

(No Model.)

2 Sheets—Sheet 1.

E. A. C. PETERSEN.
BAKER'S OVEN.

No. 428,521.

Patented May 20, 1890.

Fig. I.

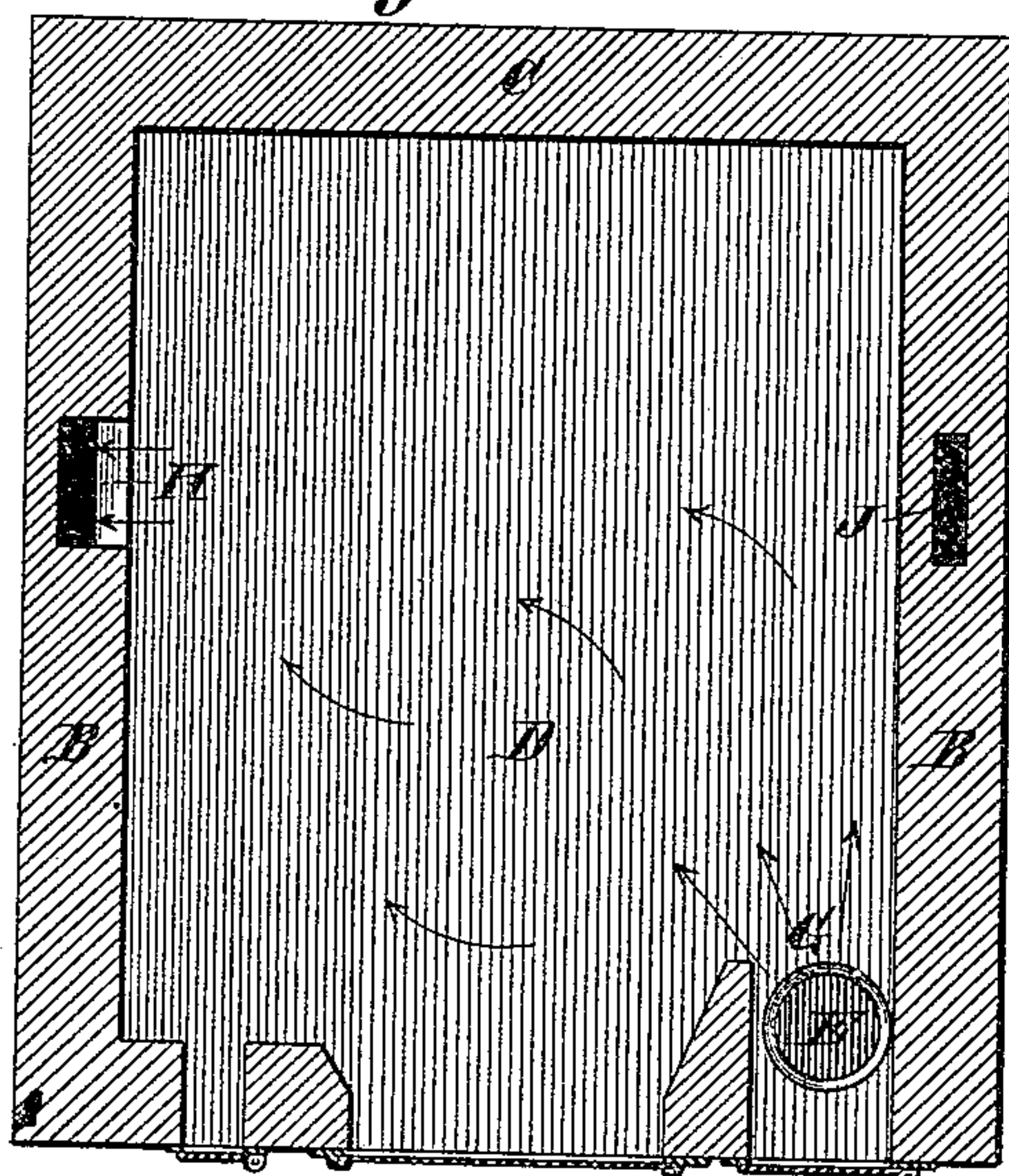


Fig. III.

