G. G. WOLFE.

Cooking-Stoves.

No. 200,811. Patented Feb. 26, 1878.

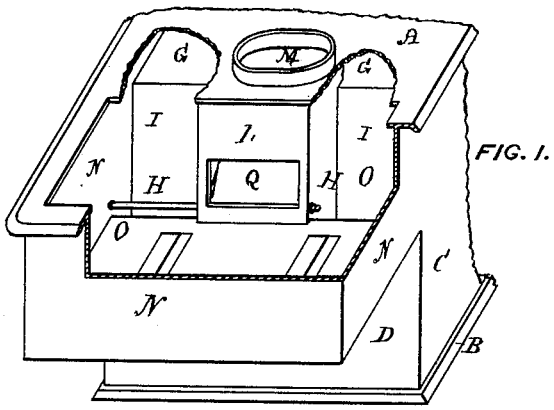


FIG. 1.

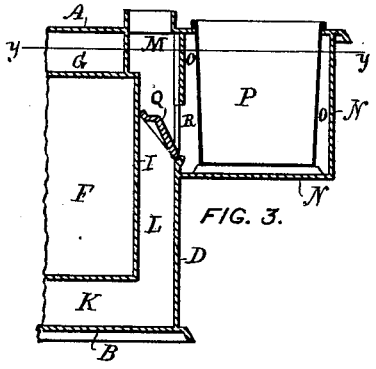


FIG. 3.

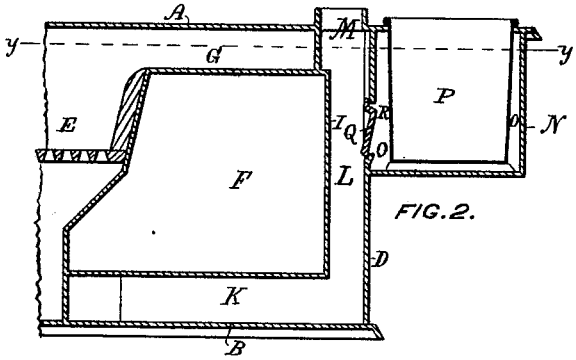
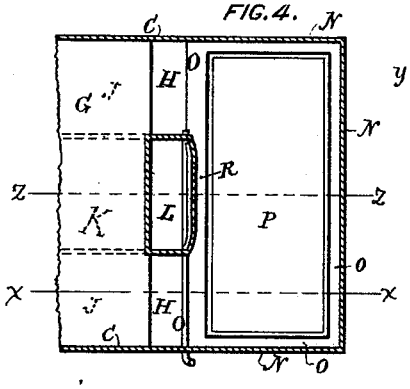


FIG. 2.

FIG. 4.



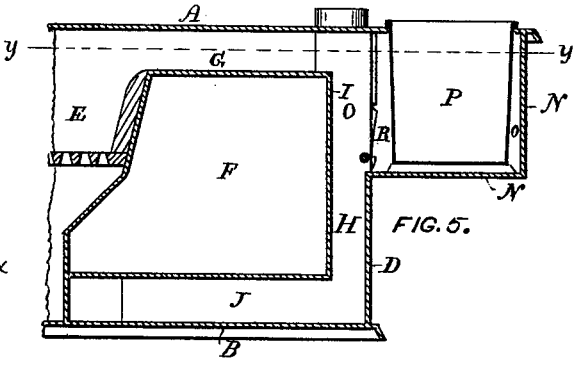


FIG. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GURDON G. WOLFE, OF TROY, NEW YORK, ASSIGNOR TO WILTSIE F. WOLFE, OF SAME PLACE.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **200,811**, dated February 26, 1878; application filed July 19, 1873.

To all whom it may concern:

Be it known that I, GURDON G. WOLFE, of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Reservoir Cooking-Stoves, of which the following is a specification, reference being had to the accompanying drawing.

In the aforesaid drawing, Figure 1 is an isometrical drawing of the rear portion of a stove which embodies my invention, some parts being broken away and removed. Figs. 2 and 3 are vertical sections, at the line *z z* in Fig. 4, of a portion of the same stove. Fig. 4 is a horizontal section of a part of the same stove at the line *y y* in Figs. 2, 3, and 5; and Fig. 5 is a vertical section of the same at the line *x x* in Fig. 4.

