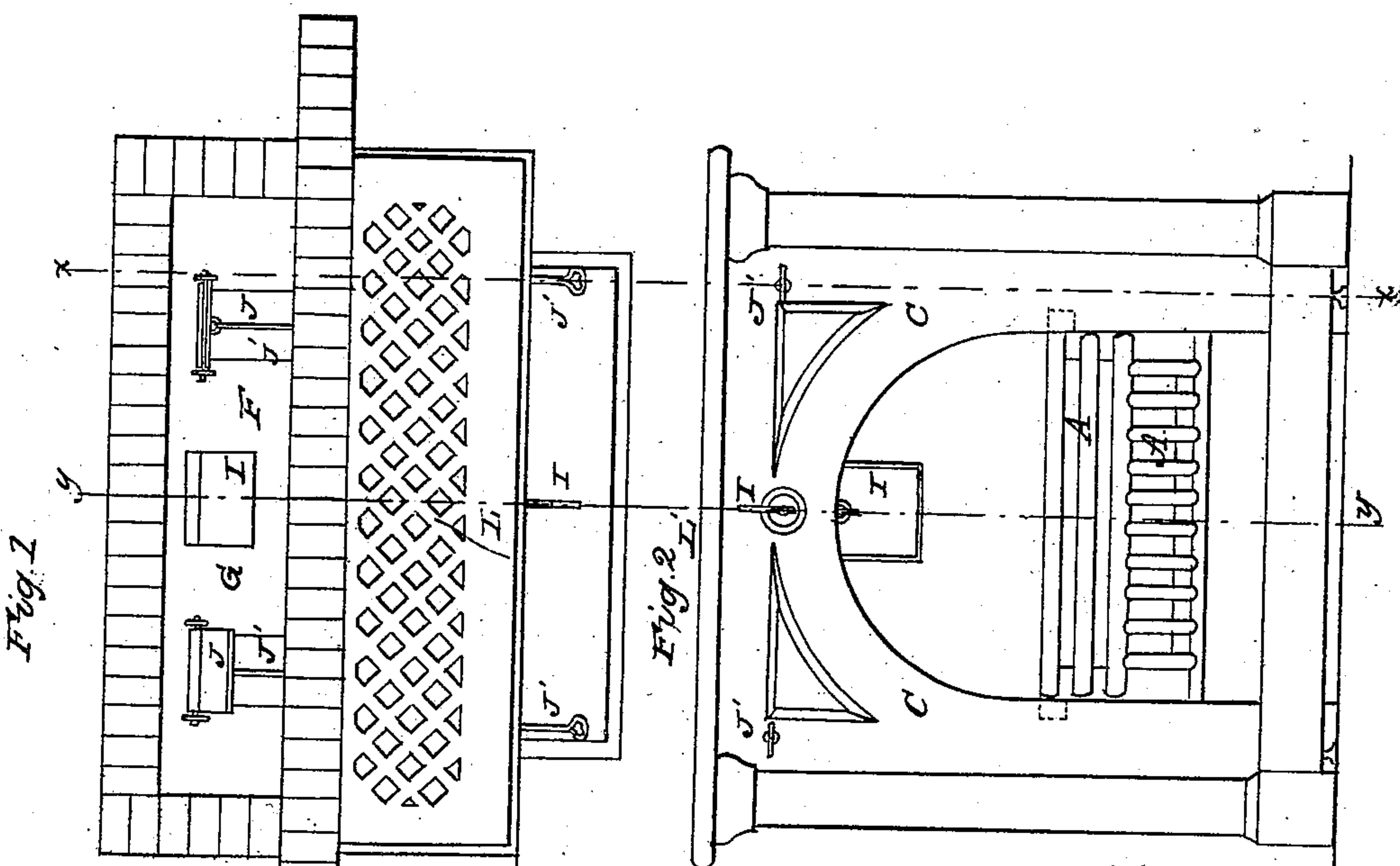
