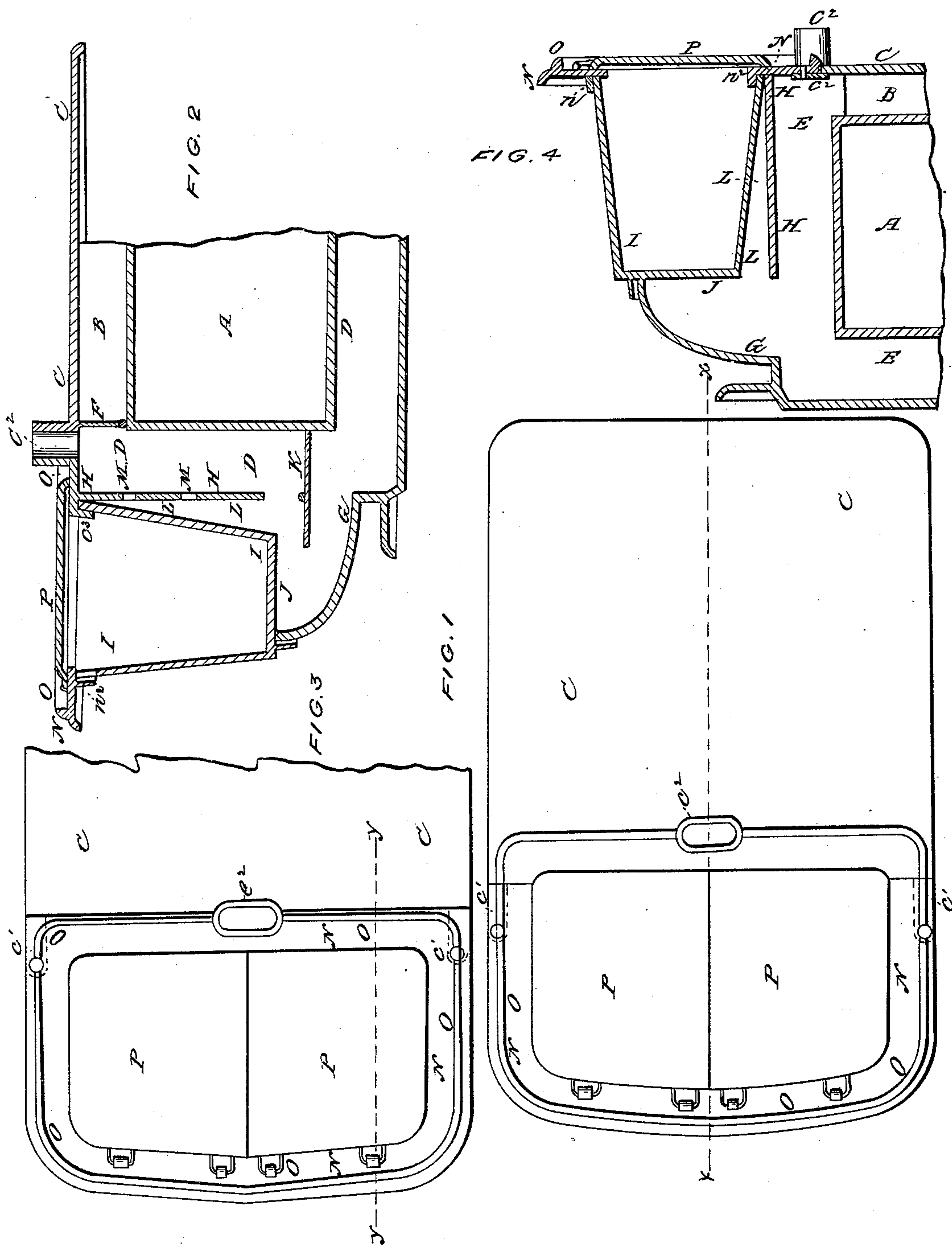


D. E. PARIS.
Cooking Stove.

No. 67,344.

Patented July 30, 1867.



WITNESSES:

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DANIEL E. PARIS, OF TROY, NEW YORK.

Letters Patent No. 67,344, dated July 30, 1867.

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, DANIEL E. PARIS, of Troy, in the county of Rensselaer, and State of New York, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a top view of a stove illustrating my invention.

Figure 2 is a vertical longitudinal section of the rear part of the same, taken through the line *x x*, fig. 1.

Figure 3 is a top view of the rear part of a stove, illustrating a modification of my improvement.

Figure 4 is a vertical longitudinal section of the same, taken through the line *y y*, fig. 3.

Similar letters of reference indicate like parts.

My invention has for its object to improve the construction of my improved stove, patented June 22, 1858, by Samuel B. Spaulding, and reissued February 26, 1867, and it consists generally in the construction of an improved return-flue chamber under the reservoir, as first shown in my Spaulding patent, but as here improved and simplified, together with an improved arrangement for the damper or flue-plate K, which may revolve on a pivot or journal; or slide back and forth, or be stationary; as the object is to drive the heat or products of combustion under the reservoir by means of said damper or flue-plate, and the only object gained in making it movable, by a horizontal sliding movement, or by a revolving action, is to allow the heat to pass directly upward to the exit pipe; if the damper slides back and forth it is capable of simply allowing the heat to pass upward into the exit pipe, but if it revolves, as shown in the drawings, then the damper not only allows the heat to pass upward to the exit pipe, but confines it to the rear central flue in its passage upward, and prevents it from coming in contact with the reservoir, for it shuts up the opening through or under the back plate of the stove, and thus shuts the heat or products of combustion entirely off from the reservoir. The plate may be made stationary if desired, but in that case the heat would come at all times into direct contact with the reservoir, so it would have to be heated at all times, whether needed for use or not, whenever there is a fire in the fire-box of the stove; this would not be so desirable, for the reservoir is not in use at all times, and it is not necessary to have the water boiling away when not needed for use.

