

(No Model.)

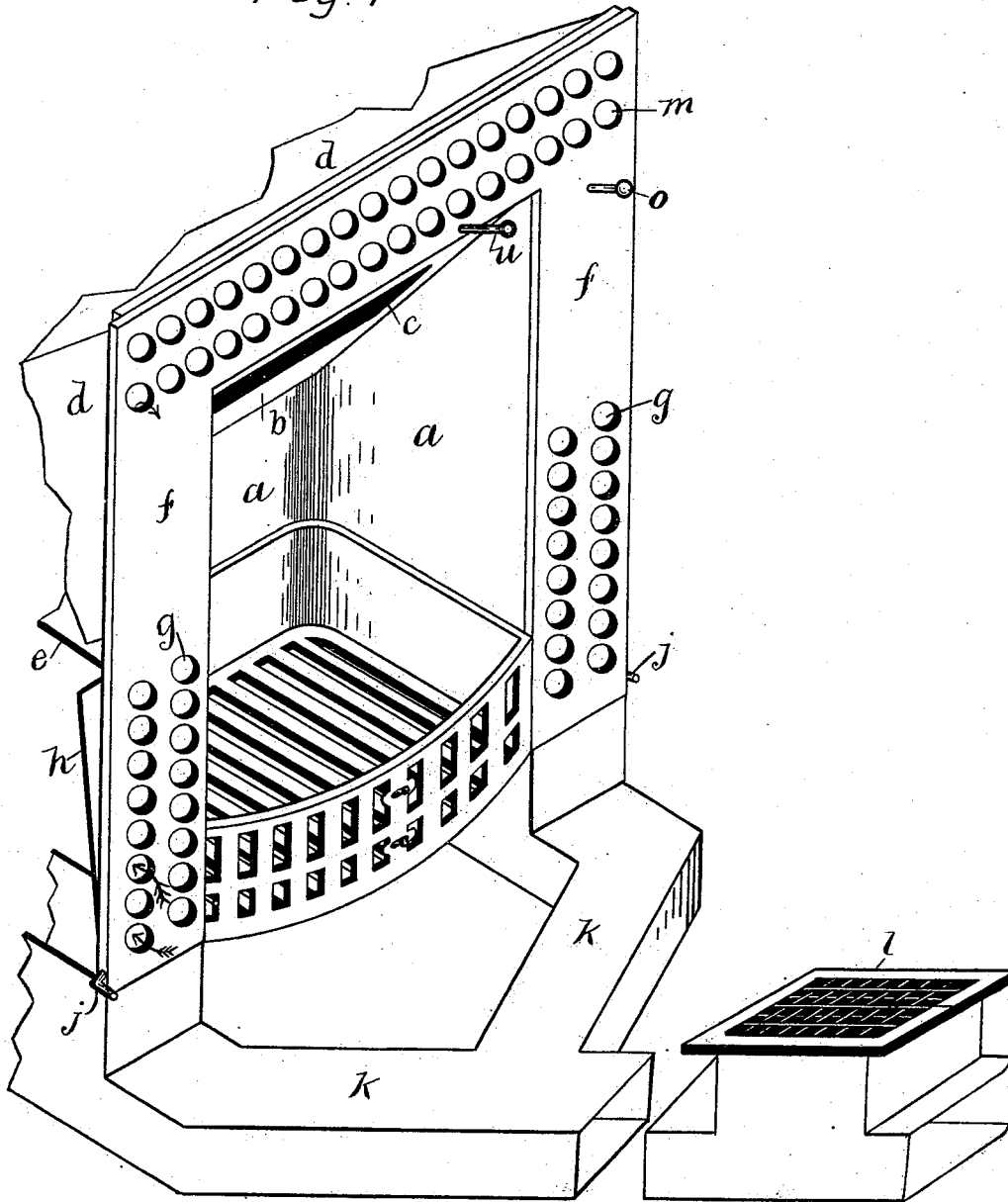
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F. HINDS.  
OPEN FIREPLACE HEATER.

No. 525,208.

Patented Aug. 28, 1894.

