

No. 875,394.

PATENTED DEC. 31, 1907.

A. VOELKER.
ELECTRIC HEATER.
APPLICATION FILED JUNE 6, 1906.

fig. 1.

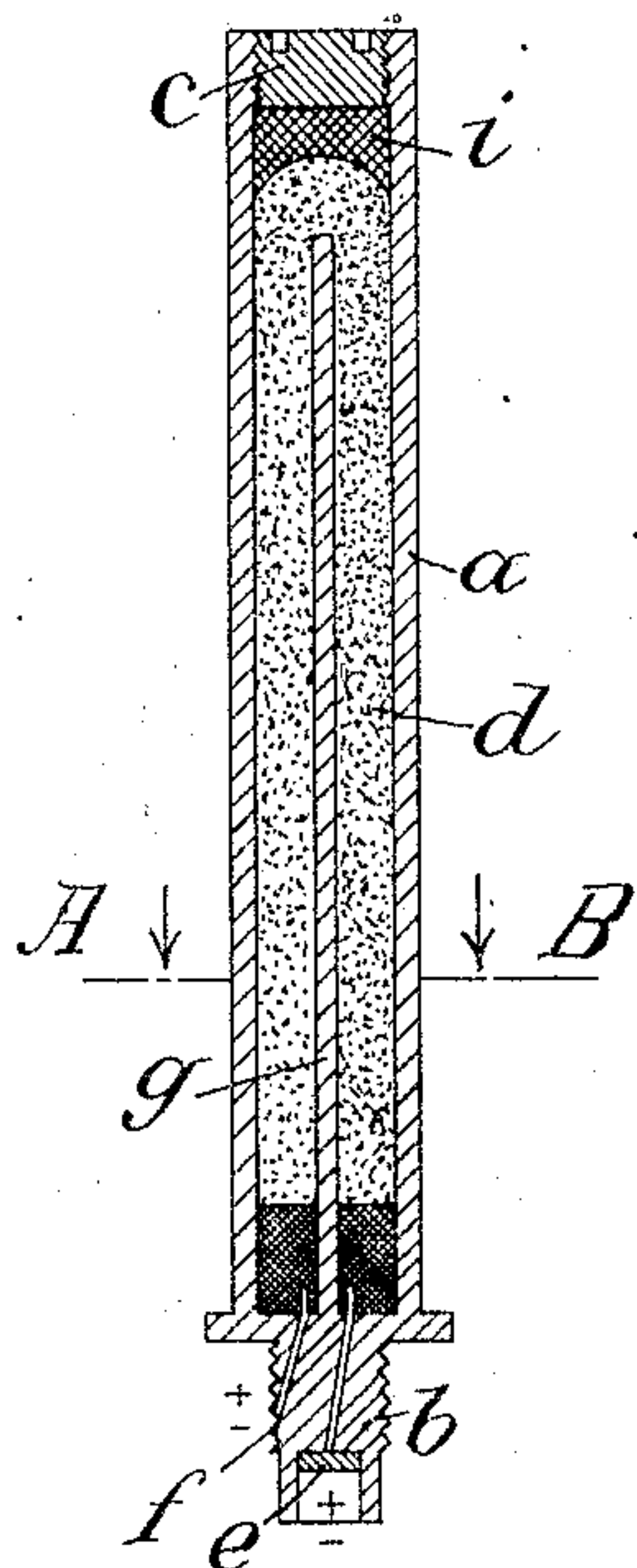


fig. 2.

