

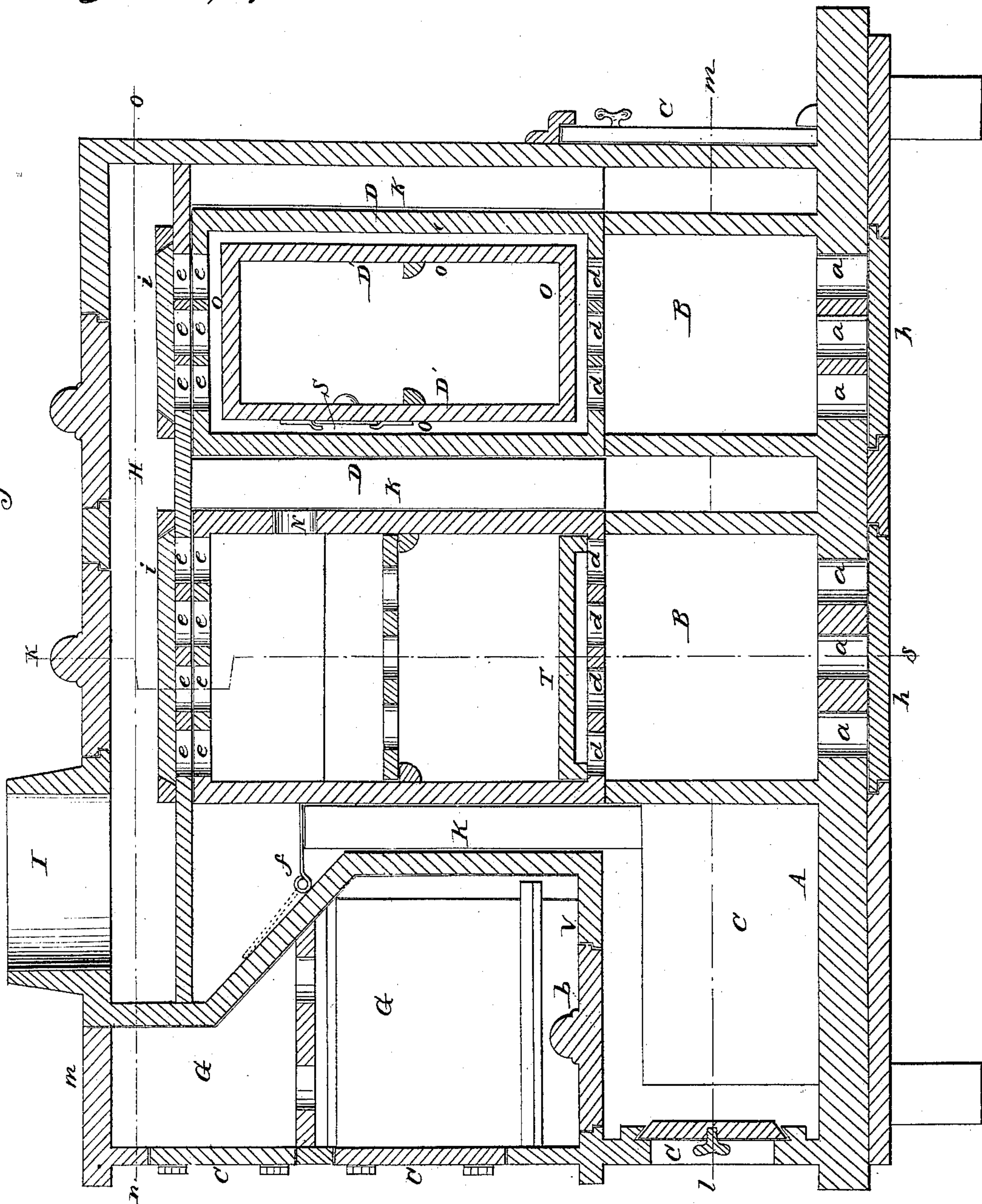
D. S. Leavitt,

Cook Stove.

