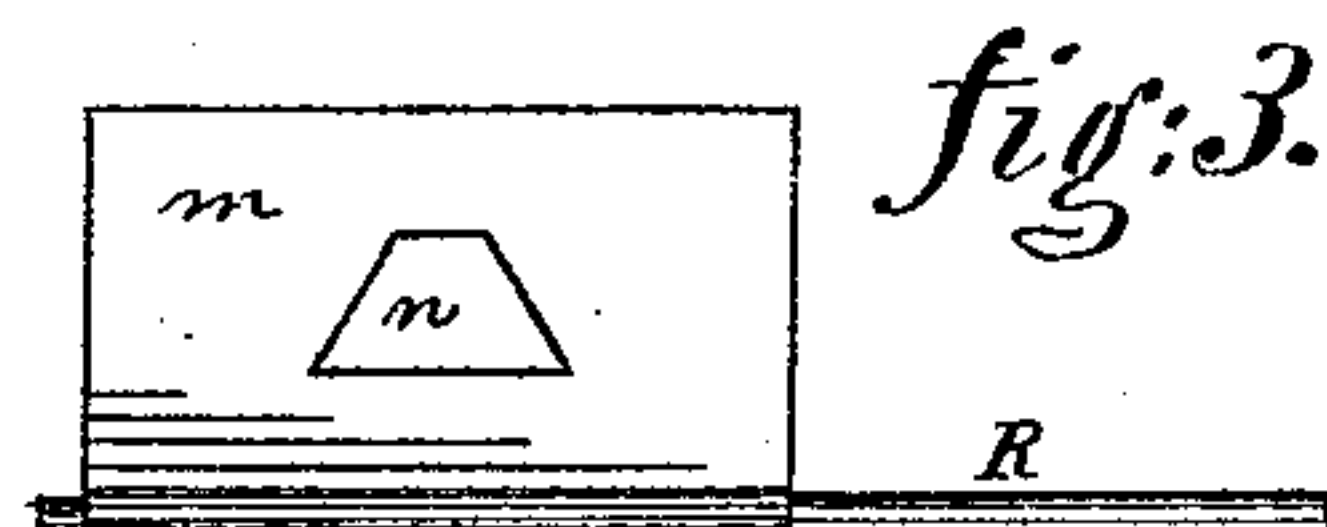
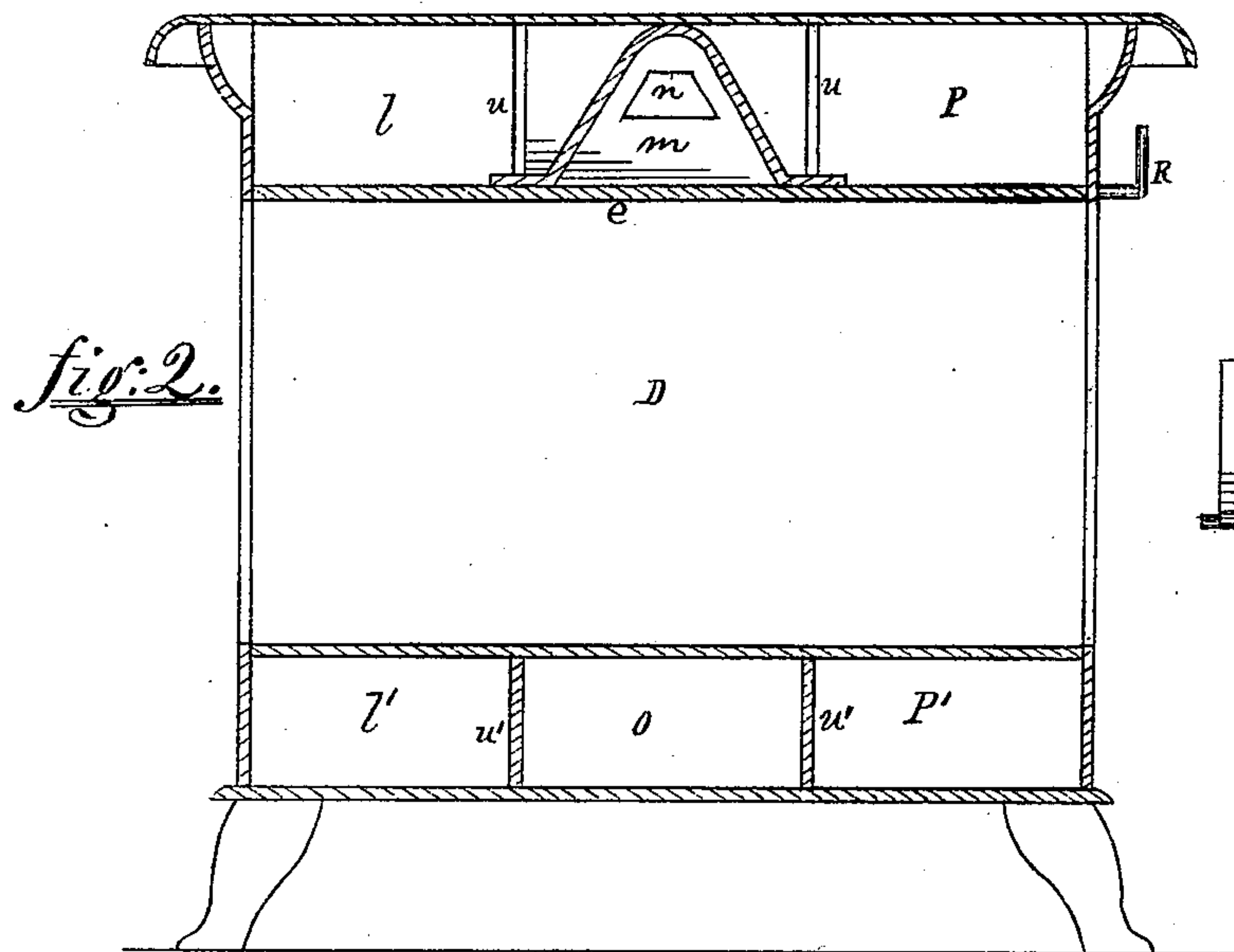
