

**B. F. CAWTHON & D. I. EZEKIEL.**  
**Cooking-Stoves.**

No. 152,602.

Patented June 30, 1874.

Fig 1

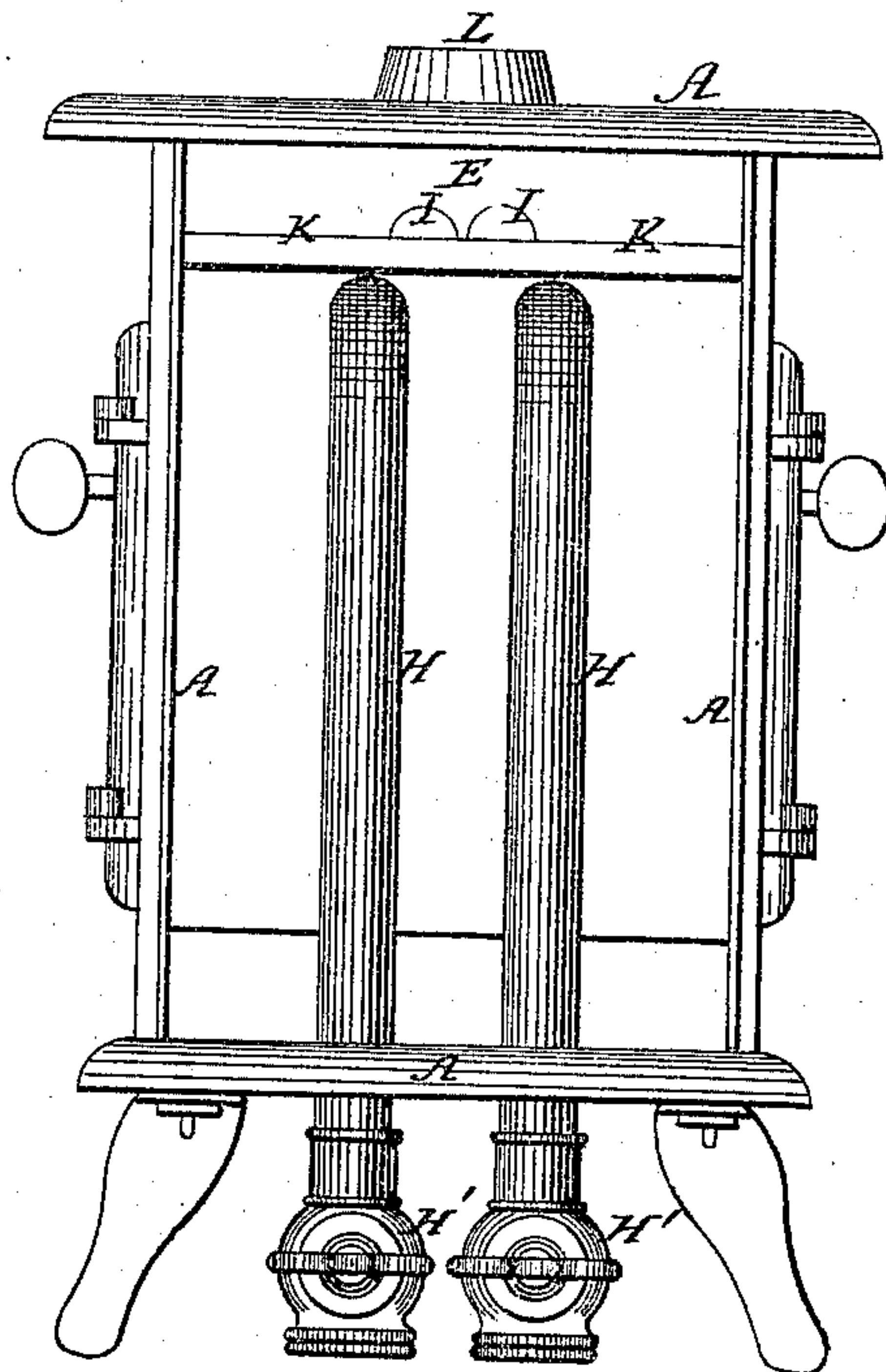


Fig. 3.

