

(No Model.)

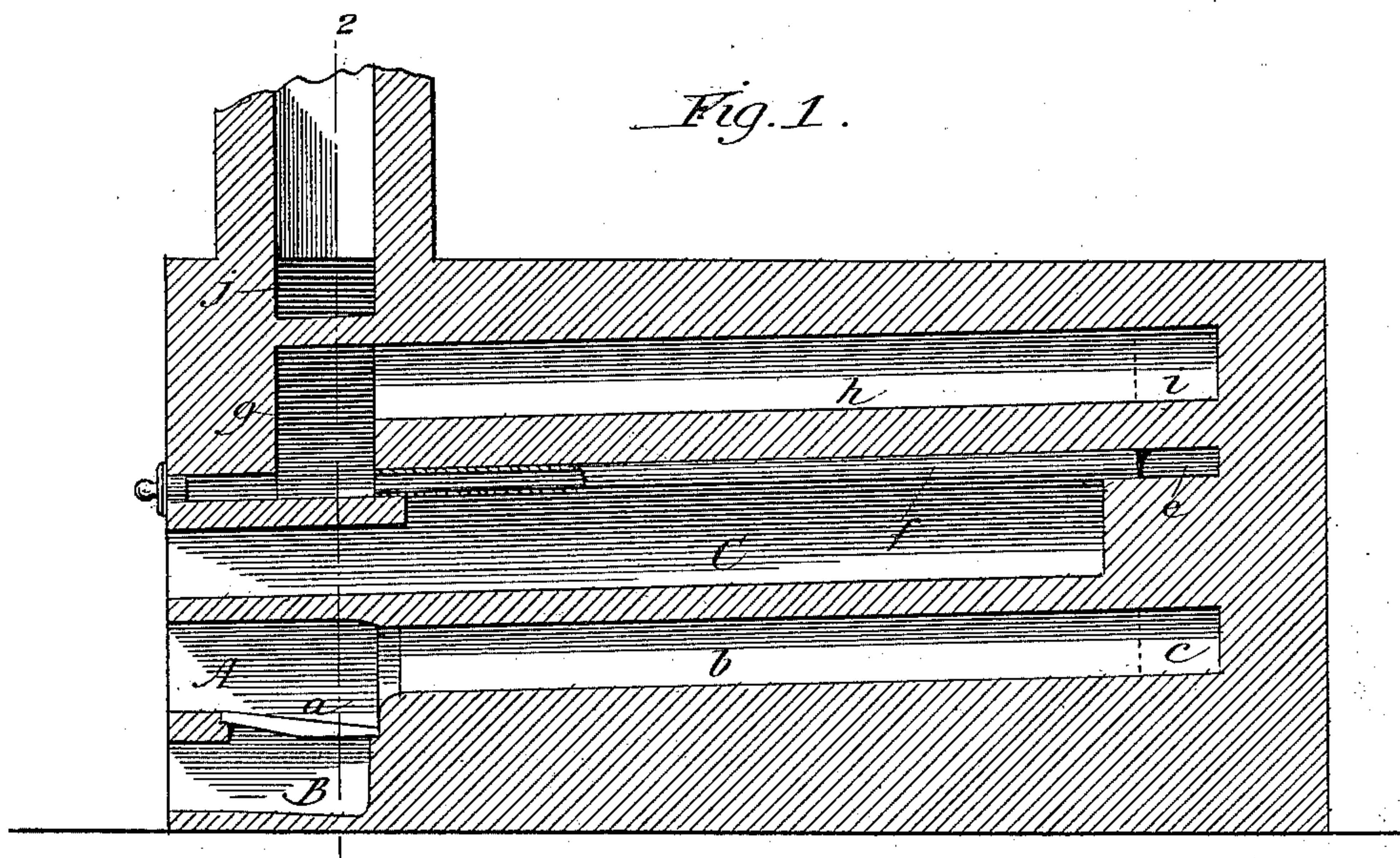
2 Sheets—Sheet 1.

E. A. C. PETERSEN.

BAKER'S OVEN.

