

No. 706,351.

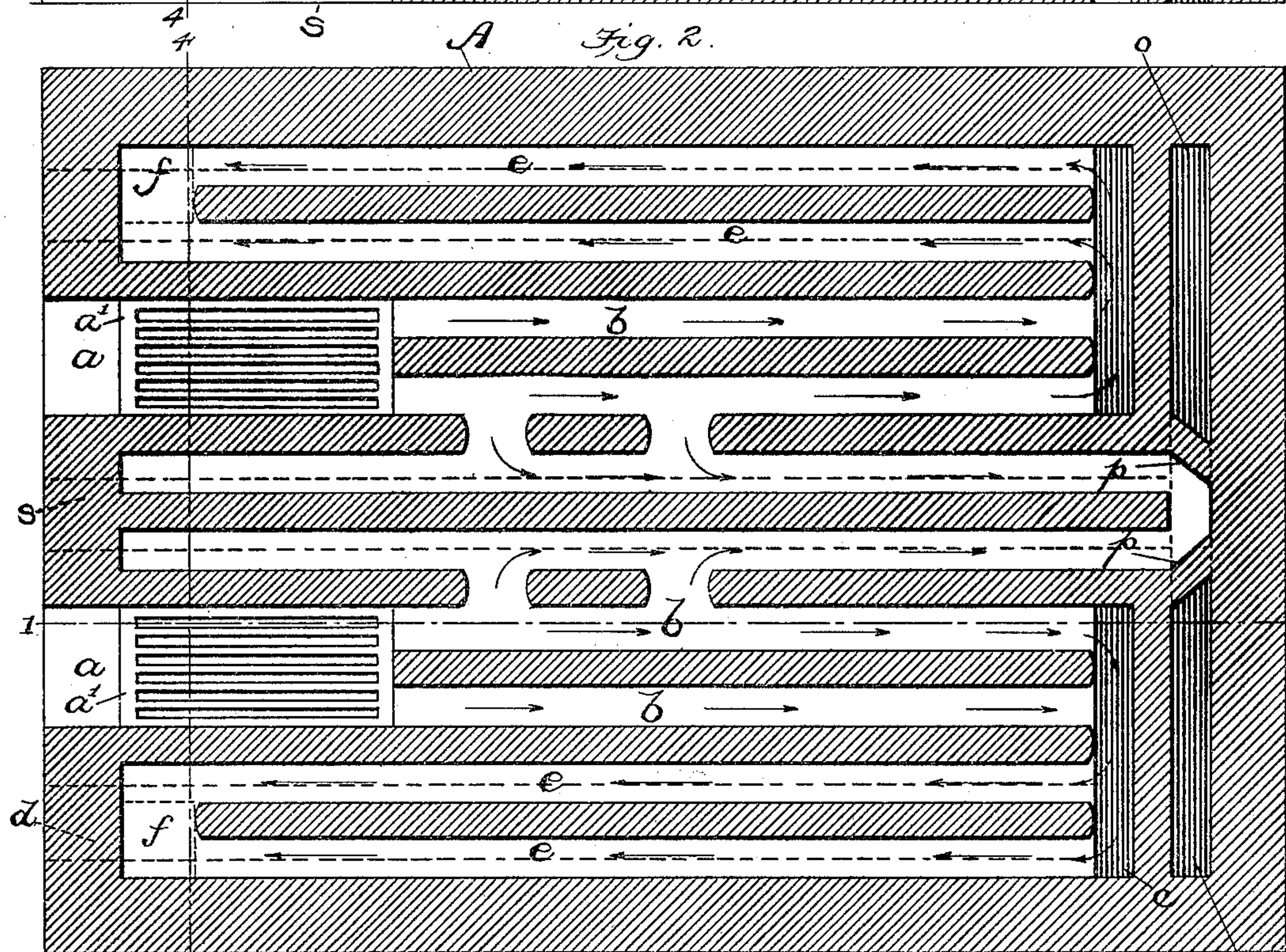
