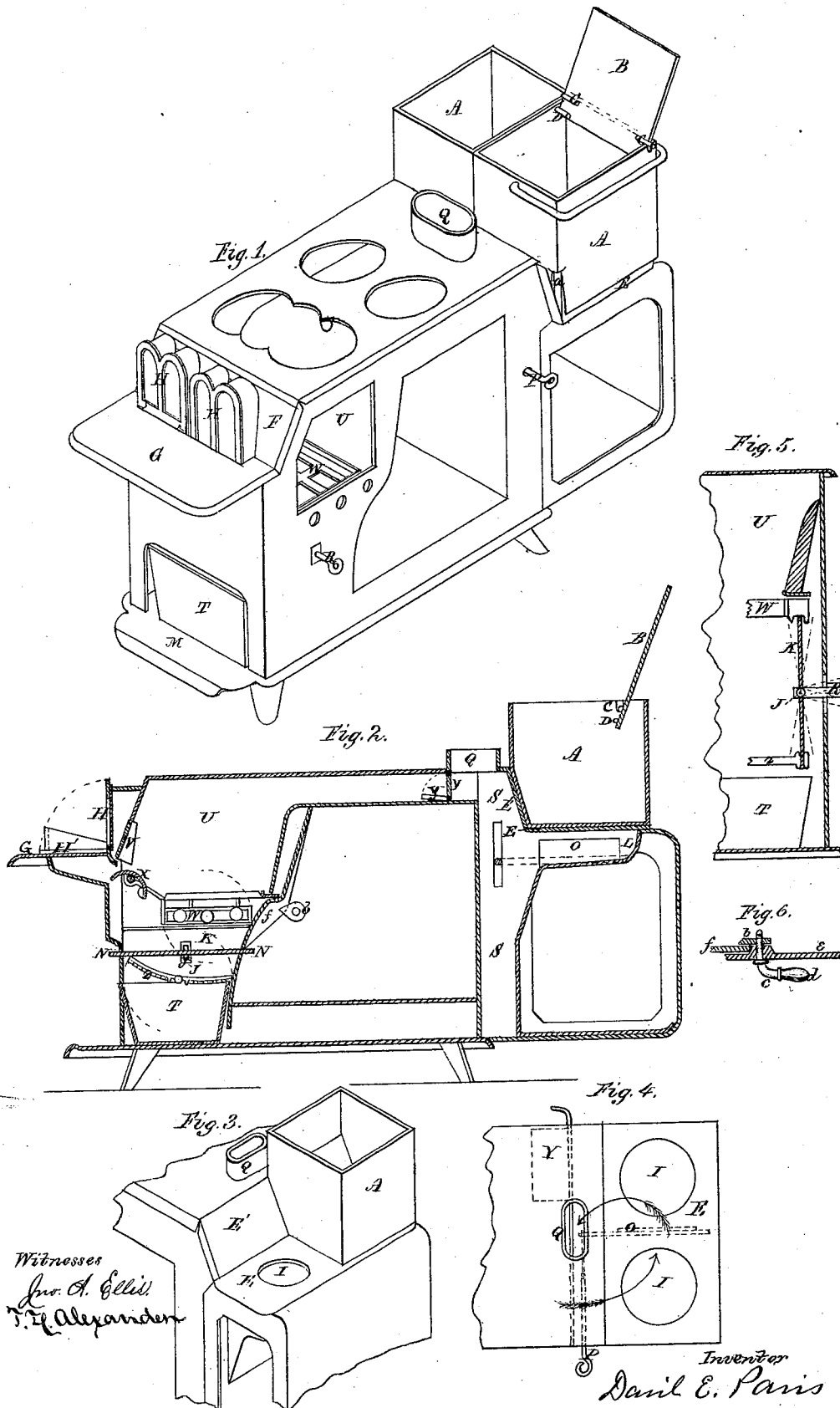


D. E. PARIS.
Cooking Stove.

No. 113,086.

Patented Mar. 28, 1871.



UNITED STATES PATENT OFFICE.

DANIEL ELDON PARIS, OF TROY, NEW YORK.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **113,086**, dated March 23, 1871.

To all whom it may concern:

Be it known that I, DANIEL ELDON PARIS, of the city of Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Cooking-Stoves; and I hereby affirm the following to be a clear and accurate description of my said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view of the stove. Fig. 2 is a vertical side view taken through the center front to rear. Fig. 3 is a perspective rear view, showing the depressed reservoir seat E, with one of the reservoirs removed, the other sitting in its place. Fig. 4 is a horizontal section taken through the flue-chamber below the reservoir. Fig. 5 is a vertical section of the front part of the stove, taken through the fire-box lengthwise, showing one end only of the same. Fig. 6 is a view of my improved door-catch or turn-button.

