(No Model.)

J. E. HOWARD.

VENTILATING ATTACHMENT TO HEARTHS.

No. 260,199. Patented June 27, 1882.

Fig. 1.

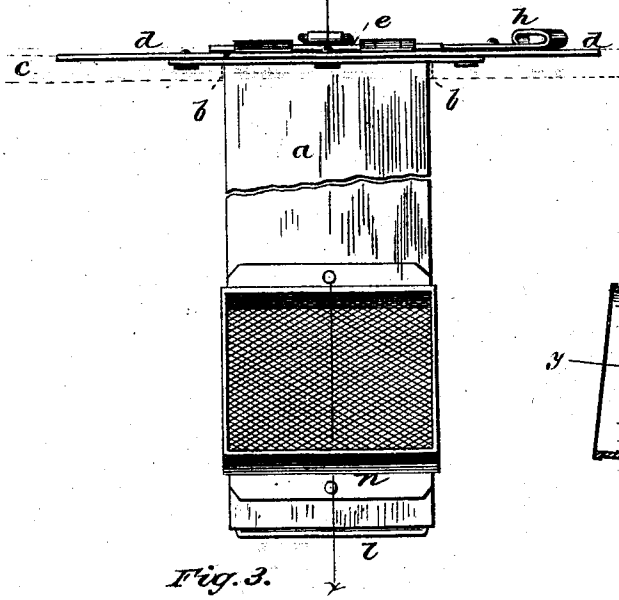


Fig. 2.

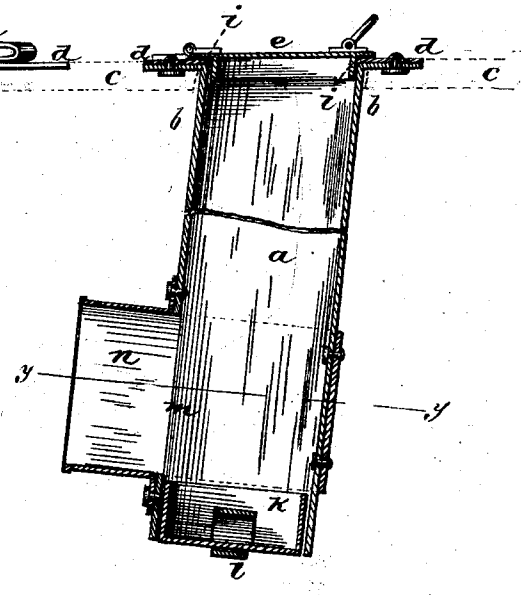


Fig. 3.

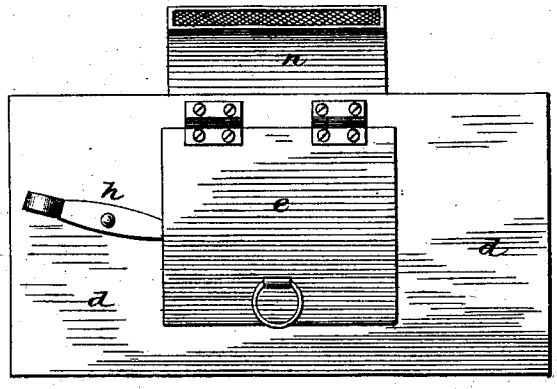
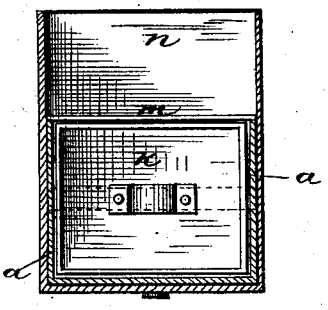


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSHUA E. HOWARD, OF GRAPE VINE, TEXAS.

VENTILATING ATTACHMENT TO HEARTHS.

SPECIFICATION forming part of Letters Patent No. 260,199, dated June 27, 1882.

Application filed December 30, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA E. HOWARD, of Grape Vine, in the county of Tarrant and State of Texas, have invented a new and Improved Ventilating Attachment to Hearths; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my improved ventilating attachment. Fig. 2 is a section in the line *x x*, Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a section in the line *y y*, Fig. 2.

