

No. 693,707.

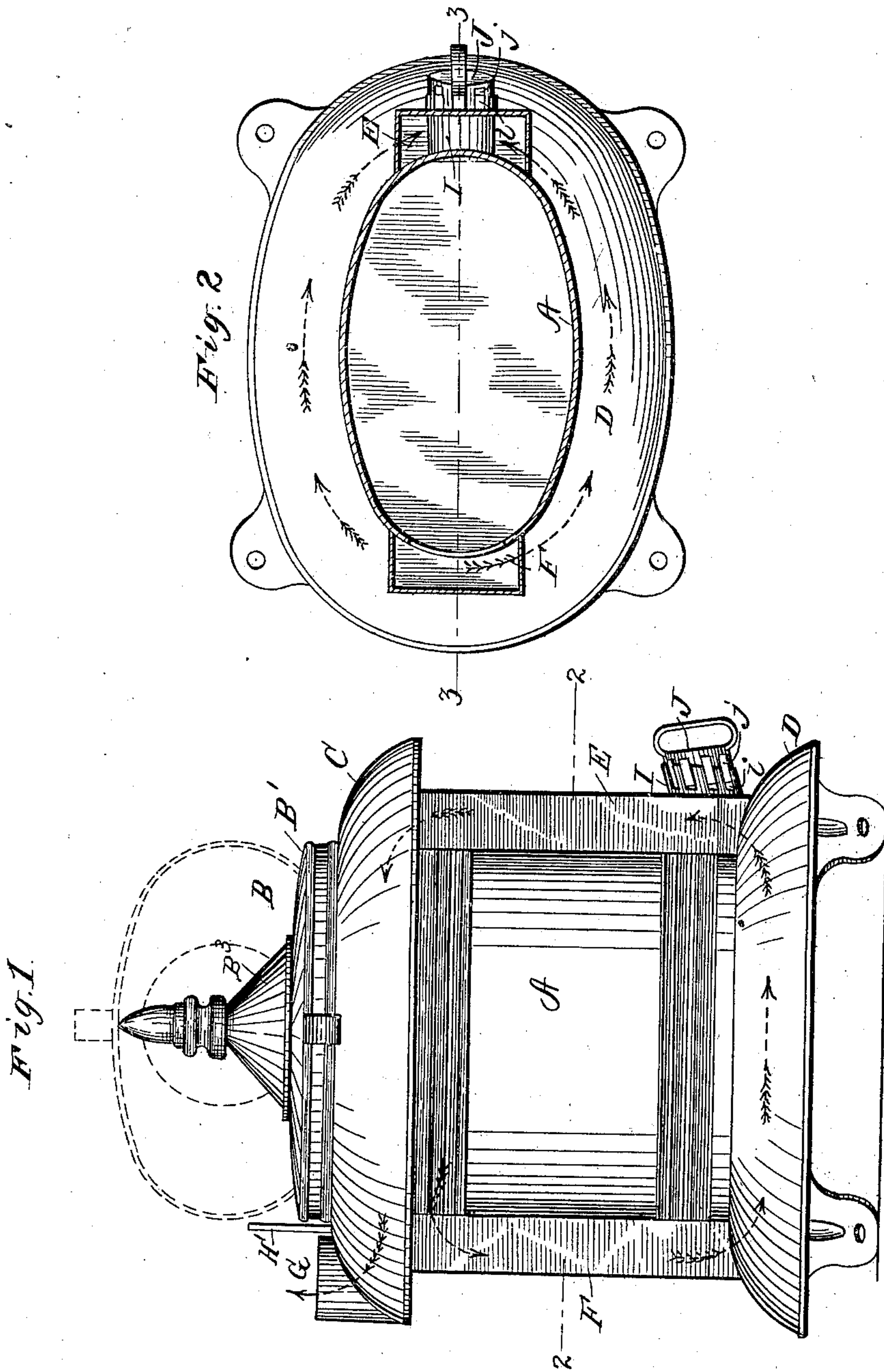
Patented Feb. 18, 1902.

