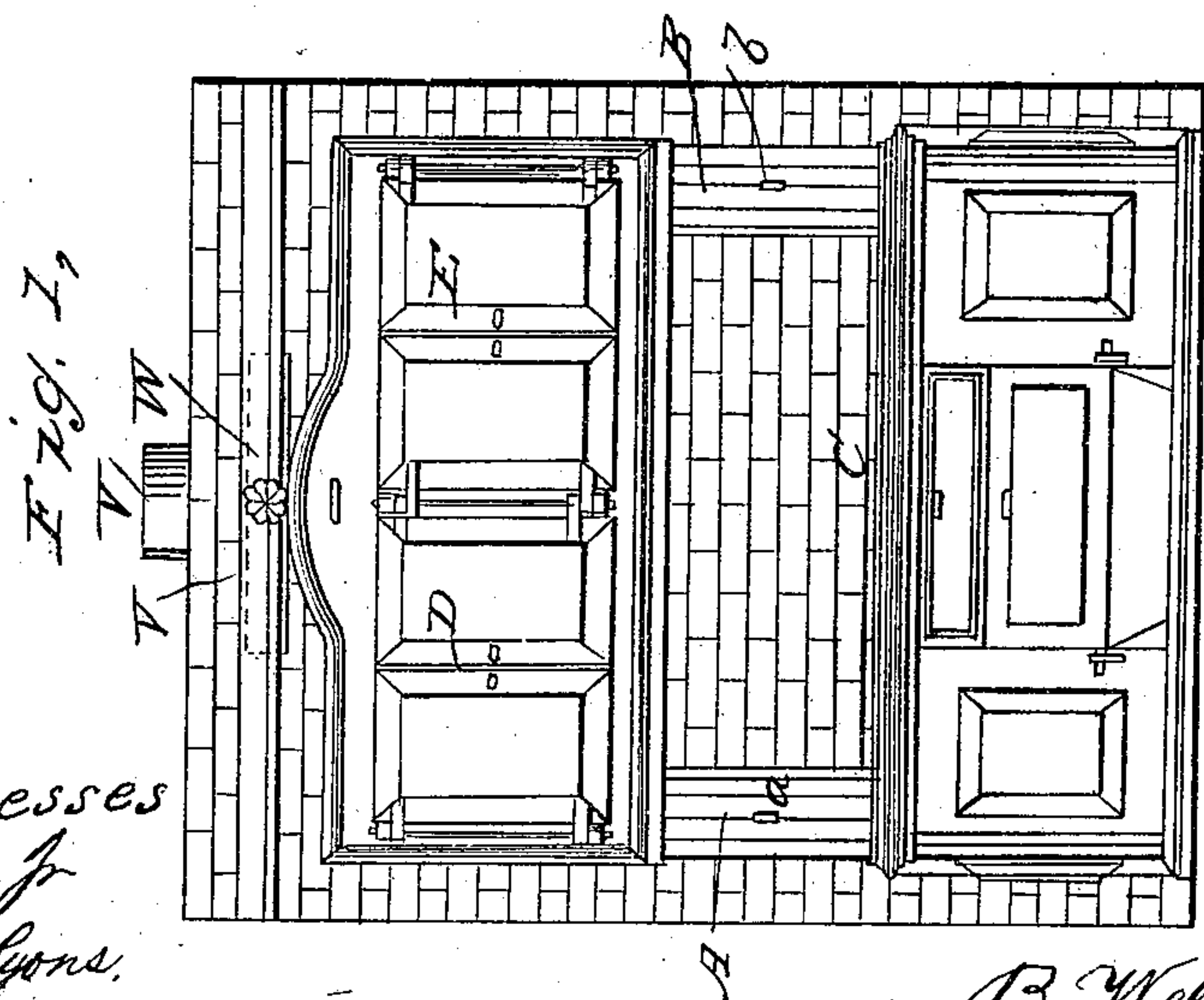
