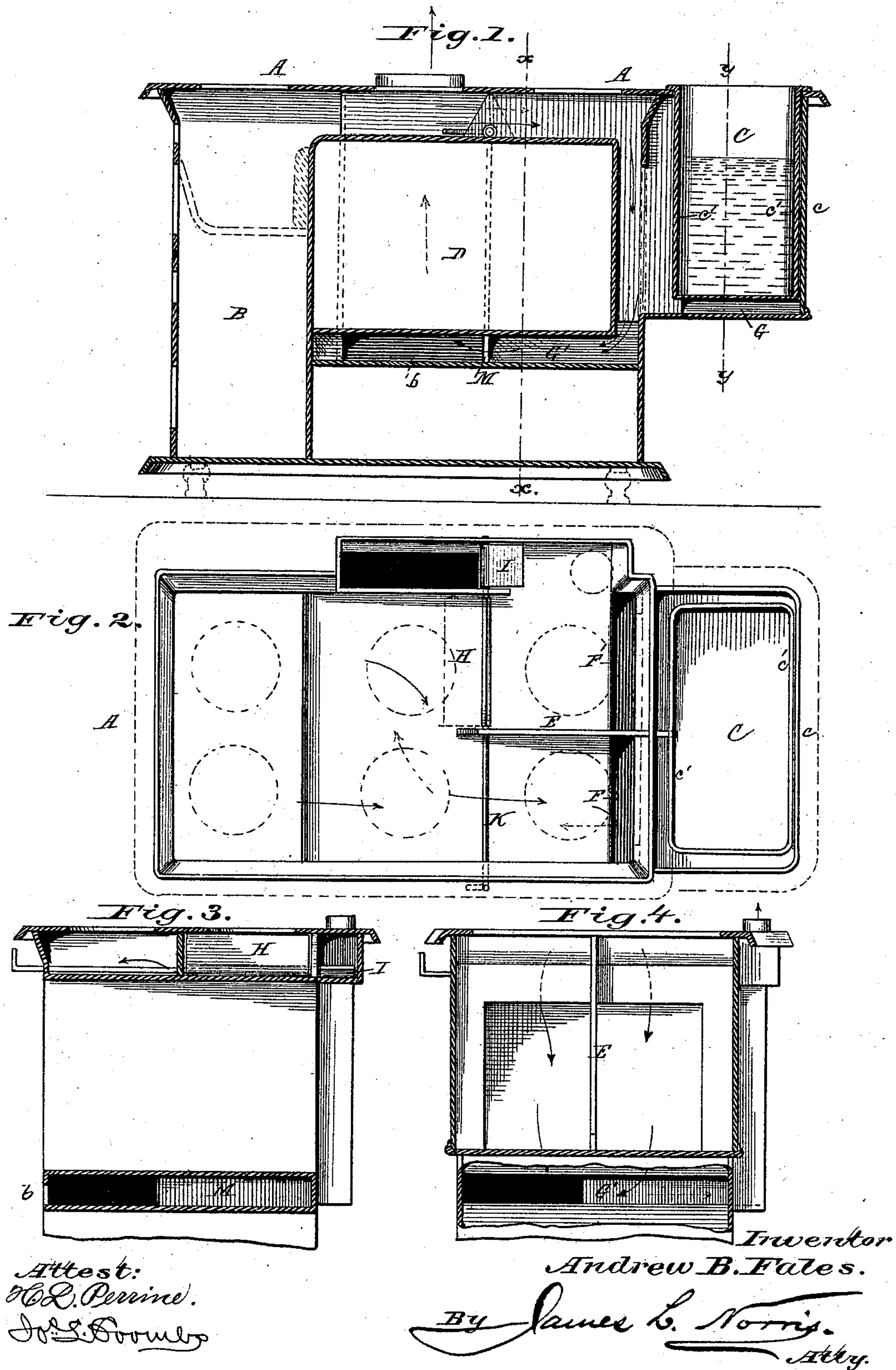


A. B. FALES.
RESERVOIR COOKING STOVE.

No. 176,944.

Patented May 2, 1876.



UNITED STATES PATENT OFFICE.

