

(No Model.)

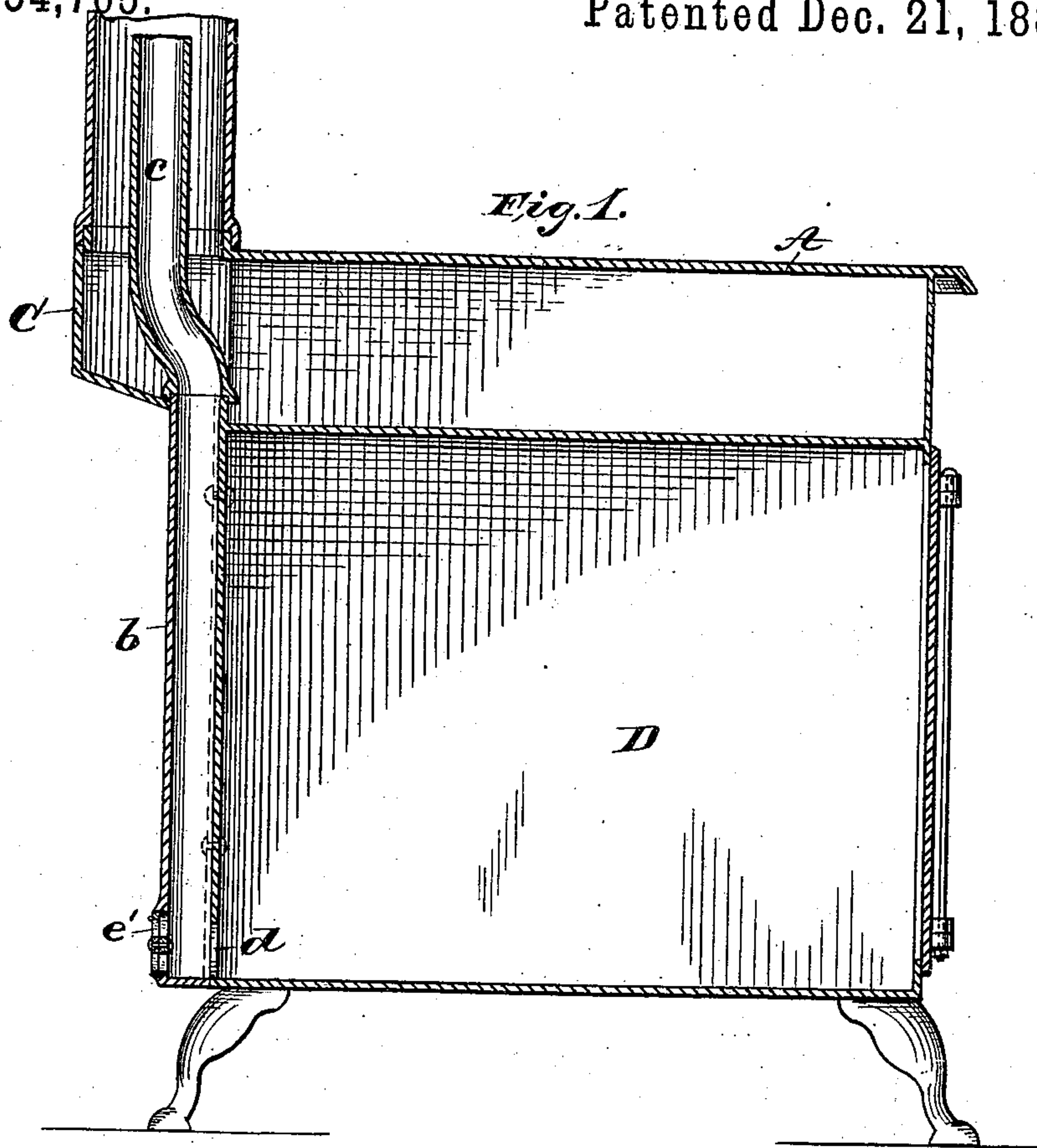
W. M. BRINKERHOFF.