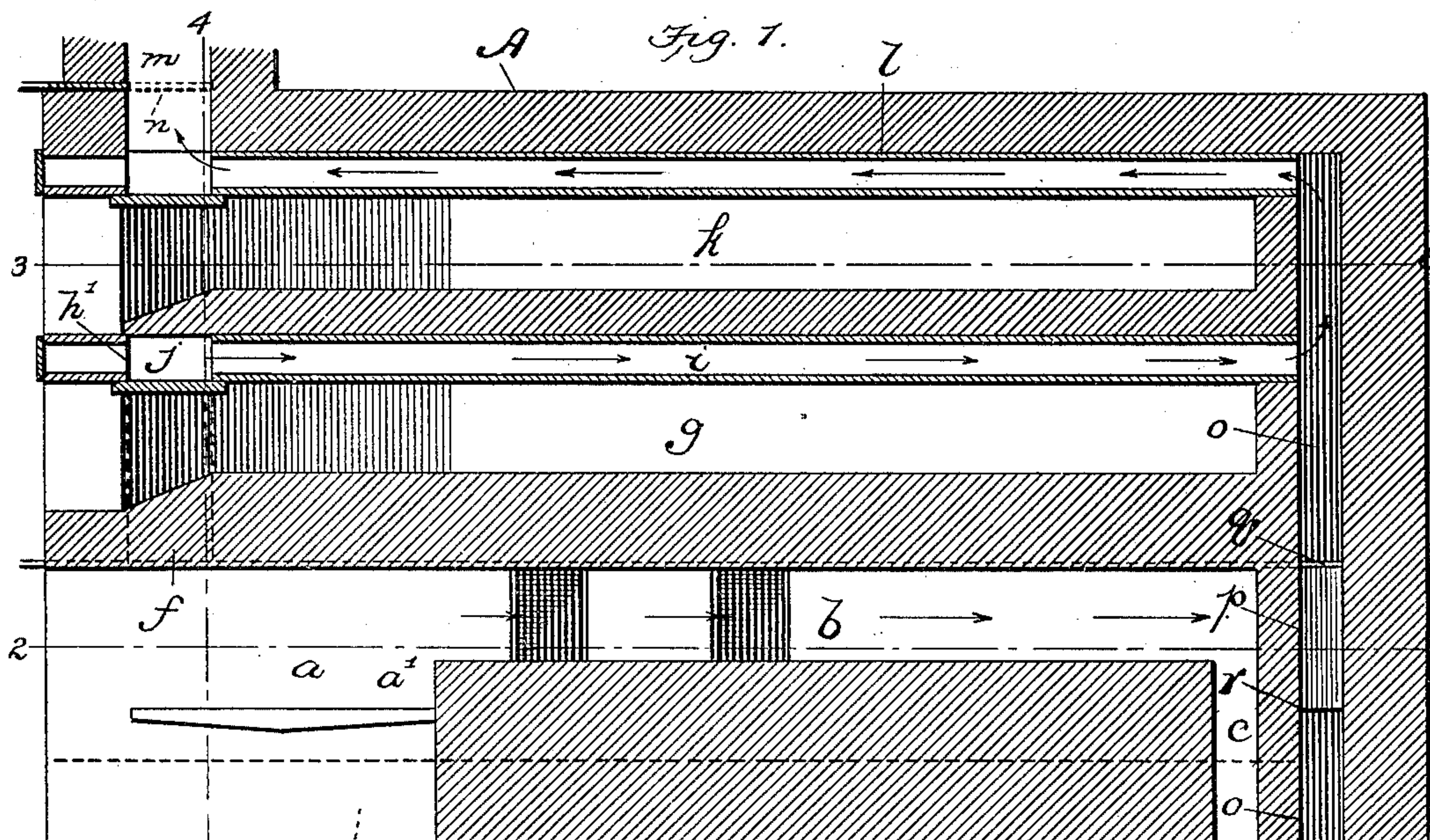
Patented Aug. 5, 1902.

