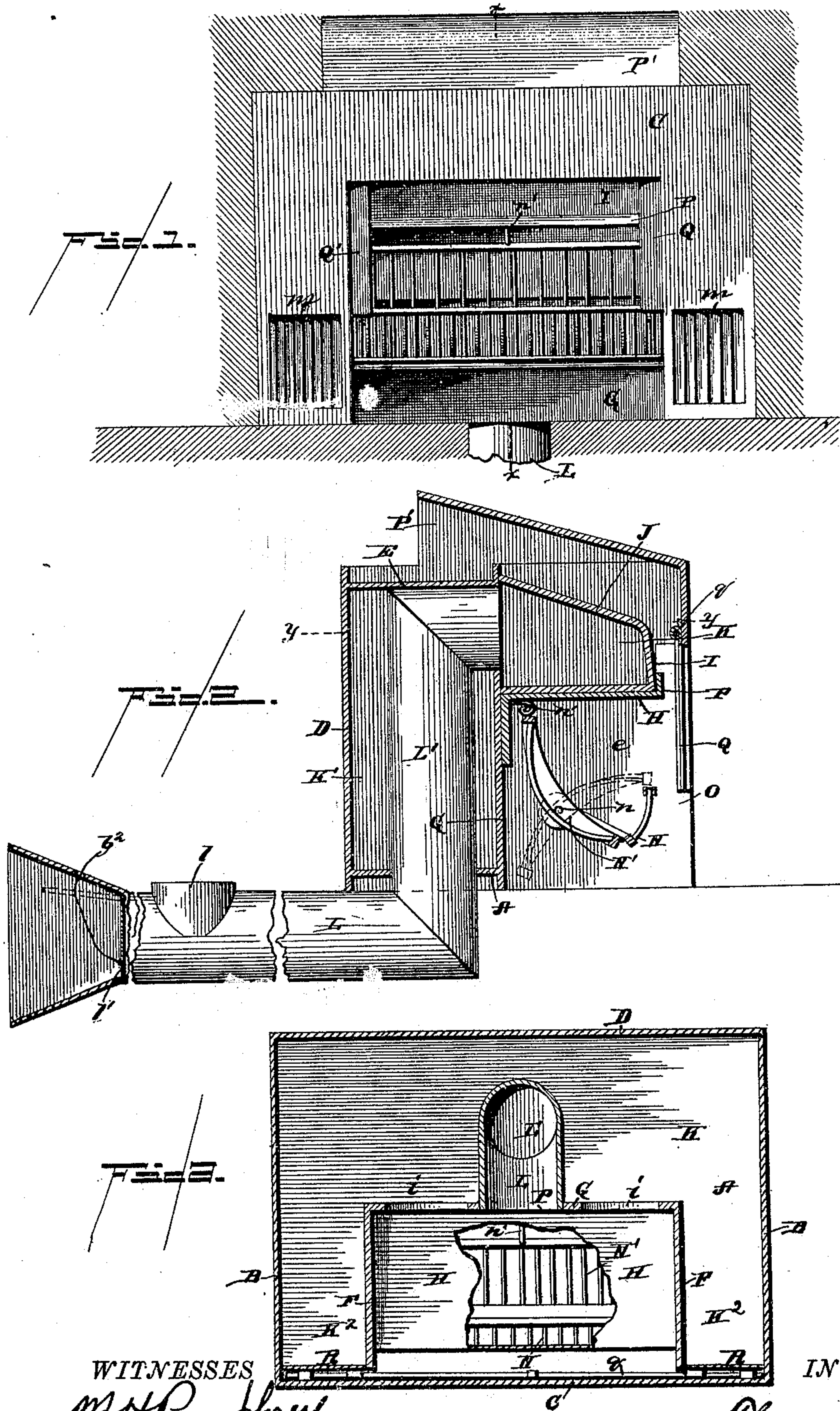


(No Model.)

T. B. JACKSON.  
FIRE PLACE HEATER.

No. 405,707.

Patented June 25, 1889.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

THOMAS B. JACKSON, OF BELMONT, OHIO.

## FIRE-PLACE HEATER.

SPECIFICATION forming part of Letters Patent No. 405,707, dated June 25, 1889.

Application filed June 8, 1888. Serial No. 276,450. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS B. JACKSON, a citizen of the United States, residing at Belmont, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Fire-Place Heaters; and I do 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 ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specifica-  
15 tion.