No. 85,678.

Patented Jan. 5. 1869.

Fig. 1.



WITNESSES:

D. A. B. um  
M. B. B. B. B.

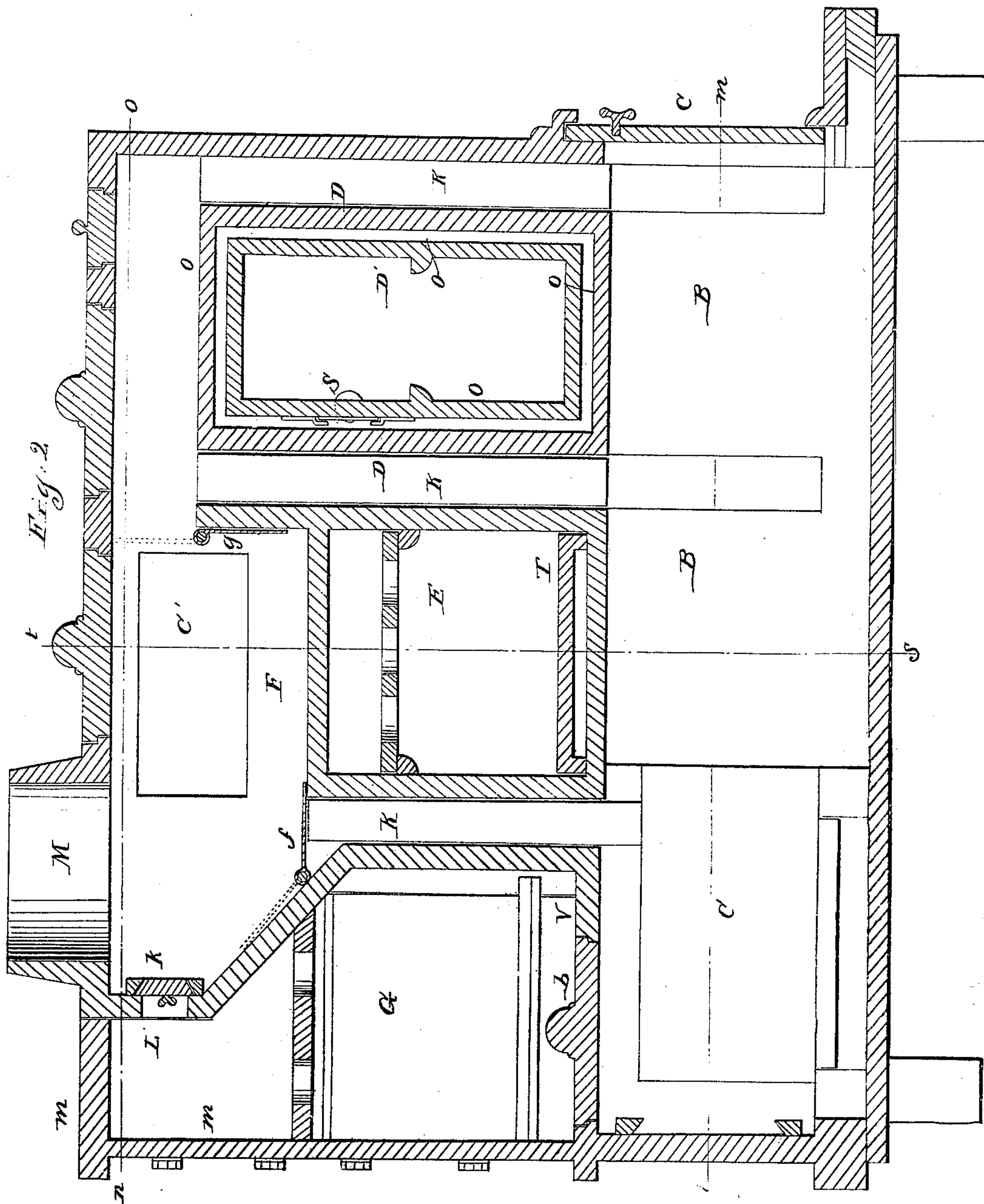
INVENTOR:

David S. Leavitt per his  
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*J. S. Leavitt,  
Cook, Stove.*

No. 85,678.

