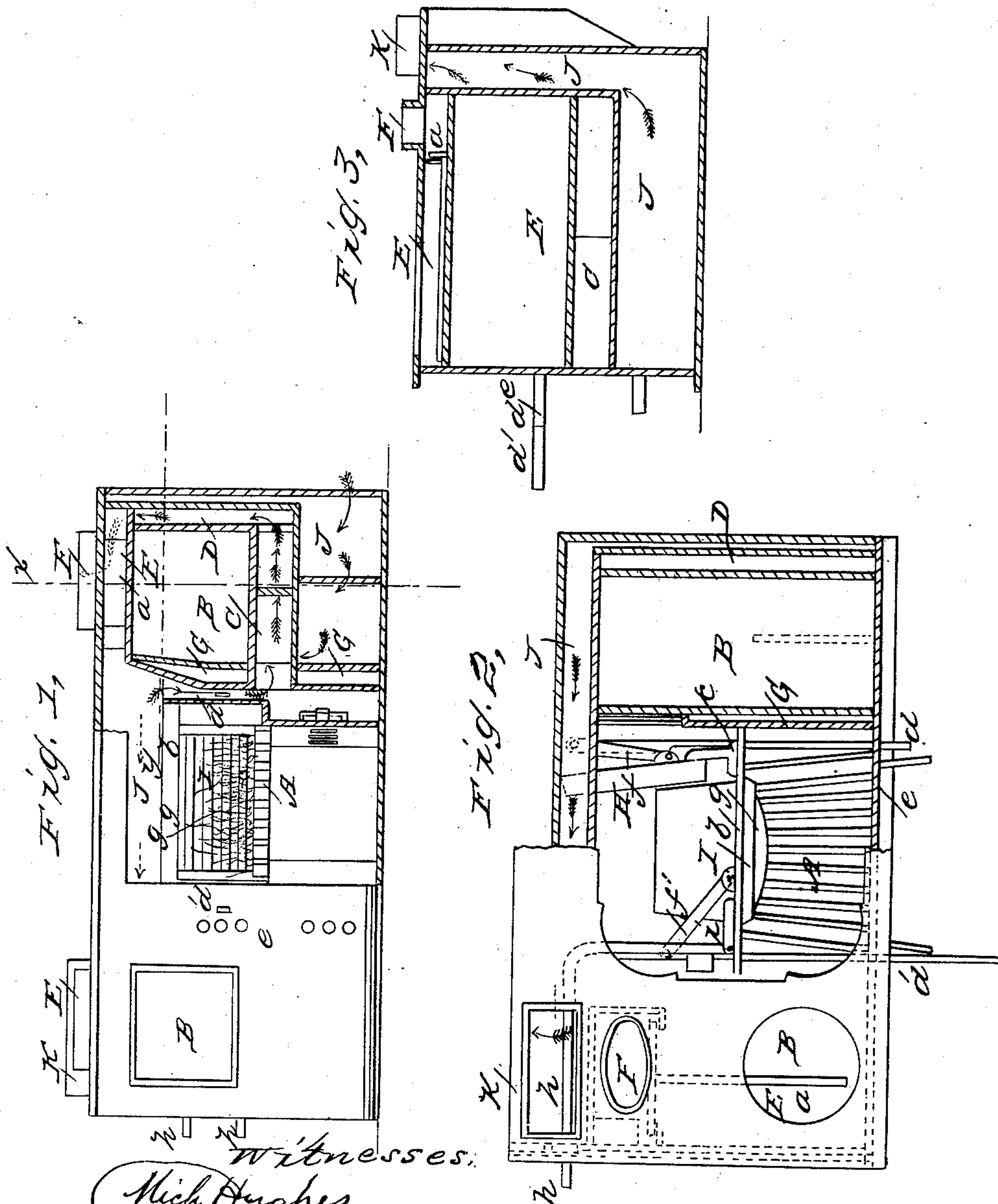


F. S. MERRITT.

Cooking Range.

No. 28,099.

Patented May 1, 1860.



Witnesses:

Nich Hughes  
Charles M. Hughes

Inventor:

F. S. Merritt



# UNITED STATES PATENT OFFICE.

F. S. MERRITT, OF NEW YORK, N. Y.

## COOKING-RANGE.

Specification of Letters Patent No. 28,099, dated May 1, 1860.

