

June 19, 1923.

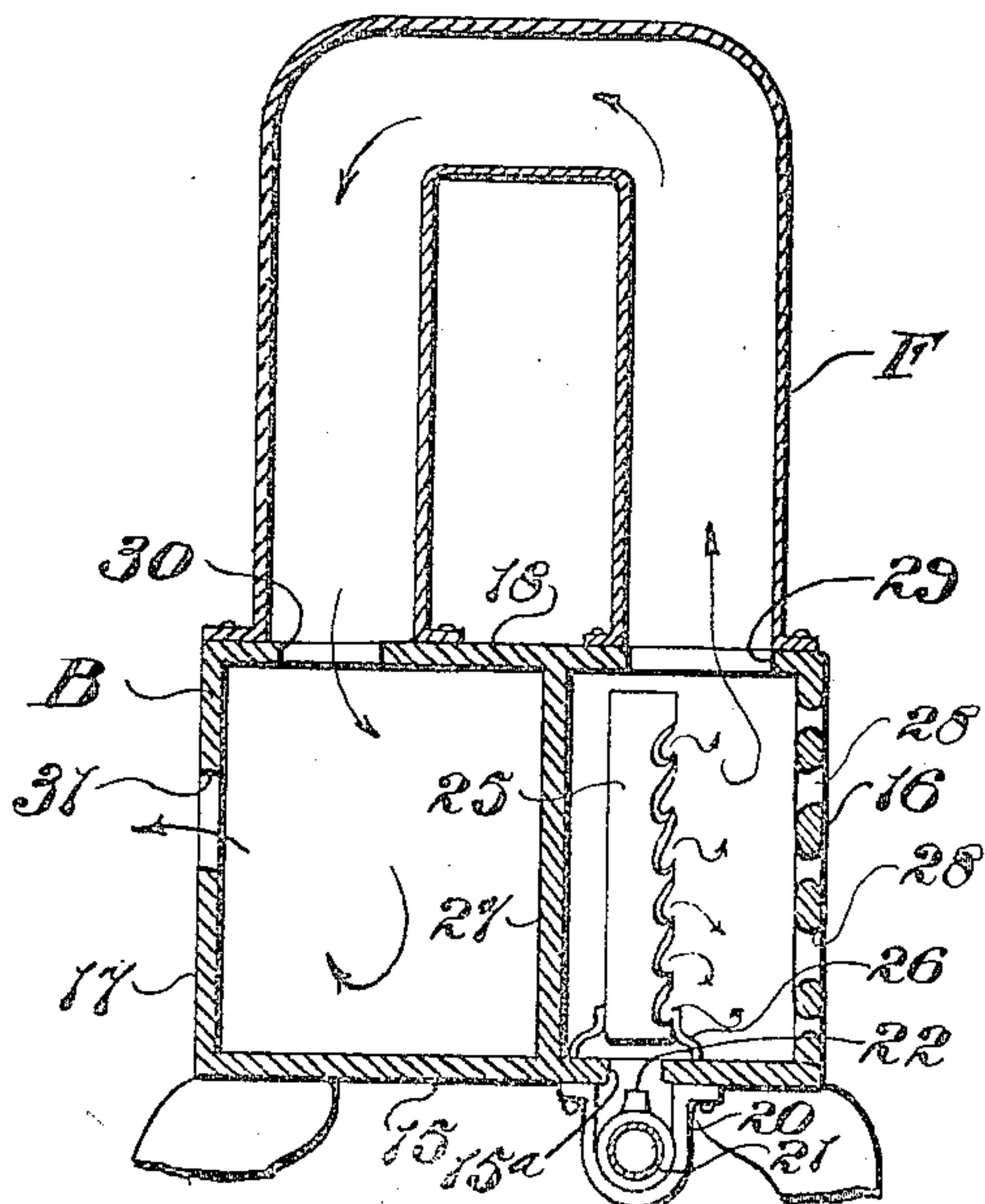