Patented Jan. 5, 1869.



WITNESSES:

J. A. Burr  
M. Purvis

INVENTOR:

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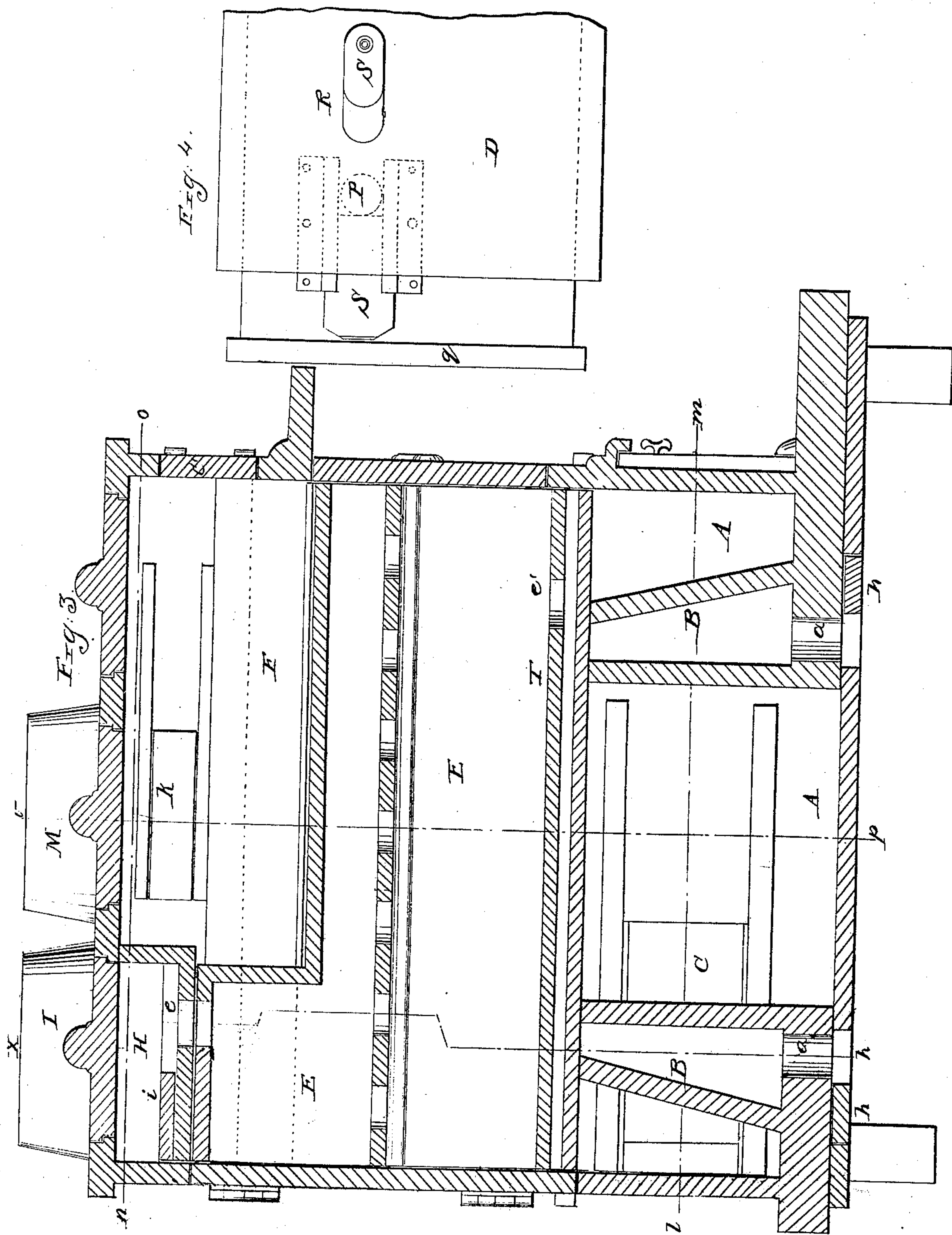
D. S. Leavitt,

5. Sheets, Sheet 3.

Cook Stove.

