(No Model.)

R. B. BERRIE.

FIRE PLACE.

No. 388,173. Patented Aug. 21, 1888.

Fig. 3.

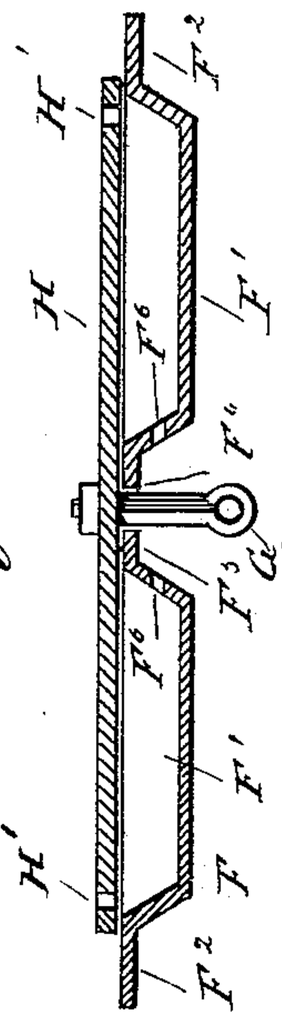


Fig. 2.

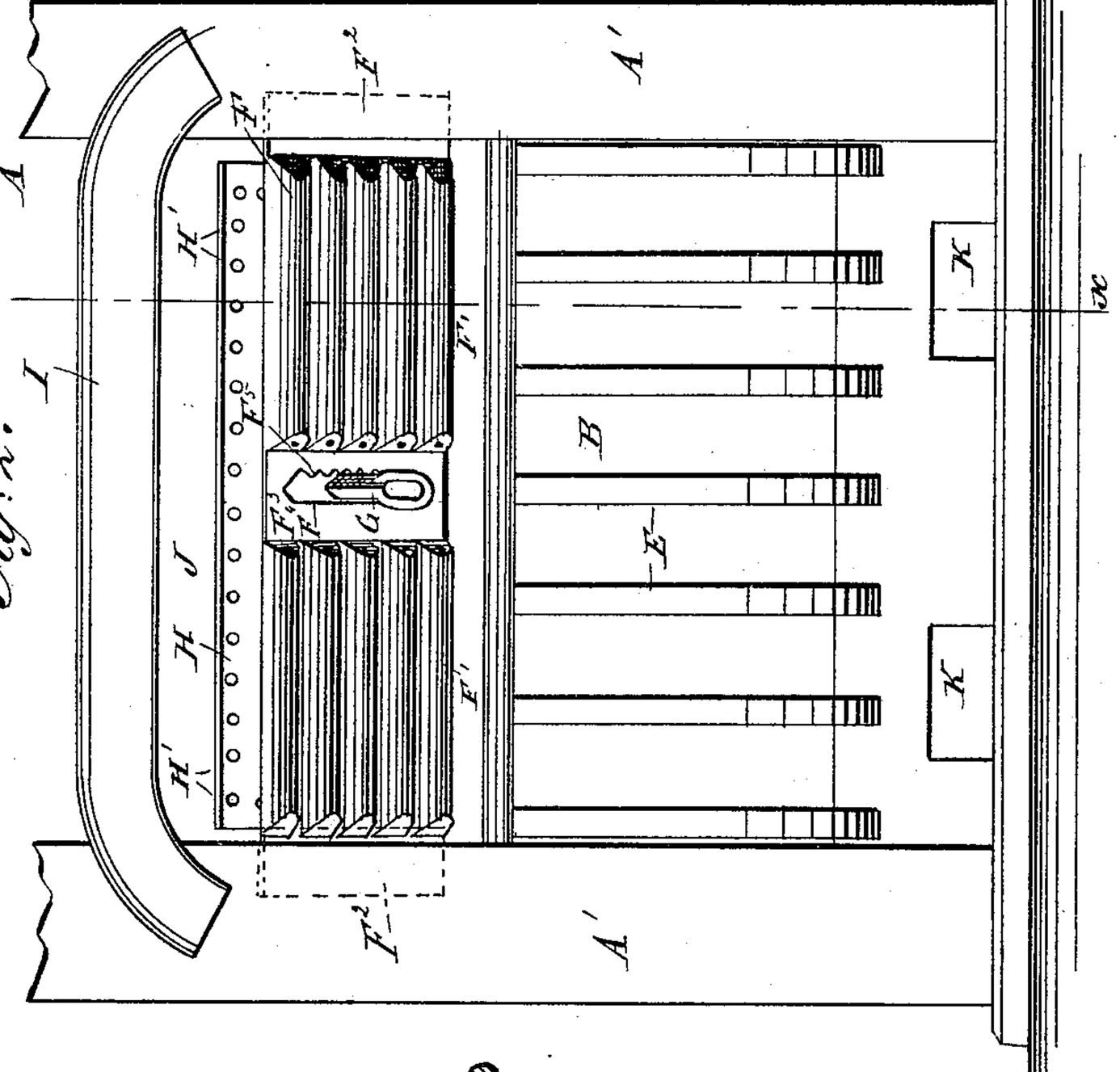
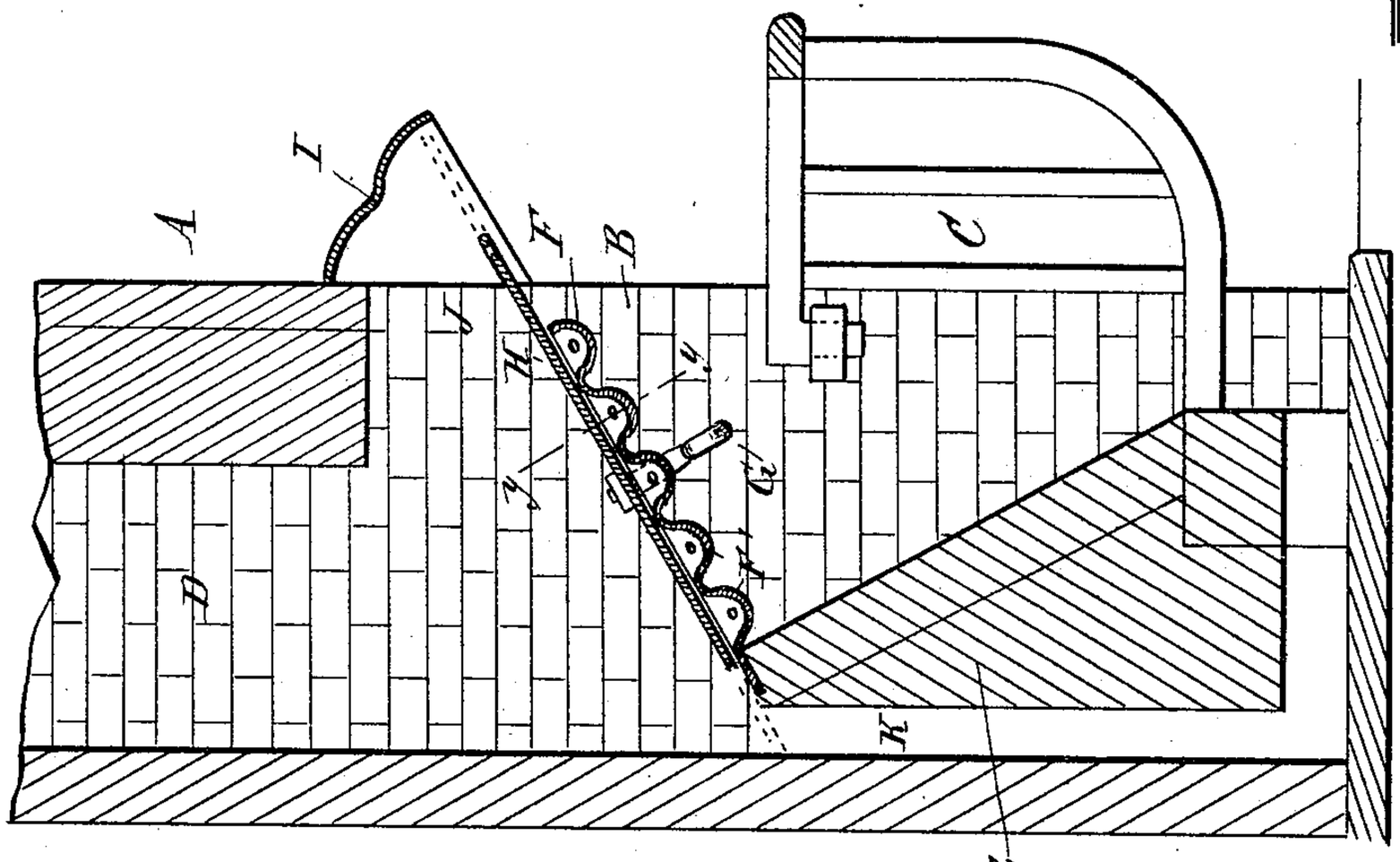


Fig. 1.



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ROBERT B. BERRIE, OF LEXINGTON, MISSOURI.

FIRE-PLACE.

SPECIFICATION forming part of Letters Patent No. 388,173, dated August 21, 1888.

Application filed February 21, 1888. Serial No. 264,744. (No model.)