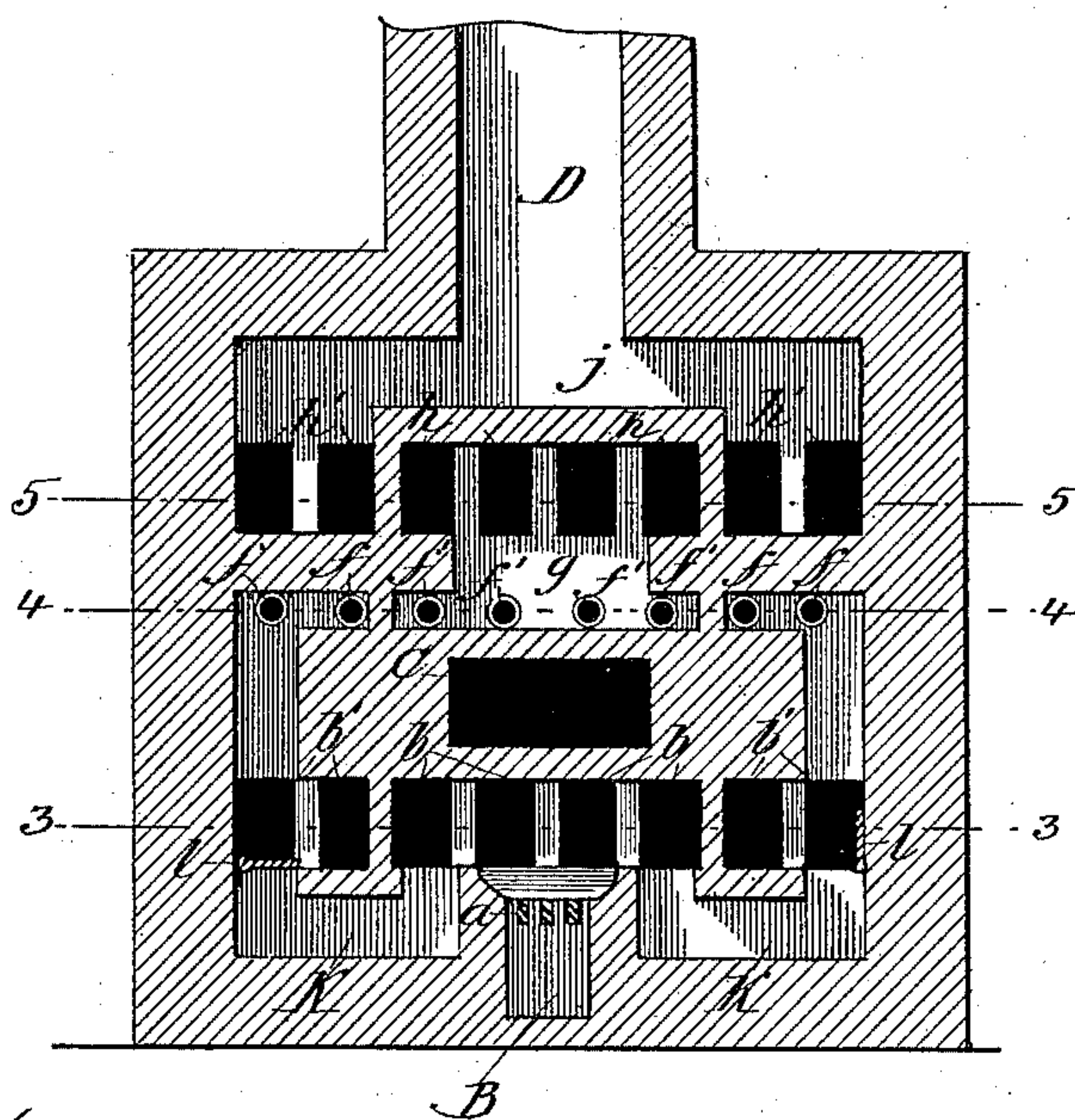
No. 363,416.

Patented May 24, 1887.



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Fig. 2.



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Fig. 3.