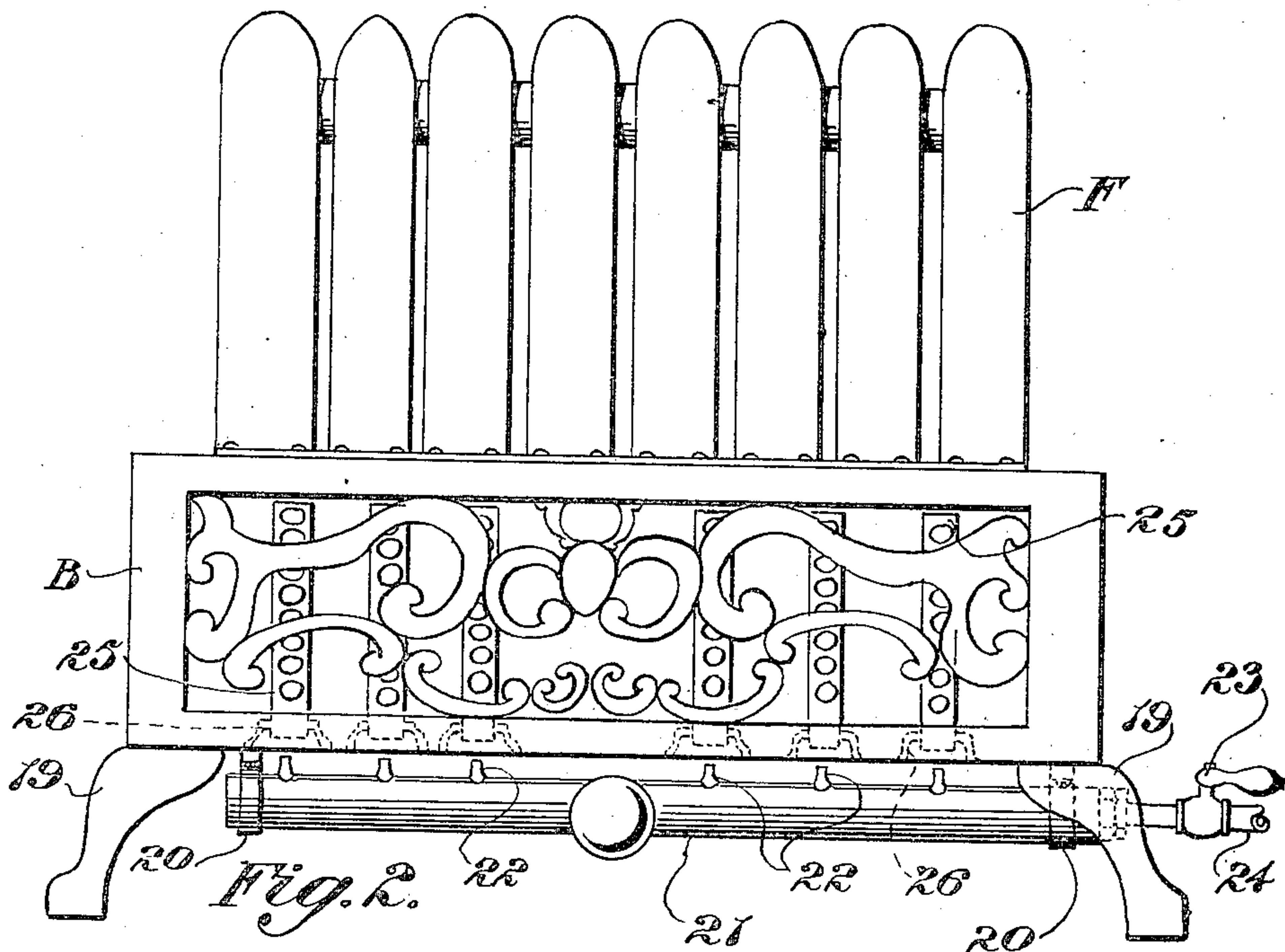
1,459,390.