This invention relates to fire-place heaters of that class which heat by radiation and by hot air, the air being heated in a chamber on each side in the rear and above the fire-grate and let into the room in desired quantities  
20 through registers which communicate with the said hot air in chamber. The cold air conducted to the hot-air chamber through a pipe, which extends to the exterior of the building, and which is provided with a regu-  
25 lating-damper to control the amount of air to be admitted to the said chamber. A branch pipe extends from this cold-air pipe, and is provided with a register, and admits air into the room to moderate the temperature thereof.

30 The improvement consists in the novel features which hereinafter will be more fully described and claimed, and shown in the annexed drawings, in which—

Figure 1 is a front view of the fire-place heater; Fig. 2, a vertical section on the line X X of Fig. 1, showing the cold-air pipe, and the cold-air register connected with the cold-  
35 air pipe; and Fig. 3, a horizontal section on the line Y Y of Fig. 1.

40 The fire-place heater is composed of the bottom A, the sides B, the front C, the back D, the top E, and the fire-chamber composed of the end walls F, parallel with the sides B, the back G, and the top H, which extends to  
45 within a short distance of the front C, and connects with the vertical wall I, from the top of which extends rearwardly the inclined top J. The rear end of the top J connects with the back wall G. The air-chamber K, formed  
50 between the walls G, H, I, J, and F F, is located directly above the fire-chamber, and communicates with the air-chamber K' in the

rear of the fire-chamber, and formed between the backs D and G, through the openings *i i* in the back wall G. The air-chambers K<sup>2</sup> at  
55 each end of the fire-chamber communicate with and are extensions of the air-chamber K'.

The cold-air pipe L, extending from the exterior of the building, passes through the bot-  
60 tom A and up through the chamber K' to the chamber K, and is provided with a vertical branch L', that extends through the floor of the room and is provided with the cold-air reg-  
65 ister L. The end of the pipe L has the damper L', which opens upward, being controlled by the string L<sup>2</sup>, to admit more or less air, as re-  
quired.

The hot-air registers *m* communicate with the chambers K<sup>2</sup>, and can be opened more or  
70 less to admit the heated air into the room.

The fire-grate N and the back grate N' are supported between the end walls F F. The  
75 back grate N' is curved in cross-section from top to bottom, and is pivotally supported at its ends midway of its top and bottom on the  
gudgeons *n*, and is held in position by the catch *n'*. The fire-chamber is protected by the end plates O and the top plate P, which  
80 extends along the top H and part way down the back G.

The products of combustion escape through the space between the front C and the front  
85 I of the hot-air chamber K, and are directed to the chimney by the hood P'. The space in the front *c*, directly in front of and above  
the fire-grate, is closed by the slides or metal screens Q and Q', two being provided for each  
90 side, which are suspended from the metal bar *q*, supported above the fire-chamber. The slides or screens work through slots in the  
sides F and enter pockets R, formed between the front C and the plates *r*, parallel with the  
said front.

When the fire is started, the slides are drawn  
95 out and effect a strong draft up the chimney, and prevent the escape of smoke into the room. They also protect the eyes from the glare of the fire and prevent the radiation of too much heat into the room. The grate be-  
100 ing pivoted, can be readily dumped.

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

1. In a fire-place heater, the combination,

with the hot-air chambers  $K^2$ ,  $K^2$ ,  $K'$ , and  $K$ , arranged to inclose a fire-chamber, the hot-air chamber  $K$  being directly above the fire-chamber and closed in on every side and communicating with the hot-air chamber  $K'$ , of the cold-air pipe leading directly to the hot-air chamber  $K$ , substantially as and for the purpose described.

2. The herein-described fire-place heater composed of the front, the end, and the rear hot-air chambers  $K^2$  and  $K'$ , respectively, inclosing the fire-chamber, the hot-air chamber  $K$ , arranged directly over the top of the fire-chamber and communicating with the rear hot-air chamber, the cold-air pipe passing through the rear chamber  $K'$  and extending into the chamber  $K$ , and the cold-air register

communicating with the said cold-air pipe, substantially as and for the purpose described.

3. In a fire-place heater having end, rear, and top hot-air chambers arranged to form walls and inclose the fire-chamber, the combination of the hot-air chamber  $K$ , arranged in the top hot-air chamber, the metal end plates  $O$   $O$ , and the metal top plate  $P$ , extending over the fire-chamber and part way down in the rear of the fire-chamber, substantially as and for the purpose described.

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

THOMAS B. JACKSON.

Witnesses:

E. W. BRYSON,  
IRA VAIL.