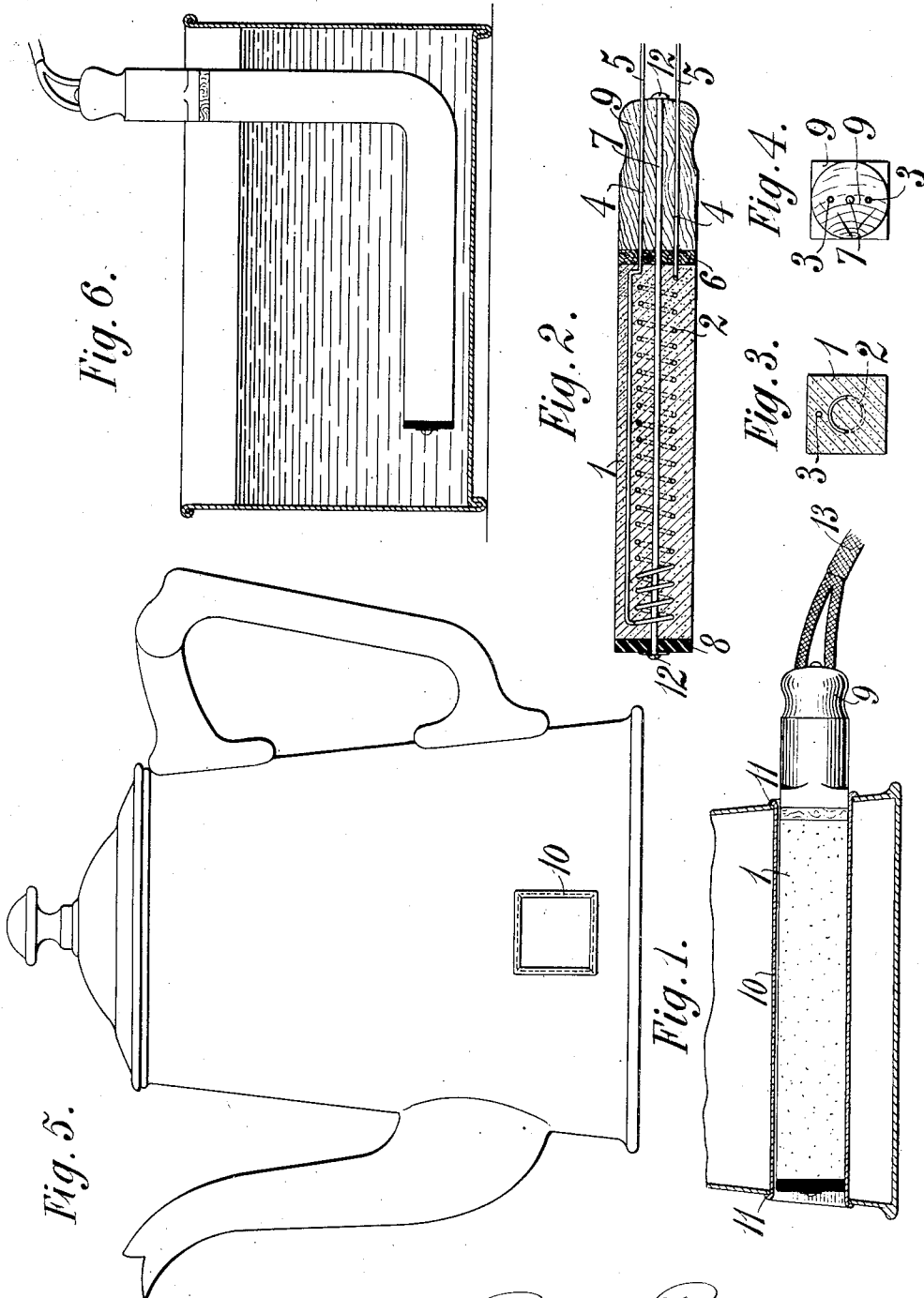


943,384.

Patented Dec. 14, 1909.



Witnesses:
Raphael Ketter
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UNITED STATES PATENT OFFICE.

ROY W. BROWN, OF AMSTERDAM, NEW YORK.

ELECTRIC HEATER.

943,384.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed October 22, 1908. Serial No. 459,097.

To all whom it may concern:

Be it known that I, ROY W. BROWN, a citizen of the United States, and a resident of Amsterdam, New York, have invented a new and useful Improvement in Electric Heaters, of which the following is a specification.

My invention relates to a heating device and it has for its object to provide a universal, simple and yet efficient electric heater.

The invention consists in providing a reinforced cement unit in which is embedded an electric heating wire.

