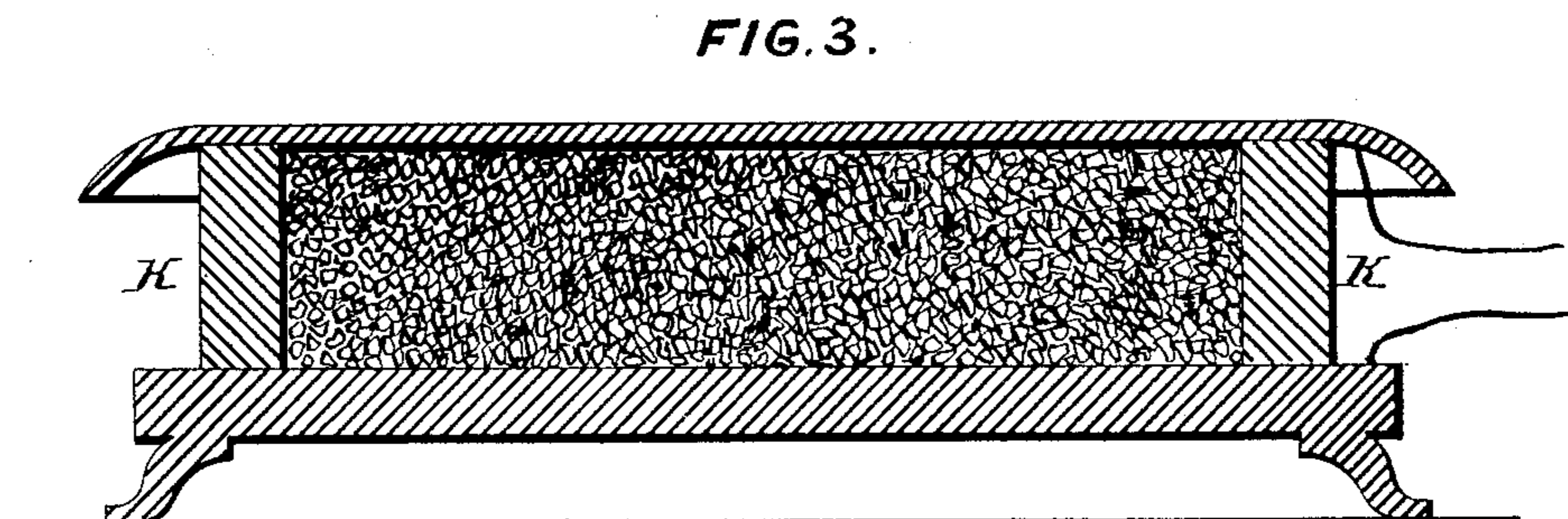
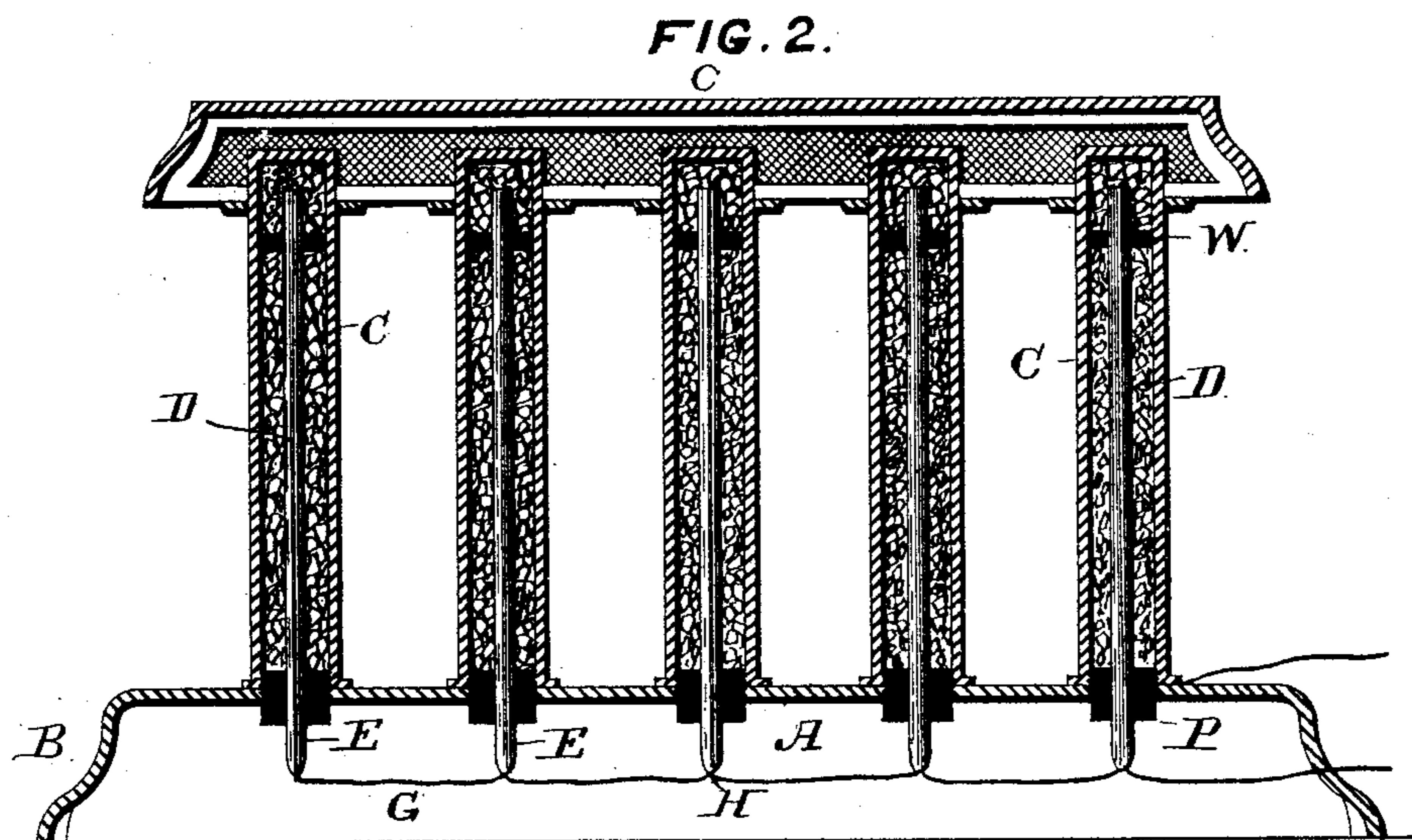