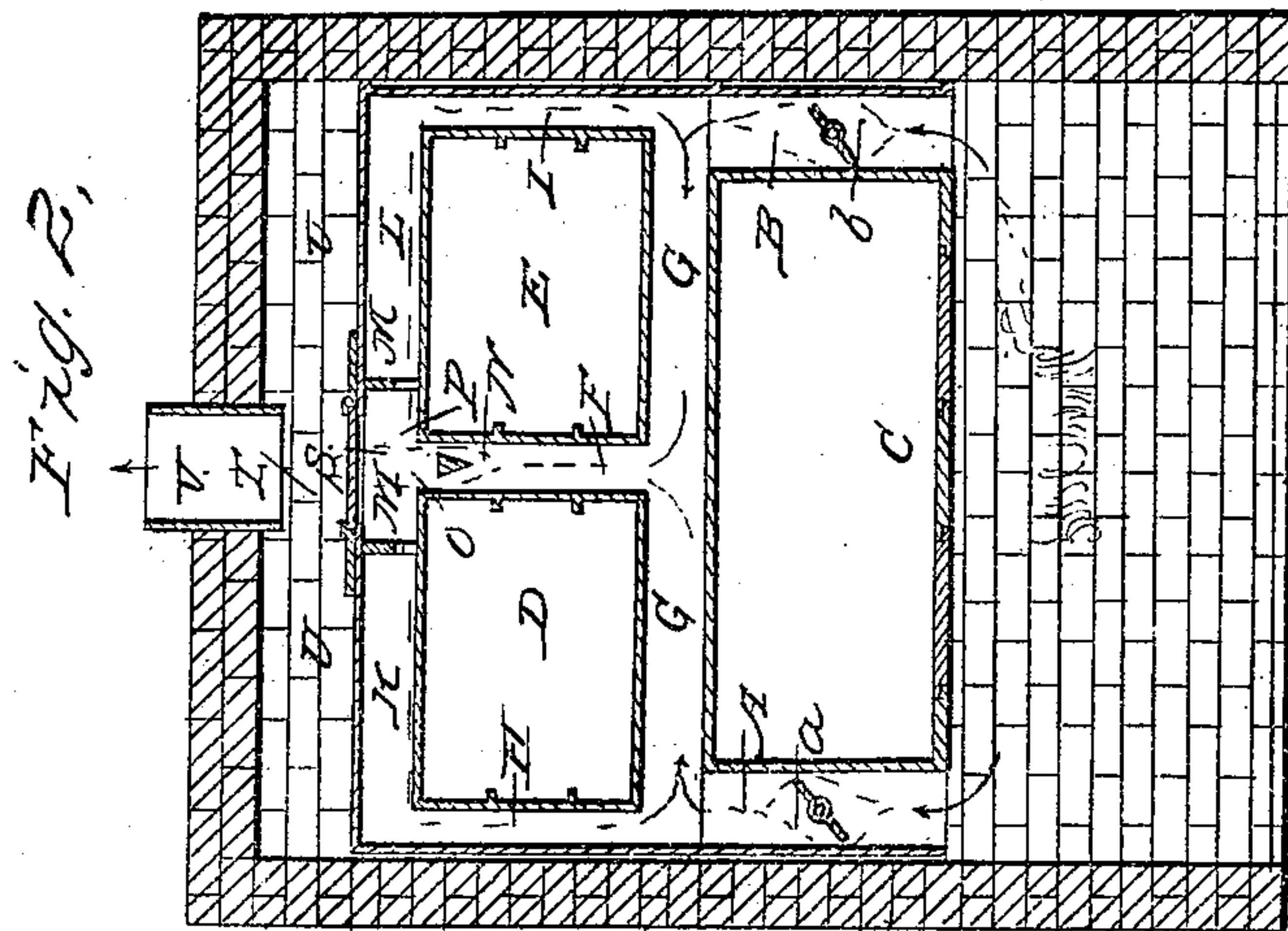