G. F. SMITH.
BAKER'S OVEN.

(Application filed May 13, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

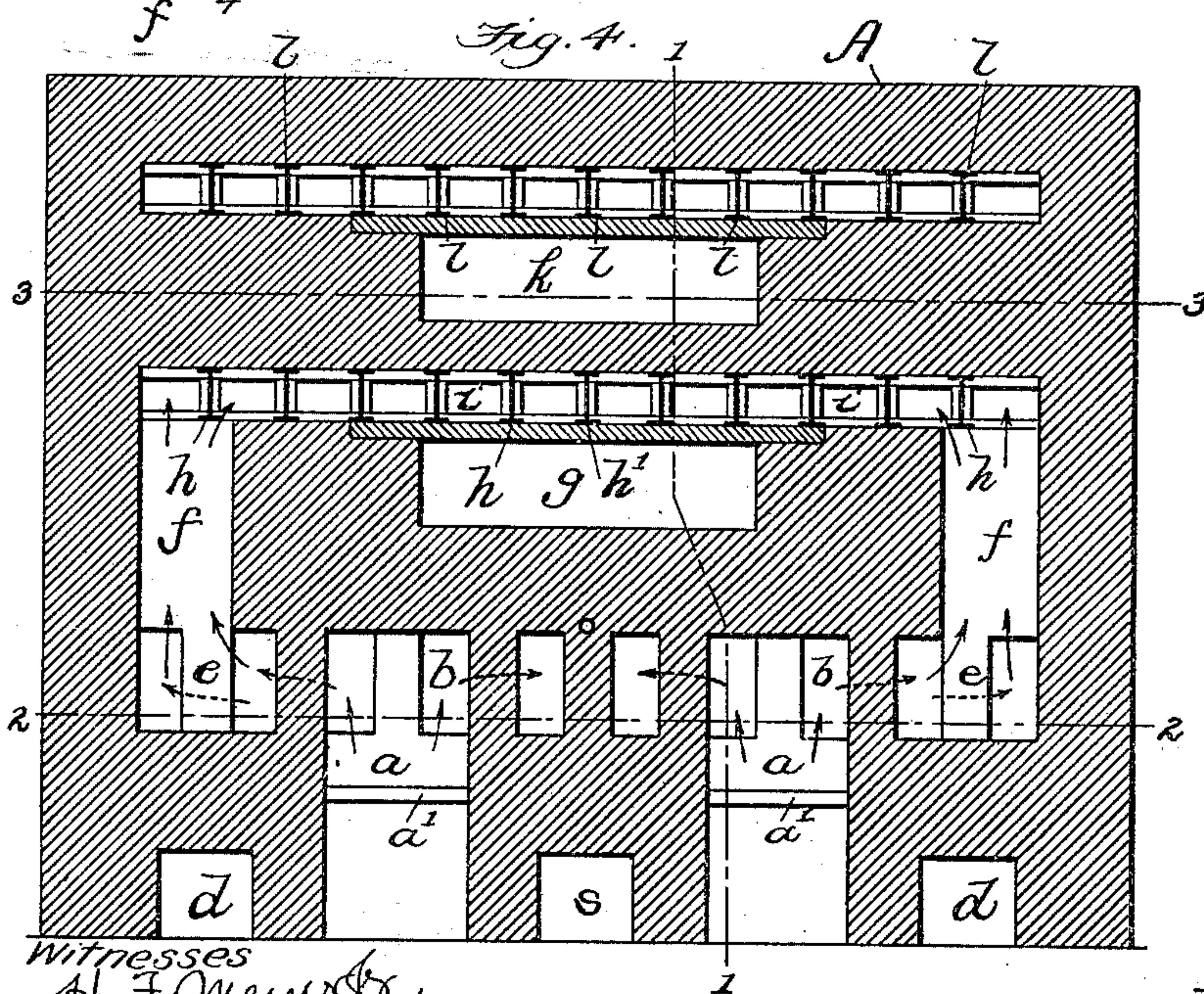
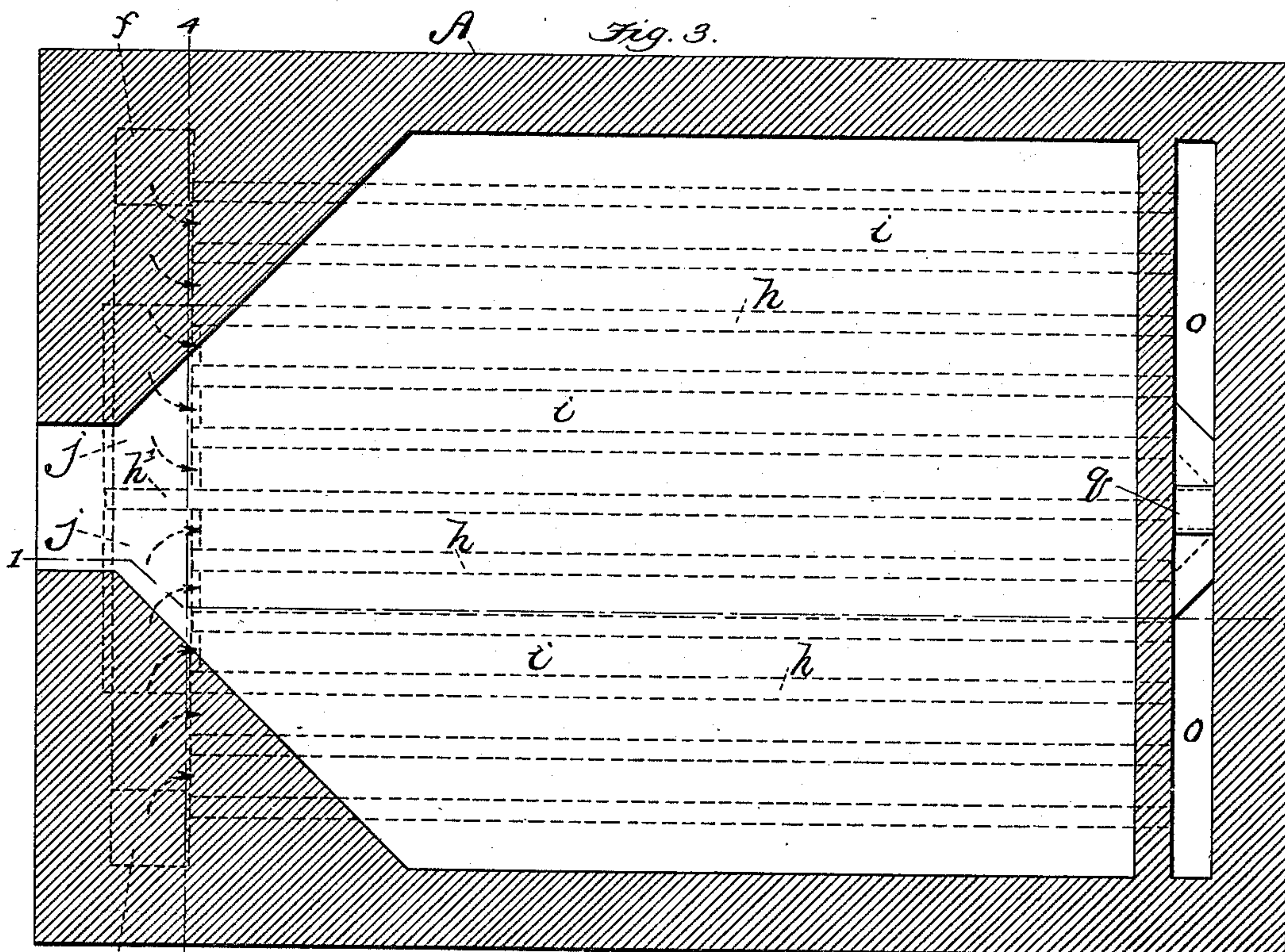
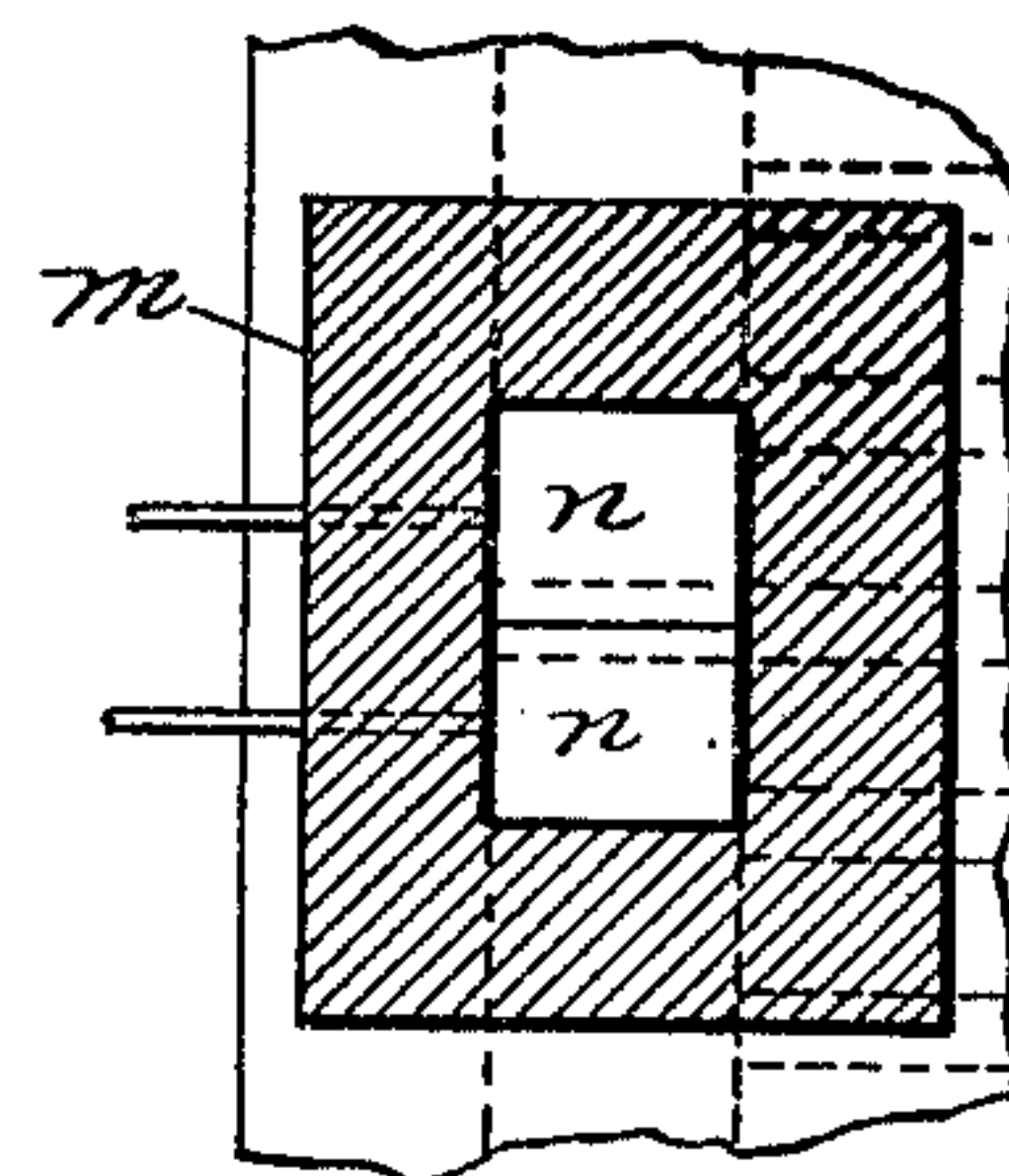