Fig. 1



WITNESSES:

Geo. W. P. McElhone.  
W. V. Personius

Fred Hinds INVENTOR

BY

J. E. Bookstaver ATTORNEY

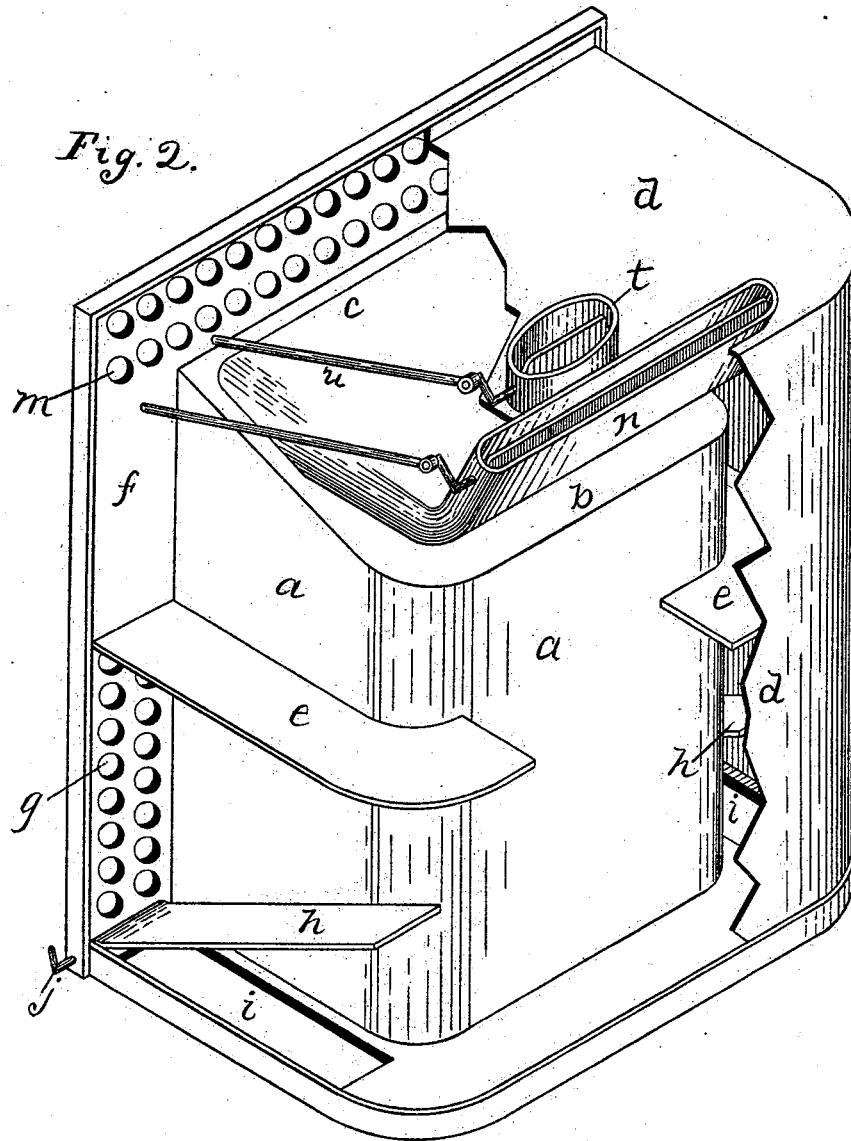
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# UNITED STATES PATENT OFFICE.

FRED HINDS, OF BINGHAMTON, NEW YORK.

## OPEN FIREPLACE-HEATER.

SPECIFICATION forming part of Letters Patent No. 525,208, dated August 28, 1894.

Application filed January 15, 1894. Serial No. 496,890. (No model.)

*To all whom it may concern:*

Be it known that I, FRED HINDS, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Open Fireplace-Heaters, (for which I have received Letters Patent in no country,) of which the following is a specification; and I do hereby declare that the following pages of specification are a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part thereof.

