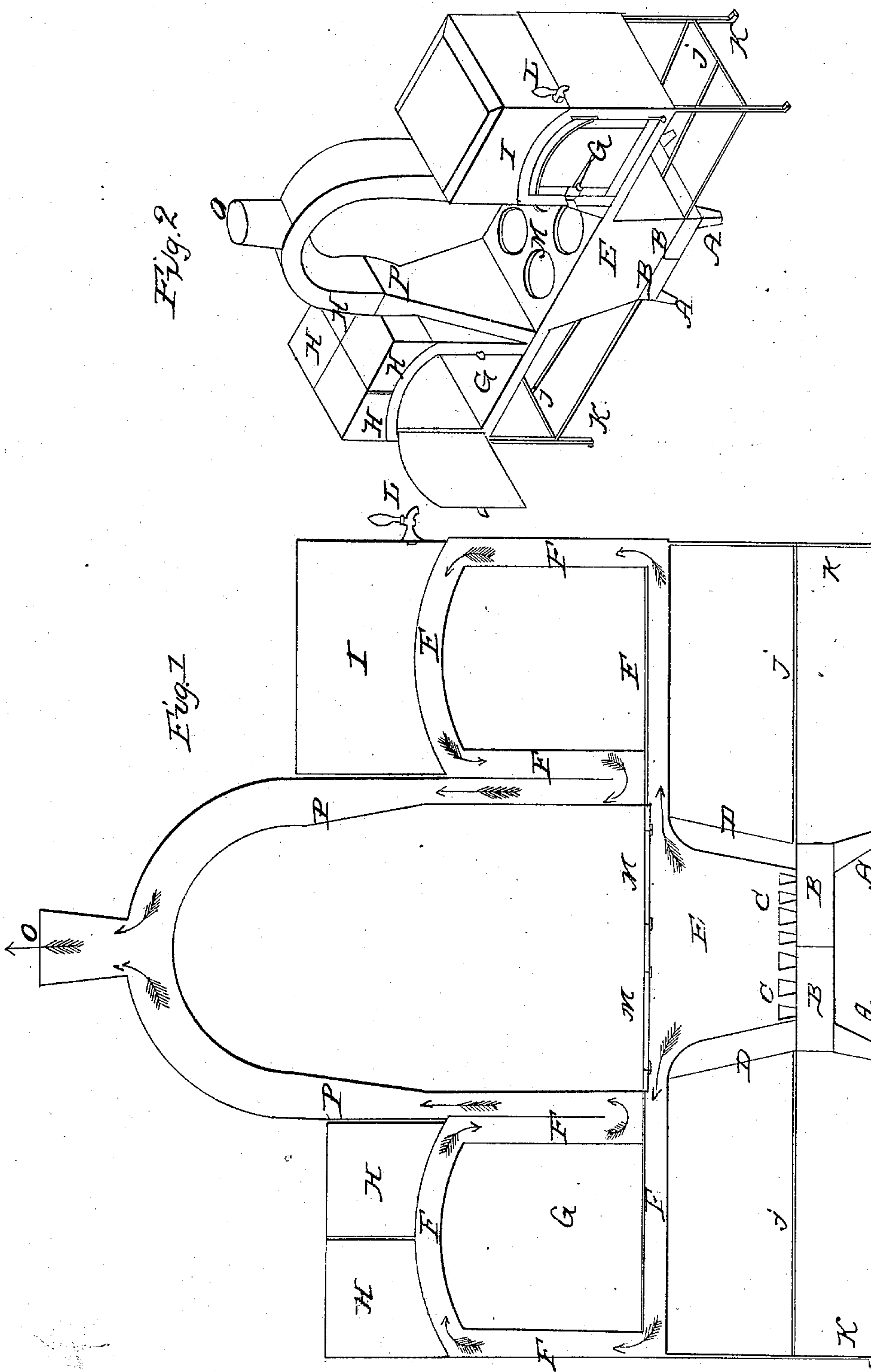


J. V. MEIGS.
Cooking Stove.

No. 23,185.

Patented March 8, 1859.



UNITED STATES PATENT OFFICE.

JOSIAH V. MEIGS, OF NASHVILLE, TENNESSEE.

COOKING-STOVE.

Specification of Letters Patent No. 23,185, dated March 8, 1859.

To all whom it may concern:

Be it known that I, JOSIAH V. MEIGS, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings and accompanying model, making a part of this specification, in which—

Figure 1 is a longitudinal section, and Fig. 2 an isometrical perspective view.