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE F. SMITH, OF BALTIMORE, MARYLAND.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 706,351, dated August 5, 1902.

Application filed May 13, 1902. Serial No. 107,064. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. SMITH, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Bakers' Ovens, of which the following is a specification.

This invention relates to certain improvements in bakers' ovens, as will be hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of my improved baker's oven, taken on the line 1 1 of Figs. 2, 3, and 4. Fig. 2 is a horizontal sectional view taken approximately on the line 2 2 of Figs. 1 and 4. Fig. 3 is a similar view taken approximately on the line 3 3 of Figs. 1 and 4. Fig. 4 is a vertical transverse sectional view taken on the line 4 4 of Figs. 1, 2, and 3. Fig. 5 is a horizontal sectional view taken through the chimney or stack.

The improved oven of my invention is, as illustrated in Figs. 1, 2, and 4, provided with two fire-chambers *a*, from each of which flues *b* lead rearwardly and communicate at the rear with transversely-extending vertical chambers *c*, opening downwardly into horizontal and longitudinally-extending dust-flues *d*, as illustrated in Fig. 4 and in dotted lines in Fig. 2, said dust-flues being located on a plane underneath the grate-bars *a'*. The rearwardly-opening flues *b* also communicate at their rear ends with forwardly-extending horizontal flues *e*, as illustrated in Fig. 2, and said latter flues communicate at their forward ends with vertical flues *f*, extending upwardly at opposite corners, as illustrated in Figs. 3 and 4.