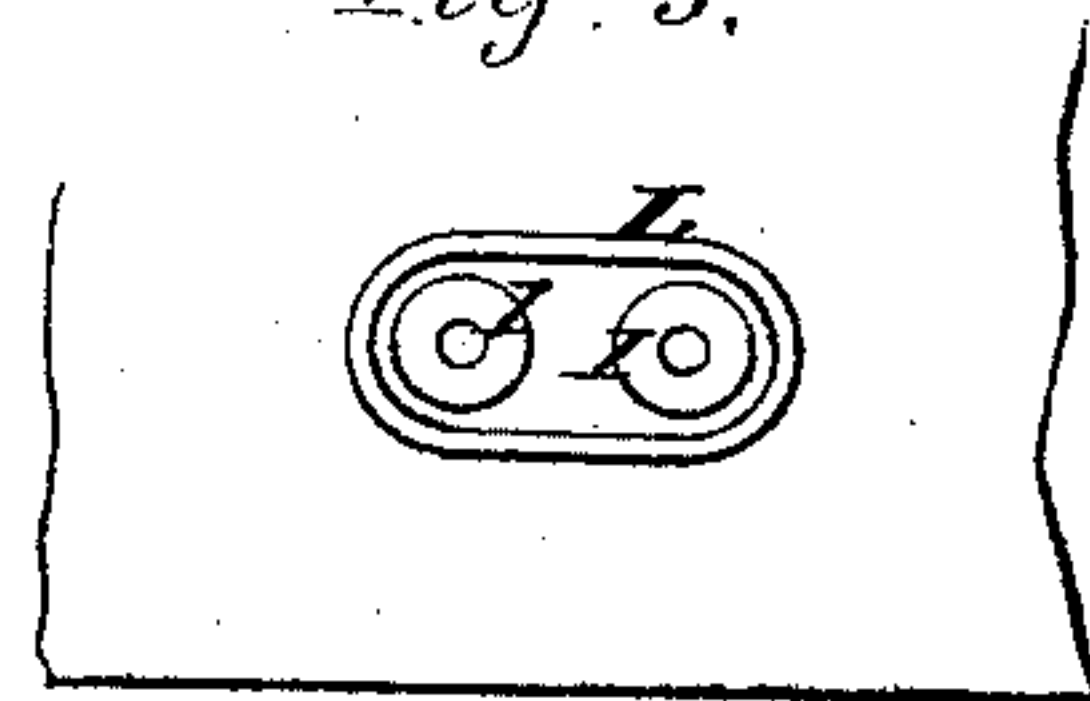
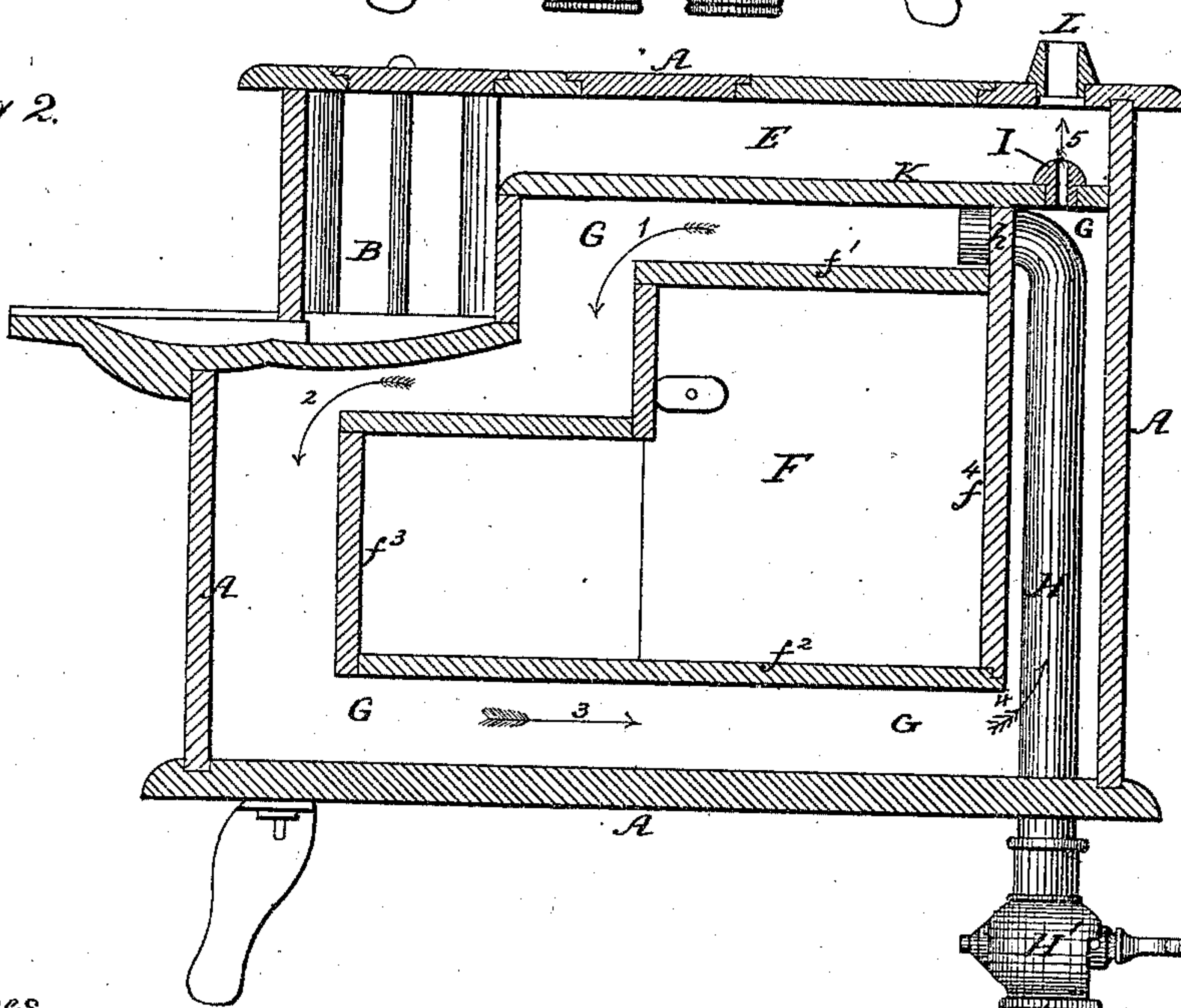


