

G. E. STEVENS.
ELECTRIC HEATER.
APPLICATION FILED NOV. 29, 1907.

919,489.

Patented Apr. 27, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

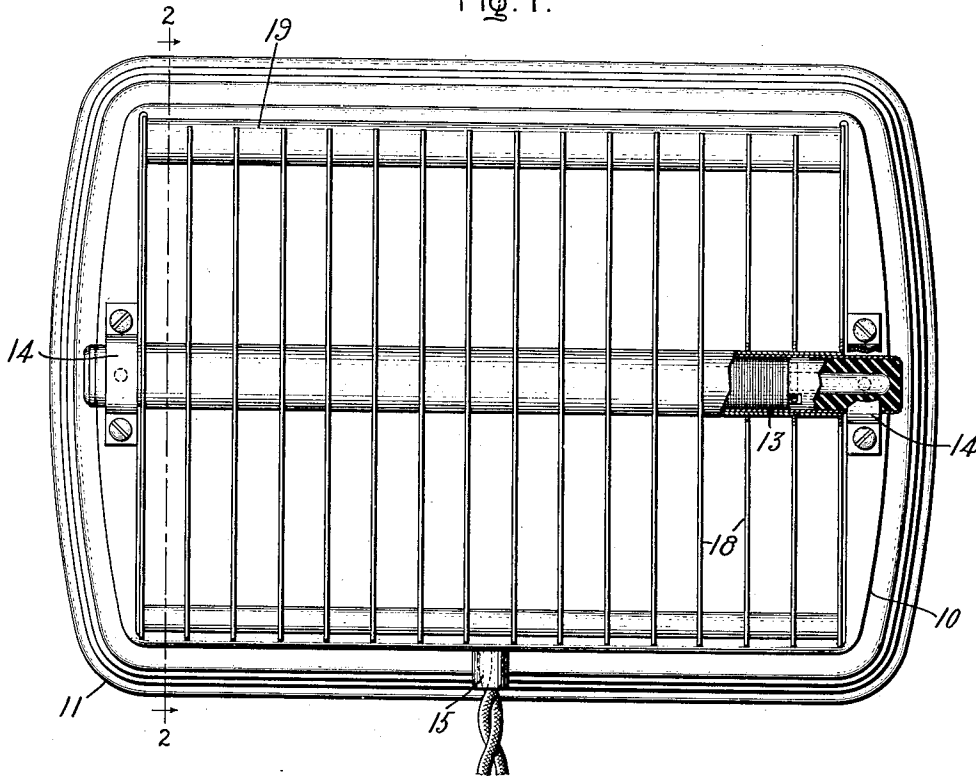
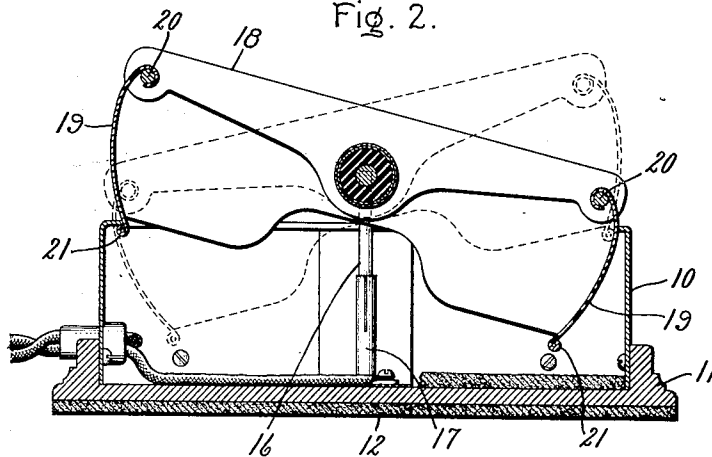


Fig. 2.



Witnesses:

George M. Tilden
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Inventor:

George E. Stevens,
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2 SHEETS—SHEET 2.

Fig. 3.

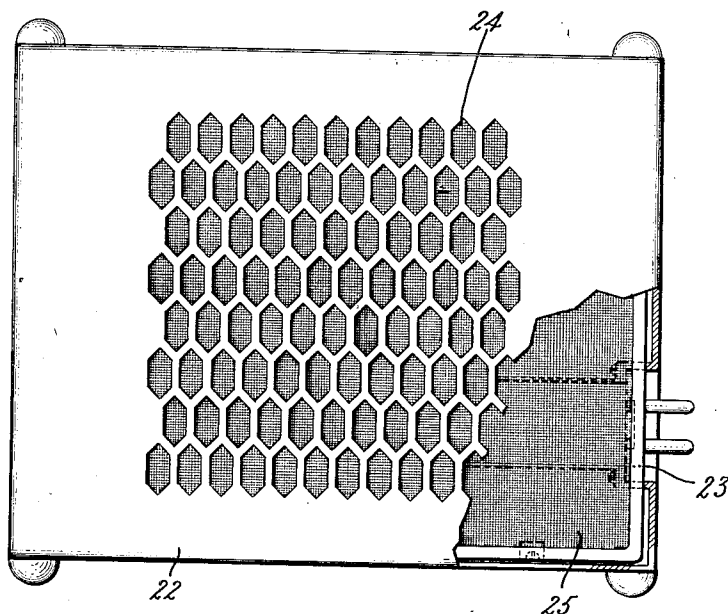
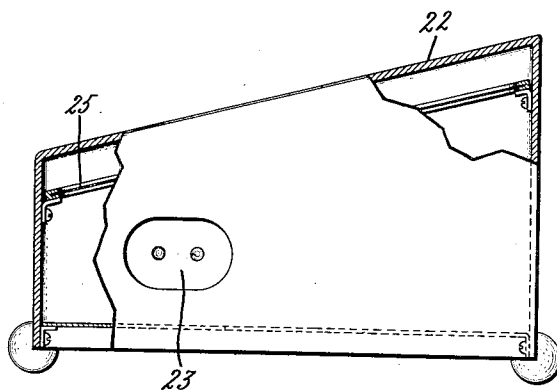


Fig. 4.



