B. F. CLEMENT,
Stove-Oven Shelf.

No. 203,242. Patented May 7, 1878.

FIG. 1.

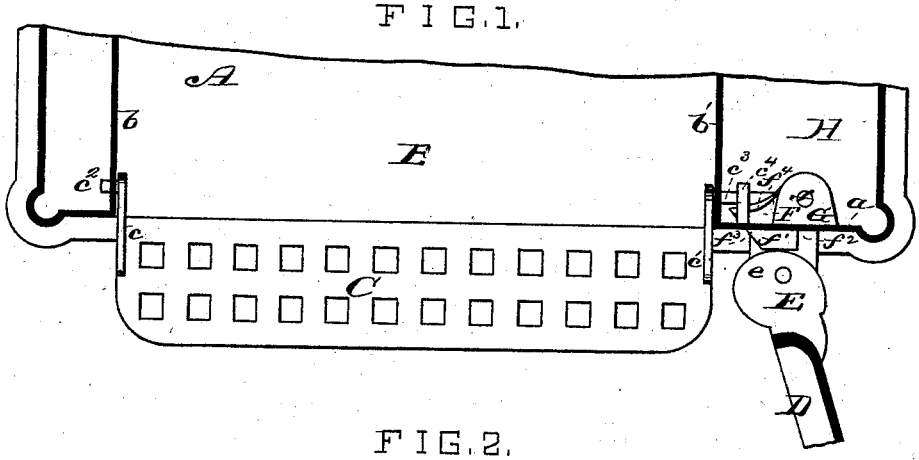


FIG. 2.

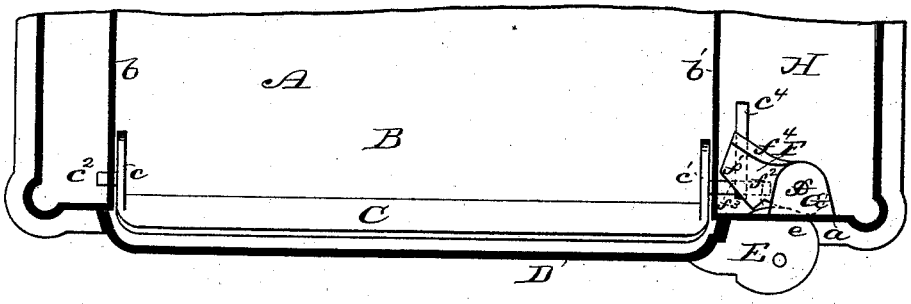


FIG. 3.

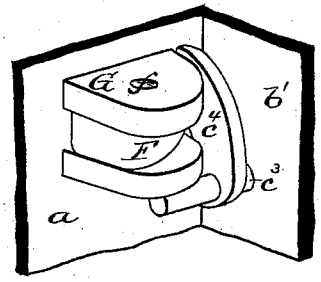
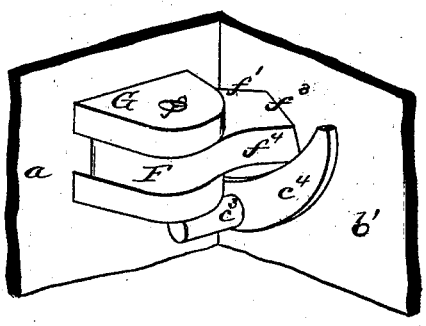


FIG. 4.



ATTEST.

Paul Bakewell

Saml. S. Boyd

INVENTOR.

Benjamin F. Clement.

by Chas. D. Moody.

atty.

2 Sheets—Sheet 2.

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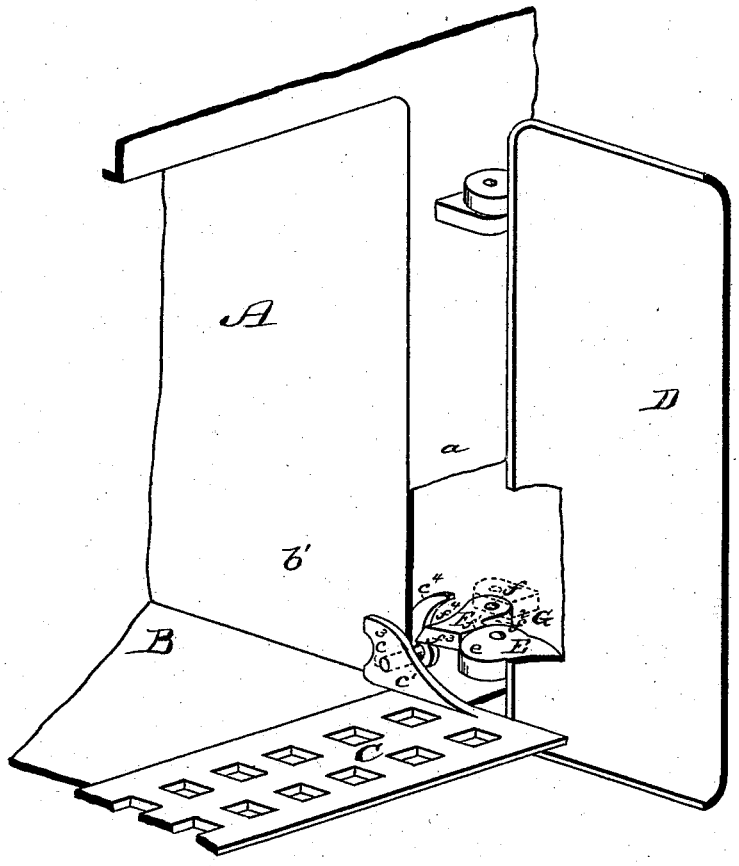
FIG. 5.