Fig 2.



Witnesses.

*Colborne Brookes*

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Inventors.

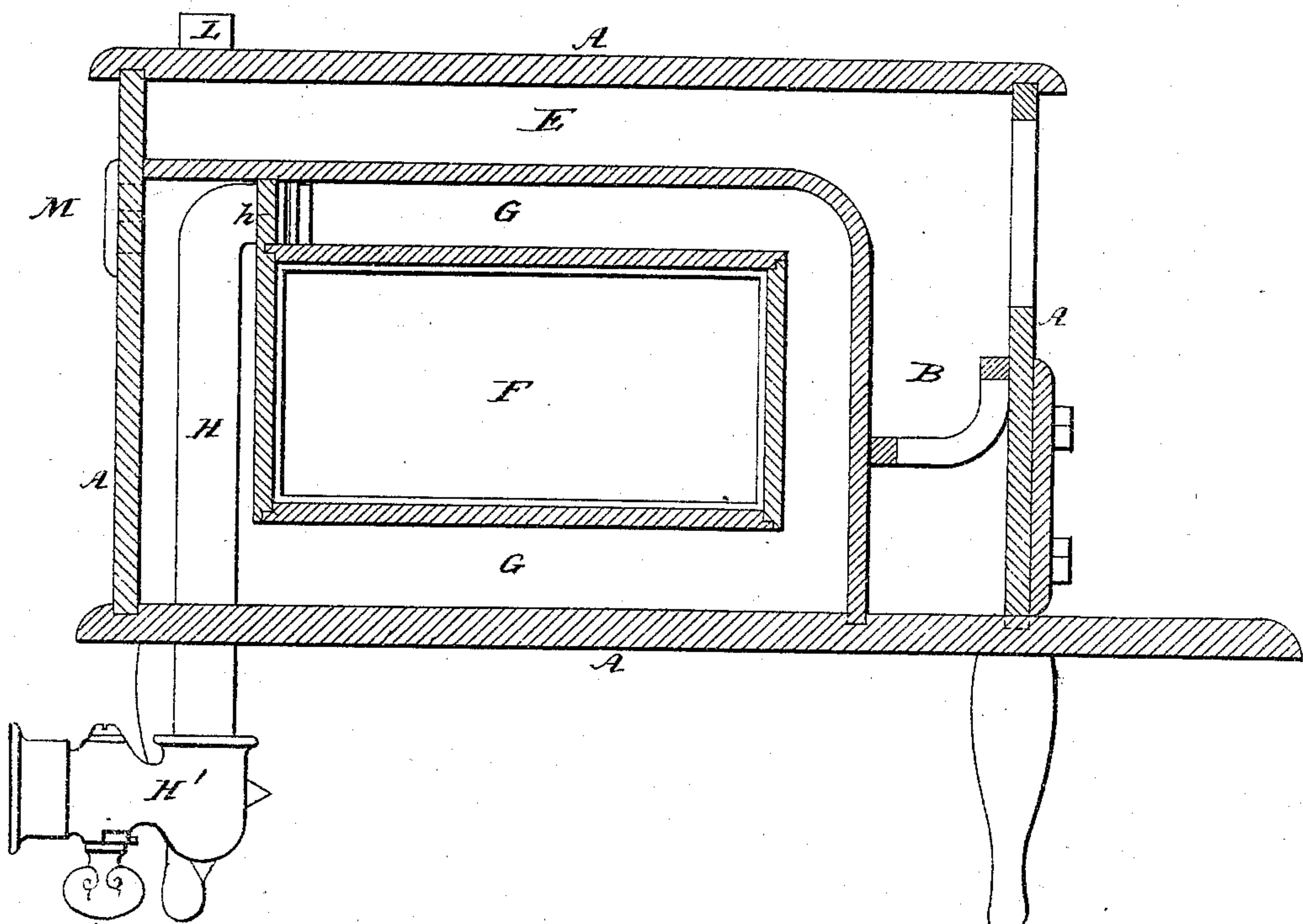
