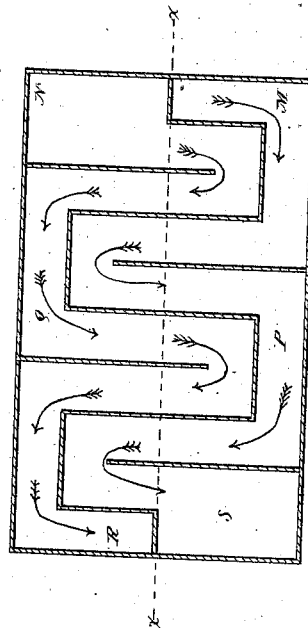
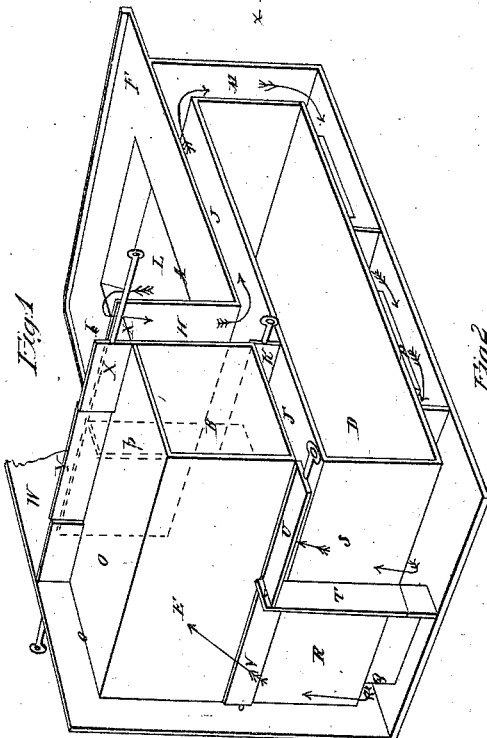
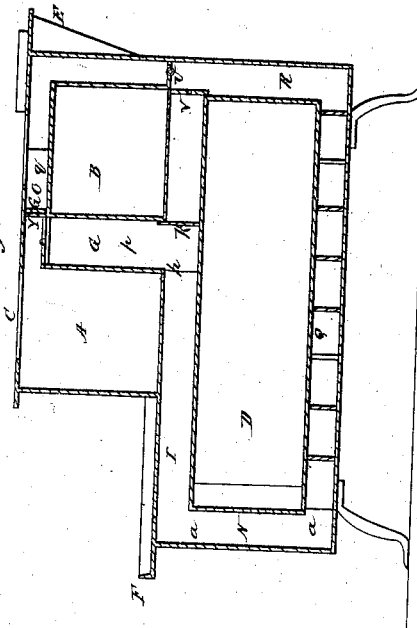


*A. Nieting.*

N<sup>o</sup> 3,860.