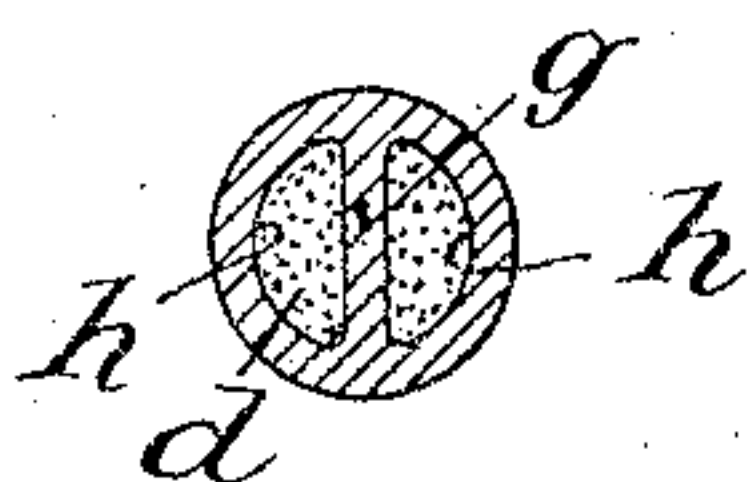
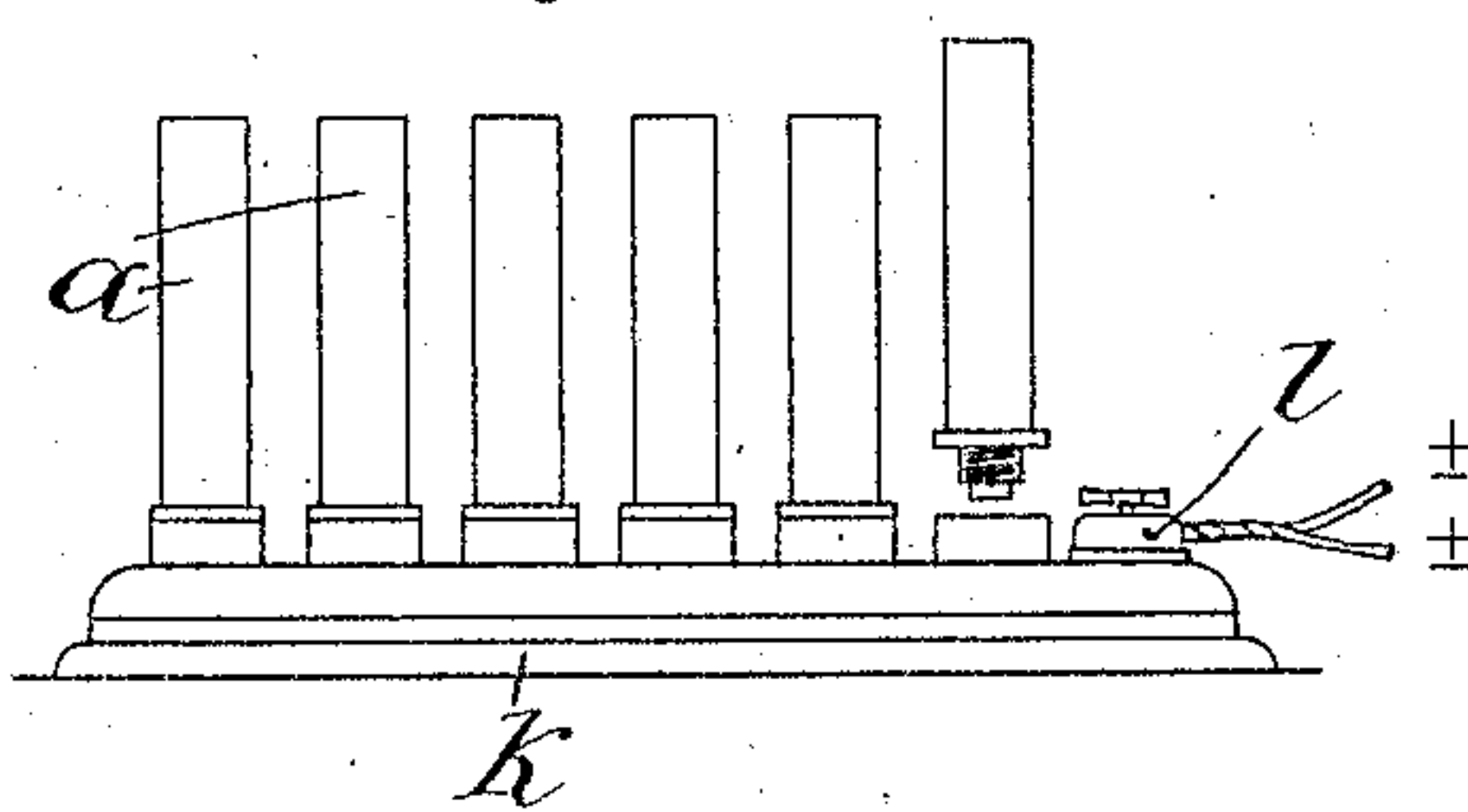


fig. 3.