The kind of stove used is what is called a diving three-flue stove, and any diving-flue stove may be used, it matters not whether it has three flues or two flues, or a sheet-flue. The stove is square-shaped, with the hearth and fire-box at one end, and the exit pipe at the other, with the oven partly back of and partly beneath the fire-box, no special and particular shape being required, so that it is a diving-flue stove, as I do not describe the invention with the old-fashioned style of stove, where the heat ascends above the top of the fire-box, in order to reach the oven, but only in a kind of stove where the heat or products of combustion strike the top of the oven, or operate upon it, before striking or operating upon the bottom of the same; the reservoir being heated mainly after the heat leaves the oven, rather than before it reaches it, so as to heat the reservoir by the waste heat of the stove after it shall have performed every other requirement, and before it passes off into the exit pipe.

The stove and its construction is explained as follows: A is the oven; B is the top flue above the oven; C is the top plate of the stove; D is the central flue of the stove; while E is one of the two side flues; F is the ordinary damper of all three-flue stoves, which, when open, allows the heat to pass directly into the exit pipe, and when closed compels it to pass around the oven before entering the exit pipe through the side flues E, and back again in the central flue D. G is an outwardly projecting plate, cast solid and in one piece, forming the rear casing of the back flues of the stove, so far up as it extends, and so made for the double purpose of forming the return-flue chamber J, and an open seat, for the purpose of sustaining the reservoir or water-tank I. H is the back plate of the stove, reaching downward from the stove top, at its centre to or about on a line with the bottom of the reservoir, beneath which the heat passes into the chamber J, under the damper K, then upward against the reservoir bottom, and thence back again to the central flue D above the damper, and thence to the exit pipe. K is the damper, which, when turned up vertically, closes this opening through the back plate H. No part of the back plate H need extend further than the bottom of the reservoir, and the damper

be made large enough to cover the entire space enclosed and formed by the plate G, or the latter plate may be made narrower, and the opening into the rear flue or flues smaller, as may be deemed best. L is a hot-air chamber, formed between the reservoir and the back plate H, and is connected with the chamber J. The openings M M, formed through the back plate H, are designed to let the pent-up heat or smoke pass off into the exit pipe, as it ascends from the chamber J, around the flue-plate K. N is a cap or rim to the reservoir, and resting upon its top edges, which is made to go around the back and both ends of the reservoir; or what is better, it may be made annular, and its front side may cover a part or the whole of the vertical flues E D of the stove, as shown in figs. 3 and 4. O is a ridge, or upwardly-projecting flange, formed upon the upper surface of the cap or rim N, at or near its outer edge, as shown in the drawings, made to prevent the water, spilled on the top, from running off on to the floor, and for conducting it back into the reservoir. The covers are hung directly to this cap or rim by pins or lugs as desired.

The stove may be made with two flues, and the heat made to pass down one side of the back of the stove, then under the reservoir to the other side of the stove, thence back under the oven, and upwards to the exit pipe. This may be done also with a three-flue stove, but in either case the damper or flue-plate K would either be made stationary, or to stand vertically, and to turn with a rotary movement in any way desired, but in this case the return-flue arrangement under the reservoir would be the same in principle and effect, though the damper K may or may not be used, as the case may require, but there must be some controlling flue-plate to create or direct such flue, or it will not go under and then back from in under the reservoir.

Having thus described my invention, what I desire to claim and secure by Letters Patent, is—

1. The revolving damper or flue-plate, made to operate in the chamber under the reservoir as follows, when, lying horizontally, it drives the heat or products of combustion under the bottom of the reservoir, when turned up vertically, allows it to pass directly into the exit pipe, and shuts it off from the reservoir by closing the opening through or under the back of the stove.

2. I claim the return-flue chamber, or open seat under the reservoir, connected with the central rear flue of the stove by an opening through or under the back plate of the same, in combination with the revolving damper or flue-plate within said chamber, and the reservoir above.

3. The construction of the annular cap or top rim N, which shall entirely surround the top of the reservoir, with the outer edge of said rim turned both upward and downward, so as to form at once a finished moulding for its outer edge, and also a water-guard for the purpose of conducting any water spilled upon the top down into the reservoir, substantially as herein shown and described.

4. I claim the backward and forward motion of the heat, in other words, a return-flue, underneath a reservoir, situated in rear of a diving-flue cooking-stove, in combination with a revolving damper, or a controlling flue-plate, creating or directing such flue as it passes out from the rear flue or flues of the stove, and then back again for the purpose of heating the reservoir.

DANIEL E. PARIS.

Witnesses:

CHAS. E. POTTER,

LOUIS POTTER.