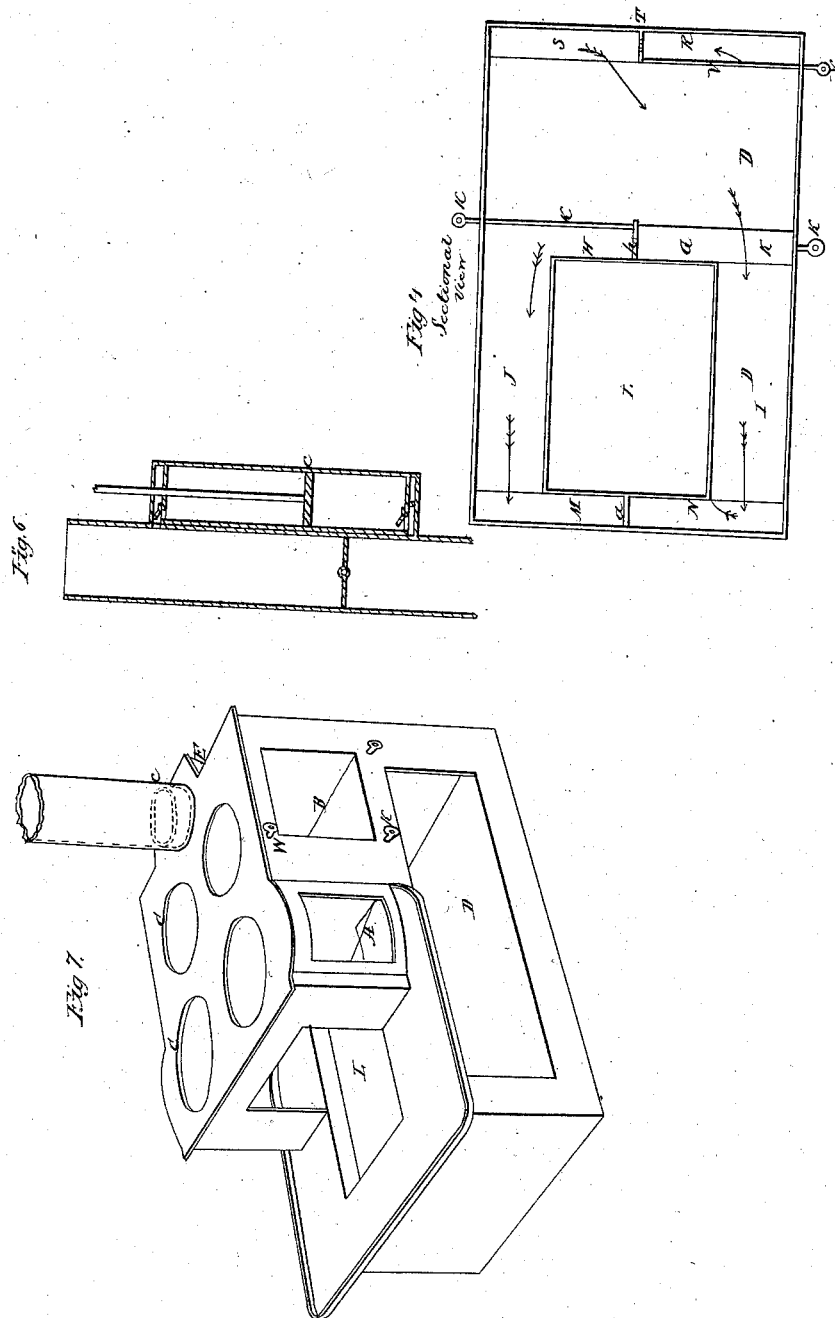
*Patented Dec. 16, 1844.*



*A. Nieting*  
*Cooking Stove.*

*N<sup>o</sup> 3,860.*

*Patented Dec. 16, 1844.*



# UNITED STATES PATENT OFFICE.

ARCHIBALD WIETING, OF MIDDLETOWN, PENNSYLVANIA.

## COOKING-STOVE.

Specification of Letters Patent No. 3,860, dated December 16, 1844.

*To all whom it may concern:*

Be it known that I, ARCHIBALD WIETING, of Middletown, in the county of Dauphin and State of Pennsylvania, have invented  
5 a new and useful Improvement in Cooking-Stoves, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the stove  
10 with the side and back plates removed, showing a part of the interior arrangement. Fig. 2 is a horizontal section through the lower flues. Fig. 3 is a horizontal section through the upper flues. Fig. 4 is a horizontal section through the middle flues.  
15 Fig. 5 is a vertical longitudinal section on the line *x x* of Figs. 2 and 3. Fig. 6 is a vertical section through the pipe, and force or section pump *c*. Fig. 7 is a perspective  
20 view of the whole stove.

The general arrangement of the fire-chamber A—small oven B—boiler holes C—large oven D—funnel E, and hearth F—is similar to other cooking stoves in use.

25 The improvement that I have made is in the arrangement of the flues for the proper diffusion of the heat throughout the stove for regularity and economy in cooking and in the arrangement of certain dampers for  
30 changing the direction of the heat at pleasure—and likewise in the arrangement of a force or suction pump in combination with the stove for producing a draft through the stove before it is heated.