Witnesses:

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Inventor:

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Att'y.

UNITED STATES PATENT OFFICE.

GEORGE E. STEVENS, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ELECTRIC HEATER.

No. 919,489.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed November 29, 1907. Serial No. 404,209.

To all whom it may concern:

Be it known that I, GEORGE E. STEVENS, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Electric Heaters, of which the following is a specification.

This invention relates to electric heaters and has for its object the provision of a device of this character adapted for atmospheric heating purposes, which is self-contained and simple in construction and at the same time thoroughly reliable, safe and efficient.

My invention relates more specifically to the production of an electric heating device of the type known as a foot warmer, one of the objects being to produce a heater which is in the nature of a foot rest, which may be moved from place to place, and which is strong and at the same time of a light construction.

My invention therefore consists of the features of construction and the arrangement and combination of elements hereinafter set forth.

In the accompanying drawings in which I have shown my invention embodied in a concrete structure, Figure 1 is a plan view partly in section of one form of my invention; Fig. 2 is a sectional view of the same taken on the line 2—2 of Fig. 1; Fig. 3 is a plan view of a modified form of my invention; and Fig. 4 is an end view partly in section of the same.

Referring to the drawings (Figs. 1 and 2) 10 represents the sides of a box, preferably of metal having a bottom or base 11 secured thereto made of some material, such as wood, the bottom surface being preferably of felt 12. The box is open at the top and an electric heating unit 13 of an elongated type, as shown, is mounted longitudinally and centrally of the box. This unit is preferably mounted in bearings 14 so as to revolve therein. The unit may be of any desired type but the particular structure forms no part of my invention. For purposes of illustration I have shown the unit of the type described and claimed in my previous patent No. 803,795. The leads for this heating unit are brought in through the insulating sleeve 15 and are connected at opposite ends of the unit by means of the terminals 16, each adapted to cooperate with a socket 17.

Mounted upon this unit and spaced apart as shown are a plurality of strips 18 preferably of thin metal. The strips are mounted in good heat-conductive relation to the unit and engage the same at their central portion so as to extend in opposite directions from the unit. These strips have a length preferably equal to the width of the box, and the space between the ends of the strips and the side of the box is inclosed by a metallic casing in the form of wings 19 mounted on rods 20 which pass through the ends of the strips. The wings 19 are bent in the arc of a circle of which the axis of the unit 13 is the center, and the sides of the box are brought in to meet this wing so as to make a close joint and prevent air from going out except through the space between the strips. The ends of the wings are bent into the form of a stop 21 so as to limit the movement of the strips. These strips are of thin metal and so shaped that they will conduct the heat from the unit out to their ends so that when the current is turned on, the strips will be heated throughout their length and the feet may be warmed by placing them thereon. The angle of support may be changed by a simple movement of the ankles which will shift the top on its pivot.

Figs. 3 and 4 show another form of the device in which the top of the box is arranged at a fixed angle. In this case the top 22 is arranged at the inclination shown and the heating unit 23 extends longitudinally of the box at about the middle of its height. The top of the box is provided with the perforations 24, as shown, extending throughout the greater part of its area. In order to distribute the heat from the unit 23 throughout the area of the top, I provide a fine screen 25 which is arranged between the unit and the top. This screen is of a very fine mesh and has the effect of causing the heat to diffuse throughout the area of the box.

While I have described my invention as embodying specific elements arranged in a different way, it should be understood that I do not so limit my invention except in so far as it is limited by the scope of the claims annexed hereto.

What I claim as new and desire to secure by Letters Patent of the United States, is—

1. An electric heater comprising a box having a movable apertured top, and an elec-

tric heating device arranged to distribute heat throughout the area of said top.

2. An electric heater comprising a box having a pivoted apertured top and an electric heating device arranged to distribute heat throughout the area of said top.

3. An electric heater comprising a box having an apertured top consisting of an elongated heating unit and spaced strips in heat conductive relation thereto.

4. An electric heater comprising a box having an apertured top pivoted for movement in a vertical plane, an elongated heating unit extending centrally thereof, and means for distributing the heat throughout the area of said top.

5. An electric heater comprising a box having an apertured top consisting of an elongated heating unit and spaced strips in

heat-conductive relation to the unit pivoted for movement in a vertical plane about the axis of the unit.

6. An electric heater comprising a box having an apertured top pivoted for movement in a vertical plane, said box consisting of an elongated central heating unit and spaced strips mounted transversely of said unit in heat-conductive relation thereto, and an inclosing casing connecting the movable ends of said strips to the side of said box.

In witness whereof, I have hereunto set my hand this twenty-sixth day of November, 1907.

GEORGE E. STEVENS.

Witnesses:

JOHN A. McMANUS, Jr.,
HENRY O. WESTENDARP.