

J. H. LITTLEFIELD.

Damper.

No. 49,899.

Patented Sept. 12, 1865.

FIG. 4.

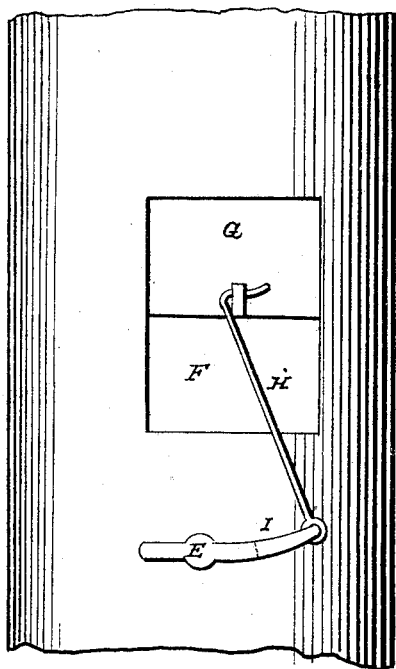


FIG. 2.

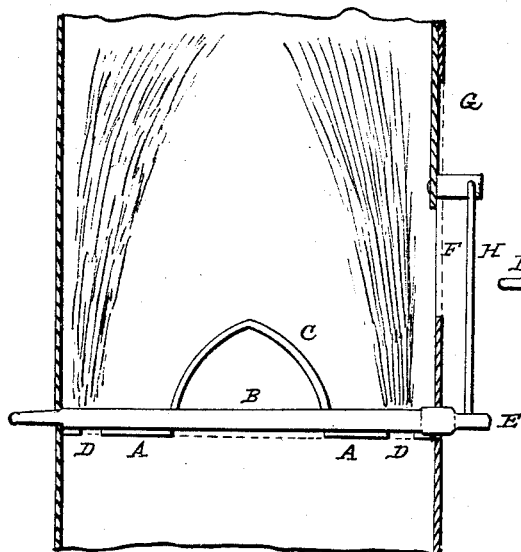


FIG. 3.

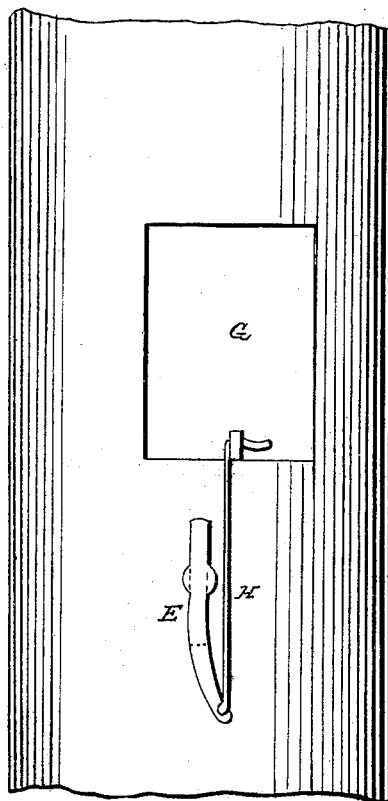
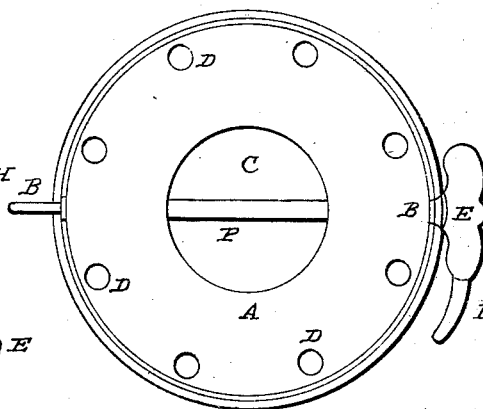


FIG. 1.



WITNESSES:

*Daniel C. Colby*  
*J. C. Largent*

INVENTOR.

*Joseph H. Littlefield*

# UNITED STATES PATENT OFFICE.

JOSEPH H. LITTLEFIELD, OF CAMBRIDGE, MASSACHUSETTS.

## DAMPER AND VENTILATOR.

Specification forming part of Letters Patent No. **49,899**, dated September 12, 1865.

*To all whom it may concern:*

Be it known that I, JOSEPH H. LITTLEFIELD, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Heat-Controllers to be Used in the Funnel of Stoves and Furnaces; and I do hereby declare the following to be a full and exact description of the same, reference being had to the drawings which accompany and form a part of this specification, in which—

Figure 1 is a view of the article as it is in position in the funnel; Fig. 2, a sectional view, showing the form of the interior part or central portion of the disk; Fig. 3, a sectional view, showing a slide forming a ventilator connected with the thumb-piece of the damper, and arranged so as to open when the damper is closed, and so vice versa. In this figure the slide is closed and the damper is open. Fig. 4 is a view showing the position of the thumb-piece with the damper closed and the ventilator partially open.

A represents a perforated disk with a portion of its interior or central part swelled so as to form a concave surface on one side and a convex surface on the other, as shown by Figs. 1 and 2; B, a spindle holding the damper A in its place in the funnel, and by this the damper is turned; C, the concave surface of the damper, with the concave surface toward the stove or fire. This is the usual position when the damper is closed. D D D, &c., are openings in the damper to keep up a slight current or draft when the damper is otherwise closed and at the same time allowing the gas to escape; E, thumb-piece with which to turn the spindle; F, opening in the funnel just above or forward the thumb-piece E; G, a slide to close or open this space F; H, a wire hook connecting this slide G with the thumb-piece E. I is a short lever to which the wire hook H is attached, and this so arranged as to point toward the stove or fire when the damper is open and the ventilator closed.

The same letters represent corresponding parts in the different figures.

To enable others skilled in the art to make and use my invention, I will describe its construction and mode of operation.

I make the disk A of cast-iron in shape and form set forth in the drawings; the spindle B of malleable iron; the slide G of cast or sheet iron, like that of the stove-funnel; the wire hook H of brass or iron wire.

The operation will be readily understood by the drawings.

The advantages are as follows, viz: When the damper-disk A is closed with the concave surface toward the stove or fire this concavity will check the currents and throw them back in eddies toward the sides of the funnel, thus retaining the heated air until it parts with a greater portion of its heat, leaving it to find its way through the openings D D D, &c., gradually. The opening F is to let off hot and bad air when the room is overheated, and by making the wire hook H detachable from the thumb-piece on the slide G, that said slide G may be opened or closed independent of the damper A—as, for instance, in the kitchen when it is desirable to let off the steam from the boiling-vessels on the stove, and at the same time have the damper A more or less open.

Now, I do not claim, broadly, the principle of connecting a damper and ventilator so that they may be operated at once or together; but

What I do claim, and desire to secure by Letters Patent, is—

The disk A, constructed and arranged in combination with the wire hook H, the spindle B, and the slide G, as and for the purpose set forth.

JOSEPH H. LITTLEFIELD,

Witnesses:

JABEZ A. SAWYER,  
THOMAS DEAN.