35 Between the fire chamber A, and the small oven B, I form a vertical space extending from one side of the stove to the other; in the middle of which I place a vertical plate *p* extending across said space,  
40 from the top plate of the large oven, to the level of the top plate of the small oven, thus dividing said space into two vertical diving flues G, H, which lead into horizontal side flues I, J, extending to the front  
45 of the stove and dividing the space between the ovens and hearth into three flues by vertical turning plates K, K, arranged directly under the lower edge of the plate forming the back of the first mentioned  
50 flues G, H. When the plates *k, k*, are turned and brought to a horizontal position, the flues I, J, will communicate the one with the other, between the two ovens. The flues I, J, where they pass under the  
55 hearth are formed into the aforesaid two side flues by the side plates of the ash pit

L, which plates also form the inner sides of said flues. These flues I, J, lead into a space formed between the front of the large oven, and the front of the stove, said space  
60 being divided by a vertical cross plate *a*, into two front diving flues M, N. These flues lead into two zig-zag flues P, Q, extending the whole length and breadth of the stove, and of the large oven, under which  
65 they pass, one of said front diving flues leading into one of said zig-zag flues, and the other diving flue into the opposite zig-zag flue. These flues P, Q, lead into two  
70 rear ascending flues R, S, that lead into the smoke funnel E, at the rear of the small oven B. The vertical cross plate T that divides the space behind the large oven into the two rear ascending flues extends from the bottom plate of the stove to the level  
75 of the bottom of the small oven. Upon the top or in this plate, turns one of the pivots of a turning damper U, for changing the draft. The other pivot forms also the handle, and passes through the side of  
80 the stove. There is another turning damper V placed at the junction of the flue I, with the flue R, for uniting or separating said flues at pleasure. One of its pivots  
85 passes through the opposite side of the stove and forms a handle by which it is turned. When these dampers U, V, are in the position represented in Fig. 1, the draft will be in the direction of the arrows, obliquely  
90 across from one of the rear corners, to the opposite front corner. Through the flues I, J, to the front diving flue N, through which it will descend to the flue Q and after passing through said flue will ascend  
95 through the flue R to the funnel, having previously passed down flue H along flue J, down flue M, and back through the zig-zag flue P and vertical flue S, by which the smoke and heat are made to circulate  
100 twice, entirely through the stove. There is a direct flue *o* between the perforated top plate of the stove and the top of the small oven leading from the fire chamber to the funnel. This flue is divided from the fire  
105 chamber by a vertical plate Y and the sliding dampers W and X. It is also separated at the middle into two sections by a central plate *q*.

When the stove is cold, there will be very little draft and therefore in order to produce a partial vacuum in the stove at the rear part thereof I have combined and ar-

ranged a suction or force pump *c* which is placed at an opening leading into the funnel, or in any convenient place, and when operated in the manner of a pump, will  
5 produce a draft from the fire-chamber to the funnel.

A sliding damper *W*, before referred to is made to slide back and forth, over one third of the space, forming the flue leading  
10 from the fire chamber to the funnel, over the small oven, for opening and closing said flue at pleasure, and for directing the heat to the side boilers. The opposite damper *X*, is for a similar purpose. There  
15 is also a horizontal sliding damper *Z*, placed over the entrance to the flue *G* to be closed when it is required to turn the draft directly from the fire chamber down the flue

*H*, as described and represented. When this damper and the damper *U* are open 20 the draft will pass through all the flues simultaneously.

Suitable and convenient apertures are provided in the side plates of the stove for  
cleaning the flues. 25

What I claim as my invention and which I desire to secure by Letters Patent is—

The manner of conducting the draft by the arrangement of the flues *I J* and *P Q* in combination with the dampers *U V* and 30 *K* as set forth, causing the draft to pass twice around the oven *D*, as described.

ARCHIBALD WIETING.

Witnesses:

WM. P. ELLIOT,  
RICHARD KEY WATTS.