G. G. WOLFE.

Stove.

No. 35,557. Patented June 10, 1862.

Fig. 1.

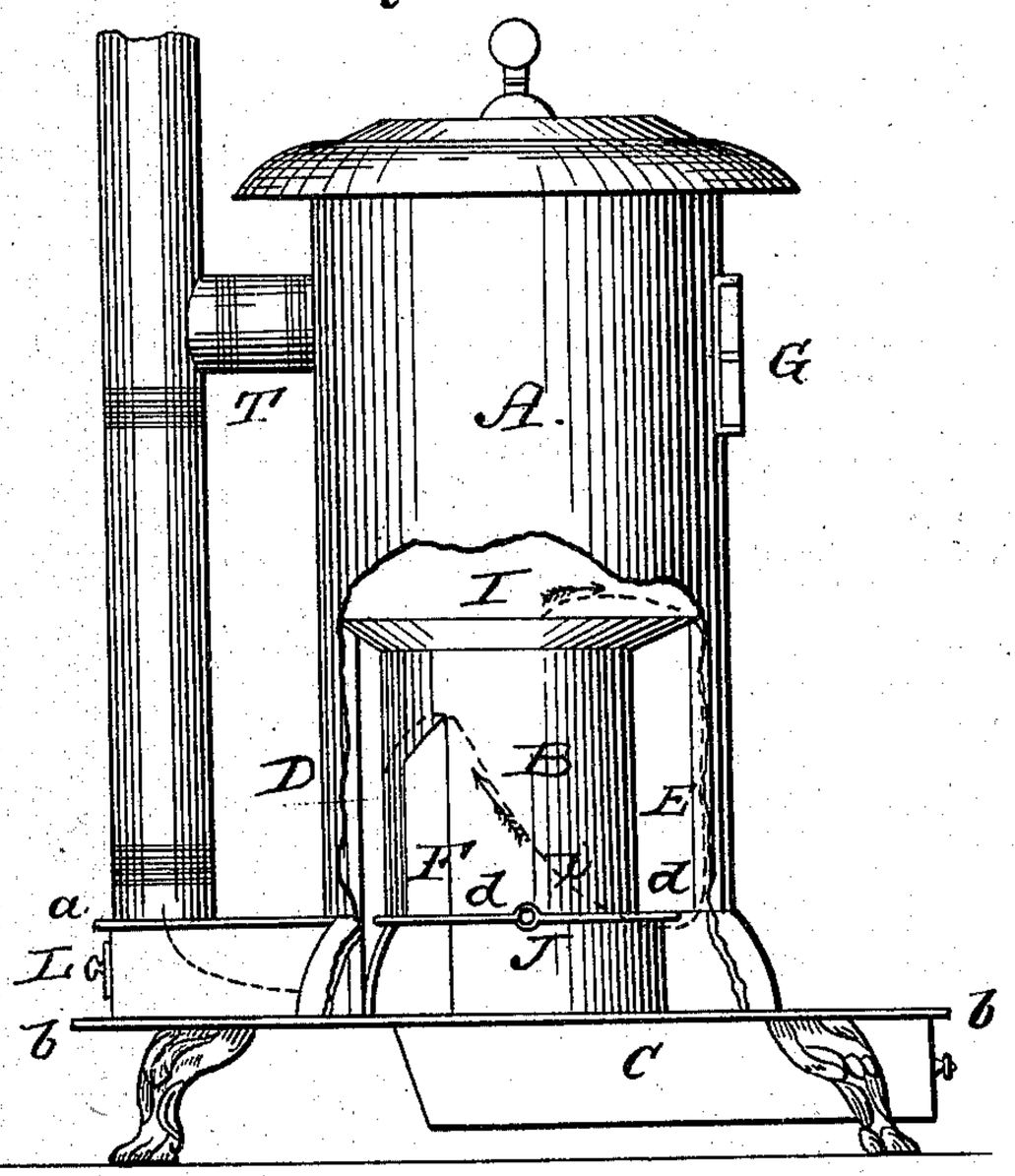


Fig. 2.

