

(No Model.)

J. L. W. OLSEN.

BAKE OVEN.

No. 324,721.

Patented Aug. 18, 1885.

Fig. 1.

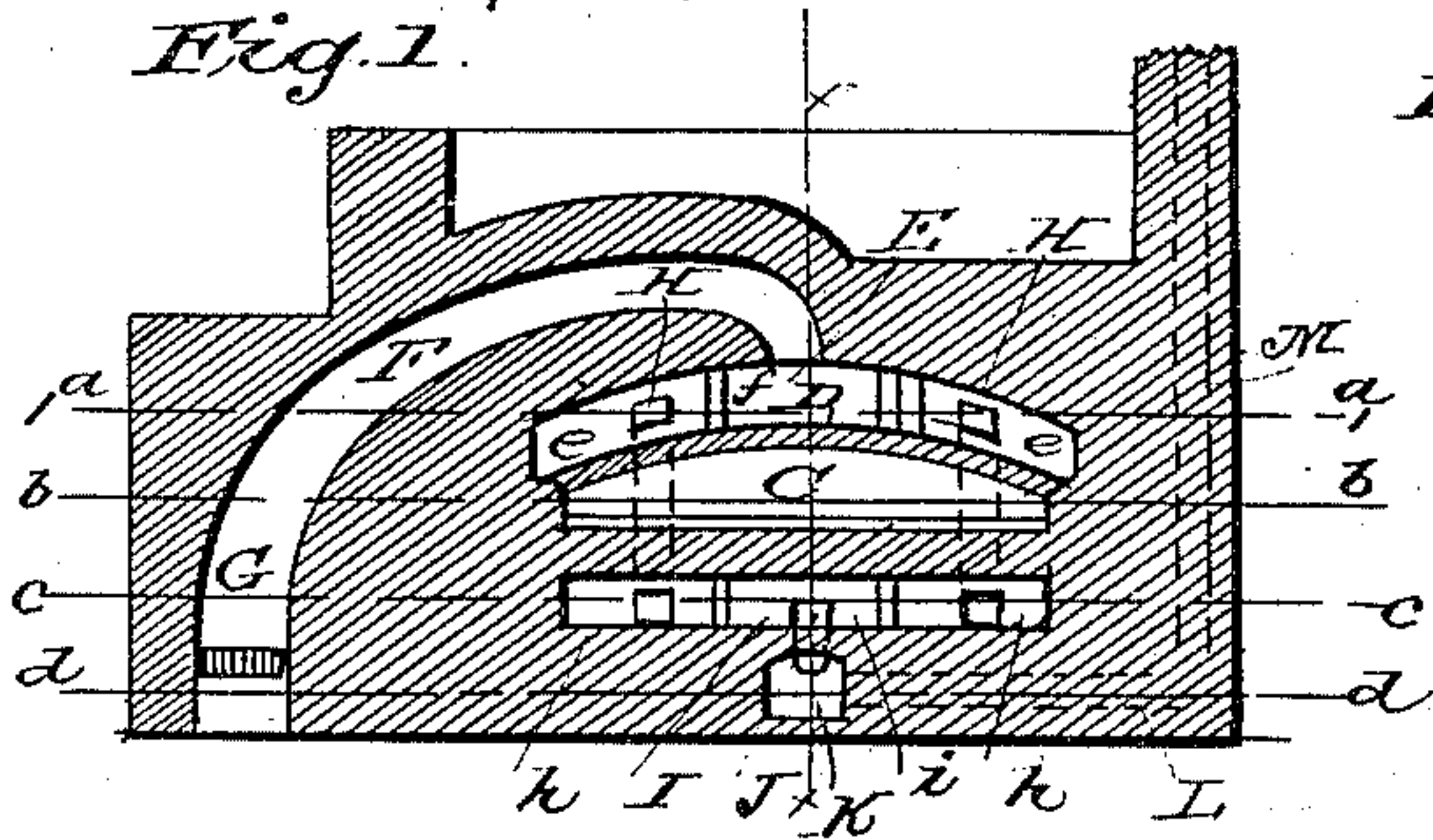


Fig. 2.