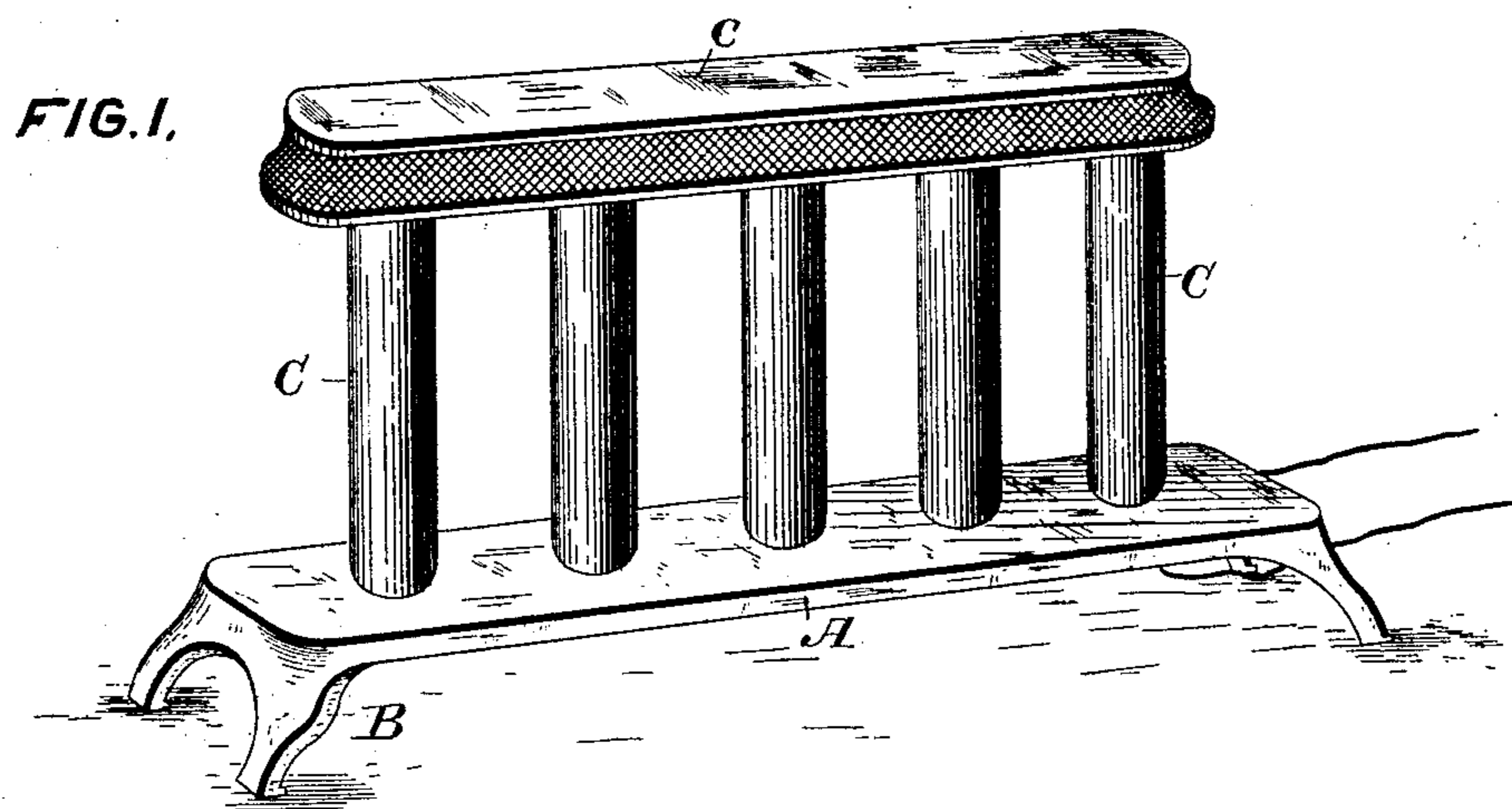


