D. H. ERDMAN.

Kitchen-Range Ventilator.

No. 217,353. Patented July 8, 1879.

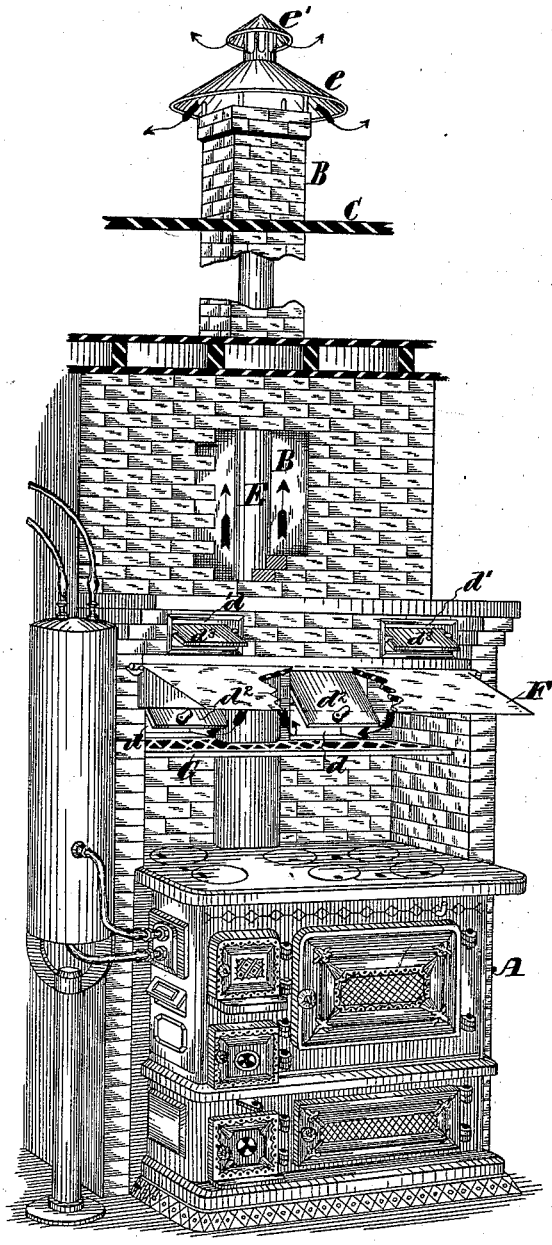

Fig. 1

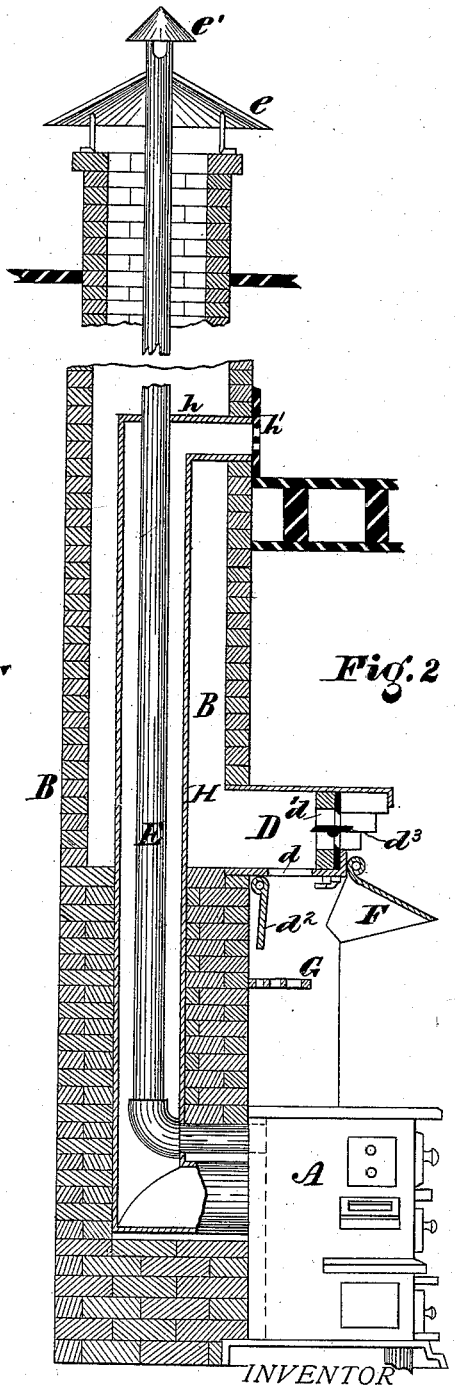

Fig. 2

WITNESSES:

Saml. J. VanStavoren

D. P. Corl

INVENTOR

Daniel H. Erdman,

By Connolly Bros.,

ATTORNEYS.