2 Sheets—Sheet 1.

VENTILATING ATTACHMENT FOR STOVES.

No. 354,765.

Patented Dec. 21, 1886.



Witnesses:

Edward T. Walker

Louis P. Whitaker.

Inventor.  
Wm. M. Brinkerhoff  
by his atty.  
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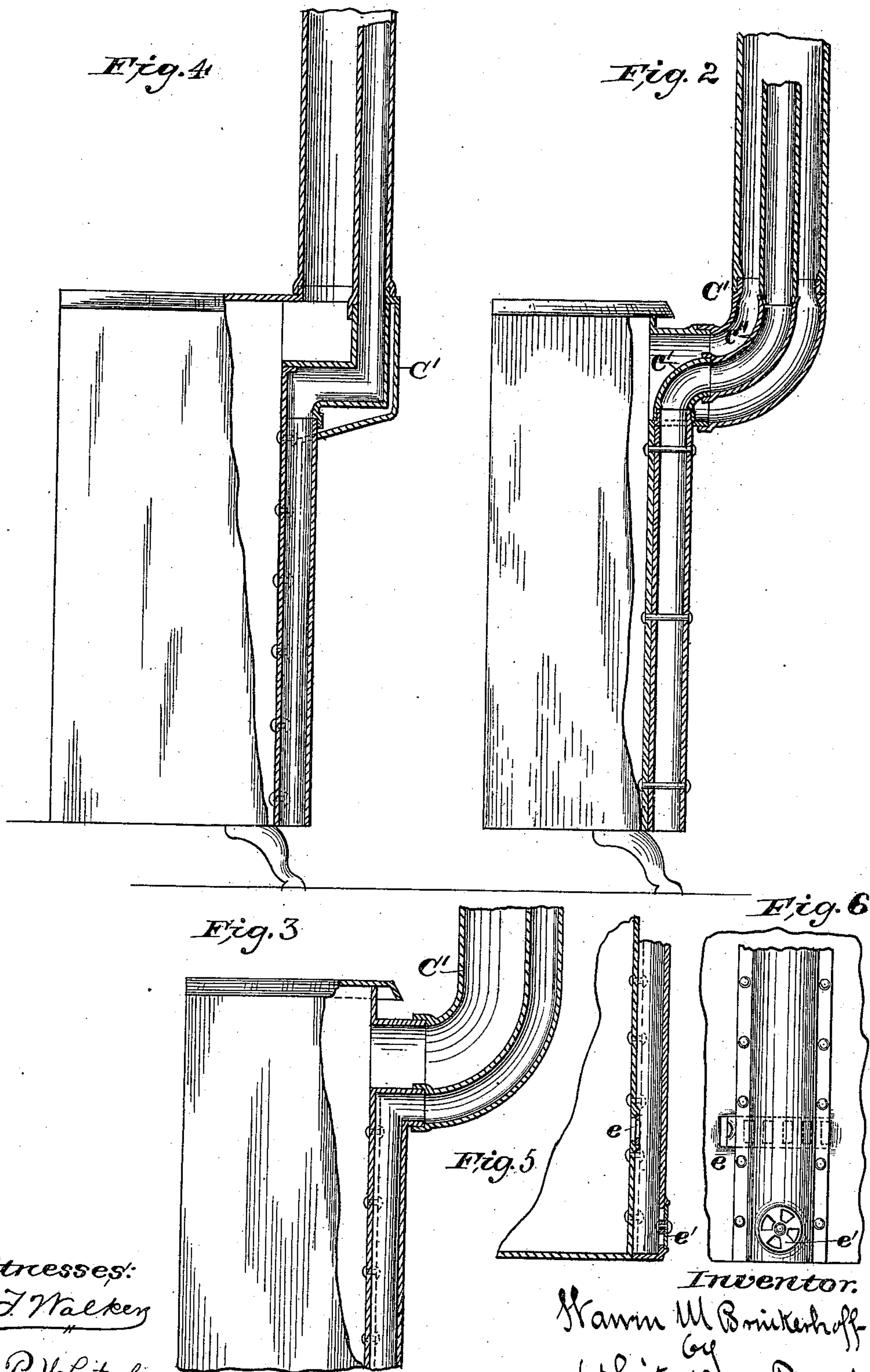
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# UNITED STATES PATENT OFFICE.

