

(No Model.)

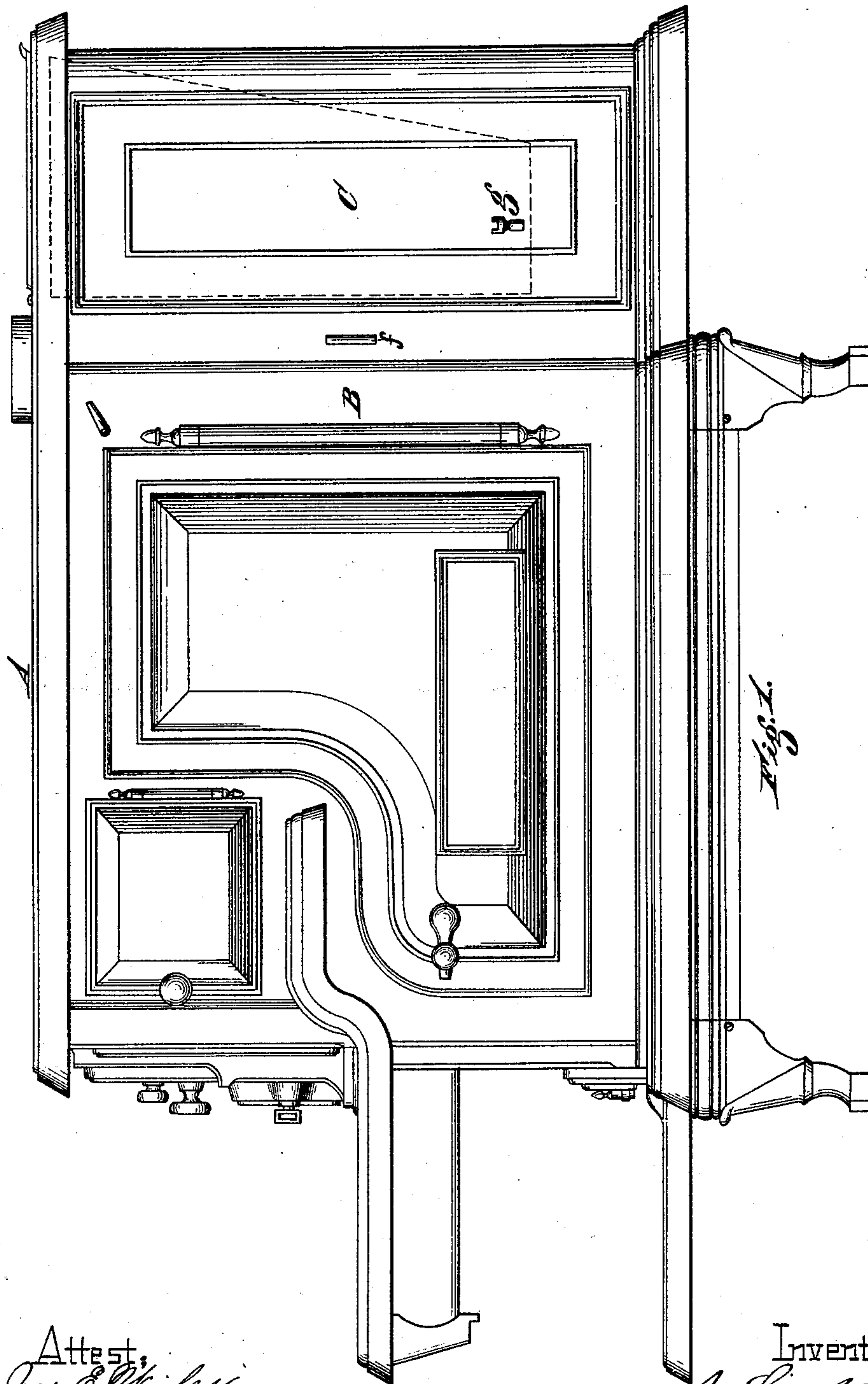
2 Sheets—Sheet 1.

J. L. NATCHEZ.

RESERVOIR COOKING STOVE.

No. 285,502.

Patented Sept. 25, 1883.