My invention relates to improvements in a ventilating attachment to hearths for which Letters Patent were granted to William S. Winfield, dated April 6, 1875, and numbered 161,724; and my invention consists in extending the ventilating box or casing of Winfield's construction sufficiently below the floor of the room to the hearth of which it is applied to allow it to project into the room below, and providing the front face of the ventilating-box with an air-passage above the ash-box, so that a current of air from the room below that to which the ventilator is applied will always pass up the ventilator-box when its lid is open, and not be obstructed by the ash-box or entirely closed thereby when the ash-box contains sufficient ashes or cinders to close the draft, whereby a fire is readily kindled in the open fire-place or grate of a room to which the ventilating attachment is applied, and at the same time the room in which it is applied and the one below it are thoroughly ventilated.

My invention further consists in certain details of construction, as hereinafter more fully set forth.

In the accompanying drawings, *a* represents a ventilating box or casing, made preferably rectangular in cross-section and of sheet metal, which is inserted in an inclined opening, *b*, in the hearth *c* of an open fire-place or grate, a few inches in front of the back of the fire-place, the inclined opening *b* extending through the floor of the room and opening into the room of the story below.

The ventilating-box *a* is provided with a top flange, *d*, of the size of an ordinary brick, and adapted to fit in the space made by removing a brick from the hearth, and is provided with a lid, *e*, hinged to the flange *d* over the upper end of the ventilating-box, and a lever, *h*, pivoted to the flange *d*, and having its inner end adapted to be turned under a flange, *i*, on the under face of the lid, so that the lid may be opened at any angle to regulate the draft or be entirely closed.

The ventilating-box *a* makes an acute angle with the flange *d*, and is inserted in the inclined opening in the hearth, and extends a short distance into the room of the story below, and is provided at its lower end with a removable ash-pan, *k*, having an imperforate bottom of nearly the same area in cross-section as the ventilating-box, and supported by a transverse bar, *l*, secured to the opposite sides of the lower end of the ventilating-box.

The front face of the ventilating-box *a* is provided with a rectangular slot, *m*, opening, when the box is in place, into the room of the story below.

n represents a rectangular box, open at one end and provided with opposite openings in its top and bottom. After the ventilating-box has been inserted in place in the inclined opening in the hearth and floor, the rectangular box *n* is slipped over the lower end of the ventilating-box extending into the room of the story below and riveted thereto, the open end of the rectangular box in the story below registering with the opening or slot *m* in the ventilating-box *a*.

By reason of the acute angle the ventilating-box *a* makes with the top flange, *d*, the box *n* is inclined inwardly, so that any coals of fire falling into the mouth of the box would be deflected inwardly and fall into the ash-pan, which is made imperforate to prevent coals from falling into the story below. If desired, however, a wire screen may be placed over the mouth of the box *n* to allow the ingress of air and prevent danger from fire.

By this construction it will be seen that, a fire having been kindled in the open fire-place or grate and the lid *e* opened as desired, a draft of air from the room in the story below will pass up through the ventilating-box, which will be unobstructed by the ash-pan, as in Winfield's construction, or entirely closed when the draft through the ash-pan is closed by cin-

ders or ashes; that all danger from fire in the story below is obviated by the ash-pan having an imperforate bottom, and that a draft of air is always furnished to kindle the fire, and at the same time both the room in which the fire is kindled and the room below it are always ventilated so long as the lid is kept open.

What I claim as my invention is—

1. A ventilating attachment to the hearths of open fire places or grates, composed of a hollow box, *a*, set into the hearth and communicating with the room below, and provided with an ash-pan having an imperforate bottom at its lower end and an air-opening in its front face communicating with the room below, and lying above the ash-pan, and a top flange provided with an adjustable lid, substantially as described, and for the purpose set forth.

2. The combination, with the ventilating-box *a*, provided with the inclined flange *d*, having the area of a hearth-brick, lever *h*, and slot *m* in its front face above its lower end, of the hinged lid *e*, ash-pan *k*, arranged below the slot *m*, and rectangular box *n*, substantially as described, and for the purpose set forth.

JOSHUA EAFFROM HOWARD.

Witnesses:
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