No. 85,678.

Patented Jan. 5, 1869.



WITNESSES:

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INVENTOR

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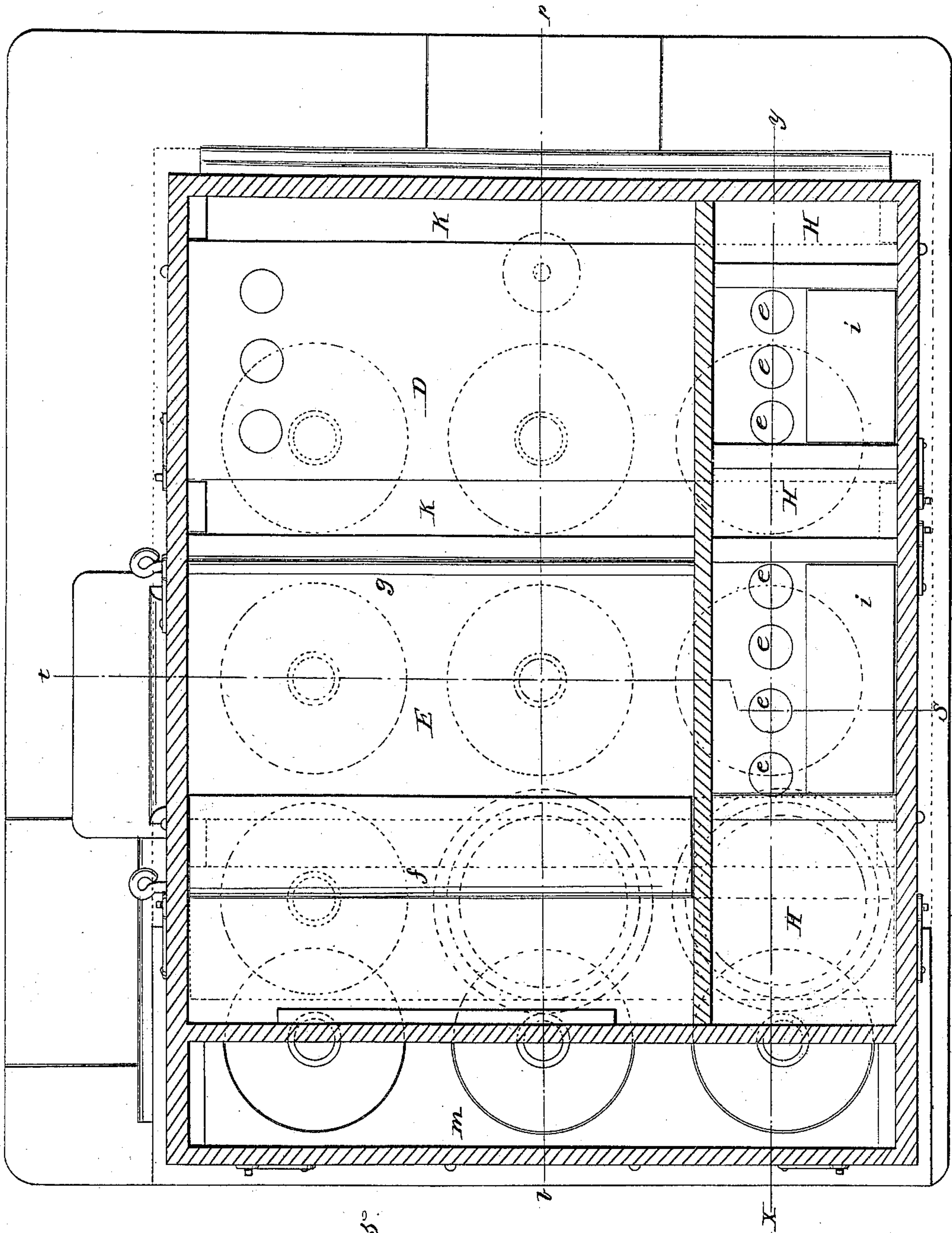
*D. S. Leavitt,*

