

H. J. FRIZELLE.

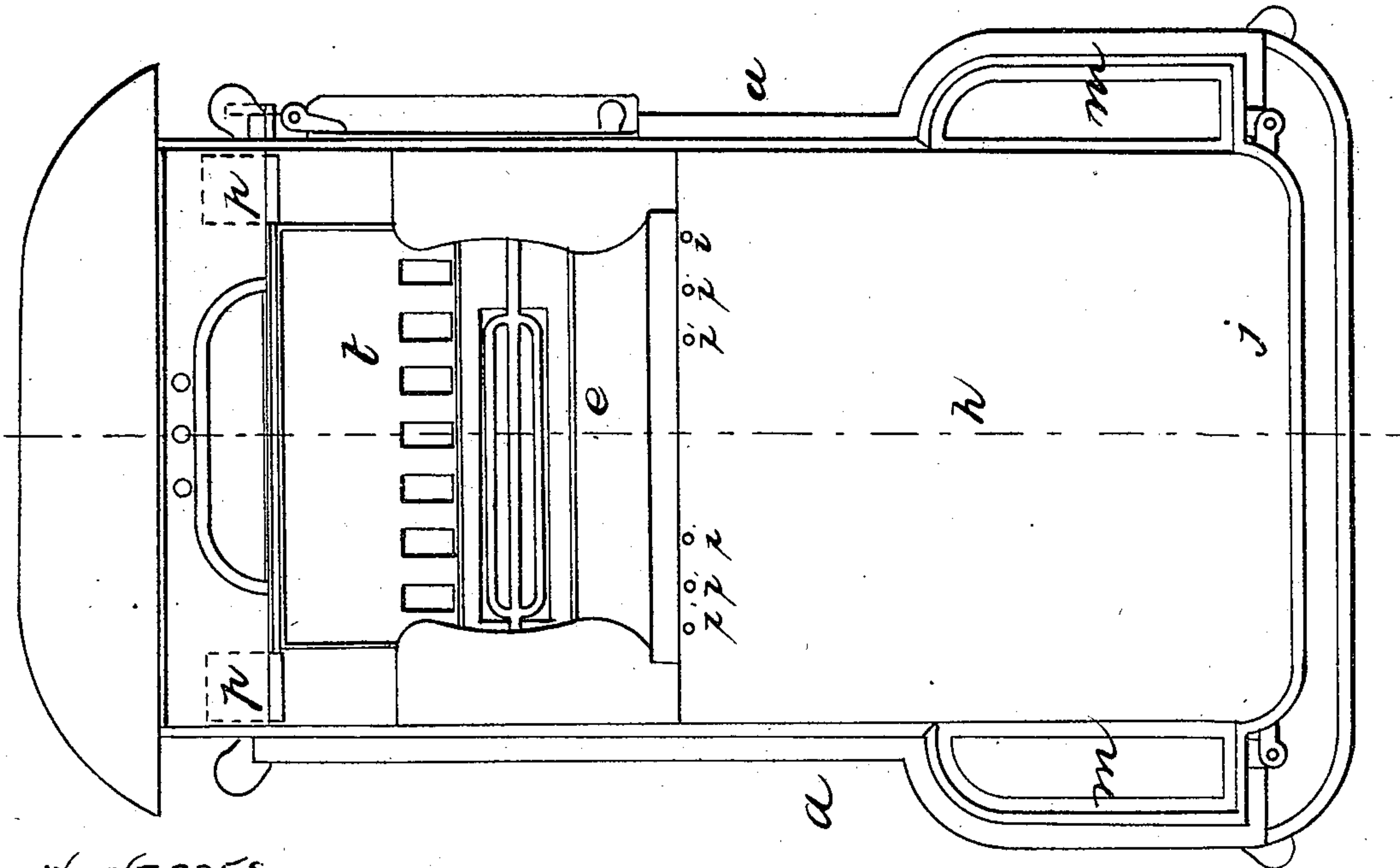
2 Sheets—Sheet 1.

Cooking Stove.

No. 44,255.

Patented Sept. 13, 1864.