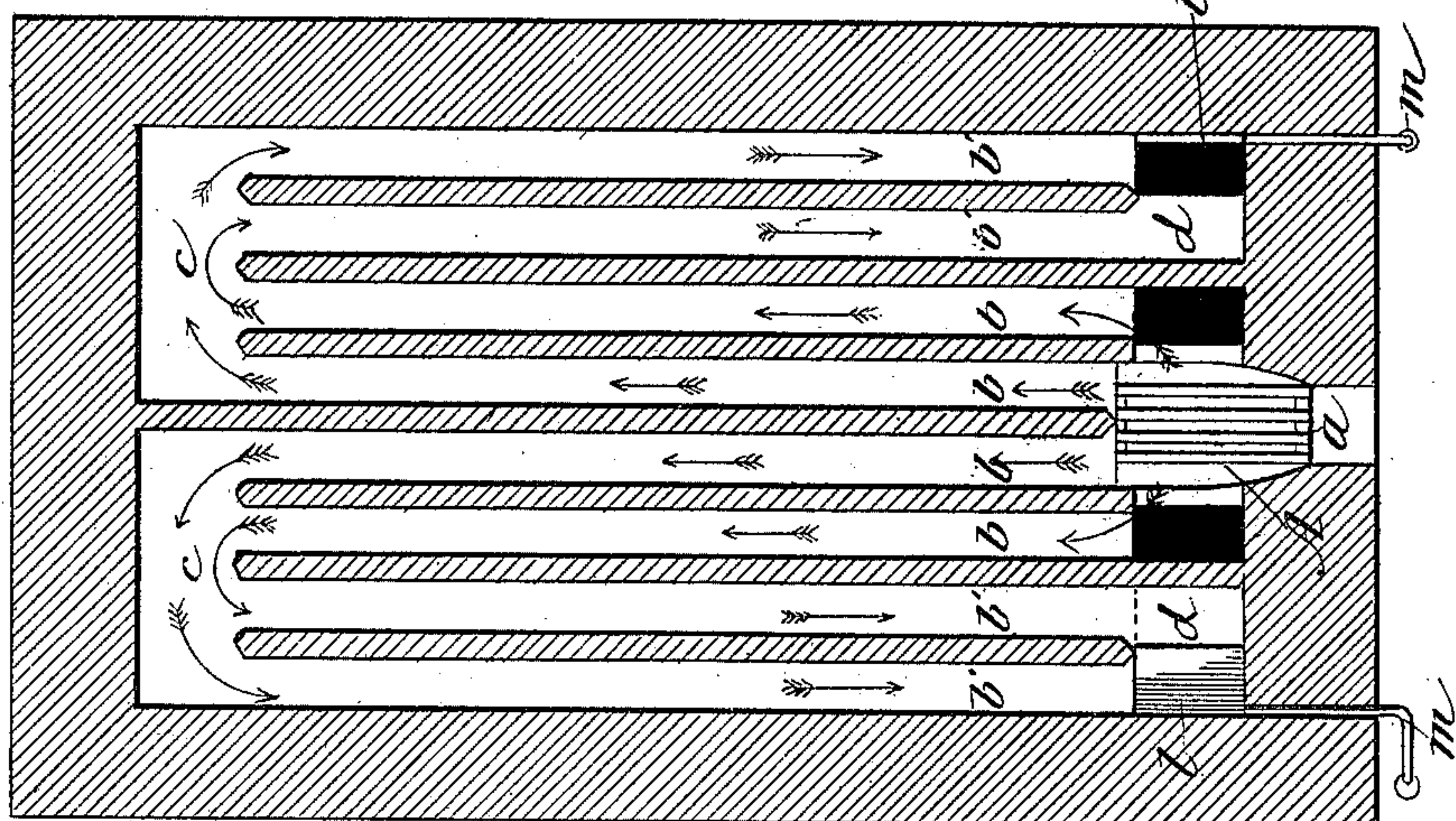


Fig. 4.