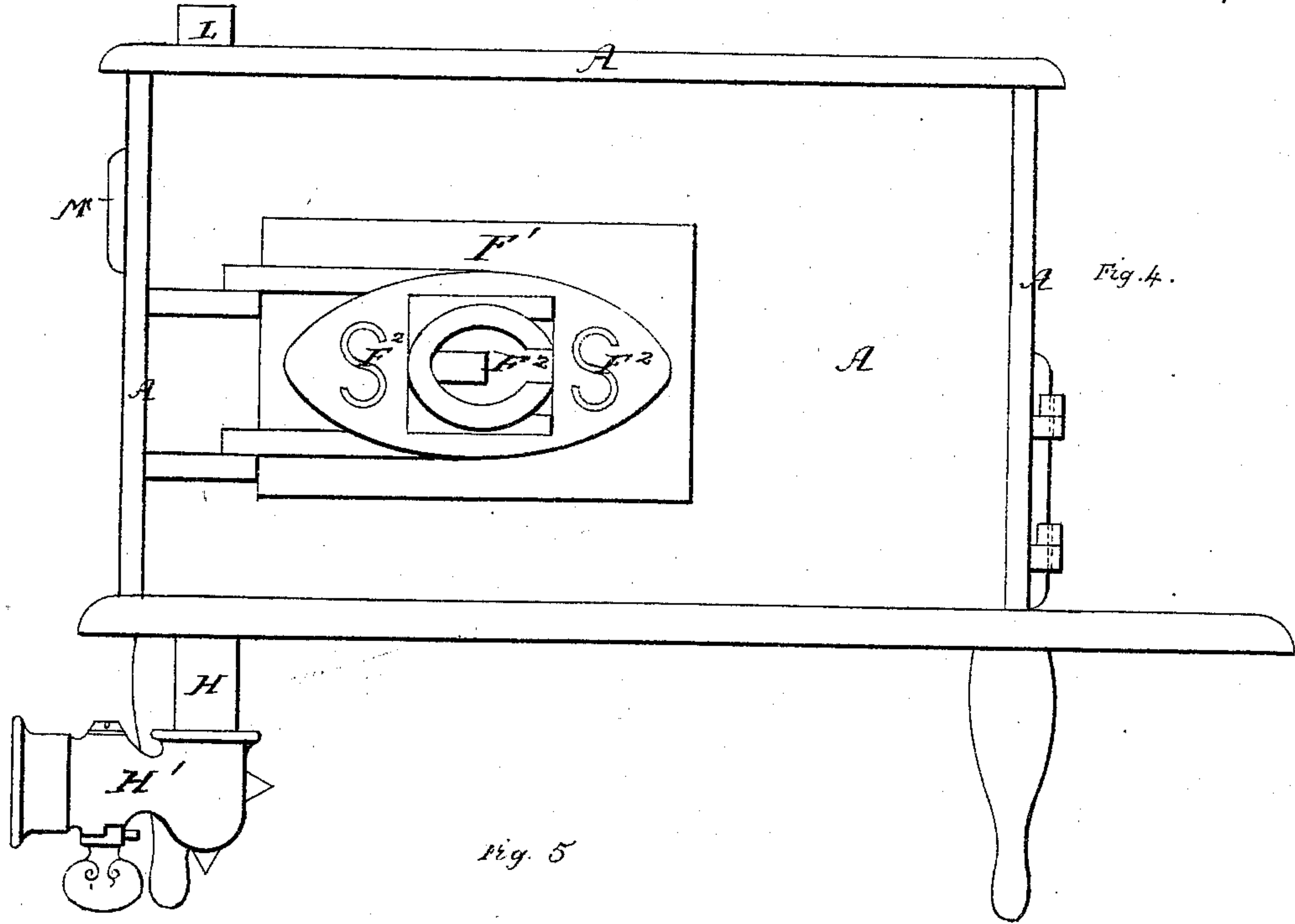
*Benjamin F. Cawthon*  
*David I. Ezekiel*  
*per Robt. & A. Lacey-atlys*