Attest,
Geo. E. Wiles
E. W. Rector

Inventor,
J. Lee Natchez
by Stearns & Co.
his Atty.s

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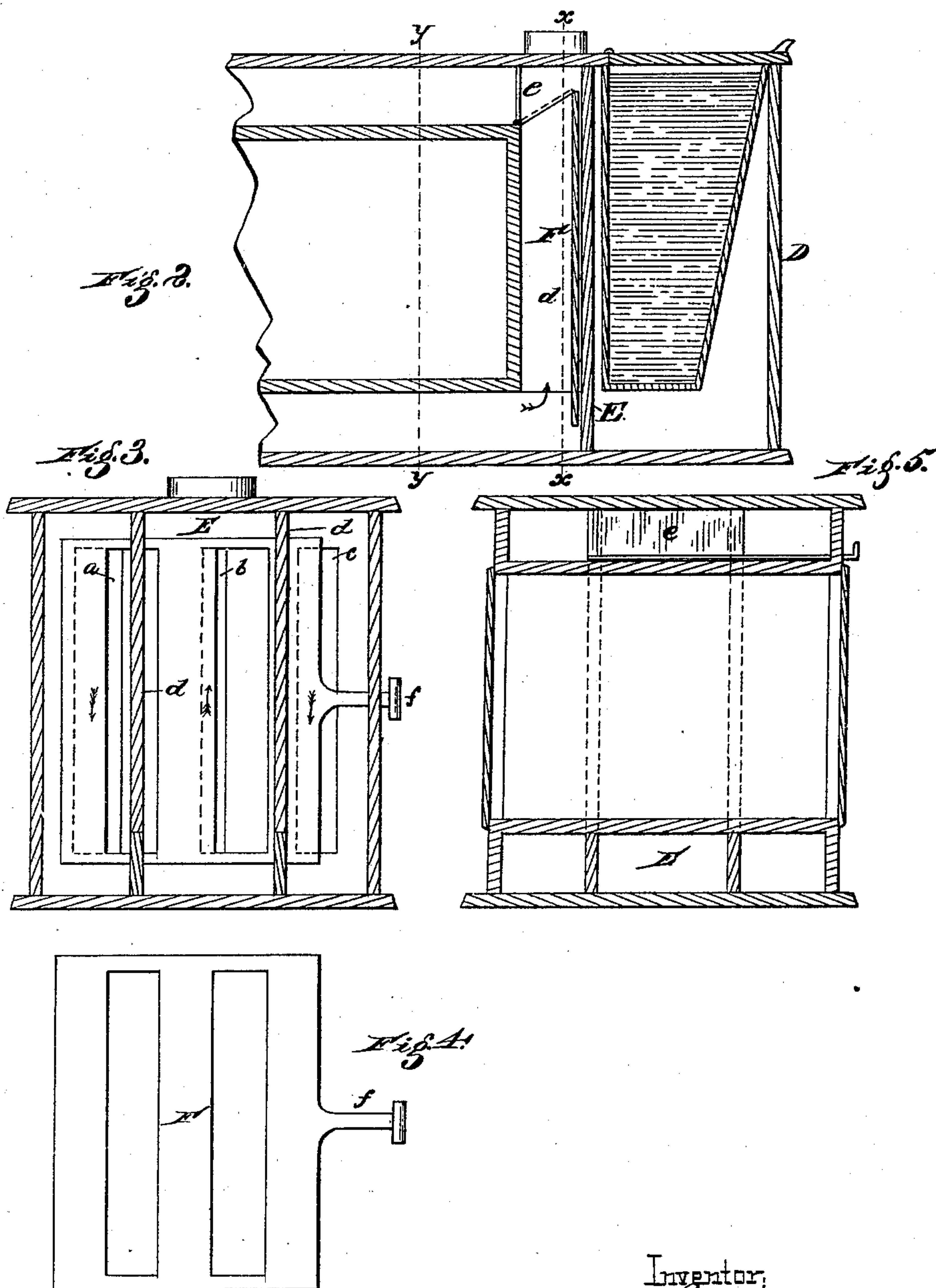
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E. W. Rector

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UNITED STATES PATENT OFFICE.

J. LEE NATCHEZ, OF DAYTON, OHIO.

RESERVOIR COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 285,502, dated September 25, 1883.

Application filed February 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, J. LEE NATCHEZ, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Reservoir Cooking-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification.

The great objections to this class of stoves hitherto have been that, owing to the shape and location of the reservoir, the proper working of the stove was greatly interfered with, its expense in construction greatly increased, and the proper heating of the water not accomplished. These objectionable features existed, first, because the reservoir was located around or in the rear of and very close to the stove-pipe, and, containing a large body of cold water, chilled the products of combustion in their passage from the stove, and thereby greatly interfered with the draft both when the direct draft was employed and when it was attempted to heat the oven by passing the products of combustion around the same, as is customary; secondly, the method of mounting necessitated by the shape and location of these reservoirs nearly doubled the cost of manufacture and rendered the stove bulky and cumbersome; thirdly, by reason of the shape and location of the reservoirs it was rarely possible to make the water therein boil, or to even make the same hot.

The object of my present invention is to produce a reservoir-stove in which the foregoing objections are obviated by so constructing and locating the reservoir as to greatly save the cost of construction of the stove, to reduce its bulk, to enable the water to be heated to the boiling-point, and without interfering with the draft or proper working of the stove.

To this end the novelty of my invention consists in the construction and combination of the parts, as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1, Sheet 1, is a side elevation of my improved stove. Fig. 2, Sheet 2, is a sectional view, in side elevation, of the rear end of the same. Fig. 3, Sheet 2, is a transverse sectional view

through the down-flues at the rear of the stove, through the line *xx* of Fig. 2. Fig. 4, Sheet 2, is a front elevation of the register-plate. Fig. 5, Sheet 2, is a transverse section of the stove through line *yy* of Fig. 2.