W. HEUERMANN.  
STOVE.

(Application filed July 3, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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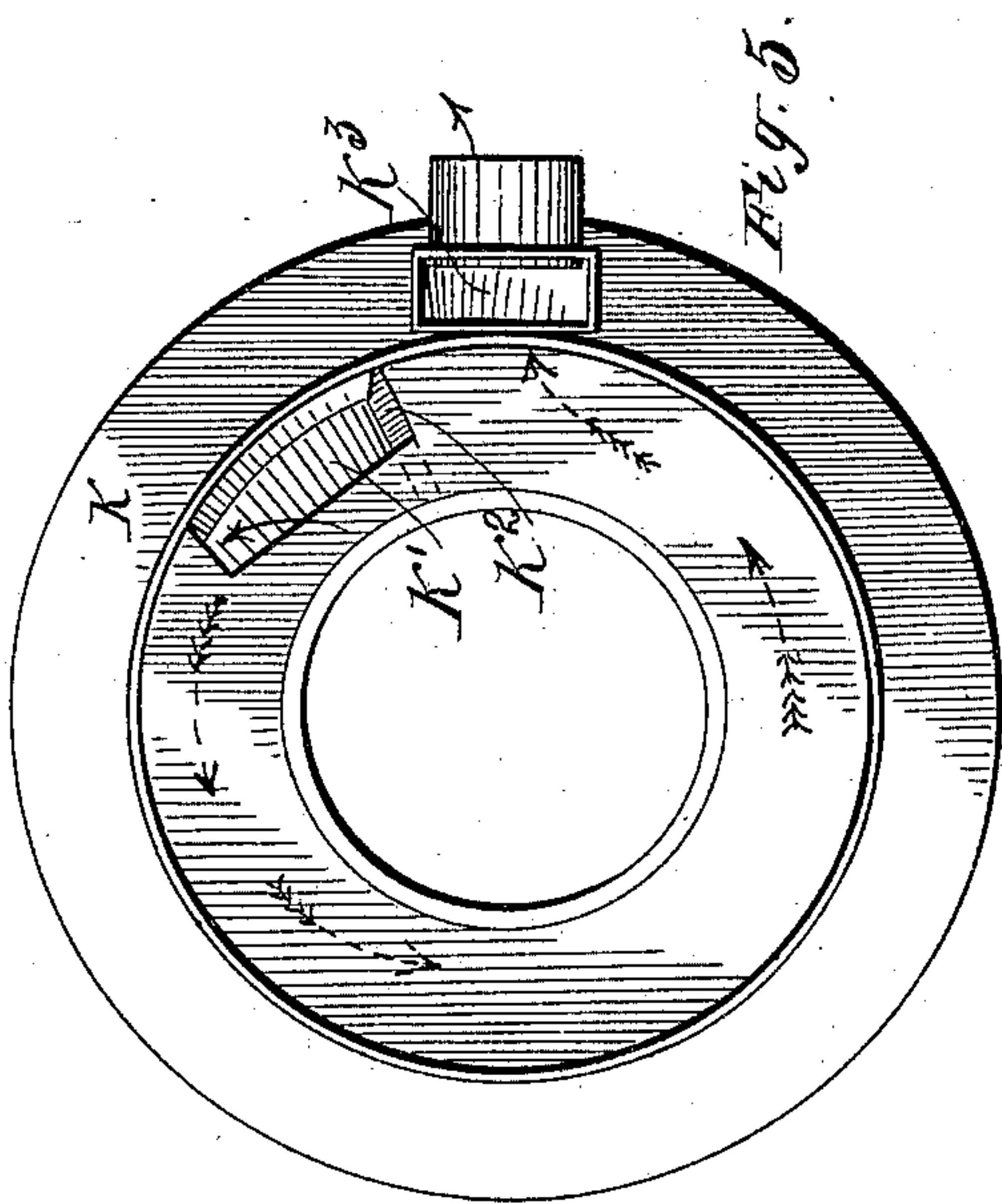
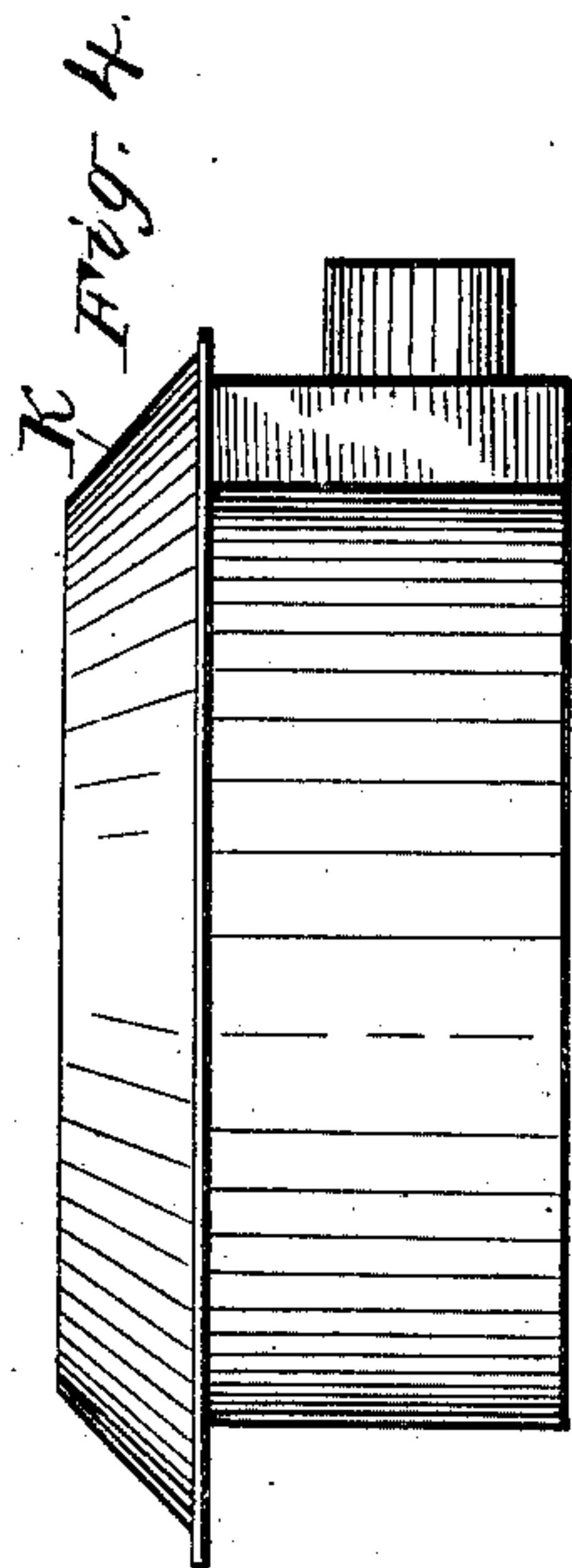
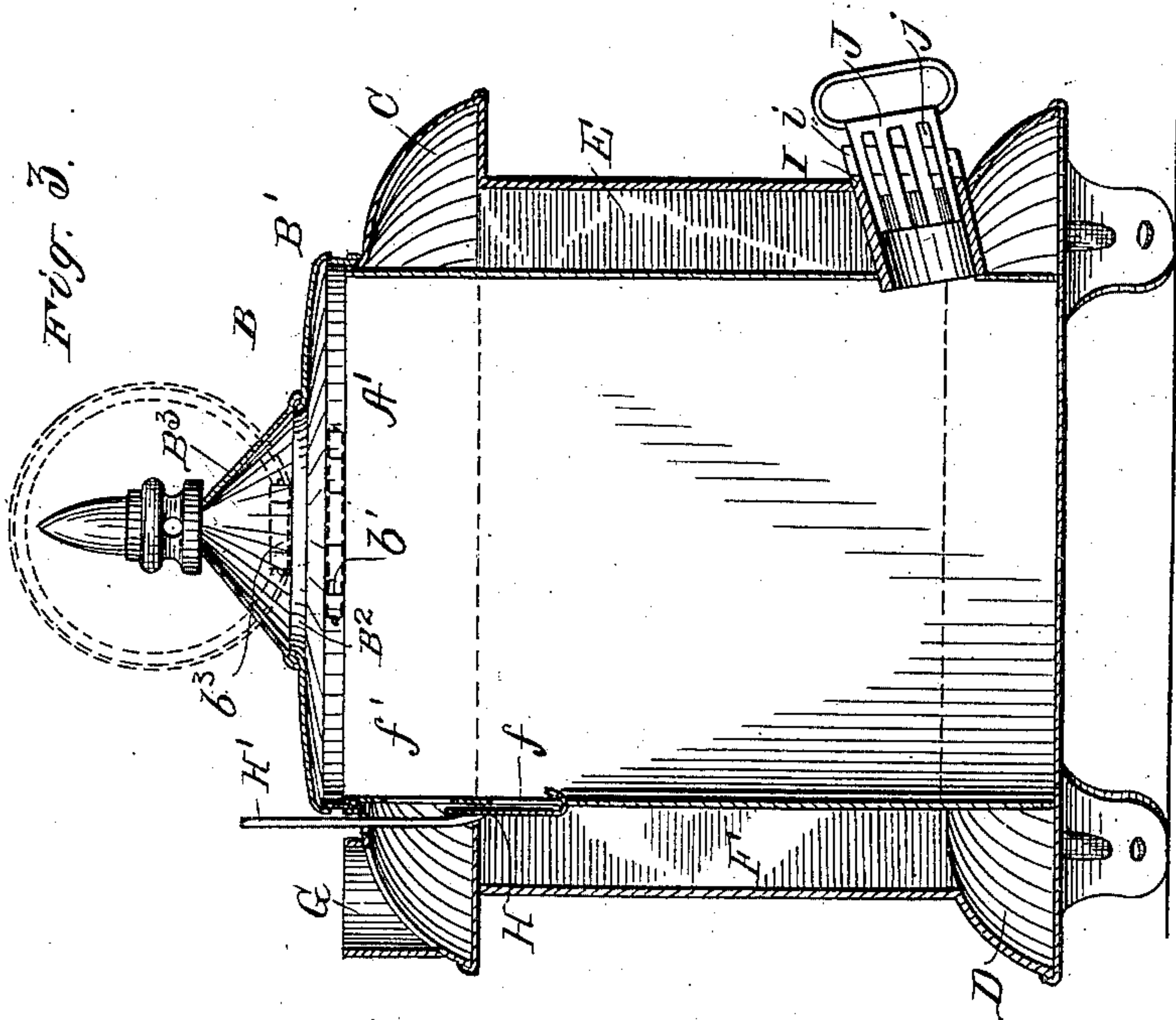
**W. HEUERMANN.**

