N. S. VEDDER.

Heating Stove.

No. 104,084. Patented June 7, 1870.

Fig. 1.

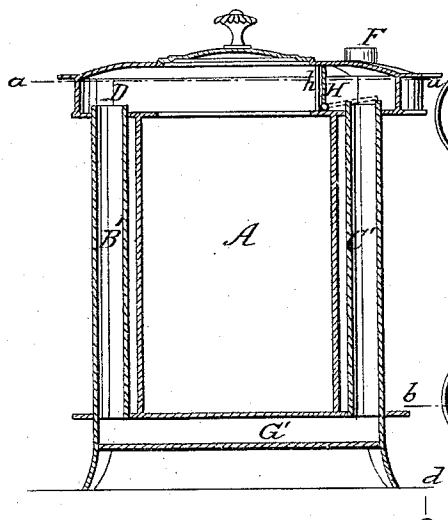


Fig. 2.

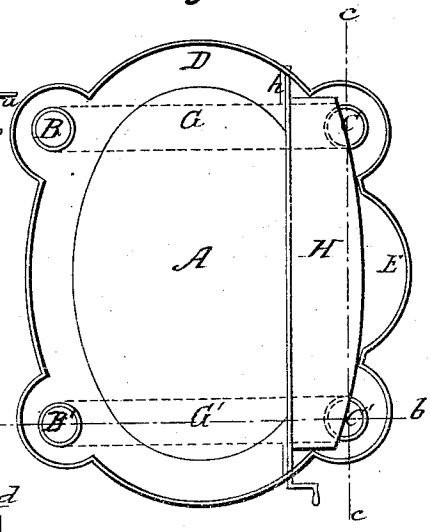
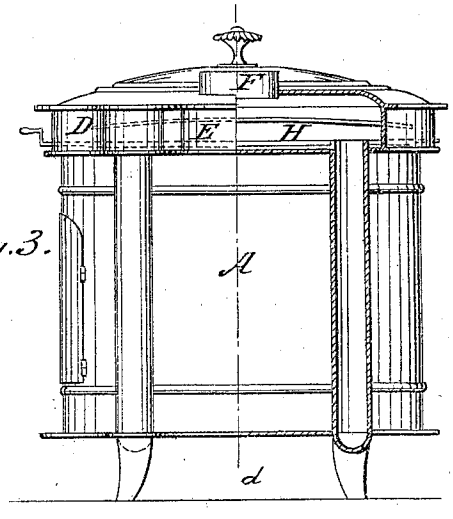


Fig. 3.



Witnesses,
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Henry J. Arentz.

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his Attys.

UNITED STATES PATENT OFFICE.

NICHOLAS S. VEDDER, OF TROY, NEW YORK.

HEATING-STOVE.

Specification forming part of Letters Patent No. **104,084**, dated June 7, 1870.

To all whom it may concern:

Be it known that I, NICHOLAS S. VEDDER, of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Heating-Stoves; and I do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the manufacture to which my invention appertains to fully understand and construct the same, reference being had to the accompanying drawing, which makes part of this specification, and in which—

Figure 1 is a vertical section in line *b b*, Fig. 2. Fig. 2 is a sectional plan view, the line of section being indicated by line *a a*, Fig. 1; and Fig. 3 is a rear elevation, that part to the right of line *d d* being shown in section in line *c c*, Fig. 2.

Like letters of reference indicate like parts in the several figures.

The nature of my invention consists in connecting each two end columns of a four-column stove by flues at their lower ends, said flues running under the stove, so that, when a damper is turned to shut off communication between the rear columns and the body of the stove, the products of combustion will be forced through the front columns downwardly, passing through the connecting-flues into the rear columns, through which they pass upwardly into the stove-pipe and chimney. When the damper is turned so as to close the top of the rear columns free communication is established between the body of the stove and the stove-pipe, and the products of combustion pass out without being forced through the columns and flues.

A in the drawing represents the body of a four-column stove, the front and rear columns, B B′ and C C′, respectively, of which open into the top D, which in the rear is somewhat enlarged, as shown at E, for the stove-pipe rim F.

The columns B C and B′ C′ are connected to each other at their lower ends by flues G G′, running laterally under the stove from front to rear.

In the top D of the stove, near its rear part, is a damper, H, so arranged that when it is in a vertical position it bears against a short ridge, *h*, running across the rear of the stove parallel with the damper. It shuts off communication between the body of the stove and the part E, into which latter the rear columns, C C′, open and from which the stove-pipe ascends; but if in a lateral position, as shown in dotted lines, Fig. 1, it covers the rear columns, C C′, thus shutting off communication between them and part E, but opening a free communication between the latter and the body of the stove. When the damper is in a vertical position the products of combustion cannot pass out from the body of the stove directly through part E into the stove-pipe and chimney, communication being shut off by means of the damper; but they are forced through the front columns, B B′, the flues G G′, and the rear columns, C C′, when they pass out through part E into the stove-pipe and chimney. In this way a very large radiating-surface is gained, considerably more than in common radiating-stoves, as the larger portion of the bottom, on which the fuel lies, is exposed as radiating-surface, while in the ordinary way the whole bottom is covered with the flue-plate.

If it is not desired to use the radiating-surface, the damper is placed in a lateral position, closing the rear column, C C′, and opening free communication with part E, through which the products of combustion will pass into the stove-pipe and chimney without going through the columns and flues.

Another advantage of the construction of my stove, as described, is that I do away with the plate across the top of the stove which divides the front and rear columns, and use only a damper instead, thus opening the whole space, and enabling the smoke-draft to spread and pass out with more freedom, making the stove less likely to smoke when a fire is first kindled. It is also cheaper to manufacture.

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

1. The combination of the fire-chamber A, front descending column-flues, B B′, horizontal flues G G′, rear ascending column-flues, C C′, and exit-chamber E, when the bottom plate of the said fire-chamber forms the outside bottom plate of the stove, and the flues G G′ extend across and project below the said bottom plate, as shown and described.

2. The combination of the fire-chamber A, front descending column-flues, B B′, communi-

cating at their bottom with rear ascending column-flues, C C′, and the exit-chamber E, when said exit-chamber is separated from the upper part of the fire-chamber by a hinged partition-plate, H, alone, by which the whole space or partition between the fire-chamber and exit-chamber is closed and opened, as described and shown.

3. The combination of the fire-chamber A, front descending column-flues, B B′, horizontal flues G G′, extending across and projecting below the outside and only bottom plate of the fire-chamber and stove, rear ascending column-flues, C C′, and exit-chamber E, separated laterally from the fire-chamber wholly by a hinged partition-plate, H, as described.

NICHOLAS S. VEDDER.

Witnesses:

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