WARREN M. BRINKERHOFF, OF AUBURN, NEW YORK.

## VENTILATING ATTACHMENT FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 354,765, dated December 21, 1886.

Application filed June 22, 1886. Serial No. 205,925. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN M. BRINKERHOFF, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful improvements in Ventilating Attachments for Stoves; 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 appertains to make and use the same.

My invention relates to a class of stoves known as "ventilators," or "ventilating-stoves," and it consists in a new construction of the ventilating air-pipes and of their connections. Heretofore such pipes have been made wholly separate and disconnected from the stove and connected to the smoke pipe or flue, or placed wholly within the stove, or placed wholly within the stove and made an integral part of the stove structure. When such pipes are separate and placed at a distance from the stove, they take up an additional amount of room and are liable to injury and displacement by contact with persons and articles moving past them, making frequent repairs necessary, and in the shipping of such stoves the larger number of parts is a considerable objection.

In my improved construction the objections to an external pipe are avoided.

In the accompanying drawings, Figure 1 is a partial vertical section of a range or cooking-stove, taken through the oven, with one form of my ventilator-pipe attached thereto. Fig. 2 is a partial section of a stove provided with a short pipe-collar and an elbow detachably connected thereto. Fig. 3 is a partial section of a similar but modified construction. Fig. 4 is a partial section of a stove with another form of outlet construction with my invention applied thereto. Fig. 5 is a partial section of a similar construction, showing a connection with the oven, with dampers for controlling the air-inlets in the ventilator-pipe. Fig. 6 is a view of a part of the rear of a stove having the construction shown in Fig. 5.

In the figures of the drawings, A designates the body of the stove, which may be of any desired construction. The rear wall or top of such stove is provided with means for attaching a smoke-pipe thereto.

b is the ventilating-pipe, which is shown in

the drawings as exterior to the stove, and lies adjacent to the wall thereof, below the point at which the smoke-pipe is attached, and is connected with the body of the stove. The ventilating-pipe may be constructed in any desired form.

In Fig. 1 the ventilating-pipe b connects with a pipe, c, within the elbow C, which is rigidly connected with the stove. The oven of the stove D is connected with the ventilating-passage b by an opening, d, forming an inlet to said pipe from the oven. The ventilating-passage is open at the side of the same, and has a damper controlling such opening. The opening may be at the bottom of the passage, instead of the side.

In Fig. 2 the pipe is shown as made separate from the stove, and attached to the rear wall of the same by bolts passing directly through the pipe and such wall. This pipe may be attached in any other suitable way.

In all the figures of the drawings I have shown the smoke-pipe connected to the stove through the intervention of an elbow. This elbow is sometimes detachable from the stove, and sometimes is rigidly connected thereto. It is, however, shown as being provided with an interior flue connecting with and forming an extension of the ventilating-flue attached to the stove. These two parts of the ventilating-flue may be connected in any manner.

In Fig. 1 the smoke-outlet of the stove consists of the elbow C, rigidly connected with the stove. An opening is made through the lower wall of said smoke-outlet, close to the stove, and the pipe forming the ventilating-passage attached to the stove, is passed up through said opening. A flue forming a continuation of the ventilating-passage is connected to the said pipe by a loosely-fitting joint within said elbow.

In Figs. 2 and 3 I have shown two ways of uniting the parts where the stove is provided with a collar, and the elbow is detachable therefrom, extending over the collar, as is usual. In Fig. 3 the elbow C' is provided with an air duct or flue extending along adjacent to the wall of the same, while the ventilating-flue extends up through the collar and has an extension backward, meeting the wall of the flue or duct in the elbow, the end of the one overlapping the end of the other. This may



obviously be changed and the ventilator-pipe extend only up just through the collar, and the air flue or duct in the elbow be provided with a hood extending beyond the elbow to cover and connect with the ventilating-pipe.

