

(No Model.)

D. M. CRUMLEY.

FIRE GRATE.

No. 381,989.

Patented May 1, 1888.

Fig. 1.

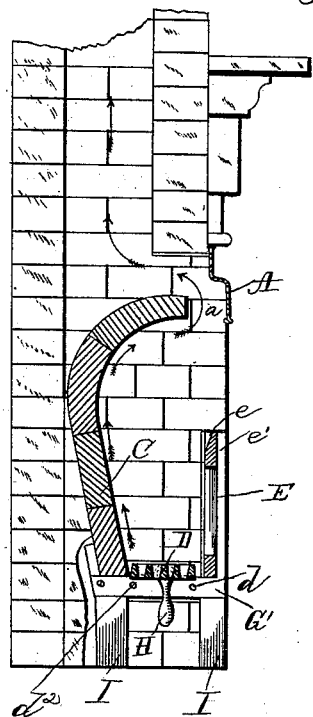


Fig. 2.

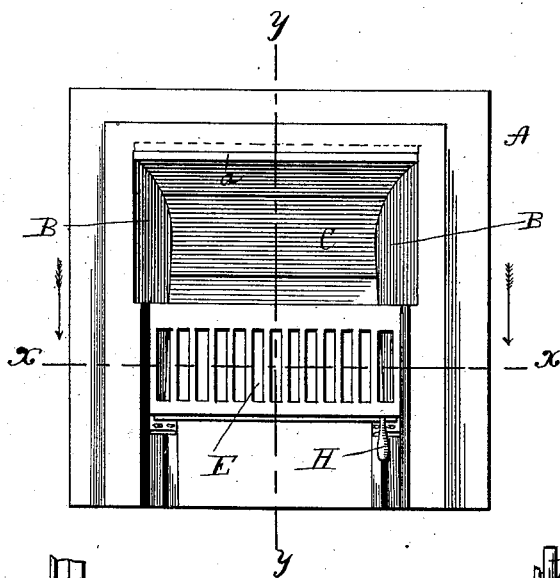


Fig. 5.

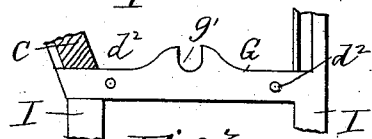
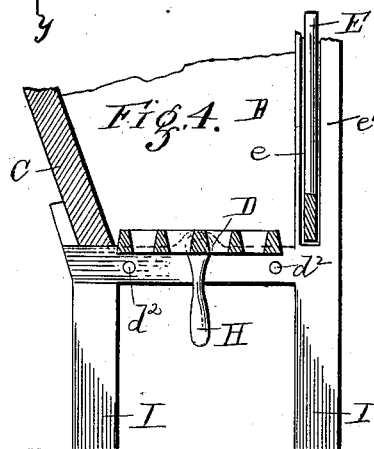
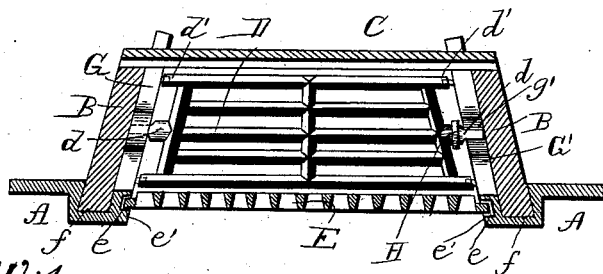


Fig. 3.



Witnesses
R. C. Laurie
Van Duren Hillyard.

Inventor:
David M. Crumley.
By R. B. & A. P. Lacey, Attys.

UNITED STATES PATENT OFFICE.

DAVID M. CRUMLEY, OF STEUBENVILLE, OHIO.

FIRE-GRATE.

SPECIFICATION forming part of Letters Patent No. 381,989, dated May 1, 1888.

Application filed December 21, 1885. Serial No. 186,378. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. CRUMLEY, a citizen of the United States, residing at Steubenville, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Fire-Grates; 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 appertains 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 specification.

Figure 1 is a side view, parts being broken away, of a fire-place heater embodying my invention; Fig. 2, a front view of the heater *per se*; Fig. 3, a section on the line X X of Fig. 2, looking in the direction of the arrow; Fig. 4, a section on the line Y Y of Fig. 2 of the lower portion of the heater on an enlarged scale; Fig. 5, a front view of the cross-bar, having its upper edge notched to receive the end of the grate-bar, which is adapted to be moved up and down when removing or replacing the grate.

The object of the invention is to improve the class of fire-place heaters to control both heat and draft without the aid of a dust-flue or an air-chamber other than the room wherein the device is arranged.

The fire-place heater is composed of a front, A, of metal, the sides B and back C, of tile, the bottom grate, D, and the front grate, E.

The sides B flare outwardly from back to front, and the back C inclines rearwardly near its base and curves outwardly at its top and terminates a short distance from the front A, leaving the space *a* between its end and the front for the escape of dust and the products of combustion.

The front grate, E, is held at its ends in vertical grooves *e* in the keepers *e'* and can be readily removed by an upward movement. The upper edge of the front grate is beveled to present little or no edge surface for the lodgment of cinders, dust, &c. The

keepers *e'* form an integral part of the front A, and have grooves *f* in their rear sides for the reception of the front edges of the sides B.

The bottom grate, D, having gudgeons *d* and stops *d'* at each end, is supported on the cross-bars G and G' by the gudgeons *d*, fitting in openings therein. The opening *g'* in the cross-bar G' extends through the upper edge of said cross-bar to permit the tipping up of the end of the grate when it is desired to remove it and place it in position. The gudgeons are centrally disposed, and one of the gudgeons is adapted to receive the lever H for shaking the grate. The grate is limited in its movements by corresponding stops, *d''*, which are adapted to engage with the stops *d'*. The cross-bars are supported by the standards I, which also support the entire heater.

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

1. A fire-grate heater composed of the sides flaring outwardly from back to front, the back rearwardly inclined at its lower end and outwardly curved at its upper end, the front having a space between it and the top edge of the back, the front grate, and the bottom grate supported at its ends on gudgeons and provided with a lever for shaking, substantially as specified.

2. In a fire-place heater, the combination, with the sides and the front having vertically-grooved keepers, of the front grate fitted in the grooves of the keepers and having its upper edge beveled, substantially as and for the purpose described.

3. In a fire-place heater, the combination, with the cross-bars and the bottom grate having gudgeons and stops at its ends, of the stops *d'*, for limiting the movements of the grate, substantially as specified.

4. The combination, with the front A, having integrally formed therewith the vertically-grooved keepers *e'*, and having the vertical grooves *f* in its rear side, of the front grate fitted in the grooves of the keepers, the sides

B, having their front edges seated in the grooves of the bottom grate, and the back, substantially as described.

5 In a fire-place heater, the combination of the cross-bars, the bottom grate having end gudgeons fitting in openings in the cross-bars, stops projecting from the ends of the grate on each side of the gudgeons, corre-

sponding stops extending from the cross-bars, and the lever fitted to one of the gudgeons for shaking the grate, substantially as set forth. 10

DAVID M. CRUMLEY.

Witnesses:

WILLIAM P. HYS,
HENRY H. FICKES.