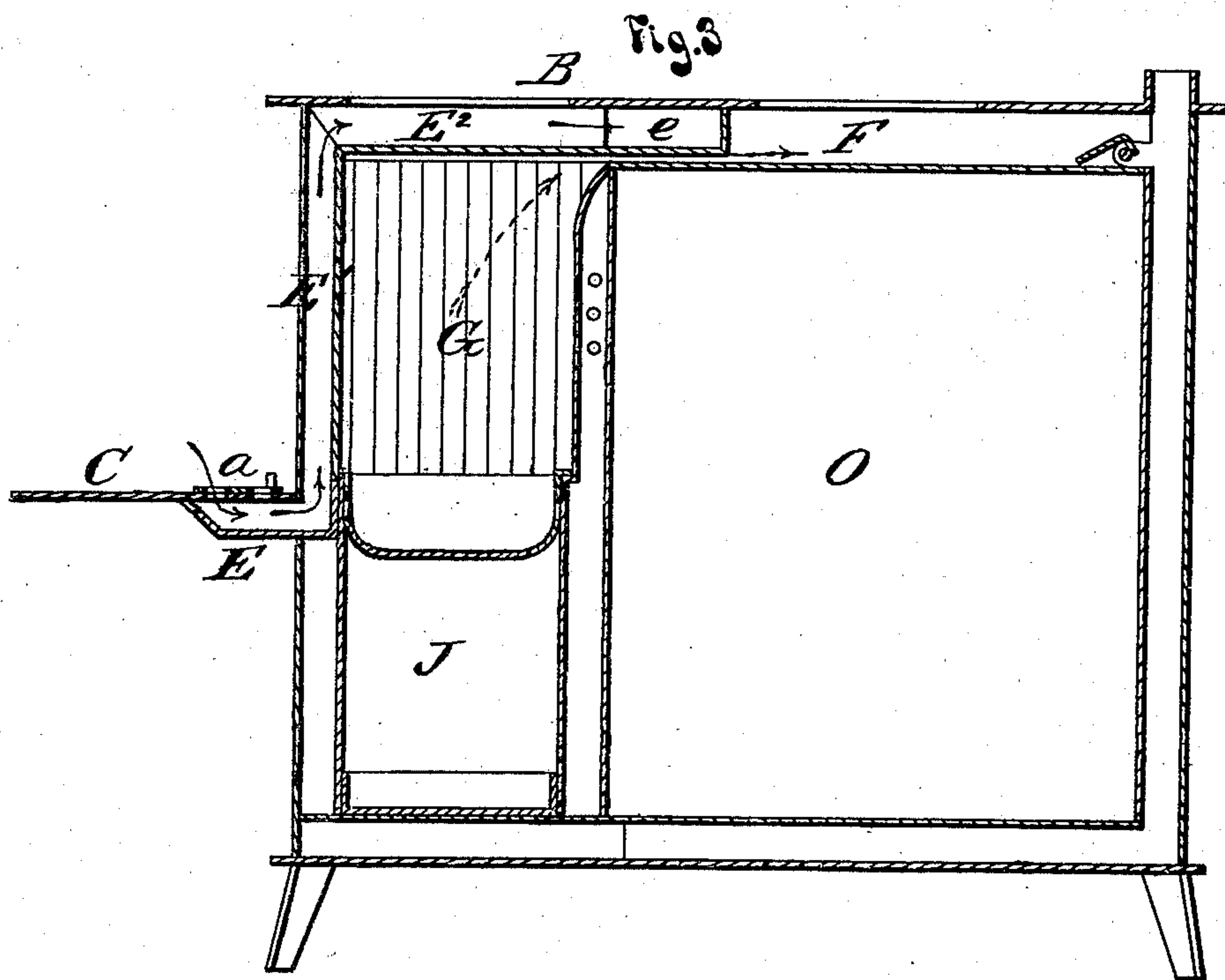
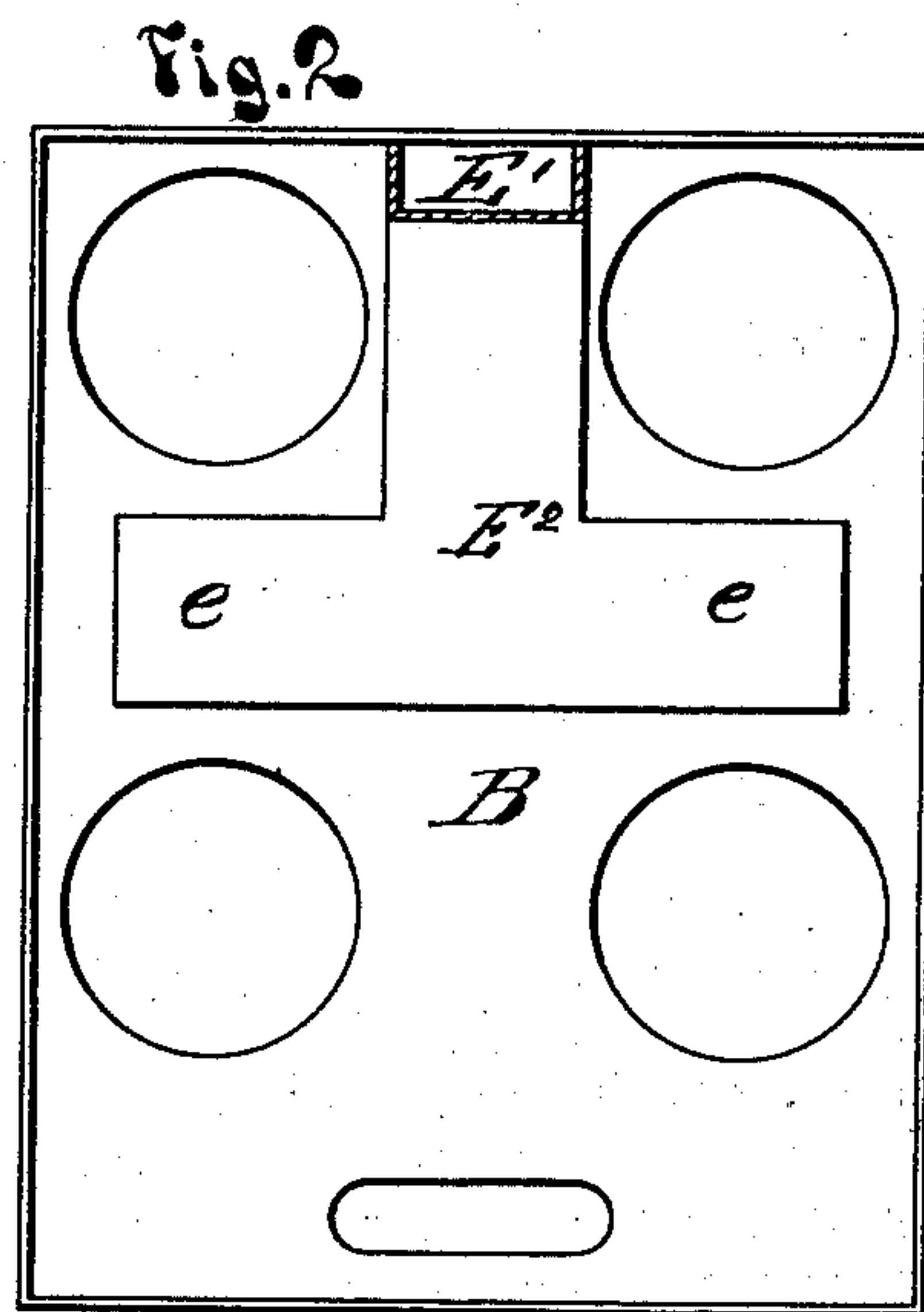