In Fig. 2 the ventilating-pipe is shown as extending up a short distance above the inner wall of the collar, and two separate pipes, *c'* and *c''*, connected to it and extending centrally upward in the elbow, and discharging in the same or in the smoke-flue. This construction, it is obvious, can be used as well where the elbow takes a downward course from the collar of the stove. It is also obvious that these two parts, *c'* and *c''*, may be made in one piece, if desired.

In Fig. 4 I have shown another method of connecting the ventilating-passage outside of the stove with the flue or pipe within the smoke-outlet. In this construction the range or stove is provided with the elbow or its equivalent *C'*, rigidly connected to the stove. The ventilating-pipe passes up into such elbow through the wall thereof, and a separate pipe is attached or connected thereto and extends upward and discharges into the elbow near the upper end thereof, or into the smoke-pipe. It is obvious that this pipe may be made to lie adjacent to the outer wall of the elbow, as in other instances shown in this application and in my former Patent No. 339,966; or the ventilating-pipe may extend upward through the elbow with little or no departure from a direct course and discharge near the top of the elbow or into the smoke-pipe.

In Figs. 5 and 6 I have shown my ventilating-flue connected with the oven by a damper construction, *e*. In this instance the lower end of the ventilating-pipe is closed, as shown, and provided with an opening at one side which may be regulated or closed by a damper, *e'*. It is to be understood that I may dispense with a damper in either of the air-inlets in this construction; or I may in all the forms shown use a damper on the ventilating-pipe, in order that the flow of air through the same may be regulated or entirely cut off, as desired.

The connection of the ventilating-flue and the oven is of value in that it affords means for ventilating the oven, and it also assists in creating a strong current through the ventilating-pipe. It may also be found desirable at times to close the direct opening in the ventilating-pipe and remove the heated air from the oven. It will sometimes be found desirable to close both dampers until the walls of the smoke-outlet become heated. With even a damper in the ventilating-pipe alone the draft of air from the oven can be nicely adjusted.

I claim as my invention—

1. The combination, with a range or cook-

ing-stove, of a passage separate from the flues of the range or stove, having its discharging or upper end opening into the smoke-outlet and communicating with the outer air at or near its lower end, constituting an uninterrupted ventilating-passage and an independent inlet-communication between the oven and said passage, substantially as described.

2. The combination, with a range or cooking stove, of a passage separate from the flues of the range or stove, having its discharge or upper end extending into the smoke-outlet and opening therein, and communicating with the outer air, near the base of the stove, at or near its lower end, constituting an uninterrupted ventilating-passage and an independent inlet from the oven to said passage, substantially as described.

3. The combination, with a stove, of a passage separate from the flues of the stove communicating with the outer air, near the base of the stove, at or near its lower end, and extending upward adjacent to and attached to the wall of the stove and communicating with the smoke-outlet through the wall thereof, and discharging into the same, substantially as described.

4. The combination, with a range or cooking-stove, of a passage separate from the flues of the range or stove, communicating with the outer air, near the base of the stove, at or near its lower end and extending upward adjacent to and outside of the walls of the stove, having communication through the wall of the smoke-outlet and discharging into the same, forming an uninterrupted ventilating-passage and an independent inlet from the oven to said passage, substantially as described.

5. The combination, with a range or cooking-stove, of a passage separate from the flues of the stove having its upper and discharging end opening into the smoke-outlet and communicating with the outer air, near the base of the range or stove, at or near its lower end, forming an uninterrupted ventilating-passage and an independent inlet from the oven to said passage, and a damper controlling one of said inlets, substantially as described.

6. The combination, with a range or cooking-stove, of an elbow provided with a duct or flue within the same and a ventilating-passage extending upward adjacent to the wall of the stove and communicating with the flue within the elbow, said ventilating-flue communicating also with the oven of the stove or range, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN M. BRINKERHOFF.

Witnesses:

J. BRINKERHOFF,  
E. T. WALKER.