Witnesses:
G. Louis Franch
C. E. Hicks

Inventor:
August Voelker
by *Almond*
his Attorney

UNITED STATES PATENT OFFICE.

AUGUST VOELKER, OF BERLIN, GERMANY.

ELECTRIC HEATER.

No. 875,394.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed June 6, 1906. Serial No. 320,421.

To all whom it may concern:

Be it known that I, AUGUST VOELKER, a subject of the King of Prussia, residing at No. 38 Oranienburgerstrasse, Berlin, German Empire, have invented new and useful Improvements in Electric Heaters, of which the following is a specification.

My invention relates to improvements in electric heaters or heating cartridges.

10 The novelty of the present invention consists in this that the electric heater or heating cartridge formed of a holder of refractory material, has a partition in its inside to form two compartments intended to receive a
15 comminuted resistance material, current connections or terminals leading to each compartment at the lower part of the cartridge, a socket surrounding the outer end of said connections or terminals, said sockets being
20 in one piece with the holder, a cover closing the upper extremity of said holder and a conducting bridge below said cover.

As a resisting material the granular non continuous resisting body obtained according to the process forming the object of my U. S. Patent No. 770991 is suitable, as, through the proper selection of the size of grains and the proper composition it can very easily be arranged to radiate a gentle
30 heat of about 80 to 90 degrees centigrade, and certainly under 200 degrees centigrade.

The subject matter of this invention is represented in an example on the sheet of drawings annexed to my present specification.
35 tion.

Figure 1 shows, in longitudinal section, a normal heating cartridge made according to this invention, with only one foot, that foot being formed like the socket of an incandescent lamp. Fig. 2 is a cross section of the heating cartridge along the line A, B, of Fig. 1. Fig. 3 shows a form of the invention for a heating arrangement made by putting together a number of such cartridges.

45 My cartridge is provided with only a single foot for receiving the two current connections, fitted on the one end of the casing containing the resisting body; this foot can be made as a screw joint, a clamp, a bayonet joint, or the like, just like the socket of an

incandescent lamp in the ordinary Edison, Swan, Siemens, or similar fittings or attachments for incandescent lamps (see Fig. 1). In this case there is the advantage that the cartridge can be put in connection with an
55 electric attachment at any time, and can be switched on and off, just like an incandescent lamp.

Referring to Figs. 1 and 2 of the drawings a holder *a*, of refractory material, such as
60 porcelain, clay, or the like, contains the fine grained resisting material *d*. This holder is provided with a cover *c* on the end opposite the foot *b*, and, if advisable, the holder can further be covered with a metal envelop.
65 In this form of the invention the holder *a* is divided into two sections or channels *h h* (Fig. 2), by a partition wall *g* made or fitted between the current connections *e, f*, and the cover *c*. In virtue of this arrangement the
70 current from the one current connection runs towards the cover *c* of the container, and then with the assistance of a conducting bridge *i*, it runs back from the cover to the other current connection.
75

In Fig. 3 there is shown a heating arrangement consisting of several heating cartridges of the above described kind. These are fitted on a bed plate *k*, which is provided with a suitable switch *l*, the switch rendering it possible to switch on heating cartridges in any
80 desired number to correspond to any temporary requirements.

Instead of using only one socket for current connection, two or several of these, say
85 for example, four, can be fitted.

The new cartridge can be used for various purposes, for example as a heating element for stoves of various constructions.

Having now particularly described my invention, what I claim as new and desire to secure by Letters Patent is:—

In a heating cartridge the combination of a holder *a* of refractory material, a partition *g* in the inside of said holder so as to form two
95 compartments *h*, a comminuted resistance material *d* contained in said two compartments, current connections or terminals *e, f* leading to each compartment *d* at the lower part of the cartridge, a socket *b* surrounding
100

the outer end of said current connections or terminals, said socket *b* being in one piece with the holder *a*, a cover *c* closing the upper extremity of said holder *a*, and a conducting
5 bridge *i* below said cover *c*, substantially as set forth.

In witness whereof I have hereunto signed

my name this 23^d day of May, 1906, in the presence of two subscribing witnesses.

AUGUST VOELKER.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.