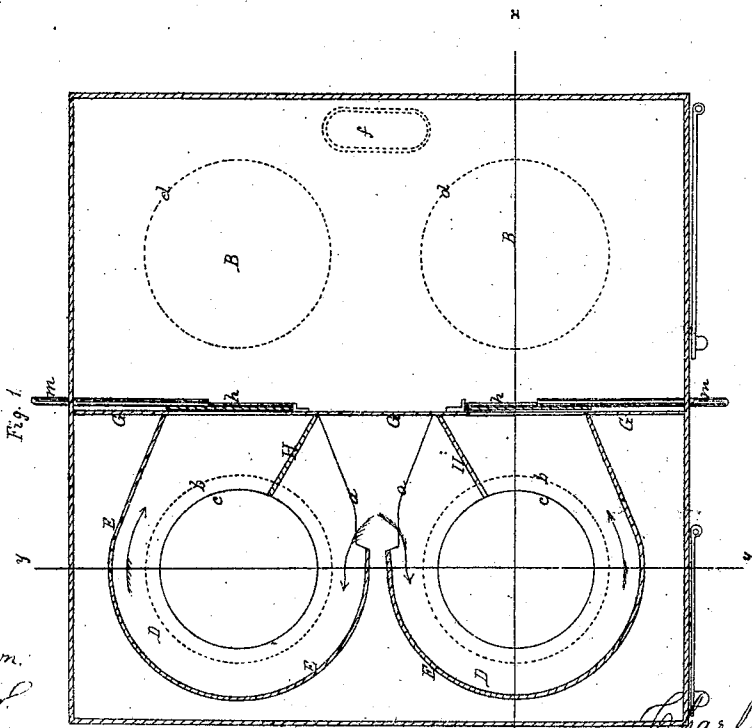
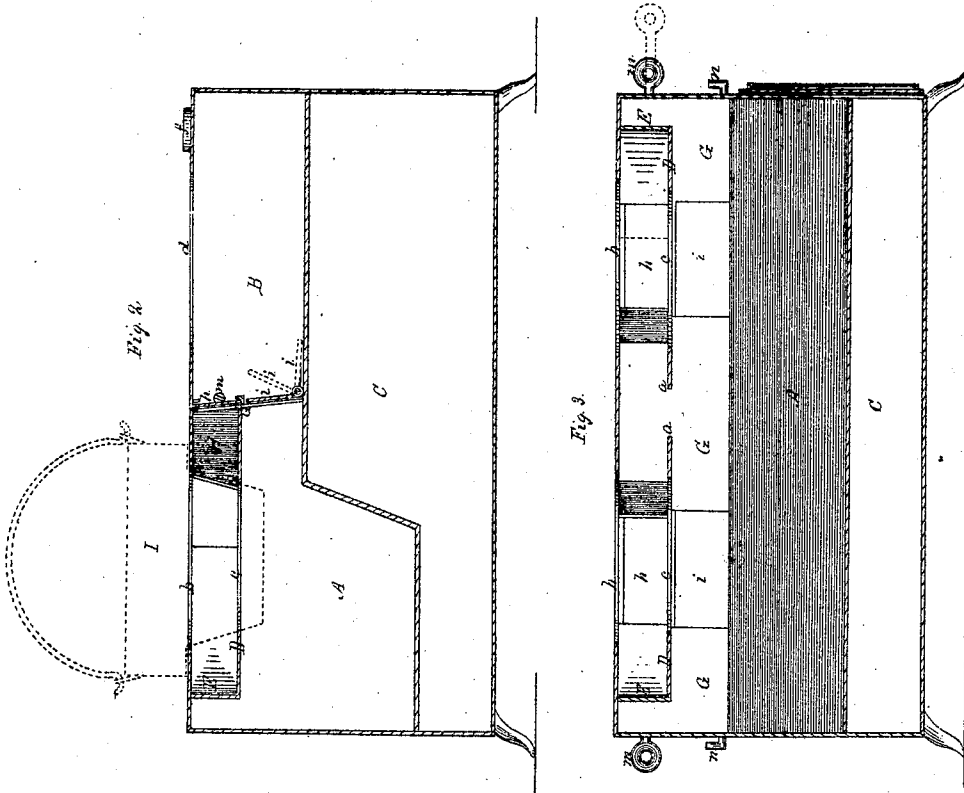


C. Van de Mark.

Cooking Stove.

N^o 72571

Patented Dec. 24, 1867



Witnesses

J. A. Brown.
J. S. Parker.

Inventor

Charles Van DeMark.

United States Patent Office.

CHARLES VAN DE MARK, OF PHELPS, NEW YORK.