The features regarded as new and valuable are not only the upright illuminating lights or windows H H, hereinafter fully described, but any light or mica window on the front of the fire-box of a cooking-stove made in or through the front wall or casing to the fire-box above the fire—that is, when the space into which the windows or lights open is above the fire—that is above the back wall of the fire-box—so that the light reflected shall be the blaze of the burning fuel, and so that the smoke shall be carried in the opposite direction away from the windows, so as not to blacken them; in other words, when the illumination is on one side of the fire-box and the exit-passage for smoke on the other, and each horizontally opposite the other, so that the light or blaze through the windows shall be clear and free of smoke, the latter being carried away by the flue opposite as fast as generated. Thus I do not claim mica lights broadly, nor mica lights opening into a space above the fire, but only when the exit-passage for smoke is directly and horizontally opposite.

The construction and utility of forming the lights or windows on movable doors, and of making them upright, may be described as follows:

The sloping surface or wall F on the front

of the fire-box of a cooking-stove is not wholly new—that is, such shape or form is not new in the single idea of the upwardly-receding surface on the upper part of the stove front—nor is an opening or door-openings into or through such surface new. Stoves have been previously so made because such construction gives far greater facilities for feeding the fire with fuel, and especially if bituminous coal is used, which can or should be put into the fire-box only through an opening or openings formed over or in one of its side or end walls, and never from the top, for if the top covering is removed when such coal is used as fuel the room is at once filled with smoke. Thus, then, while this receding front F to the fire-box has been previously made in some form or other, and also an opening through the same for the purpose of feeding the fire with coal, for broiling and for other purposes, yet the formation of upright illuminating lights or windows, or movable doors containing such lights or windows, is believed to be wholly new with this application.

I would call particular attention to the fact that these doors or windows are movable, so that all the advantages secured by the old construction are preserved in the new. It will be noticed also that these windows are upright or perpendicular, so made that the mica or whatever other illuminating substance may be used will not blacken, because of their greater distance from the fire; nor will the frame-work that holds the mica be apt to warp or burn out for the same reason, which would certainly be the case if the mica-frames or frame-work were to follow the general inclination of the front plate F.

This construction is not only useful, but it is beautiful and ornamental also, as it gives a cheerful light and a graceful appearance to the stove-front, and is similar in shape and effect to the French or Mansard roof buildings; hence the name "Mansard Cook," which I have given to the stove.

These windows are made to let down to the front, as seen at H' in Fig. 2, and also removable from the stove. No particular way, however, is claimed of attaching or connecting them with the front surface, F, as unilluminated doors used for this purpose have been

made to slide sidewise on a similar sloping surface, made to swing on hinges, and to let down to the front, as here shown, the new feature being the manner of forming or constructing the doors or windows upright or perpendicular on the rearwardly-sloping surface F', and of making such doors or windows movable, though it is not necessary that they be made movable, for stationary Mansard windows on the surface F would be new.

The hearth G, in front of these mica doors or windows is important in securing many advantages not heretofore attained in such construction of front. By raising the hearth from its usual lower position, a base to the windows is secured, so that if, in feeding the fire-box with coal, it is spilled over, or if fine particles fall down, they are caught by the hearth G and prevented from falling on the floor.

The hearth G forms, also, a rest or support for the mica doors when let down to the front, as at H' in Fig. 2, and when the gridiron is used it can be drawn out to turn the meat, and can rest on the hearth G without being entirely removed from the opening formed through the plate F; and, again, by placing hearth up at the base of the mica doors, the inclined front F may be made to correspond with the stove-top in width, so that the hearth, the stove-top, and the connecting inclined front F may be all of the same width, giving a more graceful and beautiful appearance to the stove.

It will be observed that a part of the sloping surface F is formed by the mica doors themselves—that is, that part of the doors H H immediately in rear of the arches forming the windows conforms in general surface to the plate F.

I make protecting-bars (seen at V in Fig. 2) in rear of the mica windows or doors H H, which, though not absolutely necessary, serve to prevent the fuel from coming in contact with the mica. They are not so high, however, as to prevent free access to the fire-box in feeding it with fuel, or in using the gridiron, &c. In place of the bars V, the front fire-plate, X, or its equivalent, may be extended upward and forward, so as to render them wholly unnecessary.

My fire-grate lies loosely upon the upright rocker-pieces K K. (Seen in Figs. 2 and 5.) These pieces, placed at either end of the fire-box, support the fire-grate, while they themselves are supported by journals cast or formed on either end of the same at N N, Fig. 2, at or near their center horizontally, and the rear journals, N, pass into or through the front oven-plate, while those at the front pass into or through the lower front plate of the stove, and are thus held and supported in their position. It will be seen that they not only support the fire-grate W on their tops, but uphold and support the sifting-grate or coal-screen Z on or by their bottom edges; and as both the fire-grate W and the sifting-grate Z are attached to these rocker pieces or plates K, it follows that when

the shaker R, being inserted into one of these rocker-pieces, as seen at J in Fig. 5, is moved up and down, as shown by the dotted lines each side of the shaker R, both the fire-grate and sifting-grate are vibrated horizontally by the motion indicated by the dotted vertical lines above and below the journal of the rocker at J in Fig. 5, so that by the same movement of the shaker R, I shake the fire-grate and sift the coals also. Both the fire-grate W and the sifting-grate C are made to dump or turn on central journals, as seen by the circular dotted lines in Fig. 2.