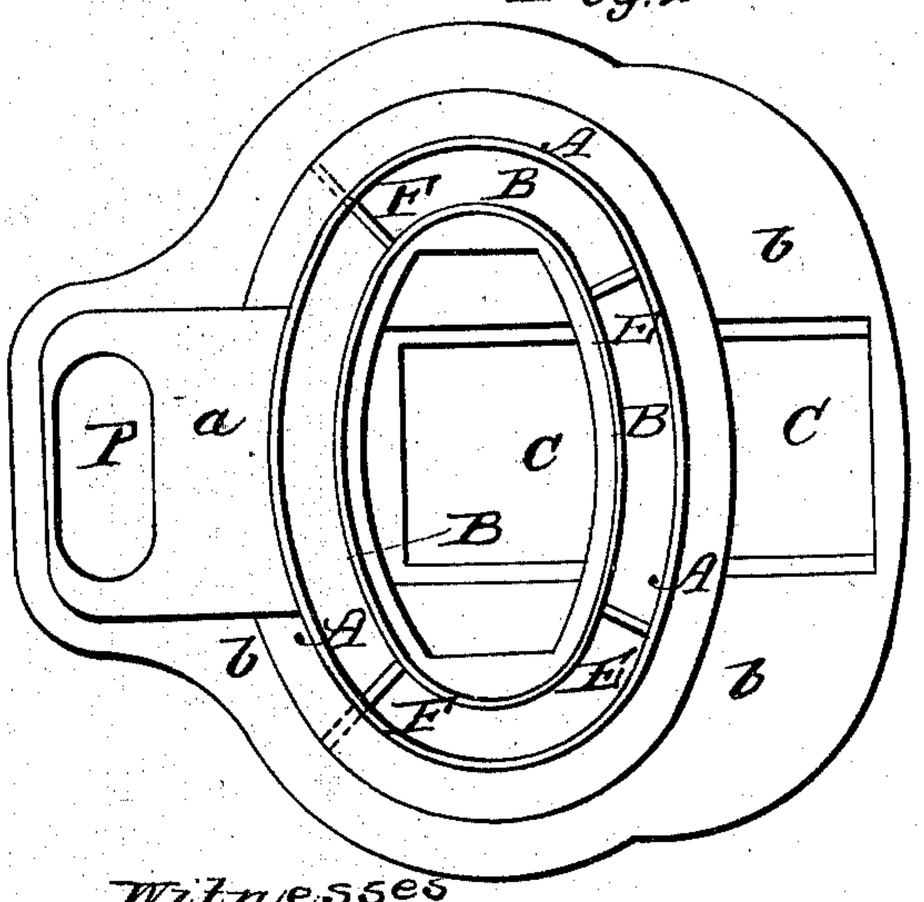
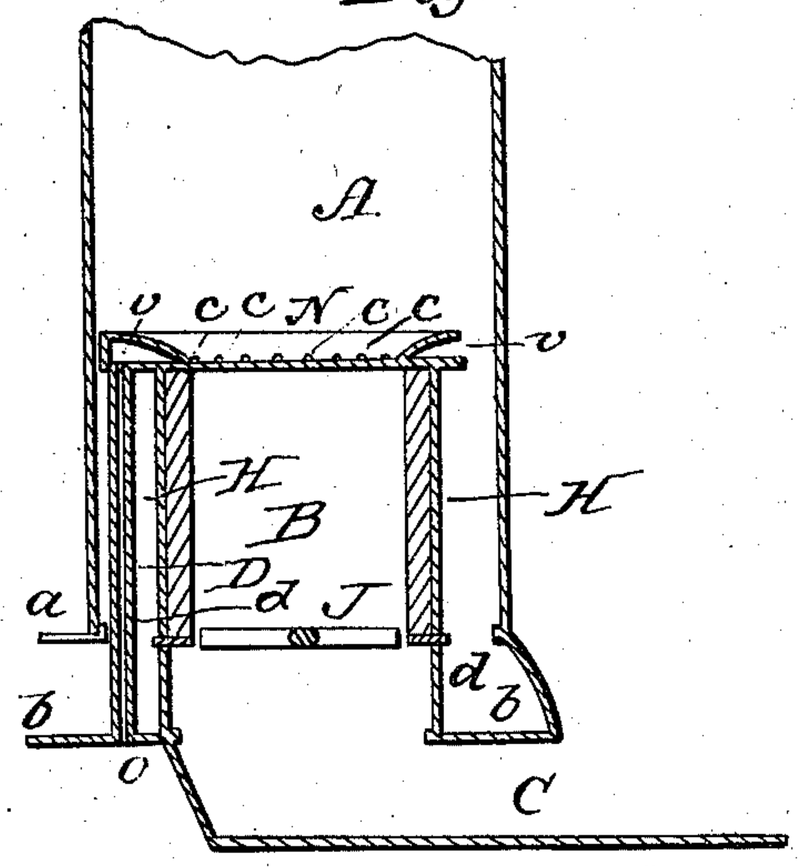


Fig. 3.



