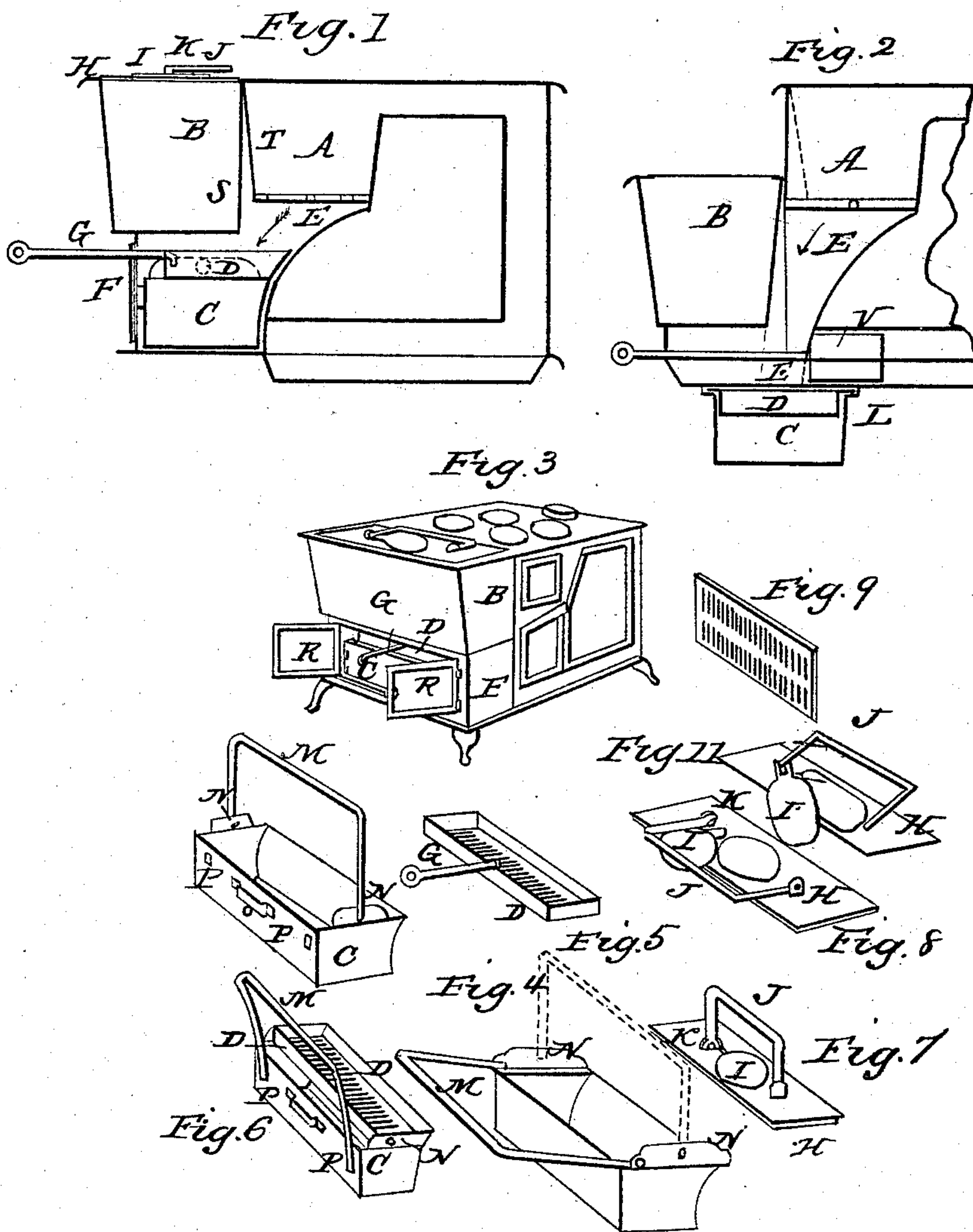


D. E. PARIS.
Cooking Stove.

No. 66,620.

Patented July 9, 1867.



Witnesses
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DANIEL E. PARIS, OF TROY, NEW YORK.

Letters Patent No. 66,620, dated July 9, 1867.

IMPROVEMENT IN COOKING-STOVES.

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 new and useful improvements in Cooking-Stoves and Reservoirs to the same; 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, and to letters of reference marked thereon, like letters representing like parts.

Figure 1 is a vertical longitudinal view of the stove with the reservoir attached, and with ash-box, pan, and sifter below the reservoir.

Figure 2 is a vertical longitudinal section of the stove with the reservoir lowered down on the stove front from a third to a quarter of the way, with the ash-pan and sifter under the bottom of the stove.

Figure 3 is a perspective view of the stove with reservoir attached; showing the ash-box below the reservoir, and with the top of the reservoir raised up to the top of the stove.

Figure 4 is a perspective view of the ash-pan with movable bail attached.