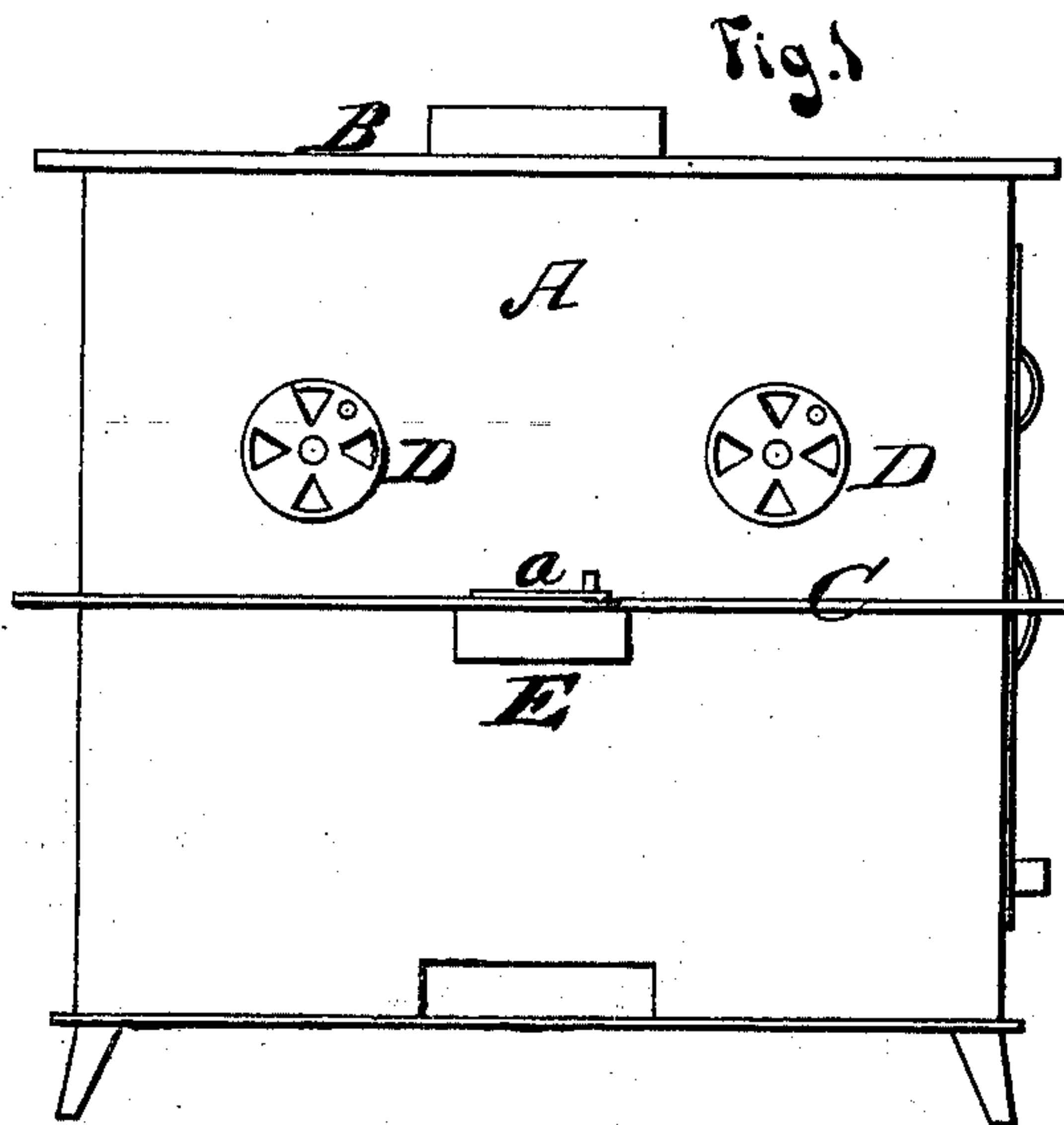