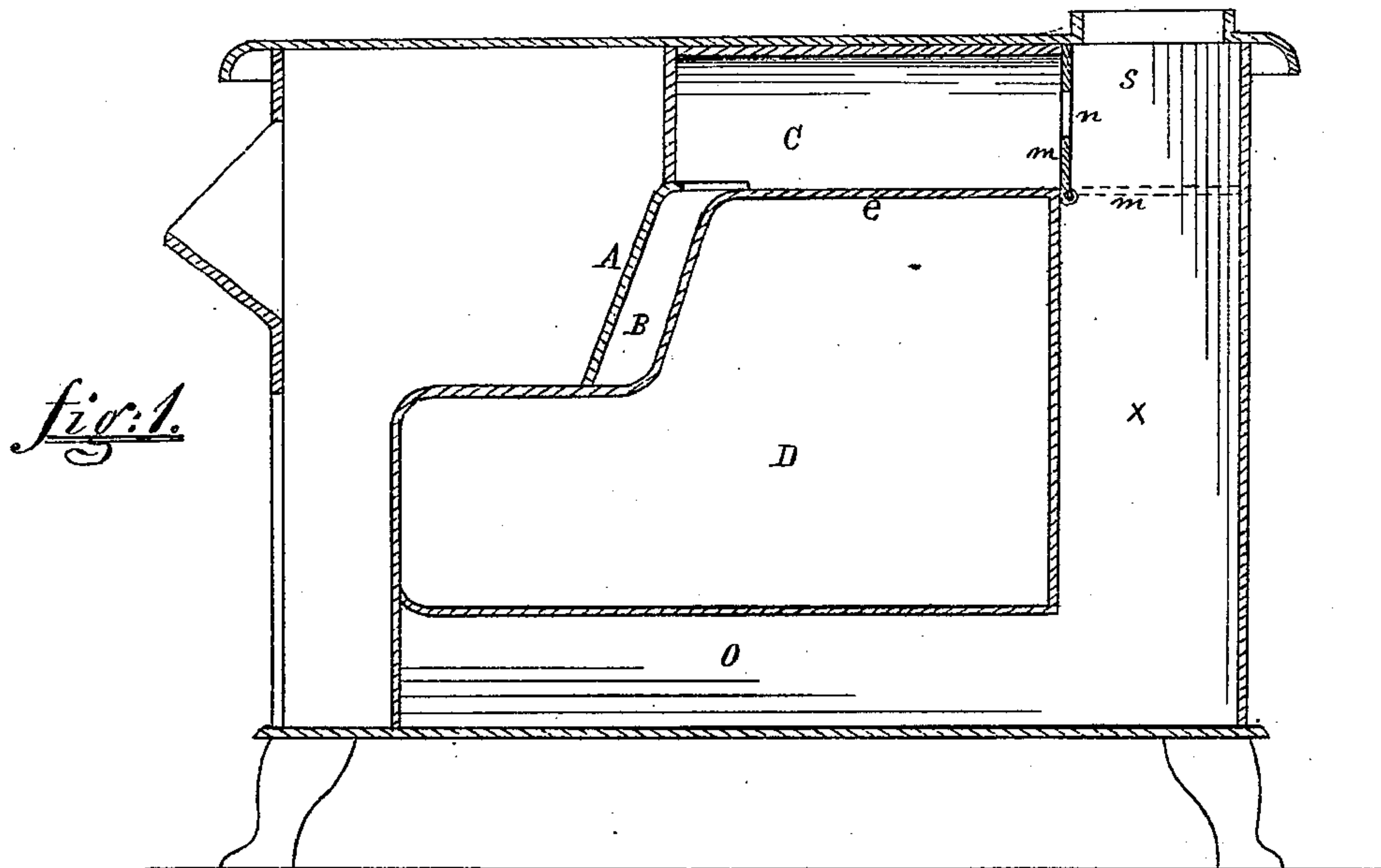