To all whom it may concern:

Be it known that I, ROBERT B. BERRIE, of Lexington, in the county of Lafayette and State of Missouri, have invented certain new and useful Improvements in Fire-Places, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in fire-places, in which the amount of draft necessary for free combustion will be easily regulated and the heat generated retained and directed into the room to be heated.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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 all the figures.

Figure 1 is a sectional side elevation of the improvement on the line *x x* of Fig. 2. Fig. 2 is a front elevation of the same, and Fig. 3 is a sectional front elevation of part of the improvement on the line *y y* of Fig. 1.

In the wall A is formed a fire-place opening, B, containing the grate C and connected with the chimney D. The front part of the grate C is of any approved construction, and the back E of the said grate is built of brick, and is slightly inclined rearward and upward, as is plainly shown in Fig. 1. The top of the grate C is formed by a plate, F, provided with longitudinal corrugations F′, and with the end flanges, F^2, set into the parts A′ of the wall A. The lower part of the plate F rests on the top of the back E of the grate C, and the corrugations F′ terminate near the middle of the plate F, so as to form the flat part F^3, in which is made an opening, F^4, through which passes a handle, G, secured to the regulating-plate H, held to slide on top of the corrugated plate F. The opening F^4 has one notched edge, F^5, one of the notches of which can be engaged by one of the corners of the handle G, which is preferably square in cross-section and placed over edge, as is plainly shown in the drawings, so that when the corner of the said handle G engages one of the notches F^5 the plate H is held in place.

Along the upper end and the sides of the plate H are formed apertures H′, to permit the heat radiated from the top of the plate F to pass out through the said apertures H′ and into the chimney D, so as to prevent the said corrugated plate F from being heated too highly.

In front of the corrugated plate F and above the grate C is held a hood, I, extending across the upper part of the opening B and secured to the wall A. The plate H, when moved forward on the corrugated plate F, decreases the opening J, formed by the front end of the corrugated plate F and the front end of the hood I, and when the said plate H is moved backward said opening J is increased. Under the grate C extend one or more channels, K, which lead to the chimney D, and the inner openings of the said channels K can be closed or opened by the lower end of the plate H.

The operation is as follows: When the fire is started in the grate C, the heat generated is reflected back into the room by the corrugated plate F, and the smoke and the gases arising from the fire on the grate C pass up through the opening J into the chimney D. The air from the room also passes through the channels K into the chimney D. When the operator desires to increase the draft on the fire in the grate C, he slides the plate H backward by taking hold of the handle G and disengaging the same from the respective notch F^5 and moving the said handle toward the rear in the slot F^4. The opening J is thus increased, so as to permit the gases and smoke rising from the grate C to pass up freely into the chimney D, and at the same time the inner lower end of the plate H closes the upper openings of the channels K, so that the draft in the chimney D is considerably increased, as no air can pass from the channels K up into the chimney D. When the operator desires to increase the draft in the chimney D and decrease the draft on the fire in the grate C, he moves the handle G forward, so as to fully open the inner openings of the channels K, and at the same time diminish the opening J between the front end of the corrugated plate F and the hood I, and thus more heat will be retained in the room.

The corrugations F′ are closed at both ends; but the inner ends are provided with openings

F⁶, as is plainly shown in Figs. 2 and 3. These openings serve to permit the heat radiated from the back of the corrugations F′ to pass out either through the openings H′ or through the said openings F⁶, thus keeping the said corrugated plate tolerably cool.

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

1. In a fire-place, the combination, with a grate having a rearwardly inclined back, of a corrugated top plate held above the grate, a fixed hood held in front of and above the said corrugated top plate, and a flat plate held to slide on top of the said corrugated plate, so as to increase or diminish the opening between said corrugated top plate and the said hood, substantially as shown and described.

2. In a fire-place, the combination, with a grate having a rearwardly-extending back and opening into the chimney, of a corrugated top plate held above the said grate and resting on the top of the back, a fixed hood held in front of and above the said corrugated plate, a plate provided with openings and held to slide on top of the said corrugated plate, and a handle secured on the said plate and projecting through a slot in the said corrugated plate, substantially as shown and described.

3. In a fire-place, a grate having an inclined back and provided with air-inlet channels extending behind the grate and up into the chimney, in combination with a corrugated plate held above the said grate and provided with flanges resting in the side walls, the lower end of the said corrugated plate resting on the top of the said back, a hood held in front of and above the said corrugated plate, a plate held to slide on the top of the said corrugated plate, and a handle secured to the said plate and projecting through a slot in the said corrugated plate, said sliding plate being adapted to open or close the opening between the said hood and the corrugated plate, and also to open and close the inner openings of the said channels, substantially as shown and described.

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Witnesses:
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