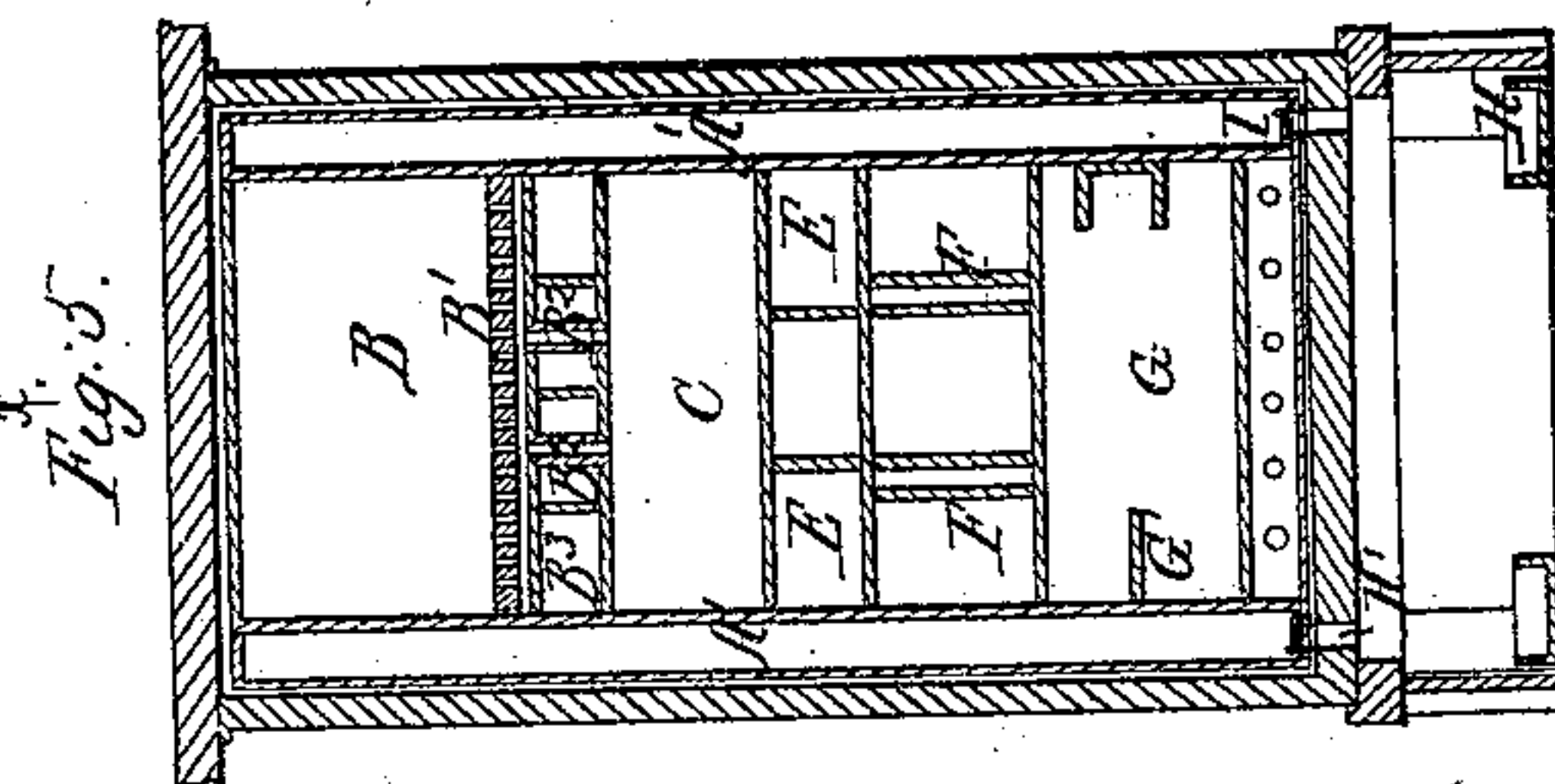