Fig. 1



WITNESSES  
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INVENTOR  
H. J. Frizelle  
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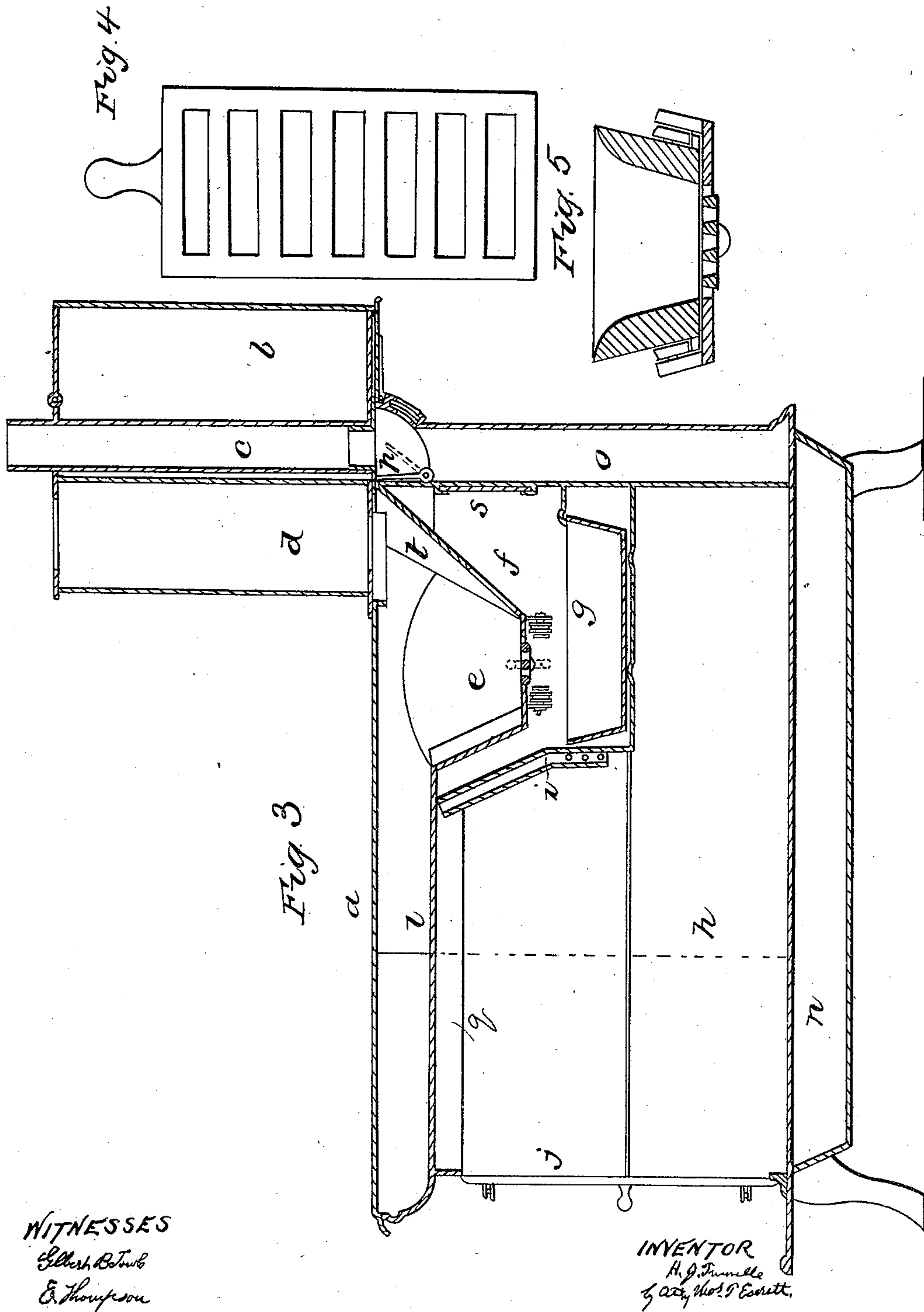
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2 Sheets—Sheet 2.

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# UNITED STATES PATENT OFFICE.

HORACE J. FRIZELLE, OF SYRACUSE, NEW YORK.

## IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 44,255, dated September 13, 1864.

*To all whom it may concern:*

Be it known that I, H. J. FRIZELLE, of Syracuse, in the county of Onondaga, in the State of New York, have invented a certain new and useful Improvement in Cooking-Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and marks thereon.