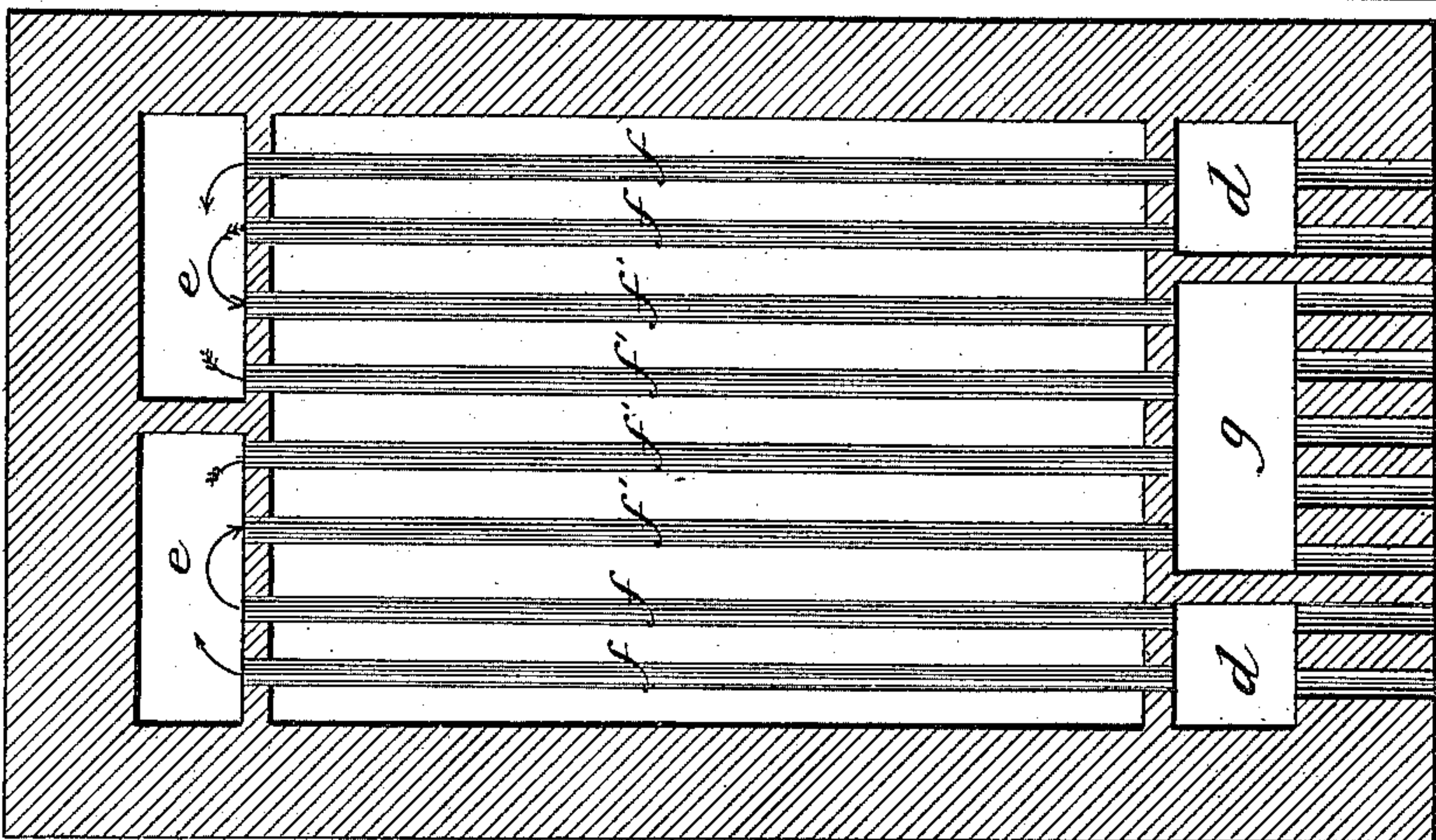
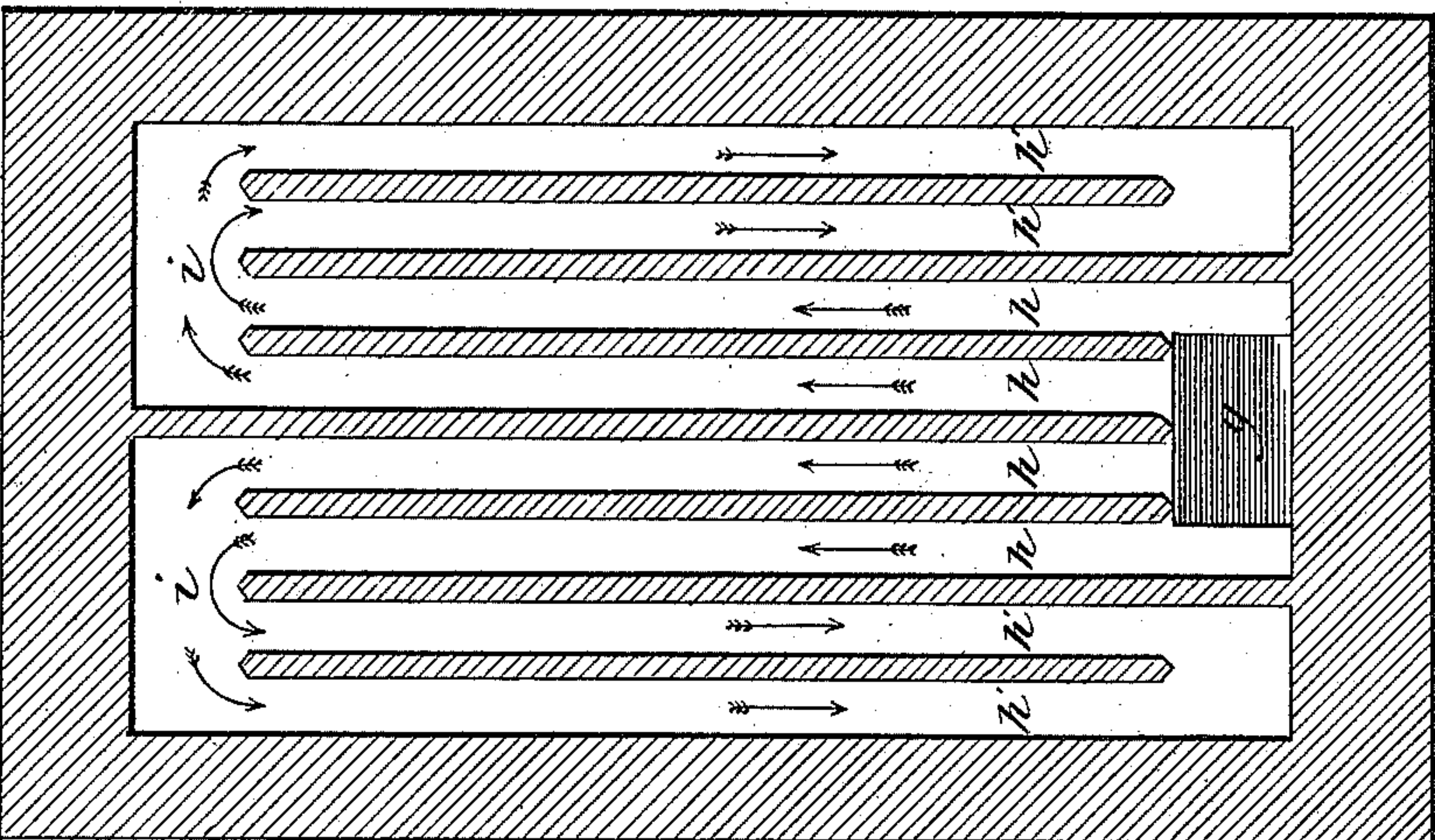


