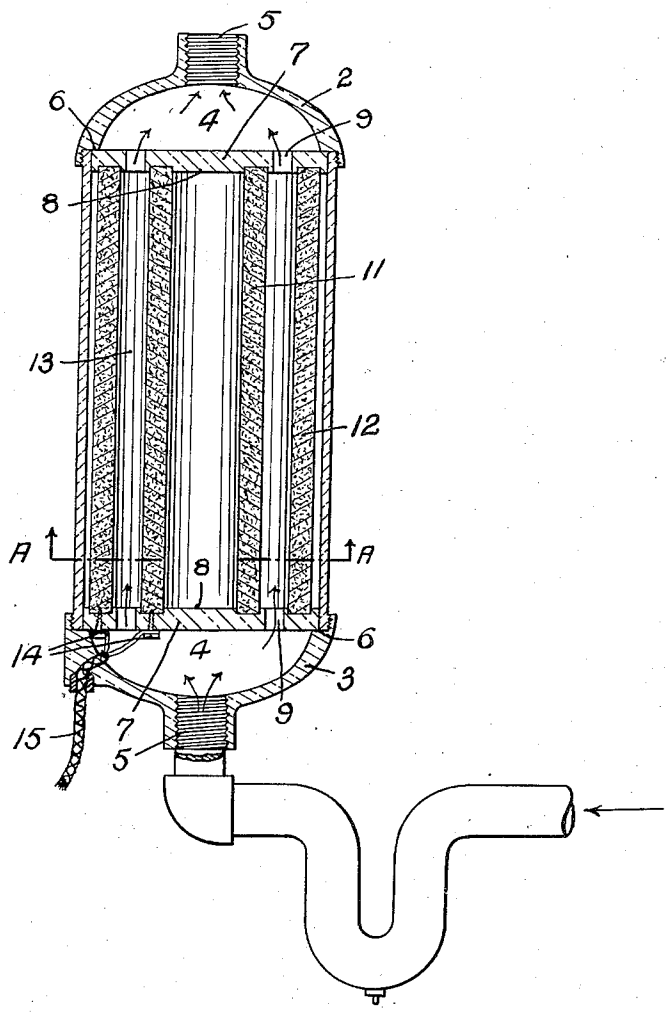
A. E. PLANTE.

ELECTRIC WATER HEATER.

APPLICATION FILED JUNE 2, 1919.

1,327,774. Patented Jan. 13, 1920.

Fig. 1.



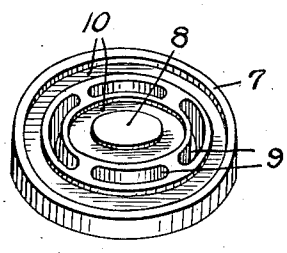


Fig. 3.

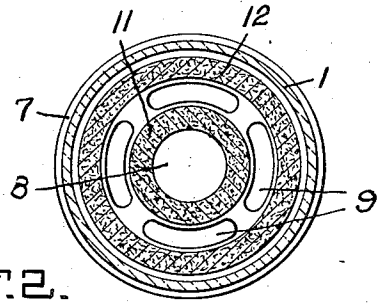


Fig. 2.

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UNITED STATES PATENT OFFICE.

ALBERT EULGÉRE PLANTE, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF TO BENJAMIN DROLET, OF MONTREAL, QUEBEC, CANADA.

ELECTRIC WATER-HEATER.

1,327,774. Specification of Letters Patent. Patented Jan. 13, 1920.

Application filed June 2, 1919. Serial No. 301,350.

To all whom it may concern:

Be it known that I, ALBERT EULGÉRE PLANTE, residing at 367 Berri street, in the city of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Electric Water-Heaters; and I do hereby declare that the following is a full, clear, and exact description of the same.

The present invention relates to improvements in electric water heaters and its main object is to provide a device of this character which is particularly cheap and of simple construction.

The invention will be understood with the aid of the accompanying drawings in which:

Figure 1 is a central vertical sectional view of the improved heater.

Fig. 2 is a cross section view on line A—A of Fig. 1.

Fig. 3 is a perspective view of one of the supporting disks inside the casing.

Like numerals of reference indicate corresponding parts in each figure.

In the drawings: 1 is the outer casing here illustrated as tubular and preferably of an insulating material such as porcelain, fiber, etc. 2 and 3 are heads preferably of a cup shape, so as to form the inner chambers 4, said heads being each provided with an opening 5 and connected at each end of said tubular casing 1 by any suitable means, but illustrated in the drawings as engaging a thread provided at each end of said casing. Each of the heads 2 and 3 preferably has an inner circumferential shoulder 6 against which a disk 7 of insulating material rests. This disk 7 is of the same size as the inner circumference of the casing 1 and is provided centrally of its outer face, (that is, the face which confronts the casing 1) with a projecting lug 8, and 9 are a plurality of circumferential slots or openings.

The disks 7 are also provided with two concentric channels 10 in which fit the ends of the electrodes 11 and 12.

The electrodes here illustrated are preferably tubular in shape and the electrode 11 which is located inside the electrode 12 and suitably spaced therefrom is of smaller diameter. The space 13 provided between the electrodes 11 and 12 is made to register with the holes 9 in the disks 7 in order to form a communication between the two chambers 4.

In any suitable part of the electrodes an electrical connection may be made but in the accompanying drawings the electrodes are illustrated as being electrically connected at their lower end by means of the terminals 14 of the wires 15 which lead from the source of current supply and project through a suitable opening provided in the head 3.

In the operation of the invention the water preferably enters the head 3 by the opening 5, passes through the openings 9 in the lower disk 7, through the passage 13 formed between the electrodes 11 and 12, the openings 9 in the disk 7 provided at the other end of said electrodes, enters the chamber 4 in the head 2 and passes from the latter through the opening 5.

Supposing that the electrodes 11 and 12 are electrically connected to a suitable source of energy, the water when passing into the passage 13, will form a resistance between the two electrodes and cause said electrodes to heat the water which passes therebetween.

What I claim as my invention is:

In an electric water heater, the combination of a vertical casing; upper and lower reversely-arranged, cup-shaped heads fitted on the corresponding ends of the casing and formed, respectively, with an outlet and an inlet for the water; a disk of insulating material seated in each head and co-acting with the same to define a water chamber in the head, each disk being provided on its outer face with a pair of spaced, concentric annular channels, and with a projecting, annular rib between said channels having a plurality of slots formed vertically through it; interfitted inner and outer tubular electrodes having their opposite ends fitting in the inner and outer channels in said disks and defining an elongated tubular water chamber between them, said slots providing communication between the two first-named chambers and the last-named chamber to permit the passage of the water through the heater; and means for supplying current to said electrodes to heat the water during its passage.

Signed at Montreal, Quebec, Canada, this 16th day of May, 1919.

ALBERT EULGÉRE PLANTE.

Witnesses:
C. PATENAUDE,
A. P. DEAL.