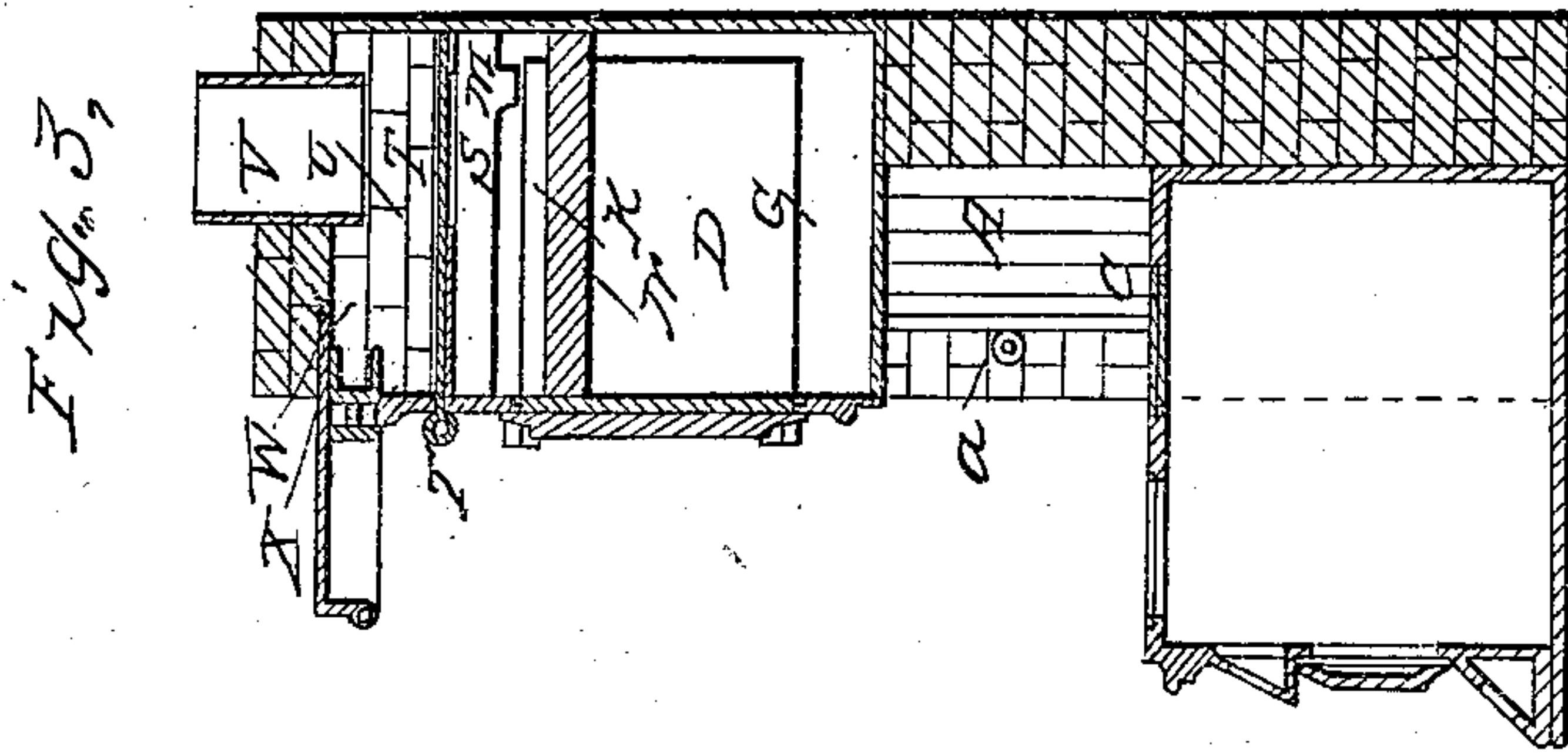