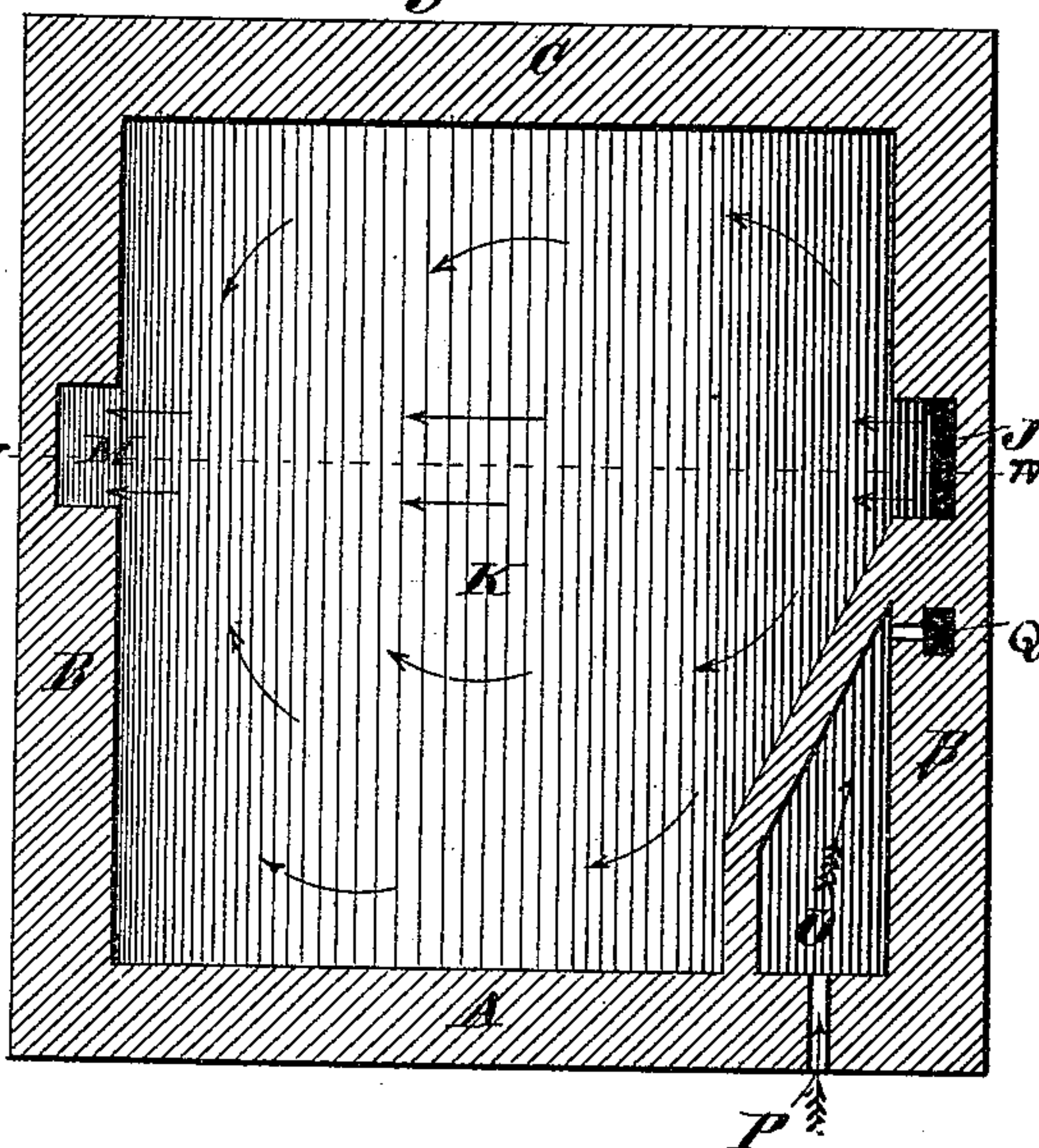


Fig. II.