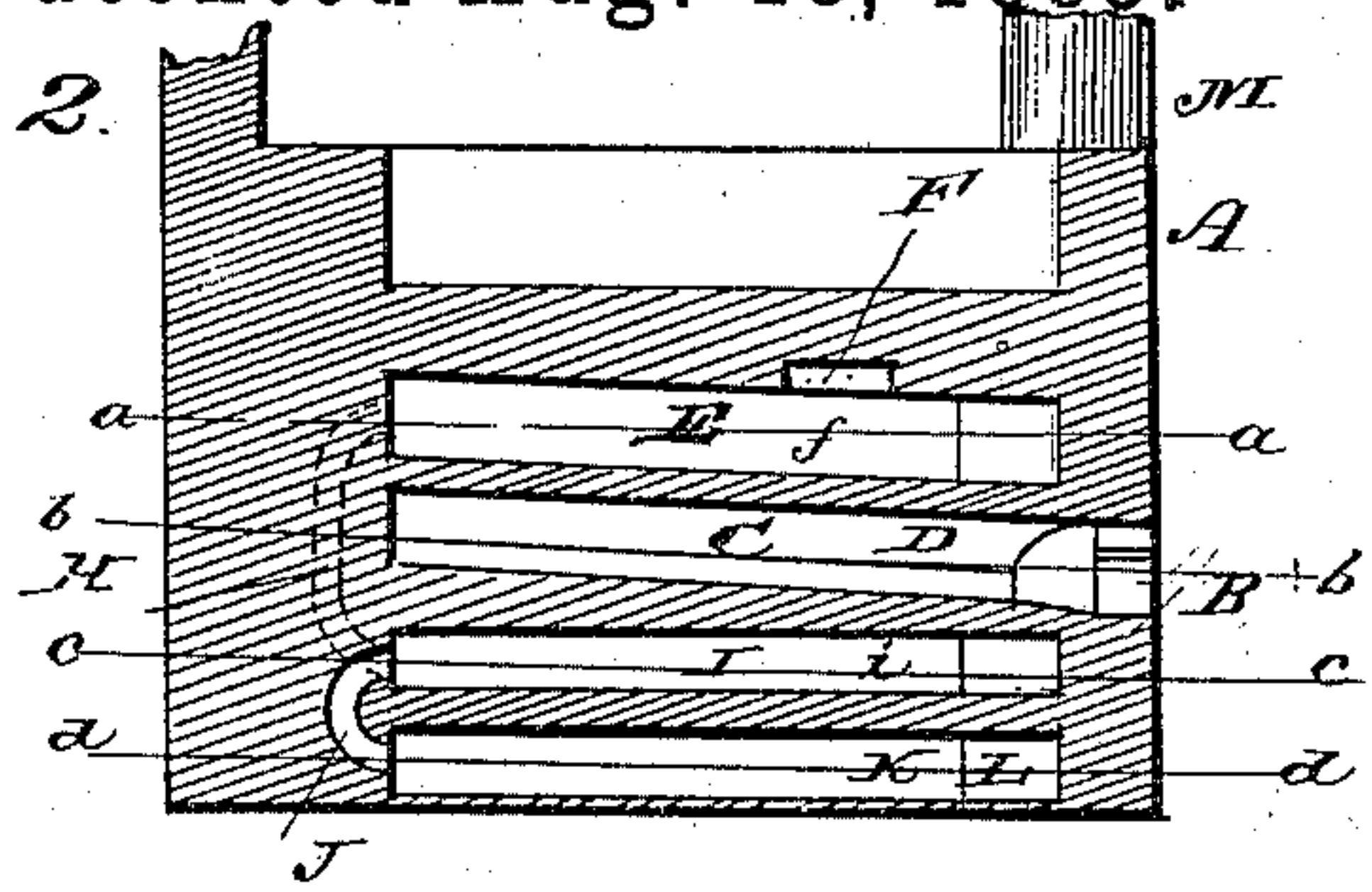


Fig. 3.