STOVE.

(Application filed July 3, 1901.)

(No Model.)

2 Sheets—Sheet 2.



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

WILLIAM HEUERMANN, OF SEDALIA, MISSOURI.

## STOVE.

SPECIFICATION forming part of Letters Patent No. 693,707, dated February 18, 1902.

Application filed July 3, 1901. Serial No. 67,029. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HEUERMANN, a citizen of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented a new and useful Improvement in Stoves, of which the following is a specification.

My invention is an improvement in stoves, and has for an object, among others, to provide means by which to enforce a circulation of the heated air and products of combustion in such manner as to increase the heating capacity of the stove, save fuel, and regulate the combustion, as may be desired; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side view of a stove embodying my invention. Fig. 2 is a cross-sectional view on about line 2 2 of Fig. 1. Fig. 3 is a vertical longitudinal section on about line 3 3 of Fig. 2; and Fig. 4 is a side view, and Fig. 5 a bottom plan view, of a modified form of top for the stove.

Referring now to the construction shown in Figs. 1, 2, and 3, it will be noticed that it includes a body A, which is open at its top A' and is provided with a lid B, preferably formed with the main portion B' fitted to the body A and hinged thereto at one edge b', so it can be raised, as indicated in dotted lines, Fig. 1, when it is desired to insert large pieces of wood or to take out the ashes. This main portion B' is provided centrally with an opening B<sup>2</sup>, which is closed by a central door B<sup>3</sup>, which is hinged at b<sup>3</sup>, as indicated in Fig. 3. This central door may be opened, as indicated in dotted lines, Fig. 3. Thus, it will be understood, the main portion B' of the cover may be opened, as indicated in dotted lines, Fig. 1, or the central door B<sup>3</sup> may be opened, as shown in dotted lines, Fig. 3, without displacing the main portion B' of the cover.

