

May 27, 1924.

A. BOURGAIN
ELECTRIC RADIATOR
Filed May 1, 1923

1,495,572

2 Sheets-Sheet 1

Fig. 1

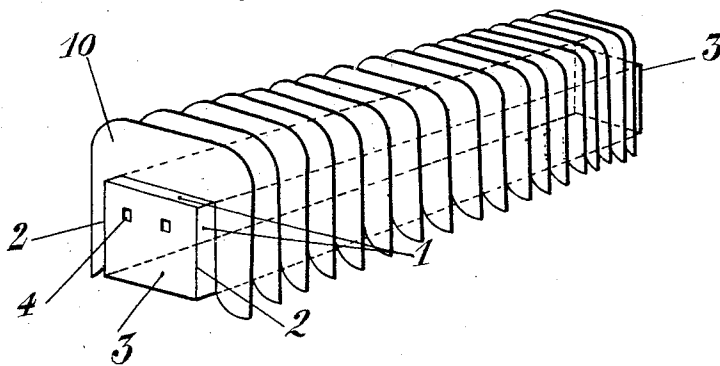
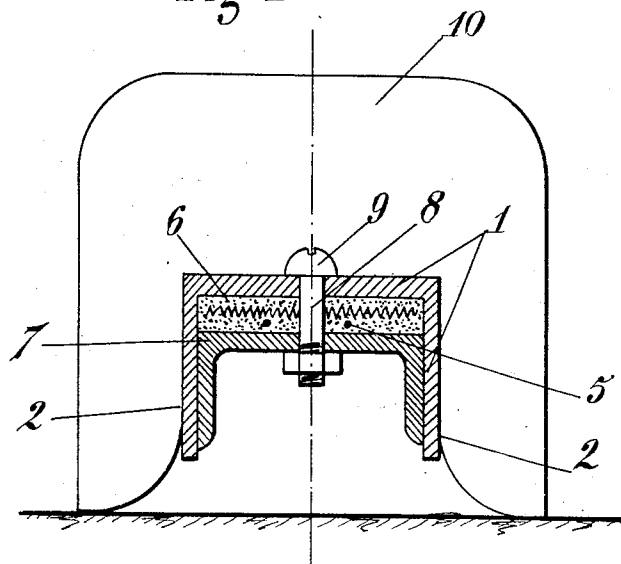


Fig. 2



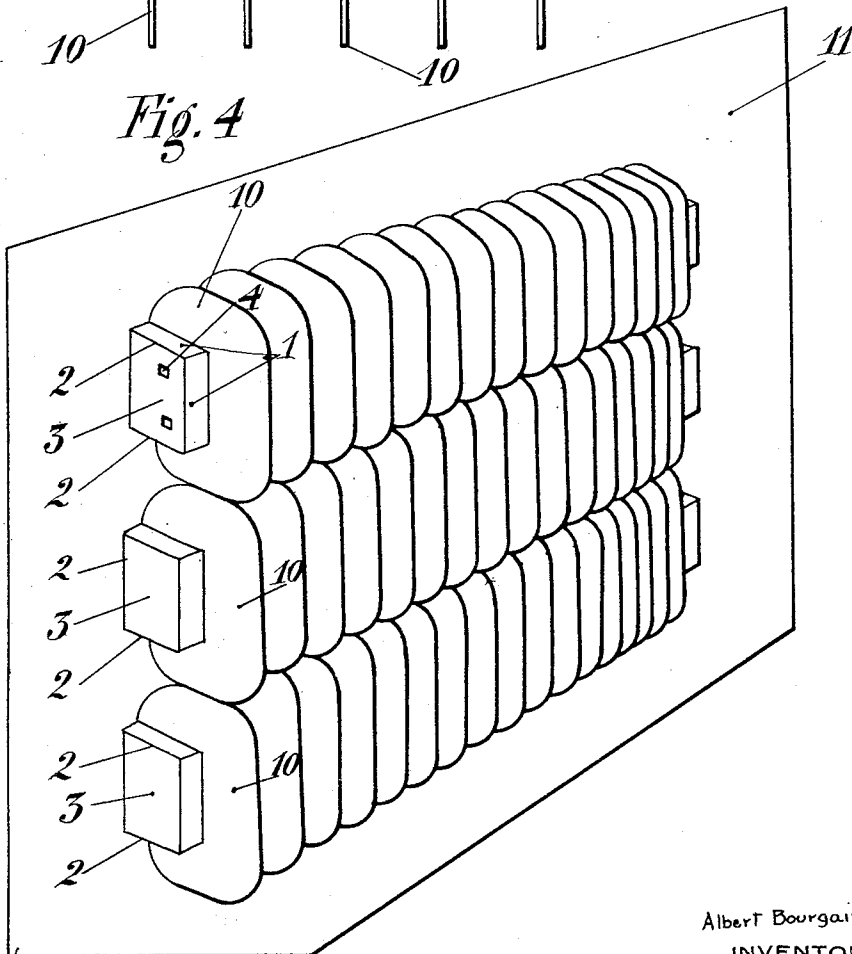
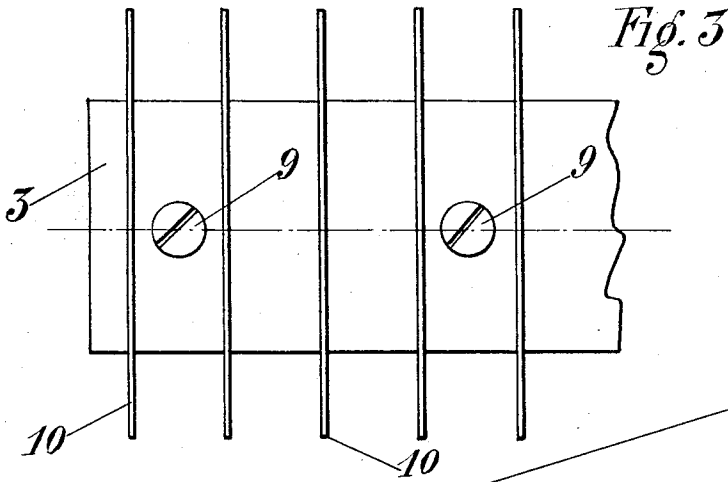
Albert Bourgain
INVENTOR;
By *Albert Bourgain*
his Attorney.