ANDREW B. FALES, OF TROY, NEW YORK.

IMPROVEMENT IN RESERVOIR COOKING-STOVES.

Specification forming part of Letters Patent No. **176,944**, dated May 2, 1876; application filed March 31, 1876.

To all whom it may concern:

Be it known that I, ANDREW B. FALES, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Cooking-Stoves, of which the following is a specification:

This invention consists, first, in the combination, in a reservoir cooking-stove having parallel flues leading from a flue above the oven to a flue below the same, and the flue under the water-reservoir, of a double damper for closing the communication between one of said parallel flues and the flue above the oven, and opening communication between the said flue and the exit-flue, for the purpose of throwing the heated products of combustion under the reservoir, substantially as described; second, in the combination, in a reservoir cooking-stove provided with a reservoir-casing at one end, and having parallel flues leading into a flue within the reservoir-casing and a flue under the oven, of a partition extending from the rear of the flue, under the bottom of the oven, to near the front end of the same, for compelling the heated products of combustion to thoroughly traverse said flue under the oven on their way to the exit-pipe.

In the drawing, Figure 1 is a sectional elevation of a cooking-stove constructed according to my invention; Fig. 2, a plan view of the same with the top removed; Fig. 3, a sectional view taken on the line *xx* of Fig. 1; and Fig. 4 a sectional view on the line *yy*, Fig. 1, with the water-reservoir removed, and a portion of the stove below the reservoir-casing with the outer wall removed, showing the flues under the oven.

The letter A represents a stove or portable range, provided with a fire-box and ash-pit, B, at one end, and a water-reservoir, C, at the other. D represents an intermediate oven, with the usual flues above and below the same for the passage of the products of combustion and hot gases. E represents a partition-plate, extending from near the center of the top of the oven to the end of the same adjoining the water-reservoir, and down the flue at said end nearly to the bottom of the same, forming two flues, F F', communicating with the flue G under the bottom of the reservoir and with the flue G'

under the oven. H and I represent two dampers, secured upon a common damper-rod, K, passing through the front of the stove.

The damper H is arranged to open and close the communication between the flue F' and the flue leading from the fire-box of the stove, and the damper I to open and close communication between the flue F' and the chimney, the relative positions of the two dampers upon the rod K being such that when one damper is opened the other will be closed.

The flue G' under the bottom of the oven is provided with a transverse partition-plate, M, extending from the back about half-way across the same, and said flue communicates with the exit-flue, at or near its bottom, by means of an opening, *b*.

The reservoir C consists of an outer casing, *c*, forming part of the stove proper, and an interior casing, *c'*, forming the tank, which may be made removable, if desired. The said casing *c'* does not extend quite to the bottom of the outer casing *c*, leaving the flue G under said interior casing, which communicates with the flues F F' at their lower ends.

The operation of my invention will be readily understood from the foregoing description. When the damper H is open, the damper I being closed, the heated gases and products of combustion pass down over the top of the oven, and, at the side of the same, directly into the flue under the oven, and out through the opening *b*, into the exit-flue, without passing through the flue in the bottom of the reservoir. When said damper H is closed, the damper I being opened, the hot products are carried down through the flue F into and through the flue G, and up through the flue F', and into the exit-flue, thoroughly and effectually heating the water in the reservoir.

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

1. In a reservoir cooking-stove, the combination, with the parallel flues leading from the flue above the oven to the flue below the same, and the flue under the water-reservoir in the reservoir-casing, of the double damper, for closing communication between one of said parallel

flues and the flue above the oven, and opening communication between the said flue and the exit-flue for the purpose of throwing the heated products of combustion under the reservoir, substantially as described.

2. The combination, in a reservoir cooking-stove provided with a reservoir-casing at one end, and with parallel flues leading into a flue within the reservoir-casing and a flue under the oven, of a partition extending from the rear of the flue under the bottom of the oven to near the front of the same, for compelling

the heated products of combustion to thoroughly traverse said flue under the oven on their way to the exit-pipe, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

ANDREW B. FALES.

Witnesses:

GEO. H. MORRISON,
FRANK E. HOWE.