B. W. DUNKLEE.

Cooking Range.

No. 23,665.

Patented April 19, 1859.



Witnesses
J. P. Hale Jr
Lamence Lyons.

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UNITED STATES PATENT OFFICE.

B. WELLS DUNKLEE, OF BOSTON, MASSACHUSETTS.

COOKING-RANGE.

Specification of Letters Patent No. 23,665, dated April 19, 1859.

To all whom it may concern:

Be it known that I, B. WELLS DUNKLEE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Elevated-Oven Cooking-Ranges; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a front elevation of the said range provided with my invention. Fig. 2, is a vertical section of it, such section being taken through the ovens, their flues, and the flues leading from the top plate of the boiling chamber to the oven flues. Fig. 3, is a vertical and transverse section taken between the ovens.

The nature of my improvement consists in an arrangement of two induction flues, certain gage partitions or throats, and certain flues around and between two ovens, a damper opening and damper being arranged immediately over the flue which is between the ovens.

In the drawings, the range is shown as furnished with two vertical discharge pipes A, B, leading upward from the top plate C, of the boiling chamber, such top plate being supposed to have boiler openings and a flue space, furnace, grate and ash pit below it, as in ordinary cooking ranges. Each of the pipes A, B, may be furnished with a damper *a*, or *b*, and should be made to open directly under the external lower corner of one of two ovens D, E, arranged with respect to the end pipes and above the plate C, as shown in the drawings. There is a flue F, extending upward between the two ovens and from a flue G, carried horizontally against their bottoms and extending over the upright flues A, B, as shown in Fig. 2. Furthermore, a flue H, or I, is carried from the flue G, upward against the outer side of each oven and opens into a flue K, or L, running over and against the top of each oven, the whole being as shown in Fig. 2. At the inner extremity of each flue K, L, I place a gage throat or throat plate as shown at M. Another such gage plate or bar N, triangular in transverse section and forming two gage throats O, P, I arrange at the upper part of the flue between the two ovens. This bar extends horizontally and parallel to the inner sides of the two ovens and has over it and between the partitions or throat plates M, a damper opening S, provided with a

damper T, such opening being made to communicate with a chimney when the range is in use, or with a chamber U, extending over the upper oven flues, and having a discharge flue V, an air opening W, and closing cover X, as shown in Figs. 2, and 3.

The partitions by which the gage throats are formed should extend so near to the inner corners of the two ovens or the surfaces of such ovens as to cause the heated volatile products which may rush up the pipes A, B, to be equally diffused against the top, bottom, and sides of each oven, and also to be made to tend toward and pass closer against the upper surfaces of the ovens and upper parts of the sides of the flue between the ovens and against the remaining parts of the external surfaces of the ovens. The escape throat over each oven should be a little less in area than the next adjacent escape throat placed in the vertical flue between the ovens, the difference in the two areas being sufficient to counteract the tendency of the greater part of the smoke or volatile products of combustion to directly pass up the flues H, I, rather than flow equally around the ovens. The middle bar and the partitions thus form with the ovens the necessary check throat which not only cause the heat to be disseminated equally about each of the ovens, but maintain a large amount of flue space around and cause the volatile products in proportion as they expend their heat to be brought in closer contact with the ovens, thus equalizing the heat of their surfaces or sides.

In carrying out my invention I have sought to avoid the use of dampers in the middle and top flues of the ovens, and in lieu of them I employ the unchangeable throats formed by a bar and partitions as described. I have found that when the throats are of proper sizes the volatile products are sent around and between the two ovens and so as to equally diffuse the heat over the surfaces of the same. The divisional bar N, by being triangular in section splits the current rising through the flue between the ovens and causes it to be deflected close against the sides of the said flue, in order that by contracting the currents the radiation or absorption of heat therefrom may be equalized or nearly so on the surfaces of the flue.

The arrangement of the two upright induction pipes leading upward from the plate of the boiling chamber operates to diffuse

the heat to great advantage under such plate or against the boilers that may extend into its openings.

What I claim is—

The arrangement of the two induction flues A, B, the gage throats, their plates or bars, and the flues around and between the two ovens, a single damper and its open-

ing being placed over the middle flue and with respect to the two flues as specified. 10

In testimony whereof I have hereunto set my signature.

B. WELLS DUNKLEE.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.