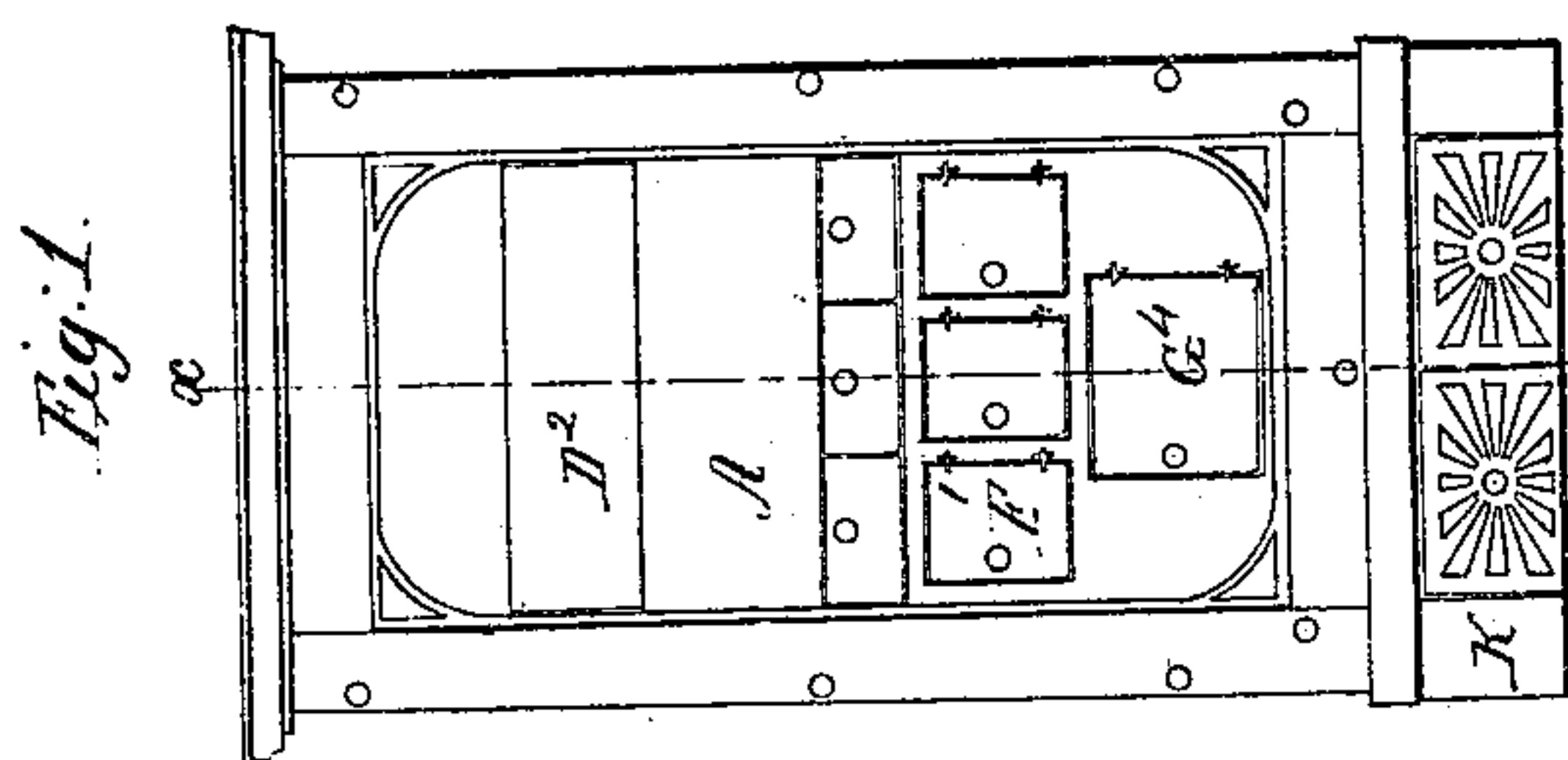
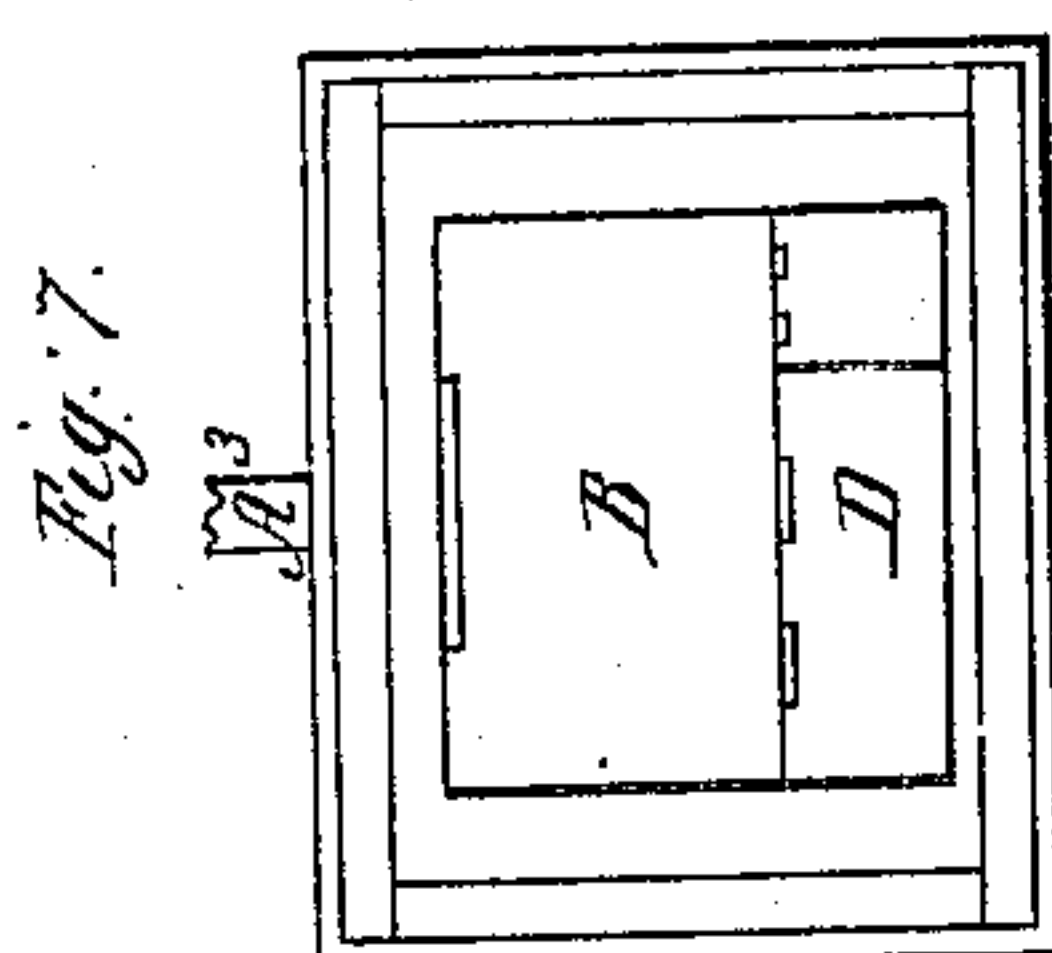