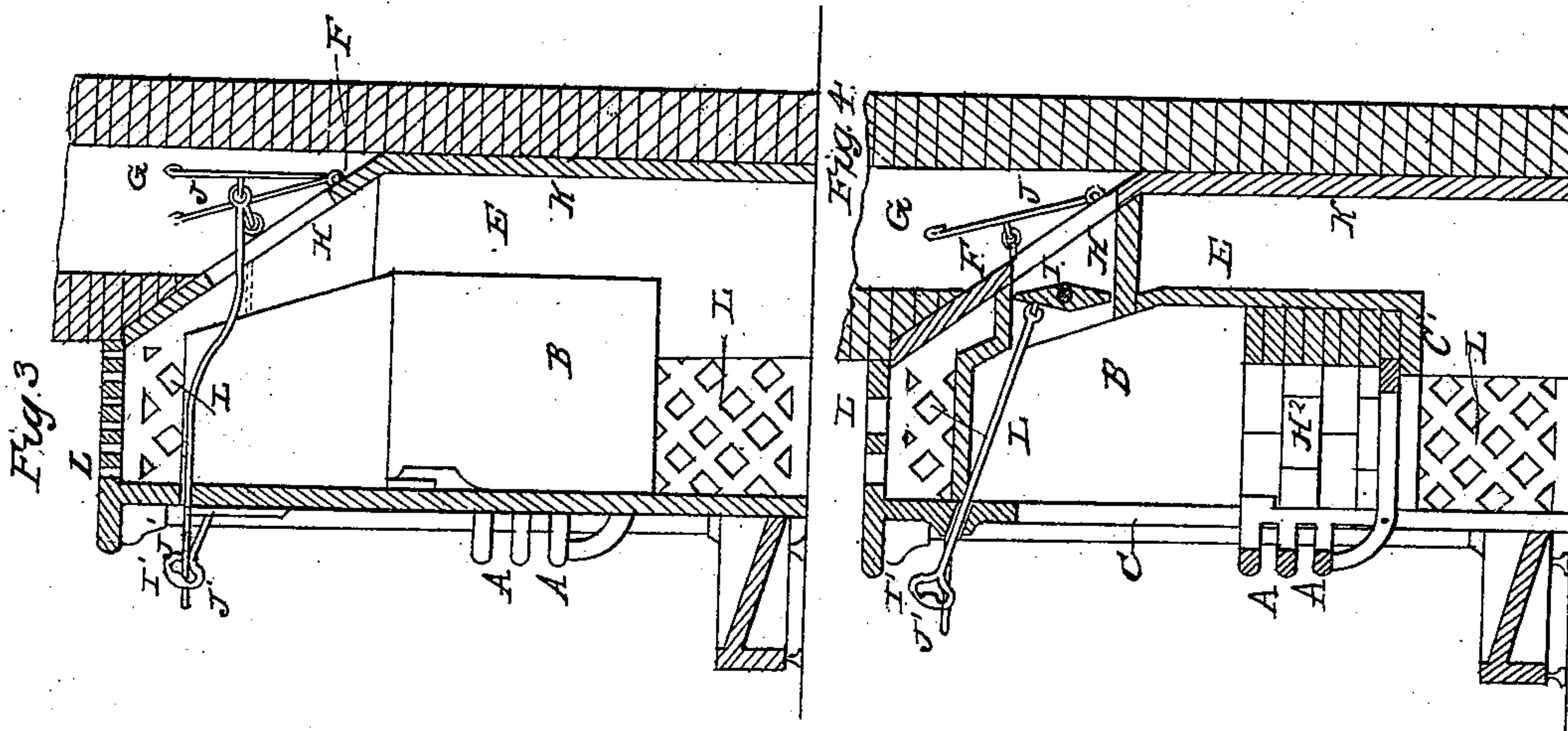


