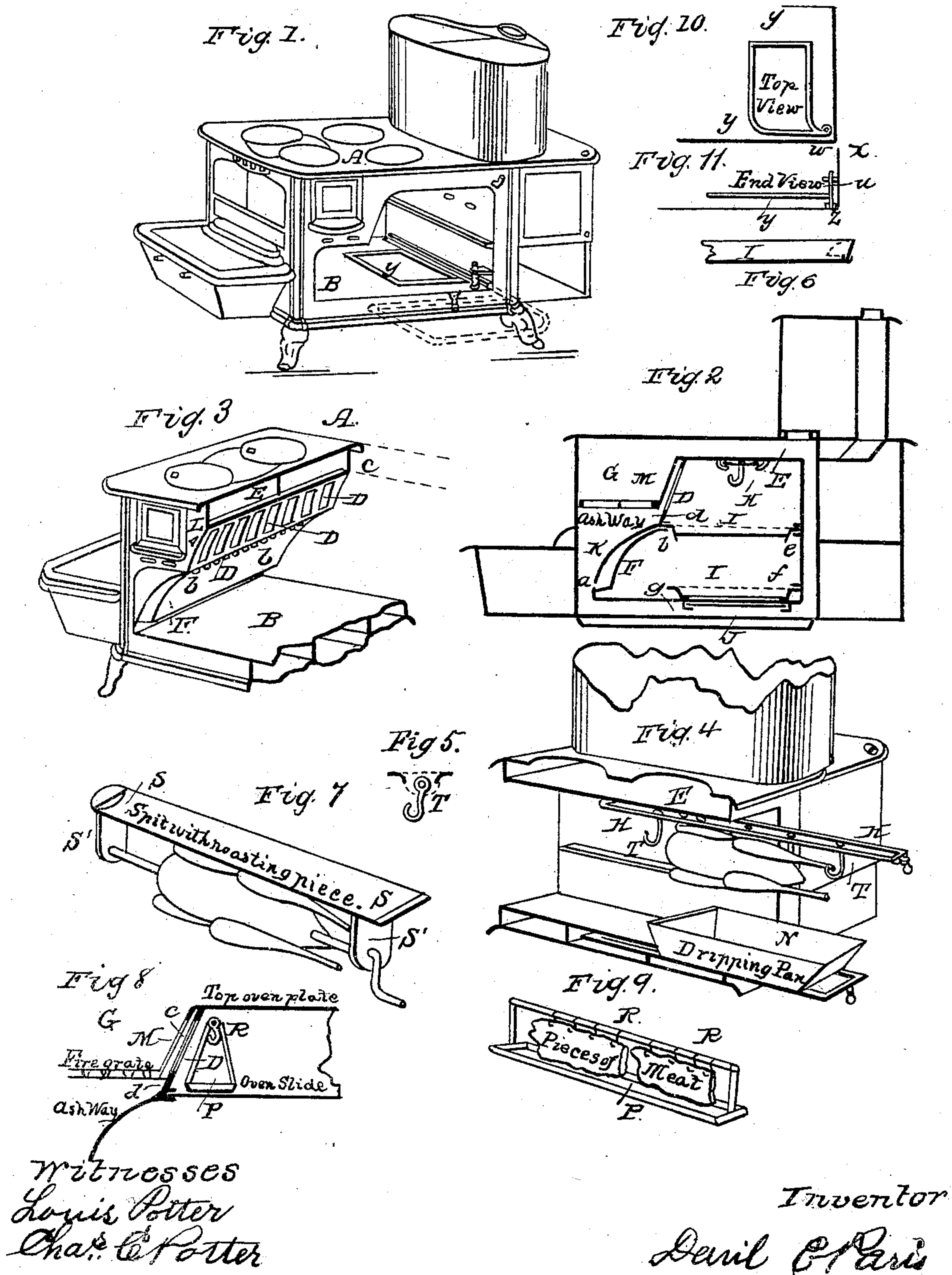


D. E. PARIS.

Stove Oven.

No. 78,687.

Patented June 9, 1868.



United States Patent Office.

DANIEL E. PARIS, OF TROY, NEW YORK.

Letters Patent No. 78,687, dated June 9, 1868.

IMPROVEMENT IN OVENS OF 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 the city of Troy, county of Rensselaer, and State of New York, have invented new and useful Improvements in Ovens for Cooking-Stoves; and I do hereby declare that the following is a clear and accurate description of the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, like letters representing like parts, in which—

Figure 1 is a perspective view of a cooking-stove, showing my oven-crane, or swinging-rack, which is seen again, with different views, in figs. 10 and 11.