May 27, 1924.

1,495,572

A. BOURGAIN
ELECTRIC RADIATOR
Filed May 1, 1923

2 Sheets-Sheet 2



Albert Bourgain
INVENTOR;
By *Chas. H. Smith*
his Attorney.

UNITED STATES PATENT OFFICE.

ALBERT BOURGAIN, OF PARIS, FRANCE.

ELECTRIC RADIATOR.

Application filed May 1, 1923. Serial No. 535,835.

To all whom it may concern:

Be it known that I, ALBERT BOURGAIN, citizen of the Republic of France, residing at Paris, France, have invented certain new and useful Improvements in Electric Radiators, of which the following is a specification.

Numerous electric radiators are already known which generally offer the disadvantage of bad distribution of the heat. Such radiators are mainly composed of lamps or wires traversed by the electric current and wound upon cylinders of refractory material. These heating units are brought by the current to a high temperature; the air, too rapidly heated by contact with such small contrivances, rises abruptly towards the ceiling of the apartment; such radiators therefore do not ensure a uniform distribution of the heat throughout the atmosphere of the apartment.

The present invention enables the above mentioned disadvantage to be avoided.

The electric radiator, according to the invention, consists of a casing in the interior of which the electrical resistances are secured sheltered from all direct contact with the air, and fins are secured on the casing to ensure slow and uniform heating of the surrounding atmosphere.

Various arrangements according to the invention are illustrated by way of example on the accompanying drawing, in which:—

Fig. 1 is a perspective view of a radiator unit according to the invention.

Fig. 2 is a transverse section of this unit drawn to a larger scale;

Fig. 3 is a partial plan of the unit;

Fig. 4 is a perspective view of three superposed units, drawn to the smaller scale.

The radiator unit (Figs. 1 to 3) comprises an elongated parallelepiped casing 1, forming a sort of inverted channel.

The ends of this casing are closed by plates 3 perforated with apertures 4 for the reception of the electric leads.

Conducting wires 5 are embedded in an electric insulating material 6, for instance asbestos. The heating body thus constituted is located in the base of the channel 1, and held against such base by a channel section bar 7; bolts 8 with heads 9 effecting the

clamping of the channel section bar 7 and of the heating body 5, 6 against the base of the channel 1.

Fins 10 are secured at intervals along the casing 1, the heads 9 of the bolts 8 being located between such fins (Fig. 3).

The above described radiator unit operates in the following manner. The current is lead through the conductive wires 5 which become heated; the heat thus generated is transmitted by conduction to the fins 10; the atmosphere of the apartment to be heated comes into contact with these fins; it becomes slowly heated by such contact and rises by convection along the fins.

The radiator unit has a large heating surface, thus ensuring a regular and uniform heating of the atmosphere of an apartment.

The radiator units which form the subject of the invention may obviously be grouped in various manners. For example, instead of these units resting on the floor, as is indicated in Fig. 2, several units may be superposed, as shown in Fig. 4, with the lateral surfaces 2 of the casings 1, for example, protruding from the wall 11 of the apartment to be heated.

Claims:—

1. In an electric heater, the combination of a casing, electric resistances secured to the interior thereof, and fins embracing the casing and dissipating slow and uniform heat from the resistances to the surrounding atmosphere.

2. An electric heater, as claimed in claim 1, in which the casing comprises a parallelepiped shaped elongated member disposed to provide an inverted channel having its ends closed.

3. An electric heater, as claimed in claim 1, in which said casing comprises an inverted channel member having its ends closed, insulating material arranged against the base of said casing and having the resistances embedded therein, a closure member comprising an inverted channel arranged against said insulation, and clamping means disposed through the two channel members and insulation for adjusting the former to exclude air from the resistances.

I have hereunto affixed my signature.

ALBERT BOURGAIN.