Fig. 5.



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# UNITED STATES PATENT OFFICE.

EDUARD A. C. PETERSEN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO HENRY PIPER, OF SAME PLACE.

## BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 363,416, dated May 24, 1887.

Application filed May 5, 1885. Serial No. 161,442. (No model.)

*To all whom it may concern:*

Be it known that I, EDUARD A. C. PETERSEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bakers' Ovens, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to the construction of bakers' ovens, and is an improvement of the oven described in Letters Patent of the United States, No. 252,054, granted to me on January 10, 1882.

The invention consists of the novel devices and combination of devices, hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section through the central line of the oven. Fig. 2 is a cross-section on line 2 2 in Fig. 1; Fig. 3, a sectional plan on line 3 3 in Fig. 2; Fig. 4, a sectional plan on line 4 4 in Fig. 2, and Fig. 5 a sectional plan on line 5 5 in Fig. 2.

Like letters designate corresponding parts in all the figures of the drawings.

A denotes the fire-chamber, *a* the grate, and B the ash-pit. *b b* are a series of flues, and *b' b'* are return-flues, all of these flues being on the same plan parallel to each other and arranged underneath the hearth or baking-chamber, and the flues *b* and return-flues *b'* communicate in the rear end through to chambers *c c*. The return-flues *b' b'* communicate in the front end with vertical flues *d d*.

C is the hearth or baking-chamber, the ceiling of which may be supported on iron T-bars, as described in my former patent, and underneath this ceiling are arranged longitudinally a series of iron pipes, *f* and *f'*, the pipes *f f* communicating with the vertical flues *d d*, and the return-flues *f' f'*, through rear chambers, *e*, communicating with the flues *f*, and through a front vertical flue, *g*, with the longitudinal flues *h h*, that again, through chambers *i*, communicate with the return-flues *h' h'*. The flues *h' h'* lead into flue *j*, that forms the

communicating channel with the chimney D.

From each side of the fire chamber A a transverse flue, *k*, leads direct to vertical flues *d*, and each such flue *k* is provided with a trap-valve, *l*, arranged to be operated by iron crank-rods *m*, that are rigid with such valves and are projected through the front wall of the oven. By opening these valves *l* the hot gases from the fire will follow the more direct course, and instead of first passing through the flues *b' b'* will be carried at once through flues *d d* to pipes *f*, which frequently will be desirable for certain bakings that require more heat from above than from below.

By the arrangement of carrying the gases to and from each stratum of flues the gases are retained longer in the oven before they are allowed to escape through the chimney, to give up their heat more thoroughly, and thus economize in fuel.

I am aware that in ovens of this class flues above and below the baking-compartment have been used; also, that flues below the baking-compartment and pipes within such compartments have been used, and also that flues closed by valves and communicating with other flues situated below the compartment and extending the entire length of the same are not new, and therefore I lay no claim to these several arrangements; but

What I claim is—

A baker's oven having heating-flues *b b'* below the hearth, iron flues *f f'*, placed underneath the ceiling of and within the baking-chamber, and flues *h h'* above the baking-chamber, each stratum of such flues being arranged to carry the gases to and fro, and the several series of flues communicating through transverse and vertical flues, in the manner substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDUARD A. C. PETERSEN.

Witnesses:

W. J. CLAGETT,  
LOUIS NOLTING.