Letters Patent No. 72,571, dated December 24, 1867.

IMPROVEMENT IN COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES VAN DE MARK, of Phelps, in the county of Ontario, and State of New York, have invented an Improved Cooking-Stove; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a horizontal section, just below the top plate, of a cooking-stove constructed with my improvements.

Figure 2, a vertical section thereof, in a plane indicated by a line, *x x*, fig. 1.

Figure 3, a vertical section of the same, in a plane indicated by a line, *y y*, fig. 1.

Like letters designate corresponding parts in all of the figures.

My improvements are intended for the purpose of concentrating the heat around one or more boilers, or for distributing it, either equally or unequally, as may be desired, in different places, whereby much fuel and time may be saved in cooking and heating, and the heat may be controlled more efficiently than with stoves heretofore in use.

In the drawings, let A represent the fire-chamber of a cooking-stove, B the heating-chamber, back of the fire-chamber, and C the oven. With the exception of the parts which I claim as novel, the stove may be constructed in any suitable or desired manner. Between the fire-chamber A and heating-chamber B, I make a partition, G, across the whole width of the stove, by which the passage for the draught and products of combustion is closed, except by valves or dampers *h h*, *i i*, two of them, *h h*, being in the upper part, and the two, *i i*, in the lower part of the partition, as most clearly represented in fig. 3. The upper valves *h h* are shown as sliding in and out, and controlled by slide-rods *m m*, and the lower valves are shown as swinging up on rods *n n*, to close the apertures, and down toward the rear of the stove to open them. But the lower valves might slide, instead of swinging, or the upper valves might swing. The arrangement shown, however, is best and most convenient, since, by having the upper valves slide, they do not interfere with those below, and by having the lower valves swing, the heat can be directed more or less upward against the boilers, over the heating-chamber B, as indicated by one position of the red lines in fig. 2. But I do not confine myself to any particular construction or arrangement of valves, nor to any particular number, though two of the upper and two of the lower valves, in ordinary stoves, with two boiler-holes in the front part and two in the back part, may be considered the most convenient and suitable. If there is only one boiler-hole in the front of the stove, there will be but one set of the valves, or but one upper valve *h*; or, if there were more than two boiler-holes in front, there would be as many upper valves *h h*, or as many sets of valves *h i*, as boiler-holes. Between the upper and lower valves, I extend a horizontal division-plate, D, forward from the partition G, under each boiler-hole *b*, over the fire-chamber, extending far enough beyond said boiler-hole, all around the front and sides, to furnish space around the boiler, when inserted, to allow sufficient circulation of the draught around the same, as indicated by arrows in fig. 1. This flue-space above the division-plate D is enclosed by a band or side plate, E, except a portion at the inner back part, where a flue-opening, *a*, is left to allow the products of combustion to arise and enter the flue-space from the fire-chamber underneath. This flue-opening is separated from the upper valve by a partition, H, extending from the partition G forward to the boiler-hole, so that, when the boiler is inserted, the draught or products of combustion will have to pass all around it from the flue-opening to the valve. Directly under each boiler-opening *b*, in the upper part of the stove, is another boiler-opening *c*, in the division-plate D, properly a little smaller in diameter, as shown; and the boiler I, fig. 2, is intended to reach down through both openings, *b c*, and fit them both, substantially as represented, reaching but a little distance below the division-plate D. Thus, when it is desired to concentrate the heat around one boiler, all the valves in the partition G may be closed, except the upper valve adjacent to that boiler. Then it will have not only the direct heat of the fire against its bottom, but the entire draught of the fire turned around its periphery, in the flue-space above the division-plate, so that cooking or heating can be done in the boiler very rapidly and economically; or, on the other hand, if only a gentle heat is wanted against one boiler, its upper valve is closed, so that only the direct heat against its bottom acts on it, while the draught may be drawn through other valve-spaces. Or, again, the different valves may be opened, more or less, and so divide the draught, either equally or unequally, among the

different boilers, as may be required, and the draught may either pass entirely through the upper valve-spaces, or entirely through the lower ones.

What I claim as my invention, and desire to secure by Letters Patent, is—

The partition-plate G, between the fire-chamber A and heating-chamber B, provided with one or more upper and one or more under valves *h h* and *i i*, substantially as and for the purpose herein specified.

I also claim the boiler-hole plate or plates D, and enclosing side plate or plates E, arranged in combination with partition-valves *h i*, so that the heat may be directed against the bottom part of a boiler or boilers, I, only, or both against the bottom and around the sides thereof, substantially as and for the purposes herein specified.

Witnesses:

J. S. BROWN,
THOS. T. PARKER.

CHARLES VAN DE MARK.