*To all whom it may concern:*

Be it known that I, FREDK. S. MERRITT, of the city, county, and State of New York, have invented certain new and useful Improvements in Cooking-Ranges; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which,—

Figure 1, is a front elevation of my range, a portion of the front plate being removed in order to expose the inside, Fig. 2, is a plan or top view of ditto partly in section, the line *y, y*, Fig. 1, indicating the plane of section, and Fig. 3, is a transverse vertical section of the same taken in the plane indicated by the line *x, x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to make and use my invention I will proceed to describe it.

The principal characteristics of my new range are borrowed from the range described in my former patent, granted April 3d, 1849. The heated gases or products of combustion from the fire-place A, pass down over the sides of the fire chamber and around the ovens B, through the bottom gas chambers C, and the side gas chambers D, to the top gas chamber E, and from thence through the pipes F, to the chimney, as indicated by the red arrows in Fig. 1. The siphon chambers G, protect those sides of the ovens, which are nearest to the fire, from being overheated and dampers *a*, are so arranged that by opening them the draft from the fire passes up into the pipes F, and to the chimney without having made the circuit around the ovens, but if said dampers are closed, the draft passes around the ovens as above described.

The sides of the fire chamber are lined with fire brick in the usual manner and the brick H, which forms the back of said fire chamber, is attached to the back plate *b*, by hinges *c*, and a rod *d*, which slides in suitable slots in the back plate *b*, of the fire place and in the front plate *e*, of the range, connects with said brick by means of a link *f*, in such a manner that by sliding the rod *d*, in and out the brick H, is turned on its hinges and that the same can either be brought into the opening made to receive the same in the back plate *b*, of the fire place or

that it can be turned back to a position represented in Fig. 2. Hinged to the other side of the back plate *b*, is a water back I, corresponding in size to the opening in the back plate and formed of tubes *g*, to which water is admitted and discharged through pipes *h*, which extend through the sides of the range. The water flowing to and from said water-back passes through the hinges *i*, which are constructed similar to the swivel joints of gaspiping, so that when the waterback is turned into the opening in the back plate *b*, of the fireplace, the water is admitted, but when said water back is turned out of said opening to make room for the hinged brick H, the water is shut off. A sliding rod *d'*, similar to the rod *d*, which serves to operate the hinged brick H, connects with the water back by means of a link *f'*, so that by sliding said rod in and out the water back is turned on its hinges.

If it is desired therefore to use the water back, the brick H, is turned back to a position, shown in Fig. 2, and the waterback is turned with the opening in the back plate *b*, but if it is desired to use the brick H, the waterback is turned out and the brick brought to take its place.

The heat from the fireplace as it passes through the bottom gas chambers C, and side gas chambers D, not only serve to heat the inner sides of said air chambers or the ovens, but some portion of said heat is absorbed by the outside walls of said air chambers, and in order to employ this heat to a useful purpose, I have combined with said gas chambers a passage J, admitting cold air under the bottom air chamber on one side of the range, which by coming in contact with the outside walls of said bottom gas chamber and of the side gas chamber of the oven, becomes heated so that it passes up through said passage and along the same as indicated by the black arrows in Fig. 1, to the flue K, on the other end of the range, which flue leads to the upper portion of the building. During its circuit through the passage J, the air comes in contact with the back plates of the ovens and between said ovens the passage J, is exposed to the direct influence of the heat from the fire, so that the air passing through the same, becomes completely heated before it passes up to the house. By thus combining with the fireplace and with the ovens and with the bottom and side gas chambers the above named passage J, all the



heat from the fire is usefully employed, and my range is rendered at once a most economical and a most useful article for cooking and heating purposes.

5 What I claim as new and desire to secure by Letters Patent, is,

1. The combination of the hollow faucet hinges *i*, with the water back I, back plate *b*, and supply pipes *h* so that the water will be  
10 admitted to the back I, when the latter is turned, toward the fire, and shut off when the back is swung away from the fire, as herein shown and described.

2. The arrangement of the water back I,

and fire brick H, to swing from opposite  
ends of the back plate *b* substantially as  
herein shown, so that when desired, both fire  
brick H, and water back I may be swung  
aside, to allow the heat of the fire to act  
directly upon the air pipe J, as set forth. 20

3. The arrangement of the fire place A, ovens B, gas chambers C, D, E, and air chamber J, as and for the purpose herein shown and described.

F. S. MERRITT.

Witnesses:

MICH. HUGHES,  
CHARLES M. HUGHES.