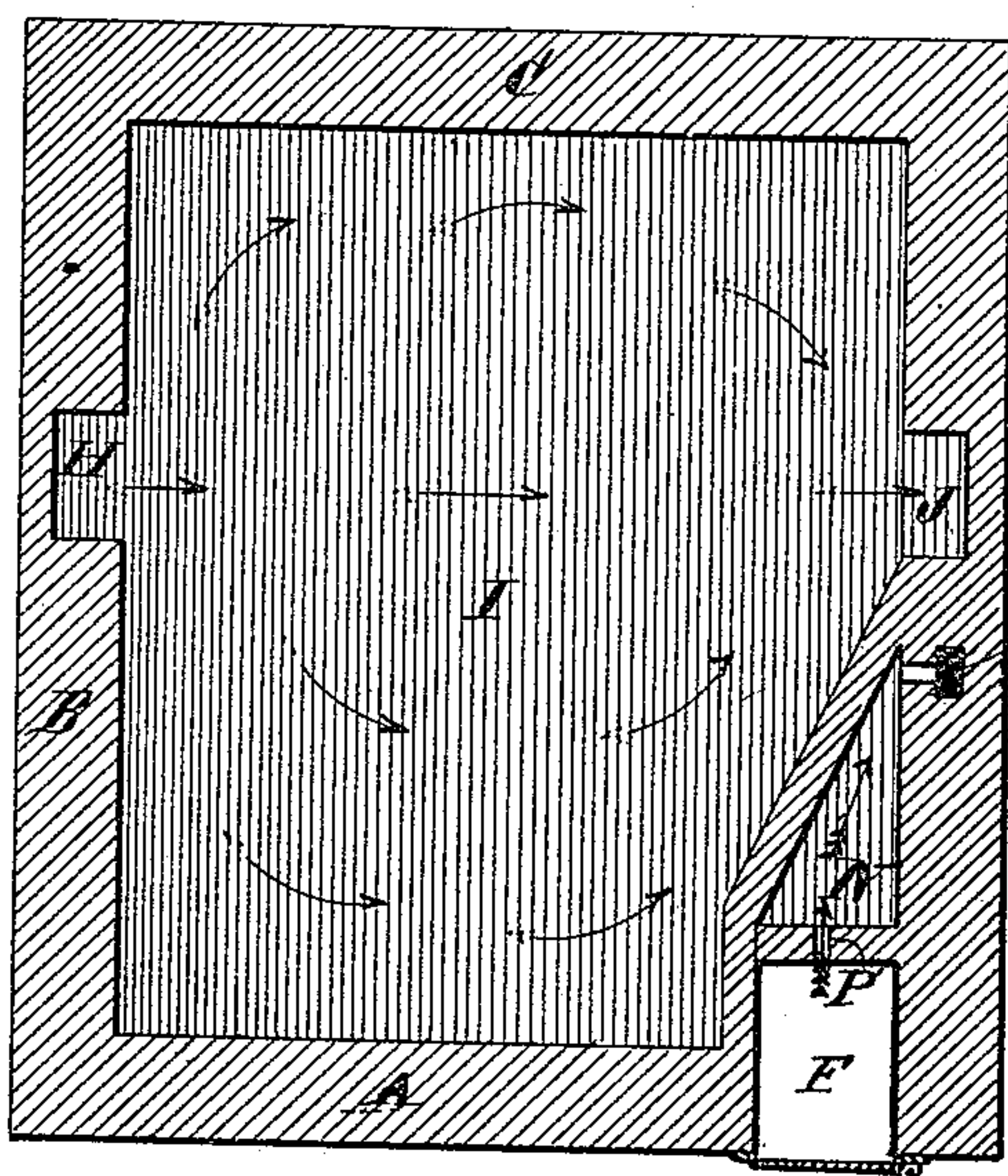