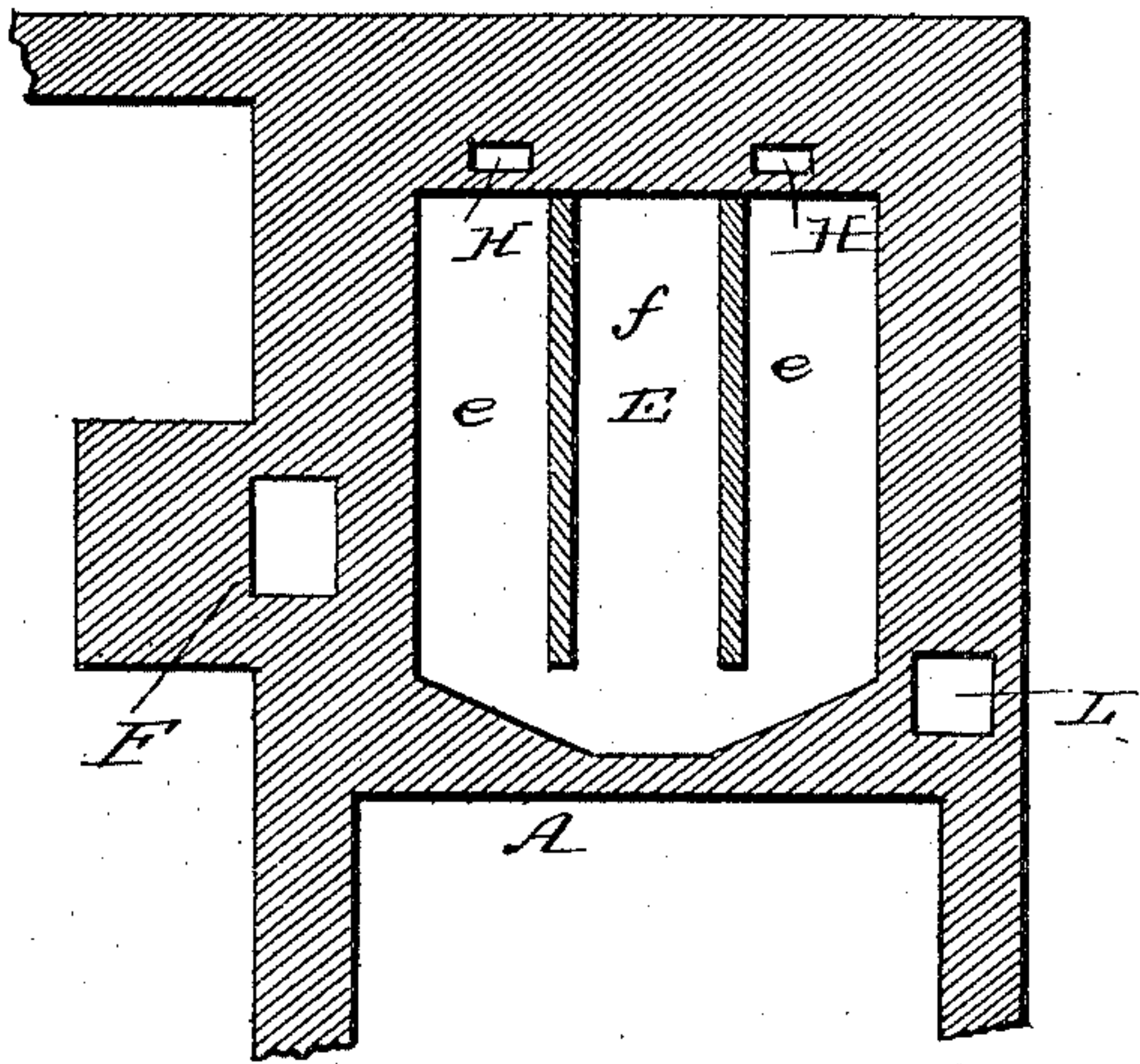


Fig. 4.

