

F. KUHN AND J. A. HAND.
ELECTRICAL HEATING UNIT.
APPLICATION FILED JAN. 25, 1917.

1,322,701.

Patented Nov. 25, 1919.

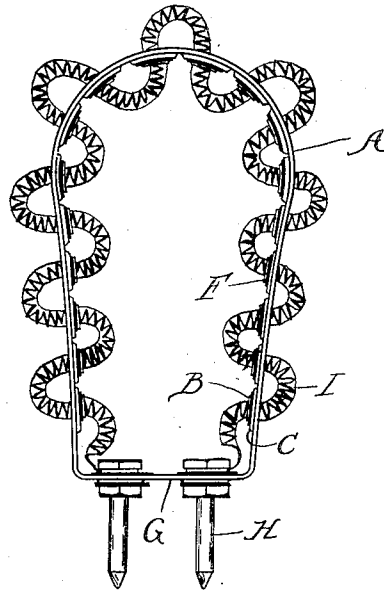
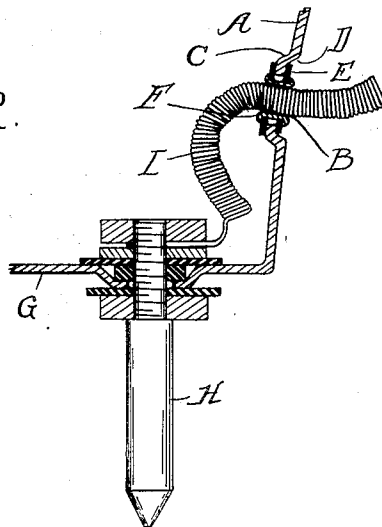


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANK KUHN AND JAY A. HAND, OF DETROIT, MICHIGAN, ASSIGNORS TO AMERICAN ELECTRICAL HEATER COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

ELECTRICAL HEATING UNIT.

1,322,701.

Specification of Letters Patent.

Patented Nov. 25, 1919.

Application filed January 25, 1917. Serial No. 144,373.

To all whom it may concern:

Be it known that we, FRANK KUHN and JAY A. HAND, both citizens 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 Electrical Heating Units, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to electrical heating units, and comprises the novel construction as hereinafter set forth.

In the drawings:

Figure 1 is an elevation of the unit;

Fig. 2 is an enlarged section showing a portion of the resistor-supporting frame and the manner of securing the resistor and the terminal contacts thereto.

A is a metallic bar formed with a series of apertures B therein, surrounded by embossed portions C which form upon one side of the bar recesses D. E are insulator disks, preferably of mica, arranged upon opposite sides of the bar concentric with the apertures B, and one of said disks being located in and centered by the recess D. F are hollow rivets or bushings passing through the disks E and securing the same together. The bar A may be bent into any form desired, but preferably is returnbent to form a closed loop. At the base of this loop is a flat portion G, on which are mounted terminal contact pins H, said pins being insulated from the bar by insulator disks engaging recesses similar to the construction previously described. I is a resistor, preferably in the form of a wire coil, which is threaded through the bushings

F back and forth in a zigzag course to form loops on opposite sides of the bar the opposite ends of said resistor being attached to the terminal contact pins H.

The unit constructed as described is adapted to engage a suitable cooperating socket contact member and thereby to be connected into an electric circuit. The current passing through the resistor will generate heat therein, which is dissipated by radiation, and the looped frame will hold the resistor in position without interfering with radiation from practically all portions thereof.

What we claim as our invention is:

In an electrical heating unit, the combination with a metallic bar having a series of apertures therein and embossed portions surrounding said apertures, forming recesses on one side of the bar, said bar being bent to form a closed loop with a flat base portion, terminal contacts mounted upon and insulated from said base portion, insulated bushings in the apertures of said bar formed by disks on opposite sides of the bar connected by hollow rivets, and a resistor in the form of a wire coil threaded back and forth through said insulated bushings to form loops on opposite sides thereof, the opposite ends of said resistor being connected to said terminal contacts.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK KUHN.
JAY A. HAND.

Witnesses:

HARRY W. LUYCKX,
ARCHIE OAKES.