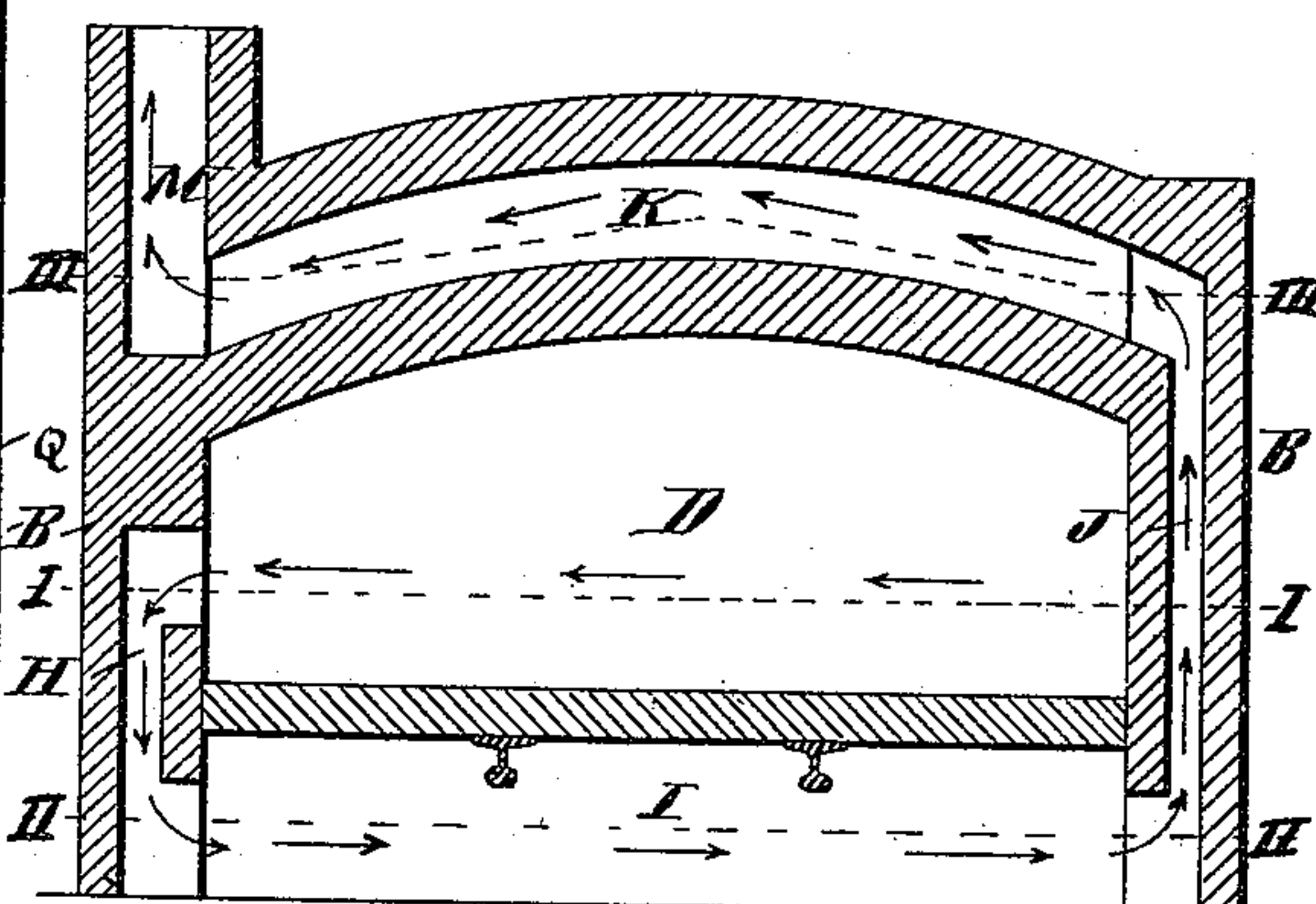