(No Model.)

P. WRIGHT.
ELECTRIC HEATER.

No. 464,055.

Patented Dec. 1, 1891.



ATTEST.

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UNITED STATES PATENT OFFICE.

PARVIN WRIGHT, OF DENVER, COLORADO.

ELECTRIC HEATER.

SPECIFICATION forming part of Letters Patent No. 464,055, dated December 1, 1891.

Application filed March 21, 1890. Renewed December 11, 1890. Serial No. 374,362. (No model.)

To all whom it may concern:

Be it known that I, PARVIN WRIGHT, a citizen of the United States, residing at Denver, county of Arapahoe, and State of Colorado, have made a new and useful Invention in Electric Heaters, of which the following is a specification.

My invention is designed, particularly, to provide certain improvements in heat-generators wherein an electric current may be employed to produce the heat necessary for various purposes, the invention in the present instance being especially intended for the generation of heat for warming and ventilating buildings and for domestic purposes.

In the accompanying drawings, in which similar letters indicate like parts in the respective figures, Figure 1 represents a heater embodying the features of my invention. Fig. 2 represents a vertical sectional view of a portion of the same. Fig. 3 is a sectional view of a heater embodying my invention and arranged for various domestic purposes.

In practicing my invention the essential object is to employ a suitable medium of such nature that when placed in an electric circuit the resistance will elevate the temperature to such an extent as to supply the heat for the purposes required, and to arrange such medium so as to practically produce the best results.

I will first describe my invention as applied to heaters of various descriptions.

Referring to the drawings, the letter A indicates a base constructed of any suitable material, which may be an insulator in itself or which may be mounted upon insulated supports or legs B. This base serves as a support for a vertical conducting-casing C, or a series of such, within which is contained an electric conducting medium or material of high electrical resistance, through which the current may be passed, and which by its resistance will be heated to the required temperature.

In Fig. 1 of the drawings the base is represented as provided with a series of conducting-casings, as above mentioned, and a continuous upper conducting-section C, extending over the whole and supported thereby in any convenient manner. The casing or casings may be constructed of any convenient

conducting material, but for economy are preferably made or cast of sheet metal and are filled with material capable of offering such resistance to an electric current as to be raised thereby to a proper temperature to supply the necessary heat. Various substances may be employed for this purpose; but practically I have found that carbon in some of its forms answers best.

The letter D indicates the medium of resistance, which is packed in the conducting casing or casings in any suitable manner, and E indicates one or more conducting-electrodes, of carbon or other suitable material, which extend upward through the base of the heater into such medium to a proper extent.

As shown in Figs. 1 and 2 of the drawings, the casing or casings serve as the electrode or electrodes opposite to the electrode E, before mentioned, said electrodes E and conducting-casing being held apart, as shown in Fig. 2, by non-conducting washers W and non-conducting screw-plugs P.

The electrodes E and casing C are connected by suitable conductors G with binding-posts H, by means of which they may be put into communication with the wires or conductors of a dynamo or other electric generator.

In the modification shown in Fig. 3 of the drawings the base and cap of the device, which are constructed of metal or suitable electrical conducting material from the electrode, and the walls K, which are constructed of fire-clay, vitreous material, or other non-conducting substance, inclose the resisting medium. In this case the top and base are provided with binding-posts, to which the wires or conductors of an electric generator or dynamo may be connected.

In the forms of the heater herein shown and described the outer casings or walls are preferably coated or covered with vitrified material, mica, or other non-electrical conductors, so as to insure safety in handling.

The walls of the carbon-chamber are constructed so as to be impervious to air, in order that the carbon filling may not be consumed or burned out by being supplied with oxygen from the atmosphere, and in practice I prefer to exhaust the air from the carbon-chamber, so as to better accomplish this end.

I am aware that an electrical heater has

heretofore been devised in which a high-resistance medium was inclosed within a tube or other retaining-receptacle, which high-resistance medium was heated by the passage
5 of an electrical current therethrough, and my claims hereinafter made are not directed to a construction broad enough to include such an apparatus.

Having thus described my invention, what
10 I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, in an electrical heater,
15 of the base and cap constructed of conducting material, an intervening inclosure constructed of non-conducting material, and an inclosed medium of high electrical resistance, substantially as and for the purpose specified.

2. The combination, in an electrical heater, of the anode and cathode constructed of con-

ducting material, an intermediate closure constructed of non-conducting material, and an inclosed medium of high electrical resistance, substantially as specified.

3. An electrical heater consisting of two or more electrodes of good conductivity insulated from each other, in combination with intervening conducting material of poorer conductivity having contact with said electrodes throughout their entire surface, the intervening conducting material being held in
3 place by the aforesaid electrodes, substantially as described.

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

PARVIN WRIGHT.

Witnesses:

DAVID H. LEONARD,
L. C. NORTHROP.