W. H. CAIN

GAS RADIATOR

Filed Feb. 9, 1922

Fig. 1.



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UNITED STATES PATENT OFFICE.

WILLIAM H. CAIN, OF LOS ANGELES, CALIFORNIA.

GAS RADIATOR.

Application filed February 9, 1922. Serial No. 535,140.

To all whom it may concern:

Be it known that I, WILLIAM H. CAIN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Gas Radiators, of which the following is a specification.

My invention relates to gas radiators, and a purpose of my invention is the provision of a radiator in which is combined incandescence radiating units and radiating flues, the arrangement of the two being such as to render the incandescent units visible and thus allow a direct radiation of heat from such units, while at the same time directing a portion of the heat from the incandescent units through the radiating flues and ultimately discharging the same from the opposite side of the radiator whereby an effective radiation of heat from the opposite sides of the radiator is effected.

I will describe one form of gas radiator embodying my invention and will then point out the novel features thereof in claims.

In the accompanying drawing,

Figure 1 is a view showing in front elevation one form of gas radiator embodying my invention.

Fig. 2 is a vertical sectional view of the radiator shown in Fig. 1.

Referring specifically to the drawing in which similar reference characters refer to similar parts, my invention comprises a hollow and elongated body including a bottom wall 15, a front side wall 16 and a rear wall 17, the two latter walls being connected by a top wall 18. The body B is supported in elevation with respect to the floor by means of legs 19 arranged at the corners of the body as shown.

The bottom wall 15 of the body is shown as provided with a slot 15^a, and sustained directly beneath this slot by means of brackets 20 is a pipe 21 formed at its upper side with jets 22 arranged at intervals and through which gas is adapted to be discharged as will be understood. One end of this pipe 21 is provided with a pet cock 23 and a connection 24 adapted to be connected to a flexible pipe for supplying gas thereto. As shown in Figs. 1 and 2, a plurality of the incandescent heating elements 25 are arranged within the body and at intervals corresponding to the jets 22 so that the flames emanating from the jets will be directed upwardly into the elements for

heating the latter to a point of incandescence. These elements 25 are of standard form and are constructed of fire clay and asbestos with the front side thereof formed with openings through which the flames pass in effecting a radiation of the heat. As shown in Fig. 2, the several elements 25 are supported on feet 26 and at one side of a partition 27 arranged medially of the body and co-extensive in length therewith so as to divide the body into two separate and distinct chambers.

The front wall 16 is provided with openings 28 preferably formed in an ornamental manner as clearly shown in Fig. 1 and through which a portion of the heat from the elements 25 passes exteriorly of the radiator, while at the same time a draft inwardly through said openings is created.

Secured upon the body B are a plurality of radiating flues F constructed to provide inverted U-shaped passageways each of which communicates at its inlet end with the body B through an opening 29 formed in the wall 18, and at its outlet end through an opening 30. These openings 29 and 30 are so disposed as to effect communication between the flues and the two compartments formed in the body by means of the partition 27 in providing a continuous duct for the passage of air through the openings 28 and ultimately from the rear compartment to a discharge opening 31.

In the operation of the radiator, the flames emanating from the jets 22 pass upwardly into the elements 25 to effect a heating of the latter to a point of incandescence. As previously described, a portion of the heat from these elements radiates from the inward side of the radiator through the openings 28, while at the same time that portion of the heat rising into the flues F creates a draft upwardly of such flues with air passing inwardly of the openings 28. As the heat traverses the flues a radiation of the heat is effected, with the final discharge through the opening 31 to the rear side of the radiator. By this operation it will be seen that both a direct and indirect radiation of heat from the elements 25 is effected, the direct radiation taking place through the openings 28 and the indirect radiation occurring through the medium of the flues F with a minor portion of the heat being discharged through the opening 31.

Although I have herein shown and de-

scribed only one form of gas radiator embodying my invention, it is to be understood that various changes and modifications may be made herein without departing from the spirit of the invention and the spirit and scope of the appended claims.

What I claim is:

1. A gas radiator comprising a hollow body divided along its length into a front compartment and a rear compartment with the front wall of the front compartment formed with openings, radiant heating elements arranged within the front compartment, flues superimposed on the body and communicating with said compartments, and a discharge opening in the rear compartment.

2. A gas radiator comprising a hollow body, a partition extending longitudinally of the body for dividing the latter into a front compartment and a rear compartment, radiating heating elements positioned within the front compartment, a burner below the body and heating elements, openings formed in the front wall of the front com-

partment through which said heating elements are displayed, flues communicating with both of said compartments for effecting a circulation of heat from the front compartment to the rear compartment, and a discharge opening in the rear compartment.

3. A gas radiator comprising a hollow body, a partition extending longitudinally of the body for dividing the latter into a front compartment and a rear compartment, radiating heating elements positioned within the front compartment, a burner below the body and heating elements, openings formed in the front wall of the front compartment for exposing portions of said heating elements, flues of inverted U formation communicating at one end with the front compartment and at the opposite end with the rear compartment, and a discharge opening in the rear compartment.

In testimony whereof I have signed my name to this specification.

W. H. CAIN.