Fig. IV.



Attest,
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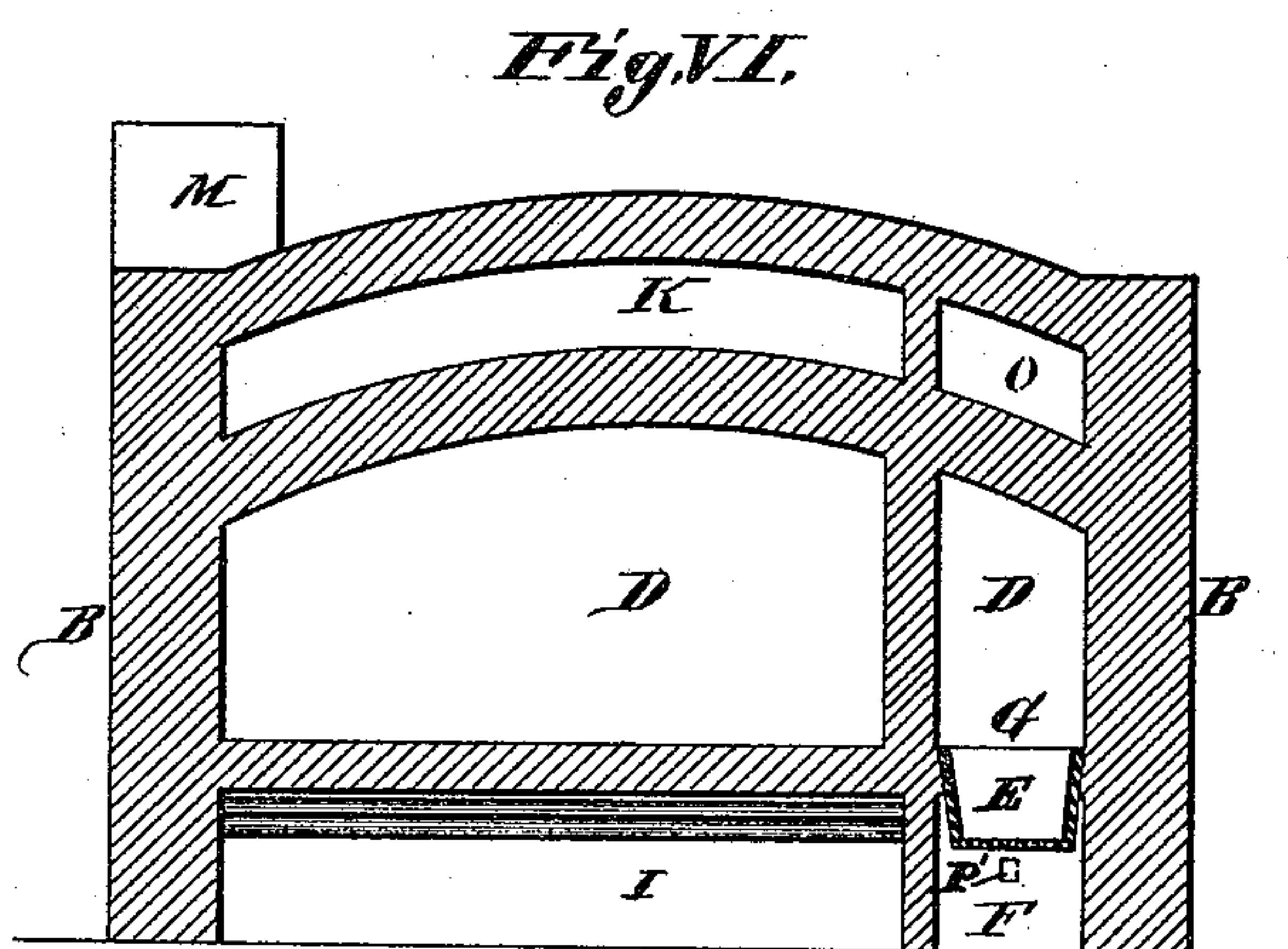
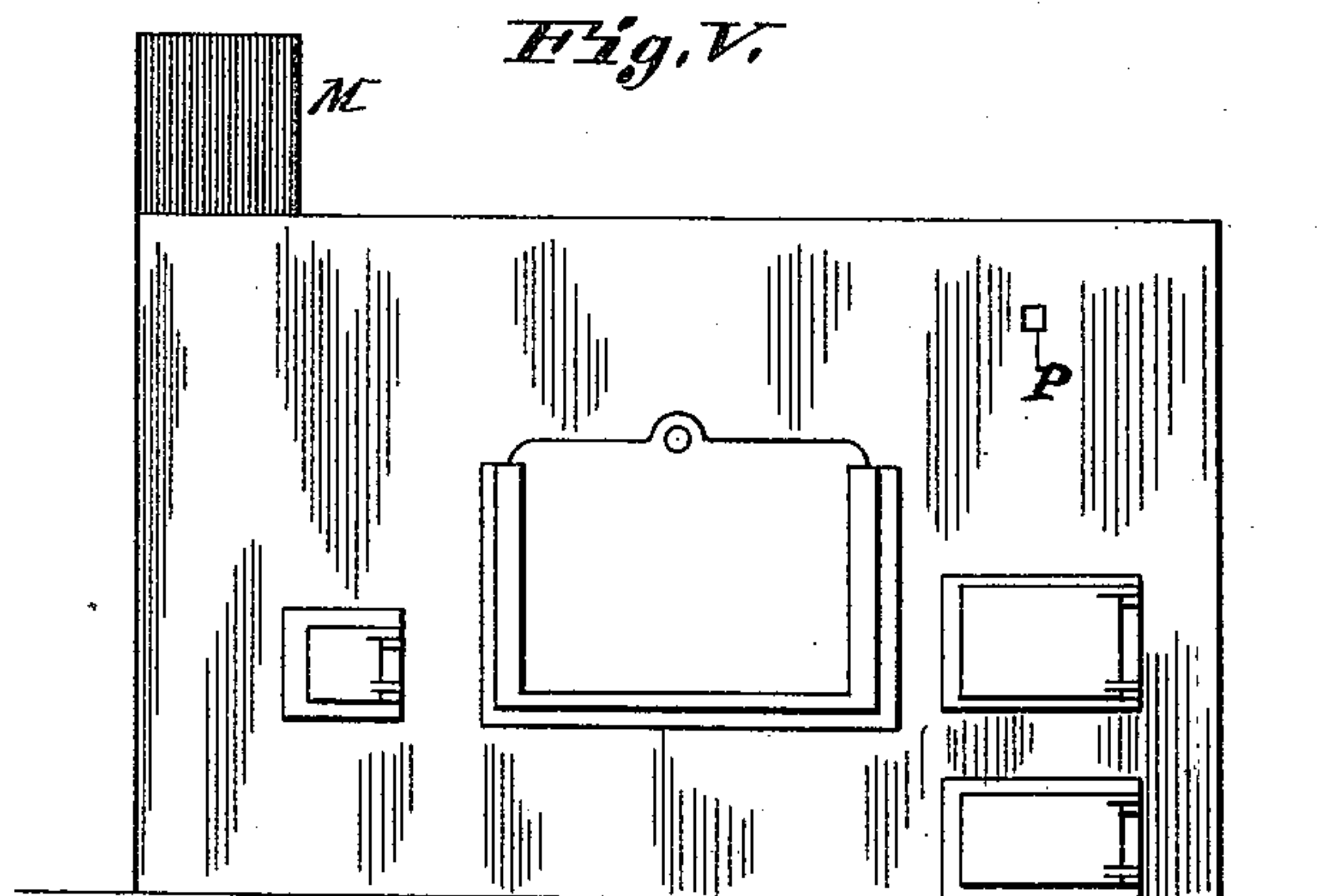
(No Model.)