At the upper and lower ends of and encircling the body A, I provide the air-chambers C and D, which extend transversely around the body A and are connected together at one end by the upright flue E, a similar flue F being provided diametrically opposite the flue E and communicating at its lower end with the chamber D, as shown in Fig. 3.

Near the upper end of the flue F, I provide

an opening *f*, which leads into the body A of the stove, an opening *f'* being provided in the body A above the opening *f*, such opening *f'* being arranged to discharge into the chamber C, directly opposite the offtake G for the smoke, a valve H being arranged, as shown in Fig. 3, so it can be adjusted to close the opening *f* or raised from the position shown in Fig. 3 to close the opening *f'* and leave the opening *f* unobstructed. This valve H has a handle H', which extends in convenient reach, so the valve can be readily operated as desired.

Air is supplied to the body A through a tube I, which extends through the flue E and is controlled by a damper J, which is provided with a series of openings *j*, which may be turned into and out of register with openings *i* in the tube I outside the stove, the outer end of the tubular damper J being closed and such damper being arranged to be turned so it can be adjusted to admit air or to shut it off to any desired degree, as may be desired. When the parts are adjusted as shown in Fig. 3, which may be desired in starting a fire, the damper H is adjusted to close the opening *f* and to leave the opening *f'* unobstructed, so the products of combustion can pass from the body A through the opening *f'* directly to the smoke-offtake. If it be desired to cause the heated air to circulate to a greater extent through the stove, the damper H may be raised from the position shown in Fig. 3 to close the opening *f'* and leave the opening *f* unobstructed. In this adjustment the smoke and heated air will be caused to pass down the flue F and discharge thence into the lower chamber D, around which it will be caused to circulate, as indicated by the arrows in Figs. 1 and 2, until it discharges into the lower end of the upright flue E, which discharges at its upper end into the chamber C at a point remote from the smoke-uptake C, so the heat will be caused to circulate through the chamber C in its passage to the said uptake, as will be understood from Figs. 1 and 2.

In Figs. 1, 2, and 3 the stove is represented as elliptical; but manifestly this may be varied and the stove, if desired, may be made circular in cross-section, as shown in Fig. 4, in which is represented a modified form of the top of the stove, in which the top circulat-



ing-chamber K has an opening K' leading into it from the body of the stove and a plate K<sup>2</sup> extending transversely across the said chamber adjacent to the smoke-offtake K<sup>3</sup>, so the heat, &c., will be caused to circulate through the chamber K in its passage to the offtake, as will be understood by the arrows in full and dotted lines in Fig. 5.

While I have shown the stove provided with two upright flues in Figs. 1, 2, and 3, it is manifest such flues may be increased in number, if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The improvement in stoves herein described, consisting of the body A, the chambers C and D encircling said body at its upper and lower ends, respectively, the flue E connecting said chambers and opening at its opposite ends thereinto, the air-tube I extending through the flue E and opening at its inner end into the body of the stove and provided at its outer end with the openings *i*, the damper J operating in the tube I and provided with openings *j* which may be adjusted into and out of register with the openings *i*, the flue F discharging at its lower end into the chamber D at a point remote from the flue E, the body of the stove being provided with openings *f* and *f'* opening respectively into the flue F and the chamber C, and the damper H movably supported and arranged to control the openings *f* and *f'*, and the lid

fitted to the body of the stove, substantially as set forth.

2. The combination in a stove of the body, the circulating-chambers encircling the same at its respective ends, one of said chambers being provided with an offtake and with an opening communicating with the body of the stove, a connecting-flue extending between the chambers, and a flue discharging into the chamber opposite that provided with the offtake, such flue being provided with an opening communicating with the body of the stove, and a valve movable to positions to close such opening or the opening which leads from the circulating-chamber into the body of the stove, substantially as set forth.

3. The combination of the stove-body, the upper circulating-chamber having an opening arranged to establish communication with the body of the stove, the lower circulating-chamber, a flue connecting said upper and lower chambers, a feed-flue connected with the lower chamber and having an opening arranged to establish communication with the body of the stove and a valve arranged in one position to close said opening and in its other position to close the opening between the upper chamber and the body of the stove substantially as set forth.

WILLIAM HEUERMANN.

Witnesses:

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