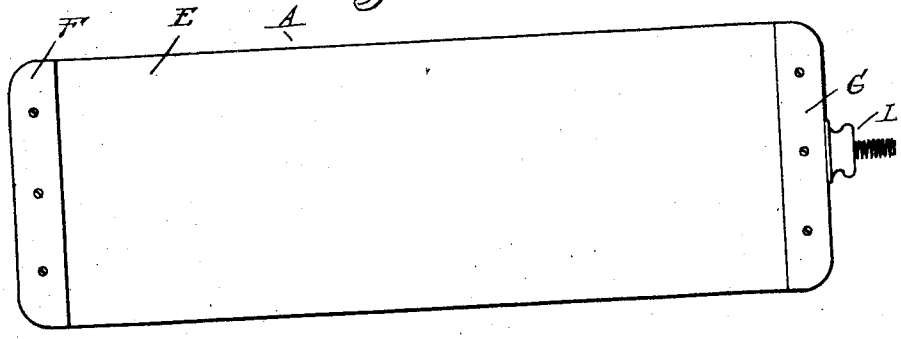
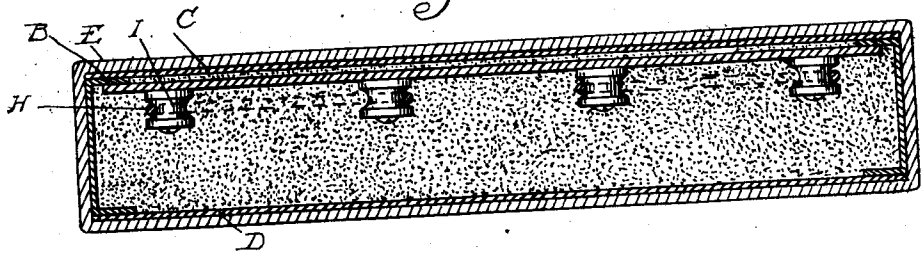


Fig. 2.



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Witnesses
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UNITED STATES PATENT OFFICE.

FRANK KUHN, OF DETROIT, MICHIGAN.

ELECTRICALLY-HEATED FOOT-WARMER.

1,087,593. Specification of Letters Patent. Patented Feb. 17, 1914.

Application filed April 9, 1912. Serial No. 689,544.

To all whom it may concern:

Be it known that I, FRANK KUHN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Electrically-Heated Foot-Warmers, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to electrically heated foot warmers and consists in the construction as hereinafter set forth.

In the drawings, Figure 1 is a plan view of the warmer with one of the cover plates removed; Fig. 2 is an enlarged cross-section on the line *x*—*x* of Fig. 1, and Fig. 3 is a plan of the complete structure.

My improved warmer is in the form of a flat board of any desired length and width and of only slight thickness.

It consists essentially of an open-centered and substantially rectangular frame A of the desired dimensions, said frame being provided at top and bottom with inwardly extending flanges B to which are secured, flat top and bottom plates C and D. The whole structure is then covered with carpet or other suitable fabric as at E and at opposite ends are metallic caps F and G which hold this cover in place. Within the chamber is arranged a suitable resistor H which extends around over electrically insulated supporting posts I and their ends are connected with terminal contacts J which are located in a socket member K secured to and projecting inward from one end of the frame. The posts I are preferably attached to cross bars K secured to the inner face of the flanges B, as shown in Fig. 2. The space within the chamber surrounding the resistor may be filled in with any suitable heat distributing and absorbing body such for instance as a mass of silica sand and cement, and as this material is also an electrical insulator, a naked resistor may be used without danger of short circuiting. The resistor is preferably located in a plane nearer the top of the case than the bottom so that a greater amount of heat will pass upward than downward.

In use it is merely necessary to place the resistor in circuit by means of a suitable connector such as L and the desired heating effect will be produced.

What I claim as my invention is:

1. The combination with an open-centered frame, of top and bottom plates secured thereto, an electrical heating resistor inclosed within the case formed by said frame and plates and insulated therefrom, a fabric covering for said case, and caps at opposite ends of the frame for holding said fabric covering in position.

2. The combination with an open-centered frame of parallel top and bottom plates secured to said frame, a socket extending inward from one end of said frame, terminal contacts in said socket, a resistor connected with said terminal contacts and extending back and forth longitudinally of said frame, and a heat conducting electrical insulating material filling the space within said frame between said plates surrounding said resistor.

3. The combination with an open-centered frame, the sides having in-turned flanges on one of their edges, spaced cross-bars arranged beneath and connected to said flanges, insulator posts carried by said cross-bars, an electric resistance attached to said posts, the sides of the open centered frame having the opposite edges provided with in-turned flanges, top and bottom cover plates arranged over the exterior faces of and connected to said flanges, and a heat conducting and electrical insulating medium surrounding said resistor and filling the space within the frame.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK KUHN.

Witnesses:
W. J. BELKNAP,
DELBERT COLLINS.