J. H. UPTON.

Fire Place.

No. 59,484.

Patented Nov. 6, 1866.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

ISAAC H. UPTON, OF NEW YORK, N. Y.

## FIRE-PLACE.

Specification forming part of Letters Patent No. 59,484, dated November 6, 1866.

*To all whom it may concern:*

Be it known that I, ISAAC H. UPTON, of the city, county, and State of New York, have invented a new and useful Improvement in Fire-Places for Grates; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, reference being had to the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 is a plan or top view of a fire-place illustrating my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical section from front to rear, the line *xx* indicating the plane of section. Fig. 4 is a vertical central section from front to rear, as indicated by the line *yy*.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of this invention is a fire-place for a grate; and the improvement consists in the method of surrounding the chamber which contains the grate with an air-heating chamber, which receives cool air through the lower part of the perforated front or frame-work, around the front of the fire-place, and discharges the same in a heated condition at the upper part of said perforated frame-work, or into suitable pipes which may be employed to conduct it into other apartments of the building.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe it in detail, with reference to the accompanying drawings.

A represents the iron grate, which may be constructed in customary manner, and supported at a suitable height above the hearth or floor upon flanges C', which may be formed for this purpose at the lower termination of the walls of the chamber B. The walls of the chamber B are joined to the iron-work C, to which the front of the grate is attached, and said chamber is provided with a back plate, D, which, as clearly shown in Fig. 4, stands some distance in front of and away from the rear wall of the chimney, so as to leave a space, E, which is but a continuation or portion of the space or chamber which surrounds the top, bottom, sides, and back of the grate-chamber B.

F is a plate extending in an inclined position entirely across the lower part of the chimney-flue, and employed to close the communication of said flue with the space E, and with the grate-chamber B when desired.

H is a short pipe or flue leading from the interior of the grate-chamber into the flue G. This pipe may be opened or closed at will by means of the damper I, which is operated by means of the rod I', extending through the front C of the grate.

The inclined plate F is provided with two similar dampers or valves, J J, and rods J' J', the latter also extending through the front of the grate, to enable valves J J to be opened or closed, as may be desired.

The upper portions of the sides and back of the chamber B may converge toward the top, for the purpose of affording sufficient space between said chamber and the surrounding parts.

The back D may be cast entire with the walls of the chamber B, or it may be of sheet-iron and riveted upon the same. The metallic lining K of the rear wall of the chimney can be used or dispensed with, as preferred.

L L are two oblong perforated plates, standing vertically behind and at the opposite sides of the front C, and joined edgewise to the latter. L' is a similar perforated plate, supported upon the upper edges of the front C and the vertical plates L L. The front C and plates L L L' form that part of the iron-work of the grate which projects into the room.

From the above description of the construction of my improvement the operation will be readily understood. When the valves J J are closed, air enters the chamber or space E through the lower part of the perforated plates, and, after circulating in contact with the heated sides and back of the chamber B, passes into the room through the upper portions of the plates L L, or through the upper perforated plate L'. If desired, however, the air thus heated in the chamber E may be conducted through pipes to other apartments of the house. It will be seen that while the grate-chamber B may be made to communicate with flue G by opening the valve I, communication may be closed between the air-heating chamber E and flue G by means of the valves J J. Hence a full draft may exist and the effective

heat of the grate be retained and utilized at the same time. The heat may, however, be moderated or permitted to escape by means of the valves J J, to suit the occasion.

Having thus described my invention, the following is what I claim as new herein and desire to secure by Letters Patent:

1. The inclined plate F, in combination with valves or dampers J J and rods J' J', employed to retain or permit the escape of heat, and arranged as and for the purpose specified.

2. In combination with the above, the air-heating space or chamber E, formed and arranged substantially as and for the purpose set forth.

3. In a fire-place for grates constructed as herein described, the perforated plates L L L', arranged as described, and permitting a free circulation of air to and from the air-heating chamber E, as set forth.

4. The arrangement of the grate-chamber B, pipe or flue H, dampers I J J, inclined plate F, and air-heating chamber E, as herein described, and for the purpose specified.

I. H. UPTON.

Witnesses:

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