*5. Sheets, Sheet 4.*

*Cook Stove.*

*No. 85,678.*

*Patented Jan. 5, 1869.*



*Fig. 5.*

WITNESSES:

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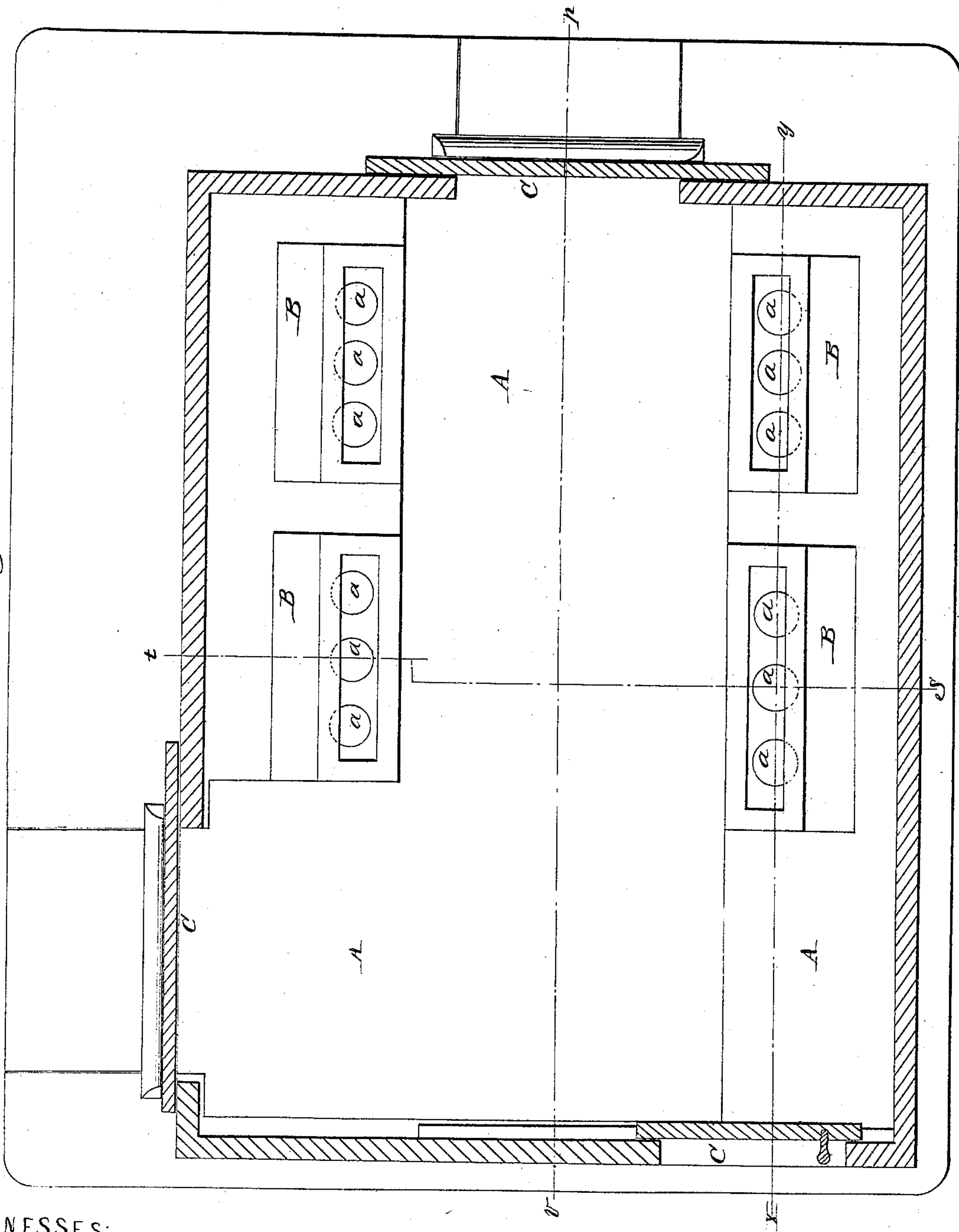
*U. S. Leavitt,*