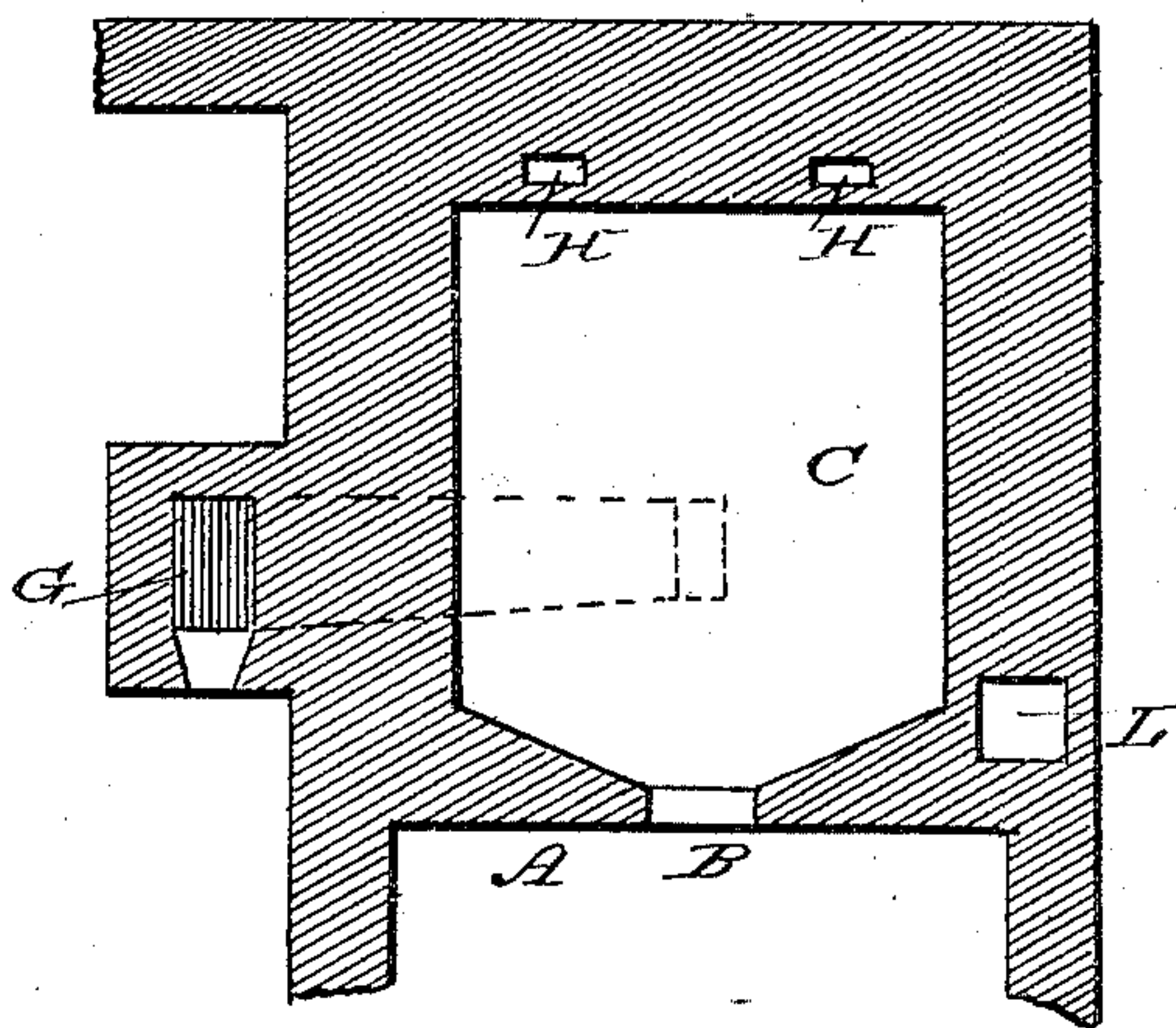


Fig. 5.

