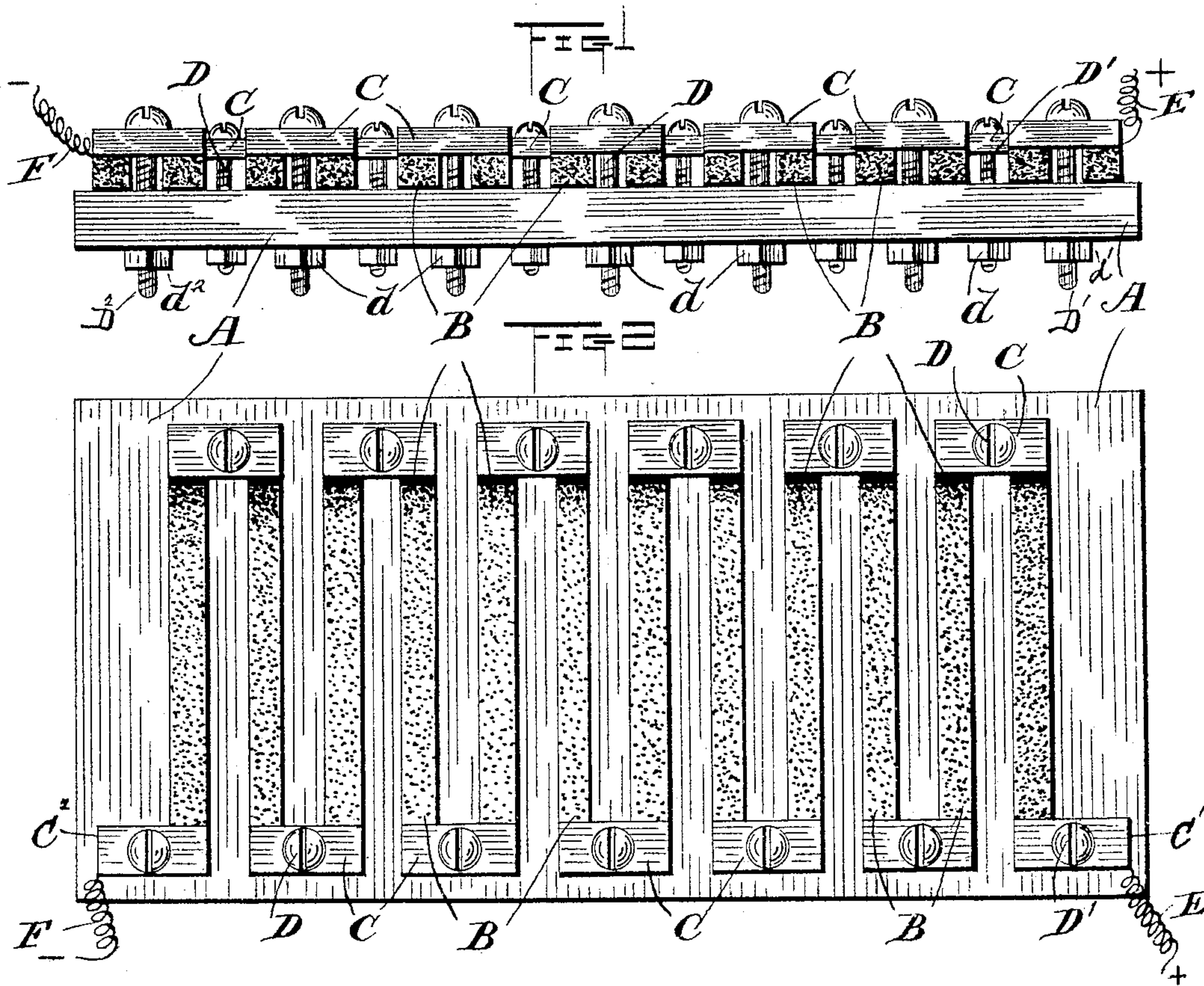


(No Model.)

S. B. JENKINS.
ELECTRIC HEATER.

No. 497,795.

Patented May 23, 1893.



WITNESSES

W. Harvey Muzzy.
J. E. Griswell.

INVENTOR

Samuel B. Jenkins
By W. H. Babcock
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL B. JENKINS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
AMERICAN ELECTRIC HEATING COMPANY, OF SAME PLACE.

ELECTRIC HEATER.

SPECIFICATION forming part of Letters Patent No. 497,795, dated May 23, 1893.

Application filed December 8, 1892. Serial No. 454,466. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. JENKINS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Electric Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide for securing to the best advantage the additional heating effect due to the passage of the electric current from metallic to non-metallic elements and vice versa, through a series making up the resistance of an electric heater. To this end I make use of the construction and combination of parts hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of a heater embodying my invention. Fig. 2 represents a plan view of the same.

A, Figs. 1 and 2 designates a plate of glass or porcelain which may serve as front for the heater; it being the base or top or vertical face thereof according to the position chosen. To this plate bars B of graphite or other carbon or other non-metallic electrical conductor of high resistance material are clamped by short bars C of metal which extend across from one bar of graphite to the next, so that the first graphite bar is connected to the second near one edge of the plate, the second to the third near the other edge and so on to the end of the series. Bolts D passing down from the metal bars C through the plate A are held by nuts d so as to fasten the whole series of bars in place. Additional plates or bars C' C^2 hold respectively the other end of the first bar of graphite and the corresponding end of the last bar; being provided with bolts D' D^2

and nuts d' d^2 operating as before stated. Circuit wires E F are connected to these plates or bars C' C^2 respectively, so that the circuit will be through the zigzag compound resistance which consists of the graphite bars and the metallic connecting and fastening bars C C' C^2 aforesaid. The said carbon bars are arranged by preference parallel to each other as shown, with the metallic bars at right angles thereto; but this is not essential. Iron and graphite are the preferred materials; but other metal may be substituted for the former and other kinds of carbon will in some instances be nearly or quite as efficient as the latter.

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

1. The combination of a series of non metallic bars with a series of metallic bars or pieces making connection between the ends of the former bars, clamping devices for holding the two kinds of bars together to form a continuous electrical resistance and an insulating plate to which the said bars are fastened by the said clamping devices substantially as set forth.

2. The insulating plate A in combination with a series of graphite or other carbon bars B, metallic bars C connecting the ends of the said carbon bars, to form a compound resistance, bolts D connecting the said metallic bars C to the said plate A to hold the resistance as a whole in place and electrical circuit connections with the ends of the series substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL B. JENKINS.

Witnesses:

ALMON C. THOMPSON,
WALTER A. BROWNE.