The drawings forming part of this specification represent a stove and parts thereof, constructed under my invention, Figure 1 being a top view of the stove with the top plate removed, Fig. 2 being an end view of the stove with the water-tank or reservoir in place, Fig. 3 being a view by longitudinal sections on the end line of Figs. 1 and 2, Fig. 4 being a top view of a grid-iron for the ash-pan, and Fig. 5 being a view by transverse section of a fire-box and grate attached thereto.

In each of these figures, where like parts are shown, like marks and letters are used to indicate the parts.

The exterior plates of the stove, as indicated in the drawings, are marked *a*, the water-reservoir, *b*; the smoke-pipe, *c*; the fuel-chamber or magazine, *d*; the fire box, *e*; the ash-pit, *f*; the ash-pan *g*, and the oven *h*.

It will be noticed that the oven *h*, Figs. 1 and 3, occupies the entire lower portion of the interior of the stove, and all of the upper portion except the small part having the ash-pit and fire-box; that it is very capacious, ventilated by passages *i*, Figs. 1 and 3, of easy access by the large doors *j*, or the small one *k*, and that it can be heated very fully and uniformly, the track of the heat and products of combustion being from the fire-box *e*, between the plates *a* and *l*, the plate *a* being well provided with pot-holes, down the flues *m*, through lower horizontal flue *n*, and up through the vertical flue *o* to the smoke-pipe, when the dampers *p* are closed, or direct to the smoke-pipe when the dampers are open, as is indicated by red lines in Figs. 1 and 3. The fire-box *e* is placed in a large ash-pit, *f*, so that its sides and the bottom of the grate are freely exposed to the air fed in through channels *q*, Fig. 3, or *r*, Fig. 2, the latter being controlled by the sliding plate *s*, Fig. 3. The position of the fire-box is such as not to lessen materially the size of the oven or to interfere with its free use or capacity.

It will be noticed that the ash-pit is of such form as enables me to do away with all side or front hearths and ash-boxes, as heretofore used, with all auxiliary attachments, and allows of its being complete within itself directly under the fire-box, in either end of the stove or on either side. It will be noticed, also, that the air to the ash-pit through the channels *q*, Fig. 3, becomes heated during its passage. The sides of the fire-box are inclined, and the one, *t*, nearest to the smoke-pipe is a grate or has grate-bars, as is shown by Figs. 1 and 3. This inclination of the sides allows of the proper transmission of the fuel from the magazine or fuel-chamber *d*, and tends to the regulation of the fuel upon the grate, while by having the grated one *t* the air will be fed direct into the body of the fuel. The feeding-mouth of the magazine, it will be noticed, is over the grated side *t*, and, the direction of the air fed in being away from the mouth, the fuel immediately near the mouth will not be as liable to be ignited as if the air was directed more toward the mouth. The grate of the fire-box, as shown by Figs. 3 and 5, rests upon wheels attached to the extended sides of the fire-box, or is suspended by wheels attached to the frame of the grate, the wheels bearing upon a side flange of the fire-box. The grate therefore can easily be moved backward and forward, acting as a sifter or cleaner, or it can be turned, as indicated by red lines in Fig. 3, and the contents of the fire-box be dumped out. The ash-pan *g*, Fig. 3, is provided with a grid-iron or broiler, Fig. 4, so that the charcoal or other proper fuel may be put in the ash-pan, and the broiler placed over the charcoal or ignited fuel, and any suitable article of food broiled, the pan being drawn out from under the grate; or, the grate being shaken and cleaned, the article of food may be put on the grid-iron, and it and the pan being shoved under the grate the heat from the fire-box may be used to cook the food. In either case, the vapor and odor from the food being cooked will be carried within the ash-pit and fire-box, and thus not affect the air of the kitchen or cooking-room. The water-reservoir *b* is placed at a convenient part of the stove, so as to receive a portion of the escape-heat through smoke-pipe *c*, a recess being formed in the reservoir for the pipe,

thus allowing of the easy removal of the reservoir when desired, and yet leaving the surfaces of the pipe regular and uniform.

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

1. The arrangement of the air-passages in their relation to the fire-box and the other parts of the stove by which the air for combustion may be taken from the front or back part of the stove or from both ends of the stove, as described.

2. The ash-pan and grid-iron or broiler as combined and as arranged to be used either in or out of the ash-pit, as herein recited.

3. Suspending or sustaining the grate on wheels, substantially as set forth.

This specification signed this 11th day of April, 1864.

H. J. FRIZELLE.

Witnesses:

THOS. T. EVERETT,  
DAN. HOWLAND.