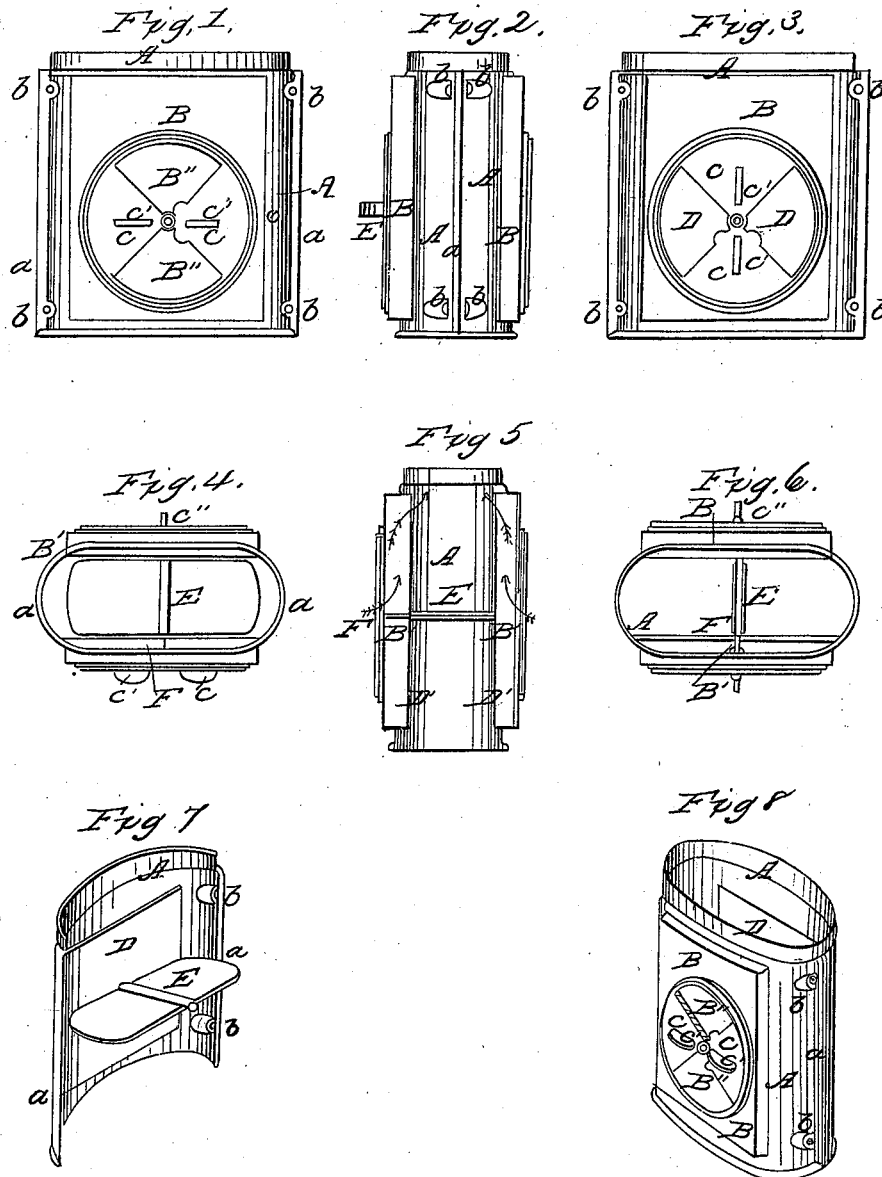


G. G. WOLFE.

Stove Pipe Ventilator and Draft Damper.

No. 46,414.

Patented Feb. 14, 1865.



Witnesses
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GURDON G. WOLFE, OF TROY, NEW YORK.

STOVE-PIPE VENTILATOR AND DRAFT-DAMPER.

Specification forming part of Letters Patent No. 46,414, dated February 14, 1865.

To all whom it may concern:

Be it known that I, GURDON G. WOLFE, of the city of Troy, county of Rensselaer, and State of New York, have invented new and useful Improvements in Stove-Pipe Ventilator and Draft-Damper; and I do hereby declare that the following is a clear, full, and exact description of the construction and operation thereof, reference being hereby had to the accompanying drawings, with letters of reference marked thereon.

Like letters represent and refer to like or corresponding parts.

Figure 1 is a side elevation with the damper closed. Fig. 2 is an end view. Fig. 3 is a side elevation with the damper closed. Fig. 4 is a cross-section showing the damper closed. Fig. 5 is a vertical section showing the damper closed, also the side vertical chambers hereinafter described. Fig. 6 is also a cross-section, showing the damper open. Fig. 7 is a perspective view of the damper and other parts hereinafter described. Fig. 8 is a perspective view of the entire ventilator and damper.