Figure 5 is a perspective view of the ash-sifter, which sits on top of the ash-pan.

Figure 6 shows the ash-pan and sifter united as they sit in the stove.

Figures 7 and 8 show the covers to the reservoir.

Figure 9 is a view of the front fire-plate T, as shown in fig. 1.

The nature of my invention consists in the construction of a reservoir or water-tank in front of the fire-box of a diving-flue cooking-stove, and so placed that it will be heated by the radiation of the burning fuel in the fire-box, as the heat or rays pass downward toward the ash-pit at E underneath the reservoir, or outward directly from the front of the fire-box to the tank B, either coming in direct contact with it or heating through the intervening plate T, said plate acting only as a shield for the purpose of giving greater protection to the reservoir, and to keep it from heating too rapidly in one place. The plate T may be slotted, as shown in fig. 9, or it may be close, without slot or holes of any kind, and, if the reservoir still heats too rapidly from one side—the side next the fire-box—there may be openings through the side flues of the stove at S to admit the cold air between the reservoir and the plate T. In case the plate T is open for the heat to pass through, the grate or bottom of the fire-box A should not go quite up to the reservoir, so that any ashes that get through the slots or holes in said plate T may fall into the ash-box below the reservoir.

I construct the stove in the usual way, with diving flues, and with the oven partly below and back of the fire-box, it being only the front part of the stove that I claim as new and useful. The bottom of the stove W is extended forward under the reservoir, or it may be a separate piece or hearth, and the ash-box F is built upon this, with the doors R R opening into it from the front to receive the ash-pan C and ash-sifter D, which has a movable handle, G. When those two articles are put into the box the doors R R can be closed, with the ash-sifter handle G left partly out, so that it will keep cool, and so that the sifter D can be operated when the stove is hot, or the handle may be removed altogether from the sifter and laid one side. The reservoir or water-tank B sits upon the box F and forms the top cover to the same, as seen in figs. 1 and 3. The ash-pan C is provided with a movable bail, as seen in figs. 4 and 6, for the double purpose of using it in two ways: first, to lift the pan C out of the ash-box F, and then inserting it in the ear-guides on the top ends of the pan at N N, fig. 4, said ear-guides being also used to keep the ash-sifter D in its place as it vibrates backwards and forwards; and, second, this bail is movable because it can be laid one side when not in use, and thus will not get hot, so that the ashes can be removed whether the stove is hot or cold, for the bail is kept cool by not being put into the stove. An improved method of lifting the pan by the bail out of the ash-box F is shown in Figure 10. The bail can be inserted more easily in the holes at the front corners to lift the pan out of the ash-box, and then equally as easy in the ear-guide holes N N, for it springs in of its own accord by being pressed downward a little. This movable bail is a very useful feature, as it never gets hot, and is always ready for use. The movable handle to the sifter D is equally useful in its arrangement. The ashes and cinders pass down in the direction of the arrow into the sifter D, and are then sifted, if coal is used, inside of the ash-box F, and there is no dust in the room, for the handle G projects outward through the front of the ash-box, and thus it is always cool or sufficiently so for use. It

can be taken out of the stove when not in use, or it can be turned up a little and pushed in out of the way, as desired.

The reservoir B is the main feature of this invention, which consists in placing it in front of the fire-box, not merely in the front of the stove, as in the Spaulding patent of 1859, but in front of or near to the fire-box, so as to depend largely upon the radiating heat of the fire-box, as seen in figs. 1 and 2. The reservoir in fig. 2 is so low down that it requires the ash-pan and sifter C and D to be placed underneath the bottom, the ashes and cinders falling down through the ash-way E in the direction of the arrow. The reservoir, however, as in fig. 1, is heated from the radiation of the fire-box, and this feature is new. The top of the reservoir in figs. 1 and 3 is raised up to the top of the stove. In fig. 2 the hearth forms the top of the reservoir, with openings through it down into the reservoir; and also the bottom flues, as in the Spaulding patent of 1859, may extend under it, going round the dotted lines in the ash-way E, and there may be a damper back of said ash-way, V, which will throw the heat of the flues under the reservoir or not, as desired. The covers to the boiler or tank may be in one piece or two, and hinged to the top or hearth or not, as desired. Figs. 1 and 3 show the reservoir, with the top of the stove extending out around its outer top edges, with a cover, H, to go over the whole top opening, and with a smaller cover in the larger one to use for the dipper. The small cover is moved by a bail off its place, horizontally, by shifting it to the opposite side, and then replaced by turning the bail back again to the other side. This is very convenient for constant use, and to dip from the reservoir a small quantity of water at a time. This feature I apply to pots, kettles, tea-kettles, stove-hearths, and all culinary articles used about my stove. It consists of a cog, cam, peg, or ratchet movement at one or the other extremity of the bail J, at or near the ear K. It can be done in a great many ways, by almost any of the mechanical lever movements; and therefore I attach no importance to the way or manner adopted. I show two ways in the drawings. Figs. 7 and 8 show this peg, cog, or ratchet movement to swing the cover off the hole, and Figure 11 shows the cam or lever movement that pushes it off its place, with a corresponding prong or cam to put it on its place again; or the reservoir may have hinged covers hung to the top plate or hearth-plate of the stove.