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by Chas. D. Mason.
atty!

UNITED STATES PATENT OFFICE.

BENJAMIN F. CLEMENT, OF ST. LOUIS, MISSOURI, ASSIGNOR TO CHARLES H. BUCK, JR., OF SAME PLACE.

IMPROVEMENT IN STOVE-OVEN SHELVES.

Specification forming part of Letters Patent No. **203,242**, dated May 7, 1878; application filed April 1, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN F. CLEMENT, of St. Louis, Missouri, have made a new and useful Improvement in Stove-Oven Shelves, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a horizontal section of a portion of a stove embodying the improvement, showing the shelf let down; Fig. 2, a similar section, showing the parts in position when the oven-door is closed and the shelf turned up; Fig. 3, a detail, being a view, in perspective, from the inside of the stove-flue, showing the parts as when the shelf is turned down; Fig. 4, a view similar to that of Fig. 3, the parts being as when the shelf is turned up; and Fig. 5, a view, in perspective, showing a portion of the stove and shelf, the oven-door and also the side plate of the stove being partly broken away to show the mechanism for operating the shelf.

The same letters of reference represent the same parts.

I have heretofore made an improvement in that class of stove-oven shelves which, when the oven-door is shut, are inclosed within the oven, but when the oven is opened, fall or are let down outward therefrom, forming a hearth just without the oven.

In the construction referred to, the shelf is supported by arms, having journals turning in bearings in the front and back plates of the oven. One of the journals (the one toward the side at which the oven-door is hinged) projects through the oven-plate into the flue-space at the rear of the oven, and at its end is furnished with an arm extending at right angles, or thereabout, from the journal. The lower hinge of the oven-door is provided with a hook-shaped extension, that, when the door is closed, comes against one end of a lever that is pivoted to a bracket within the flue referred to, causing the other end of the lever to move against the journal-arm. The shelf, in consequence, is rotated on its bearings and upturned into the oven.

The construction described is valuable as a means for operating the shelf; but I have ascertained that the shelf journal and arm, and the remaining parts immediately therewith connected, are caused to project too far into the flue, and to come too much in the way of the heat-currents. Moreover, when the various parts of the shelf-operating mechanism are constructed and arranged as described, the opening in the side plate of the stove, and through which the door-hinge and lever work, cannot well be kept closed to the passage of air and smoke in all positions of the oven-door. To obviate these difficulties is mainly the aim of the present construction.

Referring to the drawing, A represents a stove having the improvement. B represents the stove-oven; C, the shelf in question, and D the oven-door.

The shelf is supported by arms c c^1, having journals c^2 c^3, turning in bearings in the front and back plates b b^1 of the oven, as before. The shelf-journal, however, extends but a short distance into the flue-space. The door-hinge E, in place of having a hook-shaped extension, is formed somewhat like an eccentric, e, having a smooth periphery; and the lever F, that is used to transmit the movement of the hinge to the journal-arm c^4, instead of being a lever of the first order, having one arm engaging with the hinge and another arm moving against the journal-arm, is pivoted at its inner end f to the bracket G, and is moved by the hinge directly against the journal-arm.

The part f^1 of the lever that comes in contact with eccentric e during the first part of the shelf-lifting movement is preferably made straight, as shown, while at f^2 there is a recess in the lever, into which the eccentric falls when the oven-door is closed. The lever is also preferably beveled at f^3, and also at f^4, where it comes in contact with the journal-arm c^4. This last-named bevel enables the arm c^4, which is curved, as shown, to more readily fall forward against the side plate a of the stove, as shown in Fig. 3, and thereby keep the shelf from turning down too far.

In operation, as the oven-door is opened out, the shelf, being properly balanced therefor, falls down and out from the oven into the position shown in Fig. 1, and when thus let down the part f^1 of the lever will have been

moved by the journal-arm c^4 outward through the opening in the plate a, and close the opening. The lever bears against the hinge as the oven-door is opened, and thus the letting down of the shelf is regulated. In closing the oven-door the eccentric e moves against and also upon the part f^1 of the lever, moving the latter backward, and pressing the beveled side f^4 against the journal-arm c^4, and bringing the parts into the position shown in Fig. 2. In this last-named position the eccentric e passes into the opening in the plate a, taking the place that had been previously occupied by the part f^1, and again closing the opening practically to the transmission of air or smoke. Thus arranged, all the parts within the flue H are made to occupy a minimum of space therein, and so as to be out of the way of the heat.

I claim—

1. The combination, in a cooking-stove, of the eccentric e, lever F, pivoted at f, arm c^4, journal c^3, and shelf C, substantially as and for the purpose described.

2. The combination, in a cooking-stove, of the eccentric e, lever F, pivoted at f, and having the part f^1, the arm c^4, journal c^3, and shelf C, substantially as and for the purpose described.

3. The combination, in a cooking-stove, of the eccentric e, lever F, pivoted at f, and having the part f^1, and beveled at f^3 and f^4, the arm c^4, journal c^3, and shelf C, substantially as and for the purpose set forth.

B. F. CLEMENT.

Witnesses:
CHAS. D. MOODY,
PAUL BAKEWELL.