A lower oven *g* is built to extend over both sets of flues *b* and *e*, and above said oven and extending over the entire surface thereof are mounted longitudinally-extending I-beams *h*, arranged parallel and forming horizontal flues *i*, communicating at their front ends with a transverse flue *j*, which leads from the two vertical flues *f*, before mentioned, and the middle I-beam *h'*, as illustrated in Fig. 3, extends across said transverse flue *j*, whereby to separate the products of combustion passing from one vertical flue *f* from the products passing from the other vertical flue *f*. Above said

I-beams is built another oven *k*, similar to the lower oven and surmounted by I-beams *l*, similar in arrangement to the I-beams first mentioned, except that the flues formed by the upper series of I-beams all communicate with a transverse flue which leads to the stack *m*, whose draft is controlled by two dampers *n*, and also that the only communication between the flues of the upper beams and the flues of the lower beams is at the rear, as illustrated in Figs. 1 and 3. This said communication is effected by means of a combination draft and dust flue *o*, which extends from top to bottom of the oven-casing *A*, as illustrated in Fig. 1. The said combination-flue is divided and intersected on a plane with the horizontal flues *b* and *e* by two suitable brickwork partitions *p*, whose upper surfaces are on a level with the top of said flues and are covered over partly by a damper *q*, as illustrated in Fig. 3, and whose lower surfaces terminate above the bottom of the oven-casing *A*, as illustrated at *r*, Fig. 1, so that below said partitions the combination-flue extends entirely across the oven-casing from one side to the other. A horizontal dust-flue *s* connect the the bottom of said combination-flue with the front of the oven-casing, as illustrated in Figs. 1, 2, and 4, said flue *s* being directly underneath the damper *q*. In the operation of the invention if the said damper *q* is closed the heat from the fire-chambers will travel, as indicated by the darts, rearwardly through the flues *b*, thence forwardly again through the flues *e*, thence upwardly through the vertical corner-flues *f* and back over the top of the lower oven *g*, through the flues *i*, and finally up through the combination-flue *o* and forwardly over the upper oven *k* to the stack, or if the said damper *q* is open the said heat will pass from the flues *b* directly up the combination-flue *o* as well as around into the flues *e*. All the horizontal flues may be cleaned of their accumulation of dust, soot, or ashes by pushing it all backwardly, whence it will fall down into the chamber *c* and on the damper *q*. The chamber *c* is then cleaned by drawing the dust and soot out of the flue *d*, and the damper *q* is opened to let the dust or soot thereon drop into the bottom of the combination-flue, whence it can be scraped out through the dust-flue *s*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A baker's oven, comprising a casing provided at its front with a fire-chamber; flues leading rearwardly from said fire-chamber and opening at their rear into a downwardly-extending transverse dust-chamber, *c*; an oven above said flues and surmounted by longitudinally-extending flues, *i*; vertical flues, *f*, connecting said flues, *i*, at the front with said first-named flues; a combination dust and draft flue, *o*, adapted to connect said first-named flues at the rear with the stack or chimney and provided with a damper, *q*; and a dust-flue, *s*, connected to said combination-flue underneath said damper.

2. A baker's oven, comprising a casing provided with a fire-chamber; horizontal flues, *b*, and, *e*, leading from said fire-chamber; a transverse dust-chamber, *c*, opening downwardly from said flues at the rear and provided with a forwardly-opening dust-flue, *d*; an oven above said flues; longitudinally-extending flues, *i*, above said oven; vertical flues, *f*, connecting said longitudinally-extending flues, *i*, with said first-named flues,

b, and, *e*; a combination dust and draft flue, *o*, extending entirely across the casing at the rear of said dust-chamber, *c*, and provided with a damper, *q*; and a dust-flue, *s*, leading from said combination-flue underneath said damper to the front of the casing, as and for the purpose set forth.

3. A baker's oven, comprising a casing provided with a fire-chamber; flues leading rearwardly from said fire-chamber; dust-chambers, *c*, opening downwardly from said flues at the rear; dust-flues, *d*, leading forwardly from said dust-chambers; a combination dust and draft flue, *o*, in the rear of said dust-chambers and provided with a damper, *q*, controlling communication between said first-named flues and the stack of the oven-casing; a dust-flue, *s*, leading forwardly from said combination-flue underneath said damper; and an oven, *g*, above said first-named flues, as set forth.

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

GEORGE F. SMITH.

Witnesses:

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FREDERICK S. STITT.