Figure 2 is a sectional side view, showing the interior arrangement of the stove-oven, together with the modes of introducing the radiating heat from the fire-box G, through the plates M and D, a perspective rear view of which is seen in Figure 3.

Figure 4 shows my arrangement for roasting, by means of the movable rack H, the dripping-pan N, and the support-slide J, an equivalent for which latter is had in the oven-crane Y, before mentioned.

Figures 5 and 6 show, respectively, different views of the rack H and of the oven-slide I; while

Figure 7 shows another spit, made to take the place of the one shown in fig. 4, and which is attached to and slides under the top oven-plate E, in the same way and in the same place as the rack H.

Figures 8 and 9 give two views of a rack and pan for broiling purposes, the rack R R being provided with hooks, while the pan P catches and saves the juices of the meat that fall while cooking; and being placed on the oven-slide, right opposite the open plates D and M, it receives the direct radiating heat from the coals in the fire-box.

To describe my invention more in detail, I would say that, aside from the results produced by the open plates M and D, through which the oven receives the direct radiation of the fire-box, which is exceedingly desirable for broiling or roasting purposes; aside from those advantages, the object secured is greater convenience in getting at or attending to whatever is being cooked in the oven, and also a better mode of ventilating the oven, by means of the heated air passing through the chamber K, and thence through the back oven-plate, into the flues at the rear of the oven, this last feature being described in a former application, and withdrawn, to be embodied in a more appropriate place.

I introduce into my oven the direct radiation of the fire-box, through the back fire-plate M and the front oven-plate D, in which latter plate I have a slide or damper, so as to shut off this powerful radiation when the oven is used only for baking, and to let in the radiation when it is used for broiling, as in fig. 8, or for roasting, as in fig. 4. The grate should be shaken and freed of ashes before the damper is opened; and as the chamber c, between the plates D and M, is open at the bottom, at d, all the ashes that either fall, or are forced through the plate M, by the operation of the grate, fall downward into the ash-way below, and thence to the ash-box in the stove-hearth. Thus the chamber c is not clogged with ashes, which would, in that event, fall through the damper or open slots in the plate D, and thus get into the oven.

The damper may, if desired, be put into the plate M, or in any intermediate plate. The object is to have the openings closed at least while the grate is being shaken, or else the oven would get full of fire-ashes.

Of course there is no need of using words to prove that meat will roast better from direct radiation, as that is a well-known fact, and the value of this improvement lies in the fact that this radiation is obtained in the ordinary baking-oven, a stove, which does the work as well, and saves the expense of the tin or Dutch oven usually placed in front of the stove, and because of the perfect ventilation secured to this oven, by means of the current of hot air passing through the chamber K. And the smoke and gases are carried off into the back flues by and through openings made in the back oven-plate.

This ventilation is secured as follows: Cold air passes in at the front of the stove for draught; a part of this is carried, in a heated state, in at the openings at a, through the chamber K, and out into the oven, through the openings at b, as seen in fig. 2, and thence into the back flues of the stove, as above described.

The powerful radiation obtained from the fire-box through the plates M and D, is sufficient to broil meat, if hung up close to the openings, which is done by the broiling-pan and rack P, seen in figs. 8 and 9. The

meat is hung on the hooks R R, and, after one side is broiled, the pan is turned about, the other side to the fire, by which a clean piece of nicely-broiled beef is had, and all the juices saved in the pan below:

The improved oven-rack or slide I, instead of being flat, like ordinary oven-slides, is made in the shape of a pan, with raised sides or edges, made thus, so as to prevent articles placed upon it, such as potatoes, apples, &c., from rolling off when drawn out, and it is so constructed, with stays placed both below and above its outer sides or edges, at e and f, fig. 2, that it will remain in a horizontal position when drawn nearly out of the stove.

The front of this slide is made to turn down, (see fig. 6,) so that the bottom will be level, to receive a tin pan, plate, or other dish, the same as though the whole slide were made perfectly flat, thus making it equally useful for dishes, and much more useful for other purposes. It can be lowered down to the bottom of the oven if desired, and will draw out and support itself outside the oven, or mostly outside the same, as above.

There is no object in placing it here except to hold a dripping-pan for roasting purposes, when it becomes valuable, because roasting meat ought to be basted outside the oven; it is too hot a place to do it inside; and heretofore there have been no such conveniences for basting meat, while roasting, outside the oven. In order to do this, the slide or rack holding the pan must be low down, so as to give room for the article roasting below the top oven-plate.

Thus, this self-supporting slide, with or without side-pieces, when placed on or near the bottom of the oven, for the purpose of holding a dripping-pan, forms a new combination.