2 Sheets—Sheet 2.

E. A. C. PETERSEN.
BAKER'S OVEN.

No. 428,521.

Patented May 20, 1890.



Attest:

M. E. Orrand,
Walter Allen

Inventor:

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UNITED STATES PATENT OFFICE.

EDWARD A. C. PETERSEN, OF CHICAGO, ILLINOIS.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 428,521, dated May 20, 1890.

Application filed November 4, 1889. Serial No. 329,168. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. C. PETERSEN, of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Bakers' Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Figure I is a horizontal section of my oven, taken on line I I, Fig. IV. Figs. II and III are similar views taken, respectively, on lines II II and III III, Fig. IV. Fig. IV is a vertical section on line IV IV, Fig. III. Fig. V is a front elevation. Fig. VI is a vertical section on a line just inside the front wall of the oven.

My invention relates to an improved construction of oven for bakers' use, the object being to accomplish a uniform heating of the baking-chamber with a minimum amount of fuel; and to this end my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the front wall, B the side walls, and C the rear wall, of the oven.

D represents the baking-chamber; E, the fire-box at one corner, and F the ash-pit.

G represents a flue leading from the fire-box into the baking-chamber. The heat and products of combustion pass from the fire-box to the baking-chamber through the flue G, and pass across the baking-chamber, as shown by the arrows in Fig. I, to a descending flue H in the side wall at the opposite side of the oven to the fire-box, through which they pass in a downwardly direction to a bottom chamber I beneath the baking-chamber, and across which they pass, as shown by the arrows in Figs. II and IV, to an ascending flue J in the side wall at the same side of the oven as the fire-box. Passing upwardly through the flue J they enter a top chamber K above the baking-chamber, through which they circulate, and then pass to the uptake or chimney M in the side wall at the opposite side of the oven over the descending flue, as shown by the arrows in Figs. III and IV.

In Fig. IV I have shown a transverse section of the oven, which illustrates the passage or meandering of the heat and products of

combustion through the baking-chamber, through the flue H, through the chamber I beneath the baking-chamber, through the flue J, through the chamber K, above the baking-chamber, and to the chimney.

It will be understood that the heat and products of combustion as they pass through the baking-chamber from the flue G do not fill the baking-chamber entirely, but take substantially the shortest cut to the flue H. By the use of the chambers I and K and their connecting-flues H and J, I am enabled to get a uniform heating of the baking-oven throughout its entire surface. It is evident that the baking-chamber will be heated more near the flue G than at other parts, for the reason that the temperature will be the greatest where the heat first enters from the fire-box. To get a uniform temperature of this portion of the baking-chamber with the portions more remote from the fire-box, I construct the oven with live-air chambers N and O, the chamber N being located beneath the baking-chamber, and the chamber O above the baking-chamber at the corner or part of the oven into which the fire-box first discharges the heat. These chambers communicate with the outer air through means of openings P P', through which the air enters the chambers, and after passing through the chambers the air enters suitable flues Q, through which it is discharged either into the chimney or uptake or into the open air. I thus obtain a circulation of cool air above and beneath the baking-chamber, where the heat first enters, and cool down this portion of the baking-chamber to make it uniform with that of the other portion.

A baker's oven thus constructed is cheap and can be rapidly heated with a minimum amount of fuel.

I claim as my invention—

1. A baker's oven consisting of the front wall, the side walls, the rear wall, the baking-chamber, the fire-box, the flue leading into the baking-chamber, the descending flue in a side wall of the oven, the bottom chamber into which the descending flue discharges extending beneath the baking-chamber, the ascending flue in the side wall of the oven at the opposite side of the oven to the descending flue and connected with the bottom chamber, the top chamber extending over the baking-cham-

ber, into which the ascending flue discharges, and the uptake in the side wall of the oven above the descending flue and connected with the top chamber, substantially as described.

5 2. A baker's oven comprising a baking-chamber, a fire-box, a flue discharging into the baking-chamber, a cold-air chamber beneath the fire-box, having an air-inlet, and a cold-air flue in the side wall of the oven, connected with the cold-air chamber, substan-
10 tially as described.

3. A baker's oven comprising a baking-chamber, a fire-box, a flue discharging into the baking-chamber, a cold-air chamber over
15 the fire-box, having an air-inlet, and a cold-

air flue in the side wall of the oven, connected with the cold-air chamber, substantially as described.

4. A baker's oven comprising a baking-chamber, a fire-box, a flue discharging into 20 the baking-chamber, a cold-air chamber beneath the fire-box, a cold-air chamber over the fire-box, and a cold-air flue in the side wall, connected with the cold-air chambers, substantially as described.

EDWARD A. C. PETERSEN.

In presence of—

E. S. KNIGHT,
THOS. KNIGHT.