*Cook Stove.*

*No. 85,078.*

*Patented Jan. 5, 1869.*

*Fig. 6.*



WITNESSES:

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INVENTOR:

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# United States Patent Office.

DAVID S. LEAVITT, OF GRAND RAPIDS, MICHIGAN.

Letters Patent No. 85,678, dated January 5, 1869.

## IMPROVEMENT IN COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID S. LEAVITT, of Grand Rapids, in the county of Kent, and State of Michigan, have invented a new and improved Hot-Air Furnace and Cooking-Stove combined; 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 accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section, as indicated by the line *x y* of figs. 3, 5, and 6.

Figure 2 is a vertical longitudinal section, as indicated by the line *v p* of figs. 3, 5, and 6.

Figure 3 is a vertical transverse section, as indicated by the line *s t* of figs. 1, 2, 5, and 6.

Figure 4 is a view, in detail, of a double oven.

Figure 5 is a horizontal sectional view, as indicated by line *n o* of figs. 1, 2, and 3, and showing an imaginary top view of the stove, in blue lines.

Figure 6 is a horizontal sectional view, as indicated by the line *l m* of figs. 1, 2, and 3.

Like letters in the different figures of the drawings indicate like parts.

My invention consists of a combined hot-air furnace and cooking-stove, constructed with hot-air chambers under and over ovens or heaters, and communicating therewith through proper openings, and with flues in the bottom of the stove, for the admission of cold air into the hot-air chambers, and provided with one or more flues or pipes, for conducting the hot air to the apartments, for heating-purposes.

The ovens or heaters are movable, and one or more of them double, with hot-air passages around the inner, over and between it and the outer oven.

An oven is constructed at the back end of the stove, over a fire-chamber, the top of which is provided with proper openings and lids, for culinary and laundry-purposes, and a flue is made in the back end of the furnace, through which the steam and odors arising from boiling water or cooking are allowed to escape into the smoke-pipe, thus avoiding their unpleasant effects in the room.

The furnace is constructed with two fire-chambers, one below and one above the ovens and heaters. The lower one extends over the entire bottom of the furnace, except the space occupied by the hot-air chambers, and is provided with two or more sets of doors, and with proper hearths, the upper one being small, and used only when the dampers are closed, and when but little fire is required.

A represents the lower fire-chamber, extending over the entire bottom of the stove, except the space occupied by the hot-air chambers.

B B B B, which are cast with the bottom of the stove, or properly attached thereto, and C C C, are doors to fire-chamber A, which is provided also with the proper hearths. (See fig. 6.)

The openings *a a a a* are for the admission of cold air into chambers B B. (See fig. 6.)

D D' represent a double movable oven, cast, or made

of tin or sheet-iron, separately from the furnace, so that they may be removed when desired, D' being smaller, and provided with flanges, *q*, at the ends, as shown in fig. 4, so as to allow the hot-air passages *o o*, around and between it and oven and heater D, as shown in figs. 1 and 2.

E is a movable oven and heater, cast, or made of tin or sheet-iron, separately from the furnace, the right end being depressed at the top, allowing space for the fire-chamber F, as shown in figs. 2 and 3.