J. H. McCONNELL.

Cooking Stove.

No. 107,394.

Patented Sept. 13, 1870.



Witnesses.

A. C. Johnston,
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Inventor.

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JAMES H. McCONNELL, OF BEAVER FALLS, PENNSYLVANIA.

Letters Patent No. 107,394, dated September 13, 1870.

COOKING-STOVE.

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, JAMES H. McCONNELL, of Beaver Falls, in the county of Beaver, and State of Pennsylvania, have invented a new and useful Improvement in Stoves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in so constructing a stove that its fire-back shall have an air-chamber in the rear of it, communicating with a flue which passes over the top plate of the oven of the stove.

My invention also consists in providing the flues of the stove with a damper or valve, so constructed that, when it has closed the most direct opening to the stove-pipe or chimney, there shall be a communication between the air-chamber in the rear of the fire-back and the stove-pipe or chimney.

To enable others skilled in the art to make and use my invention, I will proceed to describe more fully its construction and operation.

In the accompanying drawing which forms part of my specification—

Figure 1 is a vertical and longitudinal section of an ordinary stove provided with my improvement.

Figure 2 is a transverse section of the same.

Figure 3 is a face view of the damper or valve of the stove.

The stove represented in the accompanying drawing is of ordinary construction.

A represents its fire-back, in the rear of which is an air-chamber, B, which communicates with the flue C, which communicates with the pipe or flue S.

The flue C is arranged on the top plate *e* of the oven D.

The back flues *l*, *P*, and *x*, and the bottom flues *l'*, *o*, and *P'*, are formed in the usual manner, by means of the flue-plates *u* and *u'*.

The "flue-plate" for forming the flue C, when viewed in cross-section, as shown in fig. 2, is in the form of the letter V inverted, and may be secured, by rivets or other means, to the top plate *e* of the oven.

The damper or valve *m* is provided with an opening, *n*, and is operated by means of rod R, and is

pivoted at the back end of the flue C, between the flue-plates *u*.

As the construction and arrangement of my improvement, with relation to the ordinary cooking-stove, will be readily understood from the foregoing description and by reference to the accompanying drawing, I will therefore proceed to describe its operation, which is as follows:

The air passes, at openings in the sides of the stove, into the chamber B, where it becomes heated; it then passes into and through the flue C, into the stove-pipe flue S, and out through the stove-pipe or chimney. When the damper *m* is in the position "turned up," as shown in figs. 1 and 2, then the communication between the flues C and S is kept open by means of the opening *n* in the damper *m*. When the damper is up the heat and smoke will pass back and down the flues *l* and *P*, and through the flues *l'* and *P'*, under the bottom of the oven, and, entering the flue *o*, returns back and passes up through the flue *x* into the pipe-flue S.

When the damper is turned down, as shown by the dotted lines *w* in fig. 1, then the heat and smoke passes directly back, on each side of the flue C, into the pipe-flue S, and causes the flame, heat, and smoke to pass directly under the openings in the top for the cooking-vessels, which is a desirable thing in a cooking-stove. The flue C, combined with the chamber B, prevents, to a very great degree, the fire-plate from "burning out," and overheating the front and the central portion of the top of the oven, equalizing the heat in all parts of it.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention is—

1. Providing the air-chamber, back of the fire-plate of a cooking-stove, with a flue, which passes over the top plate of the oven, as herein described, and for the purpose set forth.

2. Combining with the above flue and air-chamber the damper *m*, arranged and operating substantially as herein described, and for the purpose set forth.

Witnesses: JAMES H. McCONNELL.

A. C. JOHNSTON,
JAMES J. JOHNSTON.