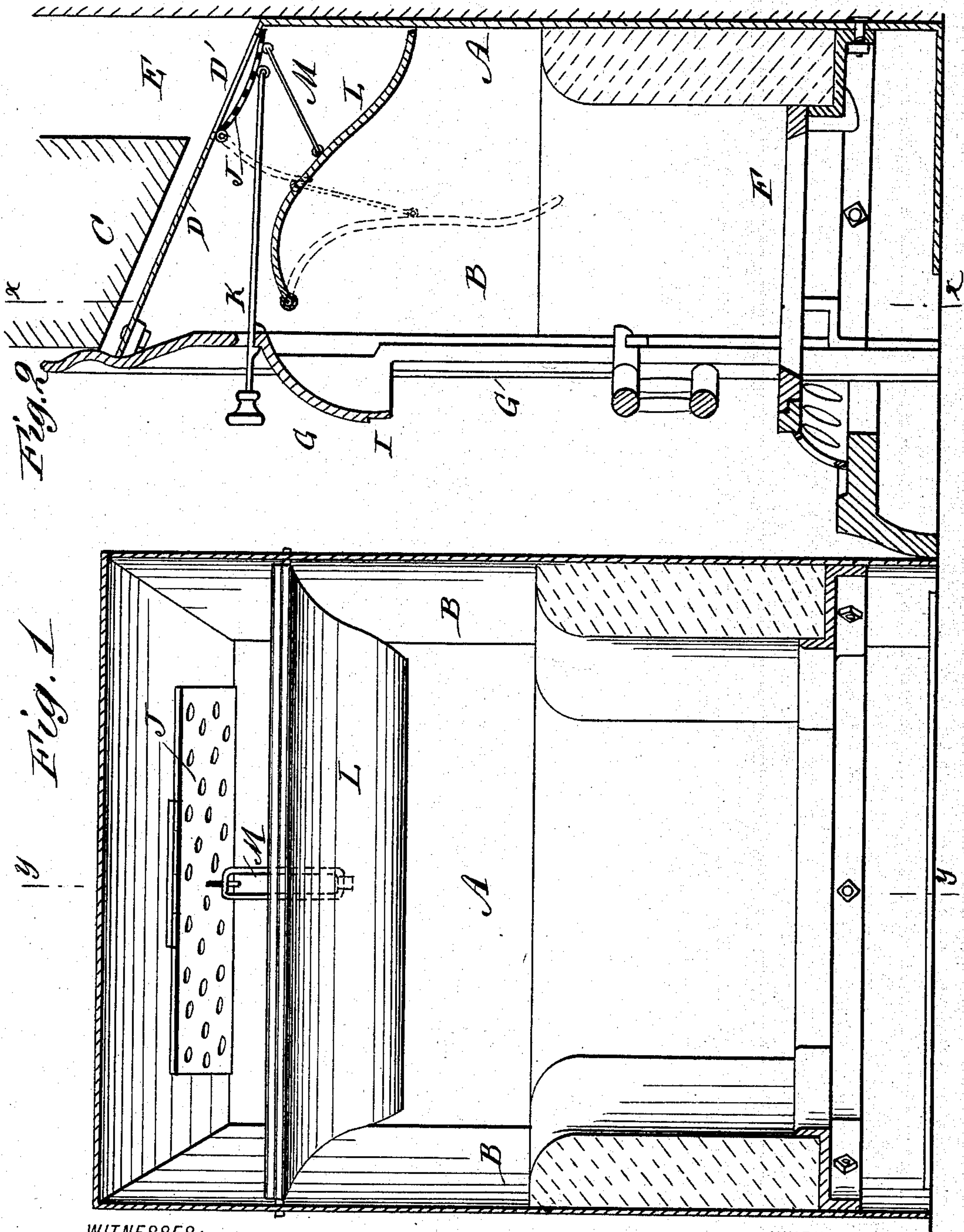


(No Model.)

J. HUCKANS.
OPEN FRONT HEATER.

No. 388,562.

Patented Aug. 28, 1888.



WITNESSES:

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JOHN HUCKANS, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
EGBERT E. BOGARDUS, OF SAME PLACE.

OPEN-FRONT HEATER.

SPECIFICATION forming part of Letters Patent No. 388,562, dated August 28, 1888.

Application filed April 12, 1888. Serial No. 270,396. (No model.)

To all whom it may concern:

Be it known that I, JOHN HUCKANS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Open-Front Heaters, of which the following is a full, clear, and exact description.

This invention relates to improvements in portable grates and other open-front heaters in which a baffling and deflecting plate is arranged at the back of the heater below the usual damper, to cause the heat, instead of being carried up the chimney with the products of combustion, to be thrown out into the room in which the heater is located.

The main object of the improvement is to provide for a convenient adjustment of the baffling and deflecting plate to suit the state of the fire in the grate; and the invention consists of a novel construction and combination of parts, substantially as hereinafter fully described and as distinctly claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front sectional elevation of a portable grate provided with my improvement on the line *xx*, Fig. 2; and Fig. 2 is a cross-sectional elevation of the same on the line *yy* of Fig. 1.

The portable grate shown is provided with a closed sheet-metal back, A, and sides B, adapted to fit within the open fire-place C, with a rearward-sloping top, D, having at its rear part a flue-opening, D', which is arranged to register with the chimney-flue E, a grate, F, and a cast-metal front, G, having an opening, G', which is provided at the top with an outward-projecting hood, I.

A perforated damper-plate, J, adapted to cover the flue-opening D', is hinged at its forward edge to the top D, so that when lowered it will leave the flue opening entirely uncovered, and is connected to a damper-rod, K, which projects outward through the front of the heater, so that it can be operated from the outside thereof to adjust the damper-plate to the desired position.

A baffling and deflecting plate, L, preferably made of cast-iron and in double-curved form, as shown, is pivoted at its forward edge to the sides B of the heater a short distance behind and above the hood I, and is adapted when

raised to extend therefrom downward and rearward to contact with the back A, so that the heated products of combustion rising from the fire and the air drawn in through the open front will be thrown forward by the plate L toward the back of the hood I and be compelled to pass between the same and the front edge of the plate L, whereby a very great portion of the heat produced will be deflected out through the open front into the room.

The hinged plate L is connected by a link, M, with the damper-plate J in such a manner that it will be raised into active position simultaneously with and by the closing of the damper-plate, as when the fire is burning well, and when the damper is opened to increase the draft, as in starting the fire, the plate L will be likewise swung to the position indicated in dotted lines in Fig. 2, when it will act to create a strong draft, and thus greatly aid in strengthening the fire.

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

1. The combination, with an open-front heater having a smoke-outlet in its rear upper part, of a downward-swinging deflecting-plate hinged at its forward edge near the front of the heater below the said outlet and inclined or curved rearwardly and downwardly to the back wall of the heater, space for draft being left between the front hinged edge of the deflecting-plate and the front of the heater, and a rod for operating the deflector, whereby the products of combustion may be deflected to the front of the heater and then to the outlet, or pass directly to the outlet between the rear side of the deflector and back of heater, according to the position of the deflector, the said outlet, however, being never closed by said deflector, substantially as set forth.

2. The combination, with an open-front heater having a flue-opening in its top, of a hinged damper adapted to the flue-opening, a hinged baffling and deflecting plate below the damper, a link connecting the damper and baffling and deflecting plate, and means for adjusting them conjointly, substantially as described.

JOHN HUCKANS.

Witnesses:

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