J. F. LANGLAIS.
Air-Flues for Stoves.

No. 156,092.

Patented Oct. 20, 1874.



WITNESSES

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JOSEPH F. LANGLAIS, OF MEMPHIS, TENNESSEE.

IMPROVEMENT IN AIR-FLUES FOR STOVES.

Specification forming part of Letters Patent No. **156,092**, dated October 20, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that I, JOSEPH F. LANGLAIS, of Memphis, in the county of Shelby and State of Tennessee, have invented a new and valuable Improvement in Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a front elevation of my stove. Fig. 2 is a top view, and Fig. 3 is a sectional view, of the same.

This invention has relation to means for supplying the combustion-chambers or combustion-flues of stoves with highly-heated air for the purpose of promoting combustion therein.

The nature of my invention consists in a T-shaped air-flue applied to the top plate of the stove over the combustion-chamber and commencement of the flue between the top oven-plate and said top stove-plate, in combination with a flue leading to the hearth, which latter is provided with a register, as will be hereinafter explained.

In the annexed drawings, I have represented my improvements applied to a single-oven cook-stove, in which A designates the front plate of the stove; B, the top plate; C, the hearth; D D, registers for introducing cold air directly into the fire-chamber G; F, the smoke-flue between the top plate of the oven O and the top plate B of the stove; and J is the ash-pit. These parts may be constructed in the usual well-known manner, as represented in the drawings. At the middle of the length of the hearth a hole is made through this hearth, and provided with a register, *a*. Beneath this register is a short horizontal flue, E, which communicates with a vertical flue, E¹, applied to the inner side of the front plate A, and extended to the top plate B, where it communicates with the longitudinal portion of a T-shaped flue, E². This flue E² is applied to the bottom side of the top plate B, and is not

so wide as to be in the way of the pot-holes through this plate, as shown in Fig. 2. The transverse branches *e e* of the flue E² are open at their extremities, and these branches are so arranged that the flame and highly-heated products of combustion will impinge against them while passing into the flue F from the fire-chamber. The vertical and horizontal portions E¹ E² of the air-flue are also exposed to the heat in the fire-chamber.

It will be seen from the above description that, when a fire is made in the chamber G, and the register *a* is opened, air will be induced to pass through the flues E E¹ E², and escape in a highly-heated condition from the extremities of the branches *e e*, where it will mix with the flame and smoke, and cause a more or less complete combustion of the same.

Three of the walls of the fire-chamber are double, and the spaces between these double walls are supplied with air through perforations made through the side walls of the stove, as shown in Fig. 3. This will prevent a rapid destruction of the fire-wall plates.

I am aware that it is not new to introduce heated air into the fire-chambers of stoves and furnaces for the purpose of promoting combustion therein; but I am not aware that air-heating flues have ever been used, arranged as I have above described and shown, with a register applied on the hearth-plate at the point where the air enters said flues, and with a T-shaped flue constructed on the bottom of the plate B.

What I claim as new, and desire to secure by Letters Patent, is—

In a stove, the combination and arrangement of the flues E E¹ E² *e e* and the register *a*, substantially in the manner and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH F. LANGLAIS.

Witnesses:

THOS. N. BELL,
THOS. F. MEATH.