The invention also consists in making a heat unit of reinforced cement incasing it in a metal tube or prism for heating the contents of a receptacle without coming in contact with the said contents.

The invention also consists in other features illustrated in the drawings and described in the following description and claimed in the claims.

Referring to the drawings, Figure 1 is an illustration of the heat unit and its application. Fig. 2 shows a longitudinal section of the heat unit. Fig. 3 is a cross sectional view of device illustrated in Fig. 2. Fig. 4 is also a cross sectional view of device shown in Fig. 2. Fig. 5 illustrates the application of the heat unit to a receptacle. Fig. 6 illustrates a modification of the heat unit.

1, Figs. 1 and 2, is the body of the heat unit. This body is composed entirely of Portland cement. It may have any desired cross section. The cement body, as shown in the drawing is a square prism. In the prism there is embedded an electric heat wire 2 capable of producing and sustaining a very high temperature. It is formed into a helical coil. It has leads 5, 5 connected to the terminals which connect it to conductors contained in the cable 13. In the center of the prism is a reinforcing rod 7 which greatly strengthens the cement body and prevents the same from cracking. The rod is of iron and passes through the length of the prismatic body and binds its parts together. A piece of slate 8 conforming to the shape of the cross section of the unit is located at the outer end of the cement body and prevents chipping or breaking of the corners and forms a firm hard protector as well as an insulator. 6 is an asbestos strip also conforming to the shape of the cross section of the cement body. It constitutes a

heat insulator for a handle as well as an electric insulator.

9 is a handle which is located on the end of the prismatic body. The handle, cap and asbestos insulator are secured together as well as the parts of cement body and maintained in position by the reinforcing rod 7 which operates to bind them together. The rod has enlarged heads 12, 12.

The prismatic body is formed by inserting the reinforcing rod in a cylindrical mold and packing or inserting the cement around the reinforcing rod. After the cylindrical cylinder of cement thus formed about the rod is hardened it is removed from the mold and an electric heating wire capable of sustaining a high temperature is wound around the body of the cement forming a helix. The cement body is then inserted in a second mold having the desired shape and the mold is again filled with Portland cement. This brings the cement in contact with the wire and fills up all spaces around the wire and completely embeds it, the whole being reinforced by the central rod of iron.

The heat unit may be made of any cross section, that is square, rectangular, ellipse or oblong. It may be used for heating anything that is desired. It may be inserted in receptacles and the contents thereof heated. It may be used as a warmer for the feet, the same as a warming pan is used, or it may be used for the same purpose as the hot water bottle is used.

In Fig. 5 I have shown a receptacle in connection with which the heater may be used for heating the contents of the receptacle without coming in contact therewith. A coppered tube or prism 10 having preferably the same shape as the heating unit is placed in the receptacle and through two holes 11 located on each side and near the bottom of the receptacle. The ends of the prism 10 are clamped or crimped so as to inclose the edges of the holes and securely fasten the hollow prism in the receptacle. The unit is inserted in the copper tube or case when it is desired to heat the contents of the receptacle.

In Fig. 6 I have shown a unit inserted in the receptacle and in contact with the contents of the receptacle. Here the unit is bent so as to more or less conform to the shape of the wall and the bottom of the receptacle.

The embodiment of my invention may be made in any shape or of any construction so that a simple cheap and yet efficient heater is produced of reinforced cement.

5 The invention may be modified by those skilled in the art and may be embodied in many kinds of devices without avoiding the utility to which the invention may be put and without avoiding the spirit of the invention.

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

1. In an electric heater, the combination of, an oblong cement body, slate located at one end of the said cement body, asbestos located at the other end of said body, a handle, a rod for tying the said parts together and embedded in said cement body, an electric heater helix surrounding the said rod and embedded in the said cement body.

2. In an electric heater, the combination of, a reinforced cement body, a helicoidal heater embedded in the said cement body, a metallic prism surrounding the said cement body, a receptacle having holes for receiving the said prism.

3. In an electric heater, the combination of, a reinforced cement body, a helicoidal heater embedded in the said cement body, a metallic prism surrounding the said cement body, a receptacle having holes for receiving the said prism, the said prism being securely fastened in the said holes and passing through the interior of the said receptacle.

4. In an electric heater, the combination of a cement body an iron rod passing through the said cement body, heads located at one end of the said cement body, one of said heads being made of slate and the other of said heads being made of asbestos, a handle, the said parts being joined together by the said rod, wire wound around the said cement body, pure Portland cement covering the said wire.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ROY W. BROWN.

Witnesses:

FRED G. MORSE,
EMIL C. ZILLGITT.