The ovens and heaters above described rest upon the hot-air chambers B B.

Chamber F is used as a fire-chamber only when dampers *f* and *g* are closed.

C' is a door to fire-chamber F.

The back end of the furnace is constructed with bench V, which is perforated with proper holes, and provided with lids *b*, for culinary and laundry-purposes.

The recess above bench V is enclosed by a movable case, *m*, provided with doors *c c*, forming the oven G; or the back end of the furnace may be cast, so as to form and enclose the oven G with doors, as represented by *c c*.

The openings *d d d d* are for admitting hot air from the chambers B B into the ovens and heaters, and

The openings *e e e e* are for admitting the hot air from the ovens to the hot-air chamber H, which extends over the left end of the ovens, as seen in figs. 1, 3, and 5.

I is a flue for conducting the hot air from the furnace to the apartments, for heating-purposes.

K K K are draught-flues between the ovens and heaters, and at the sides of the furnace, and the draught is regulated by the dampers *f* and *g*.

The slides *h h* in the bottom of the furnace, and *i i* above the ovens and heaters, are for regulating the passage of the hot air to and from the ovens and heaters, when used as a furnace.

L represents an opening or flue, which is provided with proper slide, *k*, for closing it at the back end of the furnace, for conducting steam or odors, arising from boiling water or cooking, into the smoke-pipe M thus preventing their escape into the room.

The opening, N, in the side of oven and heater E, is for ventilation; and P and R, with slides S S, in D and D', as shown in fig. 4, are for admitting hot air into the hot-air passages *o o*, and for ventilating the oven D'.

T is a movable flanged plate, provided with perforations *e'* at one end, which, placed in the bottom of the oven E, forms the hot-air passage *z*, and by means of which the air is conducted twice across the furnace, thus increasing the heat.

By increasing the size of the furnace, and the addition of other hot-air chambers and ovens and heaters, constructed as described, the capacity of the furnace and stove may be increased to any required extent; and all the ovens and heaters may be single or double, and the furnace may be provided with an additional number of hot-air flues, for conducting the heat to the premises.



### Operation.

The fire may be made in the front, side, or rear of the furnace, or throughout the entire fire-chamber A; or, when but little fire is required, it may be made in chamber F, in which case dampers *f* and *g* must be closed.

The hot air is used for cooking as well as for heating. Cooking is done in the oven D' and chamber H by hot air only, without the liability of scorching or burning.

When used for cooking-purposes only, the slides *h h* and *i i* are closed, but when used as a furnace only, or as a furnace and cooking-stove combined, one or more of the slides, as required, are opened.

D and E serve as heaters when the device is used as a furnace, but when used for cooking-purposes, they serve as ovens.

The cold air being admitted through the openings *a a a a* into the hot-air chambers B B B B, becomes heated, and passes through openings *d d d d* into the ovens and heaters D and E, and through the openings *e e e e* into the hot-air chamber H, and from thence is conveyed through flue I to the premises, for heating-purposes.

When water is boiling, or cooking is being done on bench V, or in oven G, flue L is kept open, for allowing the steam or odors to escape into the smoke-pipe M.

### Claims.

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

1. A furnace and cooking-stove combined, constructed with fire-chambers A and F, hot-air chambers B B and H, movable oven and air-heater E, double movable oven and heater D D', oven G, with ventilating-flue L and hot-air flue I, substantially as described.

2. Removable oven D', arranged within a removable air-heating case, D, and constructed and operating as described.

3. The construction of oven E with flanged plate T, in such a manner as to be used as an air-heater as well as an oven, as described.

4. The openings *a a a a*, *d d d d*, *e e e e*, and *e'*, and slides *h h* and *i i*, in combination with hot-air chambers B B and H, and heaters D and E.

5. The movable case *m*, forming the oven G, in combination with flue L, all constructed, arranged, and operating as described.

DAVID S. LEAVITT.

Witnesses:

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DAVID A. BURR.