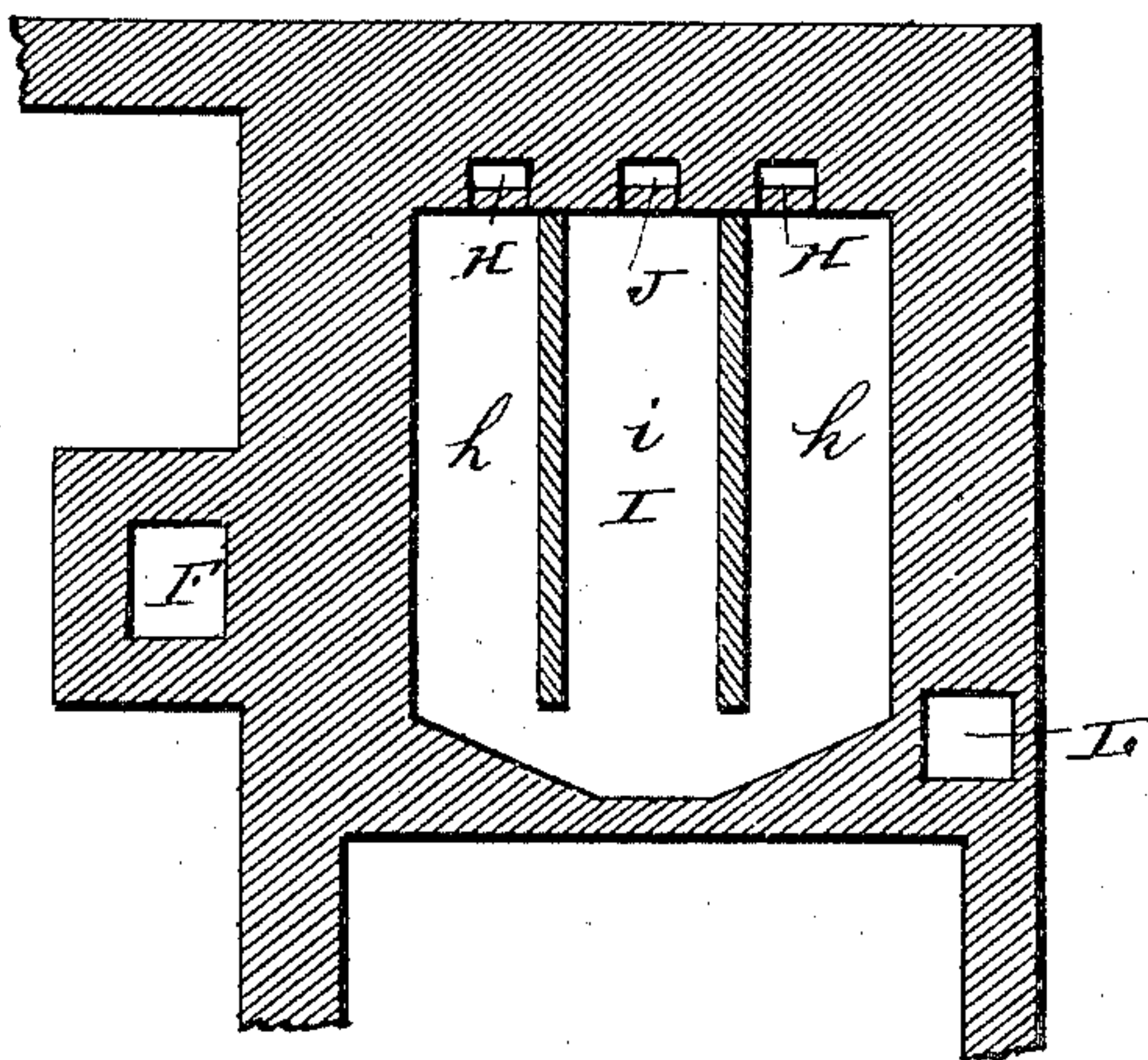