Witnesses

D Lane

Marcus P. Norton

Inventor.

Gurden G. Wolfe

UNITED STATES PATENT OFFICE.

GURDON G. WOLFE, OF TROY, NEW YORK.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. **35,557**, dated June 10, 1862.

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 a new and useful Improvement in Coal-Heating Stoves; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 is a side elevation with part of sheet-iron cylinder removed, thereby showing the fire-cylinder B, the flues E and F, and the passage of air current or draft *i*, all of which are hereinafter described and set forth. Fig. 2 is a vertical section through the center of the coal stove. Fig. 3 is a horizontal section through the coal-stove at the base where connects the fire-cylinder therewith.

Like letters represent and refer to like parts.

The nature of my invention consists in the arrangement of flues, as hereinafter described, so that the heated air arising from the fire chamber or cylinder shall pass over the top of the same down a wide front flue, up a flue upon each side of said fire-cylinder, and into a wide flue upon the back of said cylinder, thus and thereby giving a large amount of radiating-surface to the heated air in its passage from said fire-chamber to the exit-pipe.

To enable others skilled in the art to which my invention relates to make, construct, and use the same, I will here proceed to describe the construction of the same.

I construct a cylinder with two of its sides nearer the center than the other two, which shall rest upon a base of any required height. This base has a bottom plate, *b*, and a top plate, *a*. Fig. 3 shows the top of this base having therein arranged the flues, hereinafter described, and ready to receive the fire-chamber and flues thereto attached.

B, Figs. 1 and 2, is the fire cylinder or chamber; H, the fire-brick thereof; D, the cold-air passage from the under plate, *b*, up to the gas-burning arrangement N, through which the air after becoming thoroughly heated in its passage thereto passes into the said fire-chamber B through the small openings *c c*, &c. Upon the said fire-cylinder B, I arrange four partition-plates, dividing up the space around the said fire-cylinder and between the sheet-iron cylinder A into four flue-spaces, as follows, to wit: one flue occupying the front portion of said stove, which gives a broad flue; one broad flue in the rear of the stove to correspond to and with the said front flue. Between these broad front and rear flues and upon each side of the said stove are two other and narrow flues, which complete the four flues. The partition-plate E extends from the under side of the collar I, Fig. 1, downward to the top of the said base, below which is a passage for the hot air or draft, as shown at said Fig. 1. On the side opposite to the right of this partition-plate there is another partition-plate to correspond, which completes the broad front flue.

F is a partition-plate, which extends from the bottom plate, *b*, of the base upward until it comes near the said collar I, Fig. 1, where an opening is constructed to admit of the passage of the said hot air or draft into the rear broad flue, as shown at said figure. Opposite to this partition-plate at the left there is another partition-plate to correspond to and with the said partition-plate F, which completes the rear broad flue, and which also complete the side flues of less width, as described.

The hot air arising from the fire-chamber B passes over the top thereof at the front in a wide sheet through an opening to correspond to the width of the said front flue, into and down the same until it reaches the lower ends of the said partition-plates E. Thence it divides and branches off into and up the said side flues until it reaches the top of the said partition-plates F, over which it passes and unites in the rear broad flue before its passage into the exit-pipe. By this arrangement I attain a large circulation of heated air within a small space, which of course requires only a small amount of fuel, on account of the heat being retained for a long time in its circulation by reason of this arrangement of partition-plates whereby said flues are constructed.

Having thus described my invention, what I claim is—

The combination of the partition F with the fire-cylinder B, substantially as herein described and set forth.

In testimony whereof I have, on this 21st day of August, 1861, hereunto set my hand.

GURDON G. WOLFE.

Witnesses:

D. LANE,

MARCUS P. NORTON.