UNITED STATES PATENT OFFICE.

DANIEL H. ERDMAN, OF CAMDEN, NEW JERSEY.

IMPROVEMENT IN KITCHEN-RANGE VENTILATORS.

Specification forming part of Letters Patent No. **217,353**, dated July 8, 1879; application filed May 20, 1879.

To all whom it may concern:

Be it known that I, DANIEL H. ERDMAN, of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Ventilating Kitchen-Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of a range and chimney, showing my improvements applied thereto; and Fig. 2 is a vertical transverse section of the same.

My invention has for its object to provide means for ventilating kitchens and carrying off the odors and heat generated by ranges; and my improvements have reference to the provision of means whereby such heat and odors are carried up the chimney or flue.

Referring to the accompanying drawings, A indicates a range of the usual or any suitable construction, and B a chimney or flue, such as is ordinarily employed for carrying off the products of combustion, such chimney extending above the roof C of the house or apartment in which the range is located.

D is a chamber, located at the base of the flue B and communicating therewith, and E is a smoke-pipe, extending from the range A, through the chamber D and flue B, to a point above the top of the latter, having a cowl, *e*, between its upper end and the top of said flue, and being also, by preference, surmounted by another cowl, *e'*.

F is a swinging hood or awning, designed to be made of sheet metal, located in front of the chamber D, constructed and arranged in such manner that when lowered or opened it projects over the range, as shown.

d d are openings on the under side of the chamber D, and d^1 d^1 are other openings on the front side of said chamber, above the hood F, all of said openings being provided, as shown, with swinging doors or dampers, which, when closed, are fastened by turn-buttons or equivalent devices.

The operation is as follows: When cooking is proceeding on the range the hood F is drawn down, as shown in Fig. 1, the dampers d^2 opened, and the dampers d^3 closed. The heat, odors, &c., arising from the surface of the range, or from the utensils thereon, meet the hood F, and are deflected toward the chamber D, entering the same through the openings *d d*. The draft in the flue B, which is accelerated by the heated smoke-pipe E, carries such heat and odors swiftly up and out above the roof C.

When the cooking or other operation of the range is completed the dampers or doors of openings d^1 are opened, affording exit for the passage of any heat or odors which may have escaped from the front of the range, and which have ascended into the upper part of the kitchen, the draft through such openings drawing in such heat and odors with certainty and celerity.

When it is desired to place dishes on the shelf G, the hood F may be swung back or up in front of the chamber D.

This arrangement of devices for ventilating may also be used in connection with means for heating an apartment above the kitchen from the range. In such case a second pipe (shown at H in Fig. 2) will be employed, surrounding the smoke-pipe E and within the flue B. This pipe, which I denominate the "hot-air pipe," receives its supply of air, in the usual manner, from the cellar or outside source, and has a blank upper end, *h*, below the roof C, and register *h'* in the room to be heated. In this arrangement the products of combustion pass up the pipe E, the heated air between pipes E and H, and the odors, waste heat, gases, &c., between pipe H and flue B.

The cowl *e*, located below the end of pipe E, prevents the soot, &c., issuing from said pipe from falling back into flue B.

What I claim as my invention is—

1. The combination, with a range, A, and flue B, of an internal smoke-pipe, E, extending from said range through said flue, and to a point above the latter, said flue having communicating openings above the range for the entrance of waste heat, odors, &c., substantially as shown and described.

2. The combination of range A, flue B, chamber D, having openings *d*, and smoke-pipe E, substantially as shown and described.

3. The combination, with range A, flue B, and smoke-pipe E, of hood F, located above said range, and adapted to deflect escaping heat, odors, &c., into said flue, as set forth.

4. The combination of range A, flue B, chamber D, smoke-pipe E, and hood F, said chamber D having openings *d* below and other openings, *d*^{1}, above said hood, and provided with dampers, as set forth.

5. The combination of range A, flue B, having communicating openings above the range, smoke-pipe E, and hot-air pipe H, whereby separate conduits are provided for the products of combustion, heated air, and waste heat, odors, &c.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of May, 1879.

DANIEL H. ERDMAN.

Witnesses:

M. D. CONNOLLY,

CHAS. F. VAN HORN.