The same letters of reference indicate like parts in all the figures.

A represents my improved stove or range, which may be of the usual or any suitable construction, and which has a reservoir-casing at its rear formed by extending the side plates, B, back, as shown at C. The top and bottom are correspondingly extended, and the rear is closed by the back plate, D. This extension to form the casing may be produced by having separate plates to form said casing, or by making the same integral with the top, bottom, and side plates, as the manufacturer may elect. The front plate, E, which forms the back wall of the down-flues, and whose construction will be presently explained, completes the construction of the reservoir-casing. The reservoir which is fitted into this casing, and which is made of sheet metal, is a thin oblong vessel, slightly tapering toward its bottom, as shown, and with its top flush with the top of the stove. The lid or lids covering this reservoir are likewise flush with the top of the stove. It will thus be seen that my improved reservoir, which occupies nearly the entire depth of the stove, is quite thin or narrow from front to back, thereby presenting a thin body of water to a large heating-surface, by which means the water can be quickly heated and made to boil.

The front plate, E, of the reservoir-casing, as seen in Figs. 3 and 5, has three slots or apertures, *a b c*, through it, of which *a* and *c* are within the down-flues of the stove and *b* in the up-flue. I preferably make *a* and *c* larger than *b*, though this is not absolutely essential. These apertures do not extend quite to the top of the oven, so that the heat and flames in passing back over the oven are directed first against the solid portions of the plate E. This is to prevent the burning out of the reservoir, which might occur if the heat and flames were thrown directly against the reservoir before being deflected down.

Division-plates *d*, of the usual construction, separate the down-flues from the up-flues, and

the ordinary damper, *e*, is employed in the usual way, either to cause the heat and products of combustion to be sent down under the oven before escaping, or else to open the direct draft when it is not desired to heat the oven.

From the above construction it will be seen that when the damper is turned up, as shown by the solid lines in Fig. 2, the heat and products of combustion are deflected down and come in contact with the front of the reservoir through the openings *a* and *c*, and on their return likewise come in contact with the reservoir through the opening *b*, thereby enabling me to present the whole front of the reservoir to the direct action of the heat and flames, by which means, owing to the thinness of the body of water, it becomes speedily heated and can be made to boil.

To regulate the amount of heat admitted to the reservoir, and to cut it off entirely, if desired, I employ the register-plate *F*, Figs. 3 and 4, which, working in slots in the division-plates *d* directly against the front plate, *E*, and being provided with an operating-handle, *f*, extending to the outside of the stove through an opening in the side plate, enables me to slide said register-plate so as to partially or entirely uncover the openings *a*, *b*, and *c* in the plate *E*, or to close the same entirely, as may be desired; or the dampers now generally used on reservoir stoves and ranges for governing the heat to reservoir-chamber may be used for this purpose, as the manufacturer may elect; also, if desired, the reservoir may have a lock-faucet or any suitable faucet, though for safety the former is preferred, extending to the outside of the stove at or near the bottom of the reservoir to enable water to be drawn off without the necessity of dipping it out. I have shown the location of such a faucet at *g*, Fig. 1.

From the above description it will be seen that I have dispensed with the customary warming-oven under the reservoir, and have utilized this space by deepening the reservoir, which can in consequence be made much thinner from front to back without decreasing its capacity, and the water in the reservoir, being presented in a thin body to an extended heat-

ing-surface, will heat much better and quicker than by the old construction; and, furthermore, by means of the register or check damper the heating of the water can be controlled as may be desired, whether using the oven for baking or not. Again, as the top plate above the reservoir is flush with the whole top of the stove or range, a greater top surface is obtained for the use of the cooking utensils.

While the above construction and location of the reservoir is, perhaps, the best and the more preferable, yet I do not propose to limit myself to the location of the reservoir to what is known as a "low-down" reservoir with its top flush with that of the stove, for the same advantages in heating may be obtained with the thin body of water by raising the reservoir more or less, so as to project above the top of the stove to any degree required.

Having thus fully described my invention, I claim—

1. The combination, with a stove, of an incased reservoir located at the rear of the stove, having a depth substantially equal to the rear flues, and located directly in the rear of said flues and in direct communication with the products of combustion, whereby a deep thin body of water is presented to an extended heating-surface, substantially as described.

2. In a reservoir stove or range, the combination, with a deep thin reservoir, of the front plate, *E*, of the reservoir-casing, provided with openings arranged in the descending and ascending flues, whereby the products of combustion are brought in direct contact with the front face of the reservoir, substantially as described.

3. In a reservoir stove or range having a deep thin reservoir, the combination, with the front plate, *E*, provided with apertures, of the register *F*, adapted to slide over and cover said apertures, whereby the products of combustion can be admitted to or cut off from the reservoir to regulate the heating of the water, substantially as described.

J. LEE NATCHEZ.

Witnesses:

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GUS A. MEYER.