

No. 885,745.

PATENTED APR. 28, 1908.

P. GIROD.
ELECTRIC FURNACE.
APPLICATION FILED DEC. 20, 1905.

Fig. 1.

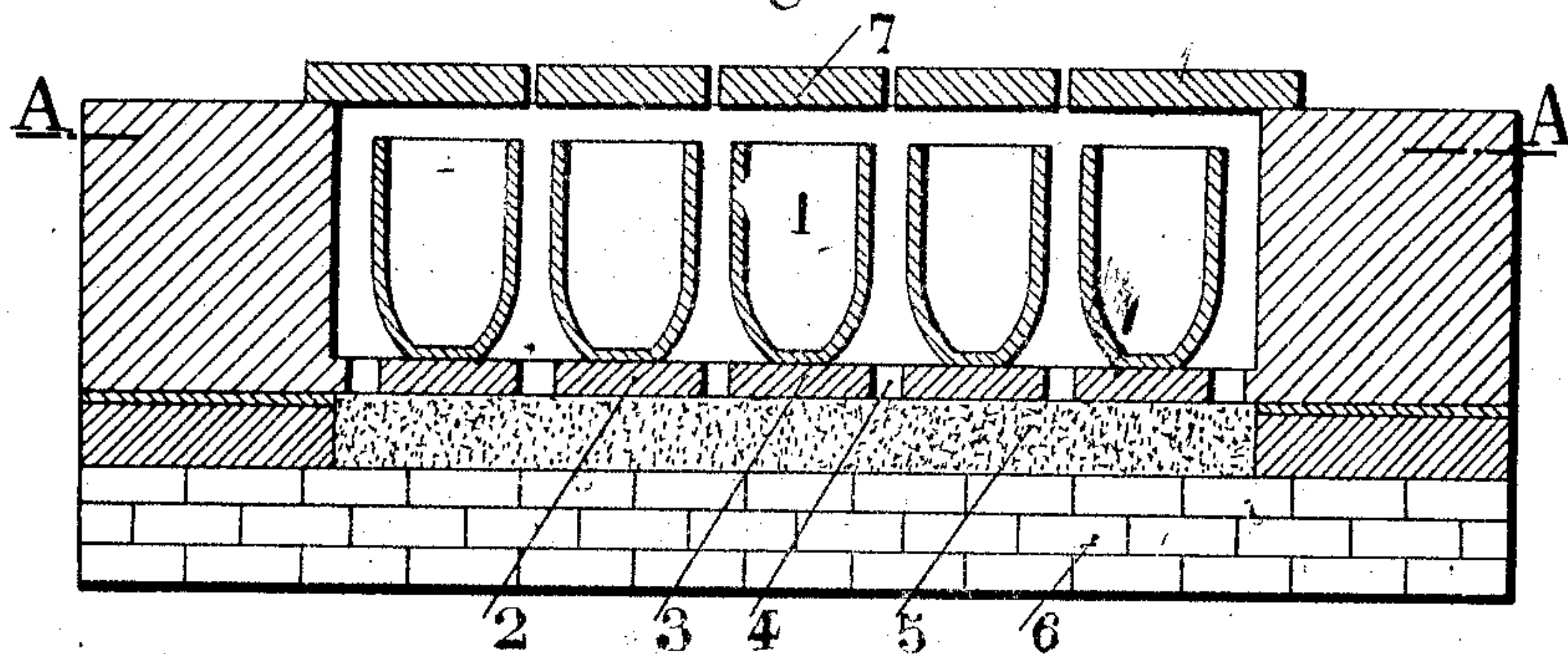
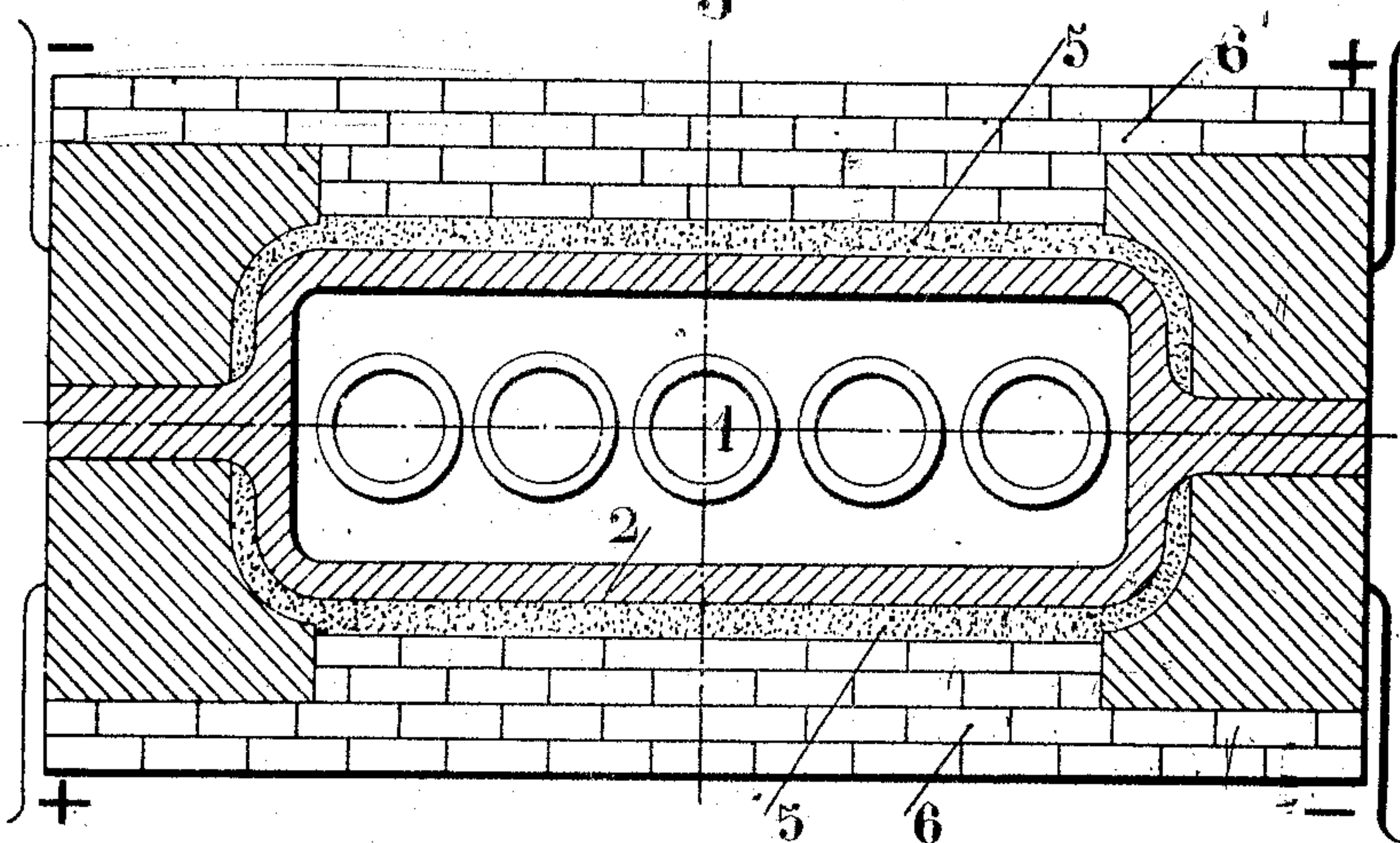