In cooking stoves it is a great desideratum to be able so to apply the heat to the oven that all parts will be heated to a uniform, or nearly a uniform temperature. Various arrangements of the flues in the different varieties of stoves with ovens have been tried to effect this object, but none within my knowledge have satisfactorily accomplished it.

Those stoves with the bottom plate directly over the fire pot, and with flues on either side leading around the side plates of the oven, and uniting in a single flue at the top, are exposed at the bottom to the direct action of the hottest part of the fire; the flame and the heated products of combustion, as they ascend impinge on the bottom and then are deflected to either side, pass around by the side flues and are drawn upward and backward away from the center of the top of the oven; thus the bottom of the oven is highly heated, while the top is comparatively cool.

In those stoves with a single flue passing up on one side, around the top of the oven and down on the opposite side, the bottom of the oven also being directly over the fire pot, the action of the flame on the flue side of the bottom is the same as previously described, while the opposite side is much cooler, the flame being carried by the draft away from that side.

While those stoves in which the oven is at the side of the fire pot, with a descending flue leading from the fire pot, passing around the bottom upward on the opposite side and over the top are much more rapidly heated on the descending flue side, and at the lower part of that flue than other parts, as the flame and the products of combustion move with less velocity in descending than in either horizontal, or ascending flues, therefore the flame is longer in contact with,

and imparts more heat to that portion of the oven than to other parts, as the descending flue is usually enlarged and rounded at the inner upper corner, the flame and products of combustion are drawn away from the upper corner of the oven adjacent to the descending flue, therefore this portion of the oven is generally cooler than the other parts, it being heated by radiation and not by direct contact with the flame and products of combustion.

The principal object of my improvement is to remedy this defect, by exposing the entire surface of the sides and bottom of the oven to direct contact with the flame and heated products of combustion; and now invention for effecting this object consists in arranging the bottom plate of the oven, in line with the top plate of the fire pot in connection with a flue leading from the top and side of the fire pot, passing under, around, over the top, and down on the opposite side of the oven.

By reference to the accompanying drawing my improvement will be fully understood.

E, is the fire pot in the form of a frustum of a cone, and lined with fire brick (P) or a water back may be substituted for the fire brick. It is provided with a grate (C) with an ash pan (B,) beneath, and is supported by feet (A) at the four corners. On either side and above the fire pot are ovens (G) and the bottom of the oven is formed by the extension of the top plate (M) of the fire pot on the same line. From the top of the fire pot on either side proceed flues (F, F) which pass under the bottom of the ovens, up on the side, over the top and down on the opposite side into exit pipes (P) on either side of the fire pot and between the ovens. These exit pipes may extend upward, unite in a single pipe and enter the chimney, or each pipe may connect separately with the chimney.

Dampers should be placed at the mouth of the flues, so that one or both may be used at pleasure. Dampers may also be placed in the top plate of the fire pot at the mouth of the exit pipe, so as to shut off the draft from around the ovens, and cause the smoke to pass direct into the exit pipe. It will be seen by this arrangement of the ovens, on the side of the fire pot with their bottom plate in the same plane as the top plate of the fire pot, and also by the arrangement of

the flues at the top of the fire pot and at the side, that the bottom of the oven is not exposed to the direct radiation of the heat from the fuel in the fire pot, and that the
5 flame and the products of combustion as they rise, are first deflected by the plate over the fire pot, to either side, pass in a direct line without descending, along the bottom of the oven up on one side, over the top, and de-
10 scend on the opposite side, passing into the exit pipe at the same level, as the bottom plate, thus surrounding and imparting heat to the entire surface of four sides of the oven. By this arrangement, the oven is more
15 equally heated in all parts; than by any other within my knowledge. As the bottom of the oven is not exposed to the direct radiation from the burning fuel in the fire pot, and as the velocity of the flame and the
20 products of combustion are not retarded

when they are hottest, therefore, that portion of the oven plate with which they first come in contact is not so liable to be overheated, while the other parts are cool as in the arrangement of flues heretofore adopted.

Having thus described my improvements in cooking stoves, what I claim therein as new and desire to secure by Letters Patent is—

The arrangement of the bottom plate of the oven in the same plane as the top plate of the fire pot, in connection with the arrangement of the flues leading from the side of the fire pot directly beneath the bottom of the oven and around it; substantially as described for the purpose set forth.
J. V. MEIGS.

Witnesses:

R. J. MEIGS,

R. J. MEIGS, Jr.