An equivalent for this bottom-slide, or when the ordinary centre oven-slide is used as a bottom-slide, is had in the slide J, seen in figs. 2 and 4. This slide J goes under the bottom oven-plate, but is pulled out and made self-supporting in the way, or at least on the same principle, as the slide I, when used at the bottom of the oven, the only difference being that the dripping-pan sits on the slide I, and is pulled out of the oven with and when the slide I is pulled out; but the slide J is pulled out first, separately, and then the dripping-pan is pulled out upon it, and there rests; and when put back, each is pushed in separately.

An equivalent for both these slides, and perhaps a better arrangement than either, is had in the oven-crane Y, seen in figs. 1, 10, and 11. The dripping-pan is placed on this crane, and is swung out and in with perfect ease and steadiness, so as not to slop or spill any liquid that the pan may hold. This crane is made to swing by and on a journal formed at one corner of the crane, and which is placed in one corner of the oven. Any other plan or way of hanging will do. It is placed thus because more out of the way and more easily constructed.

This crane, placed at or near the bottom oven-plate, answers all the purposes of the slides above mentioned, and is so handy and useful that it would probably be kept in constant use for all baking as well as roasting purposes; but it is made movable, so as not to be used or in the way when the oven is needed for other purposes. It will be observed that the back side of the crane is placed some distance from the back oven-plate, so that whatever is placed upon it is swung entirely outside of the oven. Thus this offset becomes a valuable feature.

But with all these improvements for roasting, one thing would be lacking, were it not for the roasting-rack H or spit S, seen in figs. 4 and 7. Meat, to be well and properly roasted, should never lie in the basting-liquid, for, if it does, it will lose half its flavor, and taste more like stewed than roasted meat. Much of this can be overcome, it is true, by turning and re-turning, basting and re-basting; but what is wanted, is that the meat be hung up above and out of the basting-liquid; then the pan N becomes a dripping-pan; otherwise it is a sort of a stew or bake-pan.

Roasting-hooks have heretofore been placed permanently at the top of the oven, so as to accomplish this object, the same as is secured by a spit in the old Dutch oven, but very few cooks can be found who are willing to get half way into a hot oven to baste meats; it is asking too much, especially in hot weather. What is wanted is that the article roasting, as well as the dripping-pan, shall each be brought outside of the oven, so that the meat can be basted with comfort, and then replaced in the oven, together with the dripping-pan, the latter by either of the ways described.

The meat, too, is placed on and taken off the hooks T T, in the rack H, while it is drawn out of the oven, or the rack H, or spit S, may be pulled entirely out of the oven from the opposite side, and carried, with the meat upon it, to any place desired. Thus roasting meat is made easy and comfortable, and the meat will taste as though it were roasted, too, and not as if baked or stewed.

Some one has patented a rack for a dripping-pan hung to or placed upon an oven-door, but such an arrangement is incomplete without this crane of mine, made similar to the rack H, and placed above it, to hold the meat above and up out of the dripping-pan.

I use this crane with hooks, &c., as a rack for holding meats, and when used for such purposes, it must be attached to the top part of the oven, or to the top part of the oven-door, and made to swing, with the meat upon it, outside of the oven.

Having thus discussed my invention, what I desire to secure by Letters Patent is as follows:

I am aware that ovens have been heated heretofore by direct radiation from the fire-box, and the heat regulated by a register communicating with the oven, therefore I do not make my claim broadly, but only for the specific manner in which I do it.

1. I claim the heating of the oven of a cooking-stove by direct radiation from the fire-box through the plates intervening between the two, when said plates are constructed with bars and damper, substantially as and for the purpose described.

2. I claim the broiling-pan, and rack P and R, constructed and located as and for the purpose described.

3. I claim the self-supporting oven-slide I, constructed and arranged as herein shown and described.

4. I claim a slide or rack, placed at or near the bottom plate of the oven, either over or under it, and made

self-supporting when partly or mostly drawn out, substantially in the manner and for the purpose herein described.

5. I claim a movable self-supporting roasting-spit or rack, arranged with hooks, or appliances for holding meat while roasting, placed at or near the top part of the oven of a cooking-stove or range, in the manner substantially as and for the purpose described.

6. I claim a movable oven-crane or rack, made to swing in or out of the oven of a cooking-stove or range, placed at or near the bottom, or at the top of the same, or attached to the back oven-plate, substantially as and for the purposes herein described.

7. I claim for stove-ovens, a movable self-supporting rack or spit, for holding meat while roasting, in combination with a movable self-supporting oven-slide or crane, made for holding a dripping-pan, and placed underneath said spit or rack.

Witnesses:

LEWIS POTTER,

CHAS. E. POTTER.

DANIEL E. PARIS.