The nature of my invention consists in the employment of a chamber upon each side of any stove-pipe, in combination with a damper upon the inside of the stove-pipe, and with registers or circular dampers upon the outside of said stove-pipe, each of which shall open directly into such chambers, thereby admitting the air from the surrounding room into said pipe by means of the said registers and chambers, and at the same time check the draft in the stove, and also ventilating the surrounding room, if desirable, while the damper inside such pipe remains partly or entirely open, and by means of which a light or strong draft may be had, substantially as and in the manner herein described and set forth.

To enable others skilled in the art to which my invention relates to make and use the same, I will here proceed to describe the construction and operation of the same, which are as follows, to wit:

I usually construct my said ventilator and draft-damper in two parts vertically through the center, and bolt the same firmly together in some suitable manner, as shown at *b*, Figs. 1, 2, 3, and 8. Upon each side of such parts *A*, I construct a plate, *D*, Figs. 7

and 8, which is fastened in some suitable and convenient manner to the side *A*. I usually use a bolt nut, and screw for that purpose. These partition-plates *D*, thus fastened to the sides *A*, form the air-chambers *B'*, Figs. 4, 5, and 6. The bottom of each of such chambers is closed by means of a cross plate or bottom, while the upper ends of each open into the said stove-pipe. There are two such chambers, and are opposite each other. They may be of any height or capacity required. Each of these chambers is provided with a register, *C* and *C'*, Figs. 1, 3, and 8, which, when open, forms the openings *D D*, Fig. 3, and when closed it will appear like *B'' B''*, Figs. 1 and 8. *C' C'*, Figs. 1, 2, 4, and 8, are projections upon the said register *C*, for the purpose of operating the same. *E*, Figs. 4, 5, 6, and 7, is the damper on the inside of the said stove pipe. This damper *E* is fastened in any convenient manner to the shaft *C''*, Figs. 4 and 6, so as to move them together. This shaft *C''* is so constructed that one end is connected to but one of the said registers by which the said shaft and said stove-pipe damper is operated. When the said register is closed, then said damper will be open; and when the said register is open, then the said stove-pipe damper will be closed, whereby the draft in the stove is checked, and the surrounding room at the same time is ventilated. This register may be in part opened, if desirable, so that the draft may be controlled at pleasure of the operator. The register *C'*, opposite to the one thus connected to the said stove-pipe damper, remains free to operate independent of said stove-pipe damper, and the register *C*, combined therewith by means of a downward projection of the end of the said shaft *C''*, and a cup or projections upon the inner surface of the said register which is so operated with the said stove-pipe damper. The said independent or separate register *C'* may be operated to check the draft and to ventilate the surrounding room without the aid of the opposite register so connected and combined with said stove-pipe damper; but when a full ventilation and check of draft in the stove are desired, then both of said registers may be opened, while the stove-pipe damper will be closed. The said stove-pipe damper *E* will not occupy the entire space of the stove-pipe inside, but will be somewhat

less in size, so as to allow the passage of smoke, &c., while said damper is closed. The said independent register C³ may be open while the said stove-pipe damper E is open, if desirable so to do. The said registers may be of any size or capacity desirable.

The connection or combination of the stove-pipe-damper shaft with the register C, as aforesaid, may be seen at F, Figs. 4, 5, and 6. When this ventilator and draft-damper is applied to cylinder-pipes for stoves, furnaces, &c., that part which is in close proximity to the said registers will project outward far enough to permit the use of such registers for the purposes aforesaid. This ventilator and draft-damper I usually make of cast-iron, and bolt the sides A A together, and the said partition-plates D D thereto, in the manner and by the means substantially as aforesaid.

This ventilator and draft-damper may be applied to a stove or furnace pipe of any desired form or shape, and at the same time carry into full operation the invention and improvements which I have herein described. This is done by constructing the said side chambers so as to conform to the size and shape of the pipe used, while the said registers are the same in construction, combination, and operation as aforesaid. The lower end of the said ventilator may rest upon the

stove and over the pipe or exit-funnel, while to the upper end is connected the stove-pipe continuing to the chimney.

This ventilator and draft-damper may be of any size or shape, so long as the invention and improvements are preserved, and when applied to stoves, ranges, and furnaces it is found very effective in controlling the draft, and at the same time giving good ventilation to the surrounding room. By its use there is economy in fuel, while a more even temperature of stove and surrounding room is maintained and continued.

Having thus described the construction and operation of my said invention, what I claim, and desire to secure by Letters Patent, is—

The employment and combination of the vertical register C with the damper E in the manner substantially as herein described and set forth, so that the same may together be operated independent of and separate from or with the register C³, in the manner and for the purposes herein described and set forth.

In testimony whereof I have, on this 23d day of February, 1864, hereto set my hand.

GURDON G. WOLFE.

In presence of—

CHAS. D. KELLUM,
MARCUS P. NORTON.