B. F. CAWTHON & D. I. EZEKIEL.  
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3 Sheets--Sheet 2.

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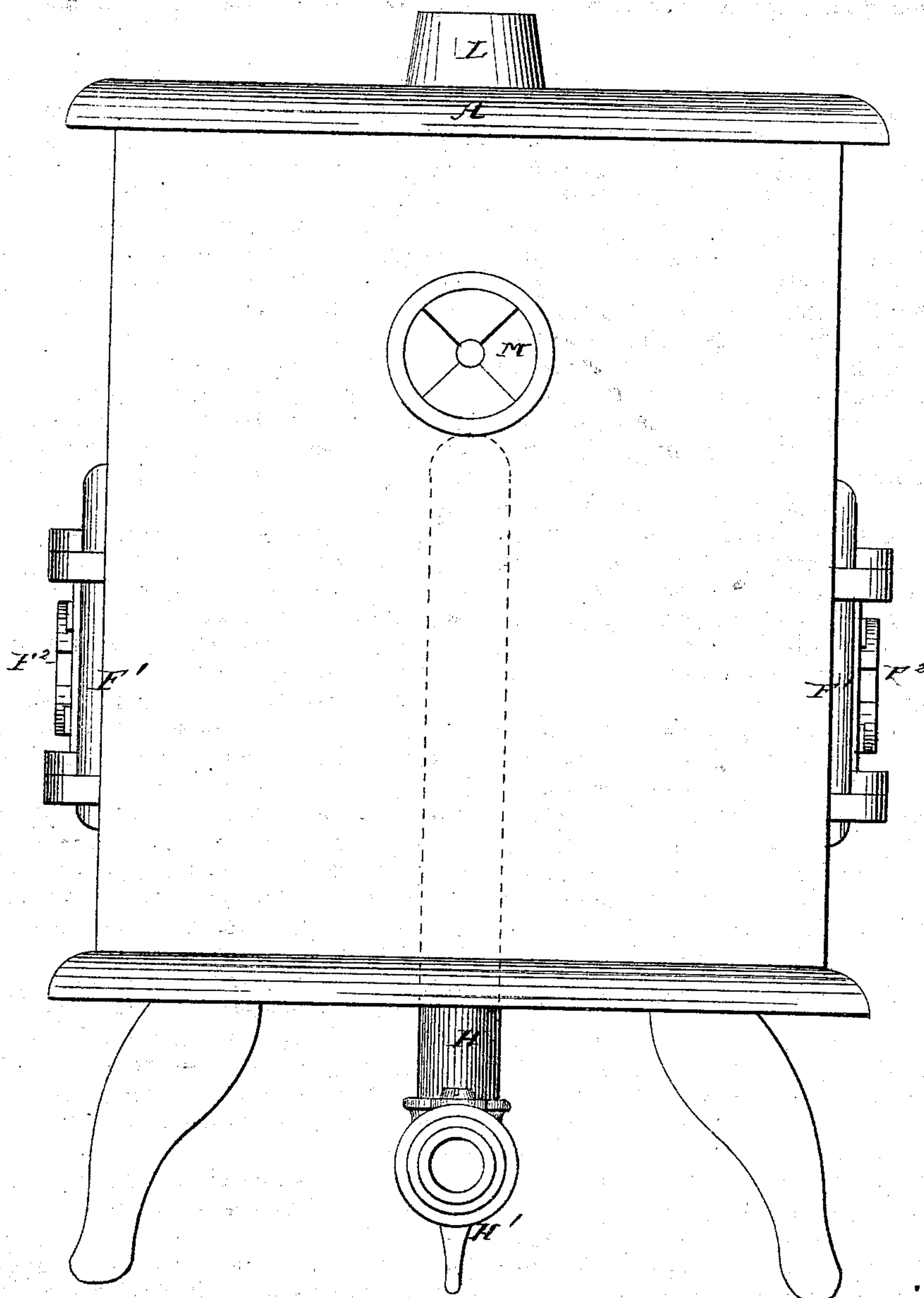
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Fig. 6.