Fig. 2.



Witnesses:

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PAUL GIROD, OF UGINE, FRANCE.

ELECTRIC FURNACE.

No. 885,745.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL GIROD, residing at Ugine, Savoie, France, have invented a new and useful Improvement in Electric Furnaces, which improvement is fully set forth in the following specification.

My invention relates to improvements in electric furnaces, and in particular to an electric furnace of the type disclosed in my French patent 329822 and the certificate of addition thereto, No. 3425.

The present invention has for its object to provide an electric furnace by means of which a plurality of objects such, for example, as crucibles, may be heated in one furnace.

In the accompanying drawings, I have illustrated one embodiment of the invention.

In the drawings Figure 1 is a vertical longitudinal section of the furnace; and Fig. 2 a section on the line A—A of Fig. 1.

Referring to the drawings, 2 indicates a receptacle which forms the heating chamber, within which may be placed a plurality of objects to be heated, for example, the series of crucibles, 1, indicated in the drawings.

The receptacle 2 is shown as substantially rectangular, with two narrow extensions 8, one at each end. The said receptacle is surrounded by insulating masonry 6 arranged to leave a space between its inner walls and the outer walls of the receptacle, which space is filled with a suitable resistance material, for example, a pulverulent graphite composition, as explained in my said French patent 329822, and the certificate of addition 3425. The extensions 8, serve to transmit the weight of the receptacle to the masonry, thus leaving the resistance material 5 substantially free from pressure due to such weight. The receptacle bottom may be solid, but it is advantageous to provide perforations 4, to allow the heat from the heating resistance 5 to radiate freely into the chamber 2.

The furnace has pole pieces 9, 9', 10 and 10' with which the terminals of the electric circuit are connected, as indicated in the drawings. The furnace is covered with refractory plates 7 which can be removed easily in order to allow the insertion or removal of the crucibles.

The resistant heating mass may be arranged in any of the ways indicated in the

said French patent and certificate of addition, but preferably in such a manner as to completely surround the chamber, the current being led into and out of the same side of the furnace. This resistance may be divided into sections and grouped together as desirable, in such a manner as to produce a regular heating, the current traversing the heating resistances both at the sides and at the ends in the directions of the planes of said sides and ends, owing to the manner of introduction of the current, as indicated by the positive and negative signs on the drawings.

Having thus fully described my invention, what I claim, is:—

1. In an electric furnace, the combination, with a receptacle forming a chamber arranged to receive a plurality of objects to be heated, of a mass of resistance material arranged in layers in contact with the sides, ends and bottom of said receptacle, and a plurality of pole pieces of opposite polarity at each end of the receptacle.

2. In an electric furnace, the combination, with a receptacle forming a chamber arranged to receive a plurality of objects to be heated, and provided with end extensions, of insulating masonry inclosing said receptacle and arranged to support said extensions, a mass of resistance material between the receptacle and the masonry pole pieces extending through the masonry and arranged to conduct current to the resistance material.

3. In an electric furnace, the combination, with a rectangular receptacle forming a chamber arranged to receive a plurality of objects to be heated, said receptacle having a perforated bottom, of resistance material in contact with the outer walls and bottom of said receptacle, means for conducting current to said resistance material, and a cover for the receptacle, said cover being formed in sections.

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

PAUL GIROD.

Witnesses:

R. METRES,
T. W. MURTON.