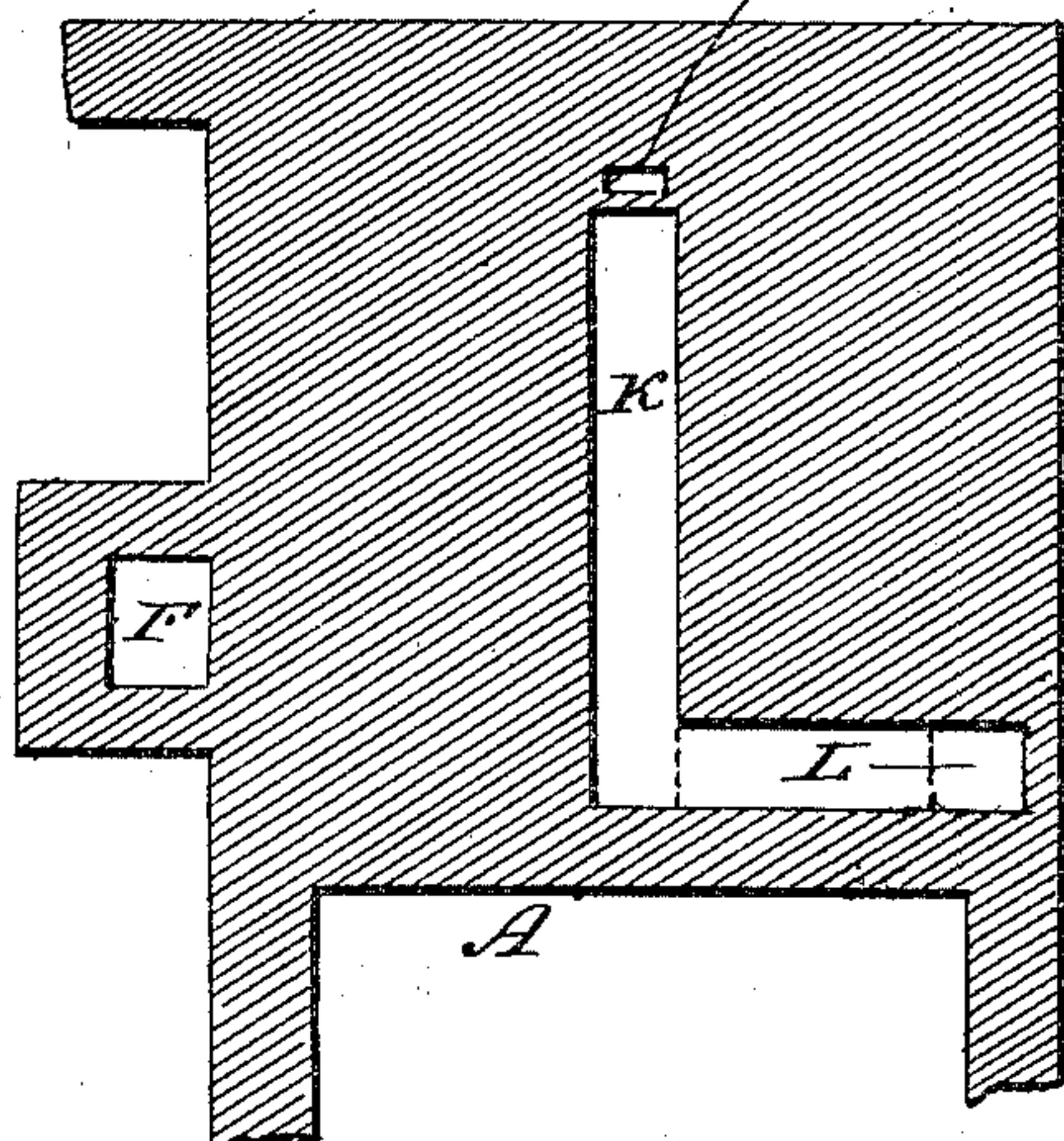