Witnesses.

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# UNITED STATES PATENT OFFICE.

BENJAMIN F. CAWTHON AND DAVID I. EZEKIEL, OF ELIZABETH-TOWN, KENTUCKY.

## IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **152,602**, dated June 30, 1874; application filed May 15, 1874.

*To all whom it may concern:*

Be it known that we, BENJAMIN F. CAWTHON and DAVID I. EZEKIEL, of Elizabeth-town, in the county of Hardin and State of Kentucky, have invented certain new and useful Improvements in Cooking-Stoves and Ranges; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in stoves and ranges for cooking and heating purposes; and it consists in the peculiar arrangement of an air-chamber around the top, bottom, and ends of the oven, or an air-chamber occupying the position of the oven, and between such oven or chamber and the fire and flue spaces.

Air is supplied to this chamber by means of pipes or tubes regulated by cocks or valves, and, after circulating through the chamber, is either conducted to the stove-pipe by means of vent-holes or nozzles arranged immediately below the same, or by means of a register or valve to the apartment to be heated.

But that our invention may be fully understood, we will describe the same in detail by aid of the accompanying drawings, which form part of this specification.

Figure 1 represents an end view with the back plate removed, and Fig. 2 a vertical section, of a cooking stove or range with our improvements applied thereto. Fig. 3 is a detached view of part of the top plate, showing the stove-pipe hole and vents or nozzles.

A A represent the plates forming the exterior of a cooking-stove or range; B, the fire-space, and E the flue. F represents the oven. Around the top  $f^1$ , bottom  $f^2$ , and ends  $f^3$   $f^4$  of the oven F an air-chamber, G, is constructed. Air is supplied to this chamber G by means of pipes H, provided with taps or valves H', for the purpose of regulating the current therethrough.

These pipes H at their lower ends are open to the external atmosphere, while at their up-

per ends they pass through a partition,  $h$ , and open into the chamber G. The air thus admitted to the chamber G is conducted in the direction of the arrows 1 2 3 4, around the oven F, to vent-holes or nozzles I, formed in or applied to the plate K, which divides the flue E from the chamber G, through which it passes in the direction of the arrow 5 to the stove-pipe L.

By this arrangement it will be readily seen that a current of heated air is carried continuously round the oven, and the heat of the oven is equalized, thereby preventing the burning or unequal cooking of articles of food placed in the oven.

Fig. 4 represents an external side view, Fig. 5 a vertical section, and Fig. 6 an end view, of a stove arranged for heating purposes constructed according to our invention.

Similar letters indicate corresponding parts in all the figures.

In this case the space F is employed as a hot-air chamber in place of an oven, as in the previous figures, and the air admitted to the chamber G by means of the pipe H, after passing around the chamber G, as described in the previous figures, is conducted by means of the register or valve M into the apartment to be heated. The pipe H in this case is, by preference, connected by other pipes with the external air, by which means a continuous supply of fresh warm air is admitted to the apartment in addition to the heated air circulating through the chamber F by means of the openings  $F^2$  in the doors  $F^1$ , which are arranged on each side of the stove to allow of the free passage of air to and from the said chamber.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a stove or range, the combination, with a continuous air-passage, G, passing over the top, bottom, and ends of an oven or chamber, F, and between such oven or chamber F and the fire-place B and flue E, as described, of the inlet-pipes H, provided with regulating-valves, and the outlet-nozzles I, all constructed and operating as and for the purposes described.

2. In a stove or range, the combination, with a heating-chamber, F, provided with doors or registers F<sup>1</sup> F<sup>2</sup>, substantially as described, of a continuous air-passage, G, passing over the top, bottom, and end of said chamber F, air-inlet pipe H, provided with a regulating-valve, and an outlet register or valve, M, constructed and operating as and for the purpose described.

In testimony that we claim the foregoing as our own we hereto affix our signatures in presence of two witnesses.

BENJAMIN F. CAWTHON.  
DAVID I. EZEKIEL.

Witnesses:

E. WARFIELD,  
GEO. V. MATTHIS.