My invention relates to improvements in open fire-place heaters; and the object of my invention is to provide a heater novel in construction, and so arranged that a large proportion of the heat produced in combustion, which in fire place heaters now in use, is lost by escaping with the smoke, will be deflected and escape into the room; and so constructed that it will take up the cold air of the room, and after causing it to pass over certain heated parts, throw it again into the apartment as hot air. I attain this object by means of the novel details of construction and arrangements of parts which are fully illustrated in the accompanying drawings, in which—

Figure 1,—represents a view in perspective of the front of my open fire-place heater, showing its general construction. Fig. 2 is a view in perspective of the back of my open fire-place heater, showing specially its inner construction.

In Fig. 1, (a) represents a cast iron inner wall surrounding the interior of the heater on its back and two sides, to which is bolted or otherwise secured, the cast iron top (b). In this top (b), close to the front of the heater, is formed the long narrow opening (c), extending nearly the whole width of the top plate, and connected inwardly with the smoke flue. Outside of the wall (a) and the top plate (b), and completely surrounding them, is the casing (d), forming an air chamber between the two walls (a) and (d). In this chamber, at a certain distance between the top and bottom, are secured the two shelves or deflectors (e) (e) which separate the air chamber in

two parts, except in the rear, where is left an open space large enough to obtain a free flow of the air which is allowed to enter from below. In that portion of the iron casing (f) in front of the heater, below the shelves or deflectors (e) (e), are the inlet openings (g) (g) which may be of any shape to allow the cold air of the room to be taken up and drawn into the air chamber. Directly back of these openings on both sides of the heater, and in the air chamber, are the doors (h) (h) covering the openings (i) (i) when closed, and when turned up by the crank (j) cover and close the inlet openings (g) (g) when necessary to exclude the room air and to admit the air from out doors or from a distant point through the opening (i) by way of the air flue (k) or the register (l). In the iron casing over the front of the heater, are the outlet openings (m) by which the heated air is admitted into the room.

In Fig. 2, (n) represents the broad and narrow smoke flue running from the front of the heater back to the chimney flue. It is opened or closed at will by means of the rod (o) operating the damper (p).

(s) represents a pipe opening through the wall (d) into the air chamber, for use in conducting hot air to an upper room. It has the damper (t) operated by the rod (u).

The top (b) of the inner wall of the air chamber slants downward at an angle, while the smoke flue (n) runs backward in a straight line to the back of the heater, thus furnishing a large radiating surface, and releasing the smoke directly into the chimney flue; also leaving a sufficient space between the smoke flue and the top (b) for air to pass through.

In use, when the heater is heated, the air of the room at the floor will enter the inlet openings (g) (g)—the door (n) being closed over the opening (i) (i)—and pass upward in the air chamber until deflected by the deflectors (e) (e), when it will pass to the openings in the rear between the ends of the deflectors, and so up between the top of the inner wall (b) and the smoke flue (n), and then out at the side of the smoke flue and around and over it, between it and the outer casing (d), when, being heated from the surfaces with which it has come in contact, it passes through

the outlet openings (*m*) into the room. If it is desired to use the outdoor air or the air from a register in a distant part of the house, the door (*h*) is raised, closing the inlet openings (*g*), and the air is supplied through the openings (*i*) from said source.

What I claim as my invention, and desire to obtain Letters Patent for, is—

1. In an open fire-place heater, the broad and narrow smoke flue, opening into the top of the heater close to its front casing, and running thence to the rear of the heater; as described and for the purpose specified.

2. In an open fire-place heater, the single, flat, rectangular doors (*h*) working at one end at the bottom of the inlet opening (*g*) upon a crank rod, the crank of which is upon the outside of the heater, and by which the door is turned back and forth in order to close the inlet opening (*g*) and open the inlet opening

(*i*) or vice versa operating to open and close the inlet openings; as described and for the purpose specified.

3. In an open fire-place heater, the combination with the air chamber, or the inlet openings in the sides of the front casing below the deflectors, the outlet openings in the top of the front casing, the door closing the inlet openings in front of the heater when vertical and covering the inlet opening in the air chamber when horizontal, the deflectors between the top and bottom of the air chamber, and the smoke flue opening into the top of the heater; substantially as described and for the purpose specified.

FRED HINDS.

Witnesses:

W. V. PERSONIUS,  
J. E. BOOKSTÄVER.