The advantages of this reservoir are evident at sight, for it is, of all places about a stove, the most convenient for actual use, being low down at the front of the stove, on a level with the top of the stove, or still lower if desired, as shown in fig. 2; and by putting the reservoir in front of the stove, I get room at the back end of the same to put a tin closet or warming oven, and the reservoir takes up no more room than a common stove, for the reservoir does not project outward from the front any further than the usual hearth-plate, while there is a plenty of room for the ash-box below it. It is an improvement over the Spaulding patent, for in that invention the heat had to go so far through long flues that the water would not heat sufficiently; but in this invention we get a double heat if it is constructed as in fig. 2, viz, the radiating heat of the fire-box on its entire front, and the heat of the flues on its entire bottom, or at least the major part of both; and if it is raised up to the top of the stove, as in fig. 1, I get a greater heat from the fire-box, while I dispense with the heat from the flues, and thus the whole is equalized, and in either case I get all the heat that is required; and the reservoir is convenient and always ready for use, and the back end of the stove is free to receive a hot closet if wanted.

The ash-box at the lower front of the stove, with doors opening from the front, is convenient and useful.

I do not claim the extension of the bottom flues of the stove underneath the reservoir, as shown in fig. 2, for that was shown and claimed in the Spaulding patent of 1859; nor do I claim a reservoir in front of the stove and below the top, as that was also invented by Spaulding. All that I claim in this invention as new, is the manner of attaching the reservoir or of mounting it into the stove, making it an inseparable feature of the stove, so placing it, and making it of cast iron, that it shall form the front wall to the fire-box or to the ash-way under the fire-box, or both, and so that the heat of the fire-box shall radiate against or come in positive contact with the side of the reservoir next adjoining the fire-box, or with only the plate T or a shield of some kind between it and the fire. Thus it will be seen I do not claim anything shown in the Spaulding patent, but only the features here alluded to and not covered by that patent.

I do not claim a vibrating sifter under the fire-box, as that was shown in the Spear patent of April 15, 1862; nor do I claim an ash-pan, nor a bail to an ash-pan, as such, for that has been claimed by Spear. The new feature here, in that line, is a double lifter or movable handle, which is used and then laid aside, so it will not get hot, like any other lifter in that respect. The doors opening from the front of an ash-box above the hearth-plate and below a water-reservoir is a new device. In the Spear patent the doors were below and claimed as being below the hearth-plate. These are not so. The top of the stove going out around the top edges of the reservoir, when situated in front of the fire-box, is also new.

I do not claim this feature when the reservoir is situated behind the stove, as shown in the Bussey patent of December 5, 1865, but only in front of the stove and in combination with the fire-box and with a reservoir in front of the fire-box.

The hearth-plate of a stove forming the top piece or cover to a water-reservoir is new, as is also a reservoir situated under the hearth-plate of a stove and in front of the same, and the opening through said hearth-plate corresponding with the opening of the top of the reservoir with or without covers. In the Spaulding patent the reservoir sat on the top of the hearth, while in this (fig. 2) it is below the hearth-plate, the hearth-plate forming the top cover to the reservoir, and figs. 1 and 5 do not resemble the Spaulding patent only in the mere fact that it is a reservoir in front of the stove, which, as a principle, is not claimed here. The new feature here is the mounting of the reservoir into the stove, so that it shall form a part of the stove, answering instead of some plate or plates in the stove, which are omitted altogether to give place to the reservoir. In figs. the front of the fire-box is omitted, as is also the top cover to the ash-box and the front to the ash-way

in fig. 2 the front plate to the ash-way E is omitted altogether, the reservoir forming the front or outer wall or casing to the fire-chamber or ash-way, or both at once, as shown in both figs. 1 and 2.

What I desire to secure by Letters Patent, is as follows:

1. A reservoir or water-tank situated in front of a diving-flue cooking-stove or range, so placed and attached that it shall form the front wall or outer casing of the fire-box or the ash-way below the fire-box, or both, for the purpose herein set forth and in the manner set forth.

2. I claim an ash-chamber in front of and below the fire-box, covered by a water-reservoir or tank, in combination with door openings into said chamber at the lower front of the reservoir, substantially as here shown and described.

3. I claim an opening through the front part of the stove top or through the hearth-plate of the stove, in combination with the open-topped reservoirs as here shown and described.

4. I claim a bail to stove-boilers, vessels, or kettles, so constructed that one end of said bail will operate on a shank or prong of the cover to said vessel, so as to move it off its place and then on again, horizontally, by the shifting of the bail from side to side.

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Witnesses:

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