Like letters refer to like parts in the different figures.

A is the top plate, B the bottom plate, C C the side plates, and D the lower back plate, of a cooking-stove having a fire-chamber at E, oven F, flue G over the oven, descending flues H H along the side portions of the back oven-plate I, lateral flues J J under the oven, central return-flue K under the oven-bottom, ascending flue L along the middle part of the back oven-plate, and exit-passage M, all connected, so that the gaseous products of combustion shall pass from the fire-chamber through the flues G, H H, J J, K, L, and M in succession, and in the order named.

N is a casing, which is secured to the rear part of the stove, and incloses a chamber, O, which is formed by the lateral extension of the flue G and the upper portion of the descending flues H H rearward and back of the rear side or casing of the ascending flue L, so that the side portions of the chamber O extend forward to the flue G, and to the upper portion of the back oven-plate I, while the front casing of the middle part of that chamber is formed by the rear casing of the ascending flue.

The chamber O has in its top an opening, through which a water-reservoir, P, or a boiler or an oven, can be inserted into the chamber, so as to leave in the latter a gas-circulating space between the casing N and the adjacent sides of the inserted portion of the boiler, oven, or water-reservoir.

I thus form the chamber O by the extension of the flue G and the enlargement of the descending flues H H rearward and back of the rear casing of the ascending flue L, in order that the gaseous products of combustion, while yet highly heated and passing from the flue G and downward along the back plate I of the oven, shall pass through the forward portions of the chamber O, and circulate rearward into that chamber and around and against any boiler, oven, or water-reservoir that shall be placed therein, and thereby give out much heat to the same, and in order that the gases, after leaving the chamber O and passing under the oven and giving out their surplus heat thereto, shall, while rising through the ascending flue L, be kept out of the chamber O and away from contact with any oven, boiler, or water-reservoir that shall be placed in that chamber, so as to retain or secure enough heat in the ascending flue to insure a good draft through the flues of the stove.

I make the rear side of the ascending flue L with a valve, Q, therein, in order that by opening that valve, as shown in Fig. 1, the hot gaseous products of combustion, descending in the lateral forward portions of the chamber O along the rear plate I of the oven, shall pass rearward and inward through the chamber O, so as to directly and strongly heat the latter, or a water-reservoir, oven, or boiler therein, and shall thence pass from in rear of the ascending flue L into the exit-flue M, without passing through or heating the lower portion of the stove.

I arrange the water-reservoir P in the chamber O, so that there is a space, R, along and between the rear side or casing of the ascending flue L and the middle or adjacent opposite part of the front side of the water-reservoir, in order that the hot gases of combustion descending around or along the water-reservoir within the chamber O shall pass or circulate into or through the passage R, and thereby give out heat to the middle part of the front side of the water-reservoir, and at the same

time maintain or increase the heat of the rear side of the ascending flue L, to promote the draft through the latter.

In connection with the arrangement of the water-reservoir P in the chamber O, so as to form the gas-passage R, the valve Q is arranged in the rear side of the ascending flue L, in order that when that valve shall be opened, as shown in Fig. 3, so as to close or contract the ascending flue, the hot gases of combustion, descending from the flue G through the chamber O, around or along the reservoir P, shall pass along the reservoir and into and through the passage R, and thence through the opening made by the valve Q and into the exit-passage M, so as to thereby very strongly heat the water-reservoir within the chamber O without heating the lower portion of the stove.

What I claim as my invention is—

1. In a cooking-stove having a top flue, G, lateral descending flues H H, and central ascending flue L, as set forth, the chamber O, adapted to receive and contain a water-reservoir in rear of the descending and ascending flues, and open to the descending flues and flue over the oven, and formed by the rearwardly-extending side, end, and bottom plates N and rim-like top plate, and having the valve Q in the rear side of the ascending flue, substantially as described.

2. In a cooking-stove having a top flue, G, descending flues H H, and ascending flue L, as set forth, the chamber O, formed by the rearwardly-extending side, end, and bottom plates N and rim-like top plate, and open to the descending flues and to the flue over the oven, inclosing a water-reservoir, P, and having a passage, R, between the ascending flue and the front side of the reservoir, and the forwardly-tilting valve Q in the rear side of the ascending flue, substantially as described.

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Witnesses:

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