Fig. 6.



WITNESSES:

Ad. S. Dütterich  
Wm. Bagger

INVENTOR.

J. L. W. Olsen,  
by Louis Bagger & Co.  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHAN LUDVIG WALDEMAR OLSEN, OF COPENHAGEN, DENMARK.

## BAKE-OVEN.

SPECIFICATION forming part of Letters Patent No. 324,721, dated August 18, 1885.

Application filed December 13, 1884. (No model.) Patented in Austria-Hungary December 20, 1884, No. 38,783 and No. 59,172, and in France February 20, 1885, No. 161,895.

*To all whom it may concern:*

Be it known that I, JOHAN LUDVIG WALDEMAR OLSEN, a subject of the King of Denmark, residing at Copenhagen, in the Kingdom of Denmark, have invented certain new and useful Improvements in Bake-Ovens; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to bake-ovens; and it has for its object to provide a bake-oven which shall possess superior advantages in point of simplicity, durability, and general efficiency, and in which the heat supplied to the oven shall be of the most steady, even, and permanent character which it is possible to obtain, and in which the cooling of the oven shall be gradual and slow, in which the principal application of heat shall be at the top of the oven, where it is most required, while the products of combustion shall be exhausted from ducts under the bottom, so that the heat supplied shall be utilized to the greatest possible extent.

With these ends in view the invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, Figure 1 is a vertical transverse sectional view of my improved bake-oven. Fig. 2 is a vertical longitudinal sectional view taken on the line *x x* in Fig. 1. Fig. 3 is a horizontal transverse sectional view taken on the line *a a* in Figs. 1 and 2. Fig. 4 is a horizontal transverse sectional view taken on the line *b b* in Figs. 1 and 2. Fig. 5 is a horizontal transverse sectional view taken on the line *c c* in Figs. 1 and 2; and Fig. 6 is a horizontal transverse sectional view taken on the line *d d* in Figs. 1 and 2.

The same letters refer to the same parts in all the figures.

A designates the front wall of the bake-oven

which constitutes my invention. The said front wall is provided with the entrance or opening B, through which access is had to the oven proper, C. The latter is constructed with an arched top wall, D, above which is formed a chamber, E, forming a smoke or heating chamber, into which the main flue F, leading from the furnace G, opens, as shown. The flue F opens into the top of the chamber E, and the latter is provided on each side of the said flue, opening with a vertical wall or partition extending from the rear toward the front end of the said chamber and terminating some distance from the front wall of the latter, thus subdividing the chamber E into compartments *e e* and *f*, into the central one of which the flue F opens, and the side ones of which, *e e*, are provided at their rear ends with downwardly-extending flues H H, extending through the back wall of the furnace to a chamber, I, which is located underneath the bake-oven proper, and divided by partitions extending from the back wall toward the front end of said compartment into sub-chambers or compartments *h h* and *i*, the former of which being located at the outer sides communicate with the flues H H. The central chamber, *i*, which receives the products of combustion from the chambers *h h*, is provided at its rear end with a downwardly-extending passage, J, communicating with a central longitudinal bottom flue, K, the front end of which is connected by an angular passage, L, with the smoke-stack or chimney M.

The operation and advantages of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The products of combustion from the furnace pass through the flue F into the chamber E, or more correctly into the chamber or compartment *f* of the latter; thence through the chambers *e e* and flues or passages H H into the compartments *h h* of the chamber I; thence through the central compartment, *i*, of the latter, and through the passage J, flue K, and passage L to the chimney or smoke-stack. By this construction it will be seen that the greatest heat will be thrown on top of the bake-oven proper, where it is most required, while the products of combustion are required to pass through



convolute passages around and underneath the oven, which is thus thoroughly heated. By this construction another important object is also attained—namely, that the oven is under no circumstances permitted to cool rapidly, but retains its heat for the longest period possible, thus contributing to the thorough and successful baking of its contents.

I am aware that bake-ovens have been made having ducts for the products of the combustion to pass around the oven, and I do not wish to claim such construction, broadly; but I am not aware that such ovens have been made in which the flue from the furnace has entered into the chamber above the oven, whereupon the products of combustion have been carried around the oven and out into the chimney at a point underneath the oven, whereby the said products are much retarded and forced to give off the greatest quantity of heat; and

I therefore claim—

A baker's oven comprising the baking-chamber C, the chamber below the baking-chamber having partial partitions dividing the chamber into compartments *h h i*, a chamber, E, above the baking-chamber having partial partitions dividing this chamber into compartments *e e f*, a furnace, G, at one side of this chamber, flue F, connecting the furnace with compartment *f* of chamber E, flues H, connecting compartments *e e* of chamber E with compartments *h h* of chamber I, and a flue connecting compartment *i* of chamber I with the chimney.

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

JOHAN LUDVIG WALDEMAR OLSEN.

Witnesses:

VIGGO C. EBERTH;  
HANS JACOB LARSEN.