I take the ash-pan T out from the front and below the hearth G, and after it is taken out and emptied of its ashes it can be replaced, and the sifting-grate can then be dumped into it. Thus the coals which pass through the fire-grate (which should be coarse or open, so that the fire will burn freely) are all saved, and separated from the ashes by the intervening sifting-screen Z.

I make my reservoirs A A movable, so that they can be taken off and cleaned or used for other purposes; and I have improved the flue-chamber below them by covering it with the cap or top plate E, which is an improvement if the reservoirs are made movable.

It may be observed that the front of the reservoirs conform to and come in parallel contact with the upper part of the rear casing of the back flues E', Fig. 2, so made that the reservoirs shall receive their radiating heat. Thus it will be seen that the reservoir is not heated on the bottom only, but on its front upright side also. I speak of the two kettles or reservoirs A A as one, for it is not necessary that they be in two parts, and are so made only for greater convenience in handling.

The boiler-holes I I may be larger or smaller, oval, square, or round, as desired; but the larger they are the more the bottom surface of the reservoir is exposed to the action of the passing heat or products of the fire-box as they pass through the flue-chamber below the same, for this heat leaves the fire-box, passes over the top of the oven, thence downward or into one of the rear upright flues of the stove, thence into and through the chamber L below the reservoir when the damper O is open, and thence up the other rear upright flue to and through the exit-opening Q in front of the reservoir, thus giving the latter the benefit of direct heat from the fire-box; but when the damper O is closed this movement of the products of combustion through the flue-chamber L is prevented, for it is then compelled to pass around the oven in the usual way, in which case the heat reaching the reservoir is greatly reduced, for it then receives only the radiating heat through the plate E' and the reduced and inactive heat that may collect in the flue-chamber L below the reservoir. A damper for direct draft may be formed at one side, or near the pipe-collar at Y, in the usual way, if so desired.

I have a new and improved cover, B, to my

reservoir, which is so constructed that it rests on the journals C C, which latter rest on the outer ends or edges of the reservoir a little way from its rear side, so that as the cover B is turned up in front of the journals C C the part to the rear of them will turn downward into the vessel, so that all the drip of condensed steam will pass down into the reservoir; and the cover is held in an upright position, a little past perpendicular, by the projecting leg or pin D, (seen in Figs. 1 and 2,) or its equivalent, formed or cast on the outer or inner side of the vessel.

There are little cups or half-rounds cast or made on the top edges of the reservoir, in which the journals C C rest and turn; and I may add that, when the reservoir is made in two parts, both the journals C C may and should rest in these cups on the top edges of the reservoir; but when the reservoir is made in one part, the cover would have to be too long to reach from end to end, and therefore a central support attached to the rear top part of the reservoir should be made for the inner journals, C C, to rest upon, for the covers should still be made in two parts whether the reservoir is or not; and the catch or lug D may, if desired, be formed or cast on this central support the same as or instead of the reservoir.

I make an improved catch to the oven-doors or fire-doors of the stove, the inside of which is shown at *b* in Fig. 2. The outside, (seen in Fig. 6,) has a curved shank or neck, *c*, which brings the main handle *d* near to the surface of the door *e*, so as to give a greater purchase in tightening the catch, and so as to be out of the way. I make the extreme end of the handle *d* of wood, so that it can be used without a holder or cloth when the stove is hot.

I would add that the reservoir or reservoirs may be made to open and shut or to swing on the journal or standard *a*. (Seen in Fig. 1.) Said journal or standard fits into a cup or socket cast or formed on the outer front corner of the reservoir, as seen in Fig. 1.

Having thus described my said invention, what I claim is—

1. Upright illuminating mica lights or windows formed on or connected with a rearwardly-sloping surface in front of the fire-box of a cooking-stove, for the purpose and substantially in the manner herein shown and described.

2. Movable doors to the front of the fire-box of a cooking-stove, containing upright illuminating lights or windows, when the lower, rear, or general surface of said doors connects with or corresponds with an upwardly and rearwardly sloping surface to said fire-box, made for the purpose, and substantially in the manner herein shown and described.

3. An illuminating-light or mica window formed in or through the front wall of the fire-box of a cooking-stove, when the space into which they open is above the fire, a flat top, with boiler-holes immediately above, and the exit-flue or smoke-passage directly and horizontally opposite, substantially as herein shown and described.

4. The reservoir-cover B, provided with the journals C, which rest in recesses in the top edge of the reservoir, in combination with the stop or lug D, or any equivalent therefor.

DANL. ELTON PARIS.

Witnesses:

MERIT E. PARIS,
OTIS A. TRAIN.