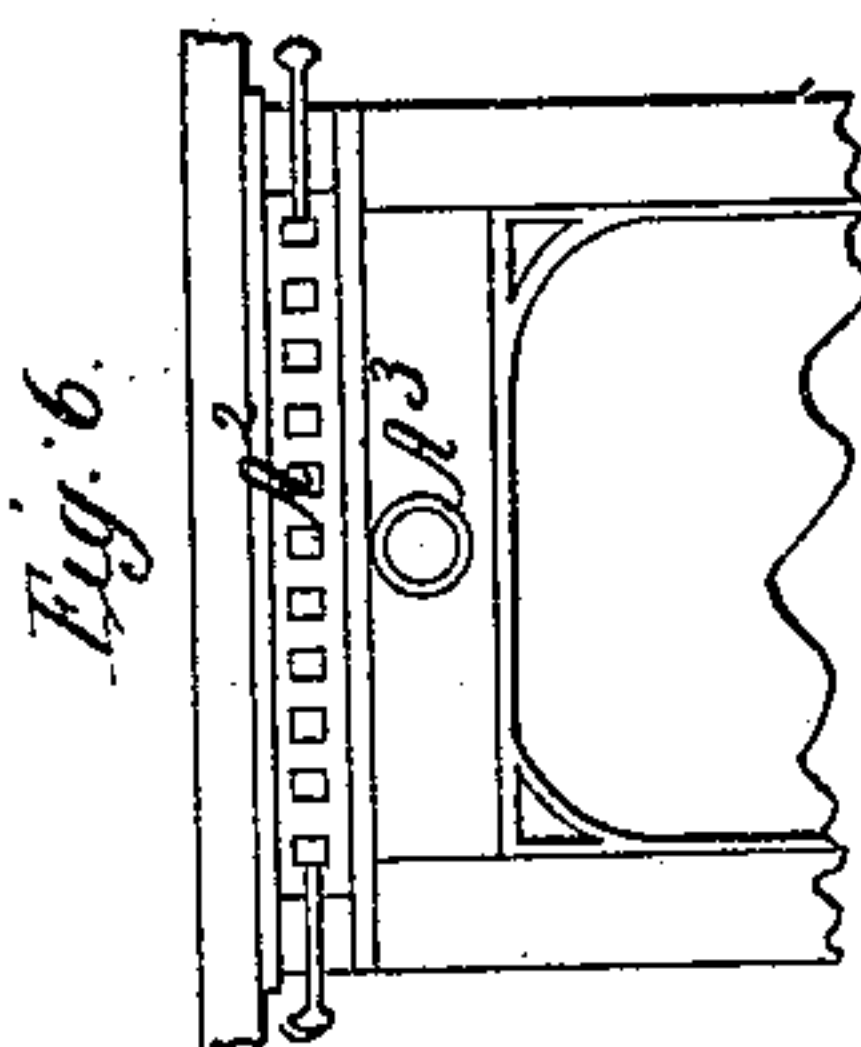
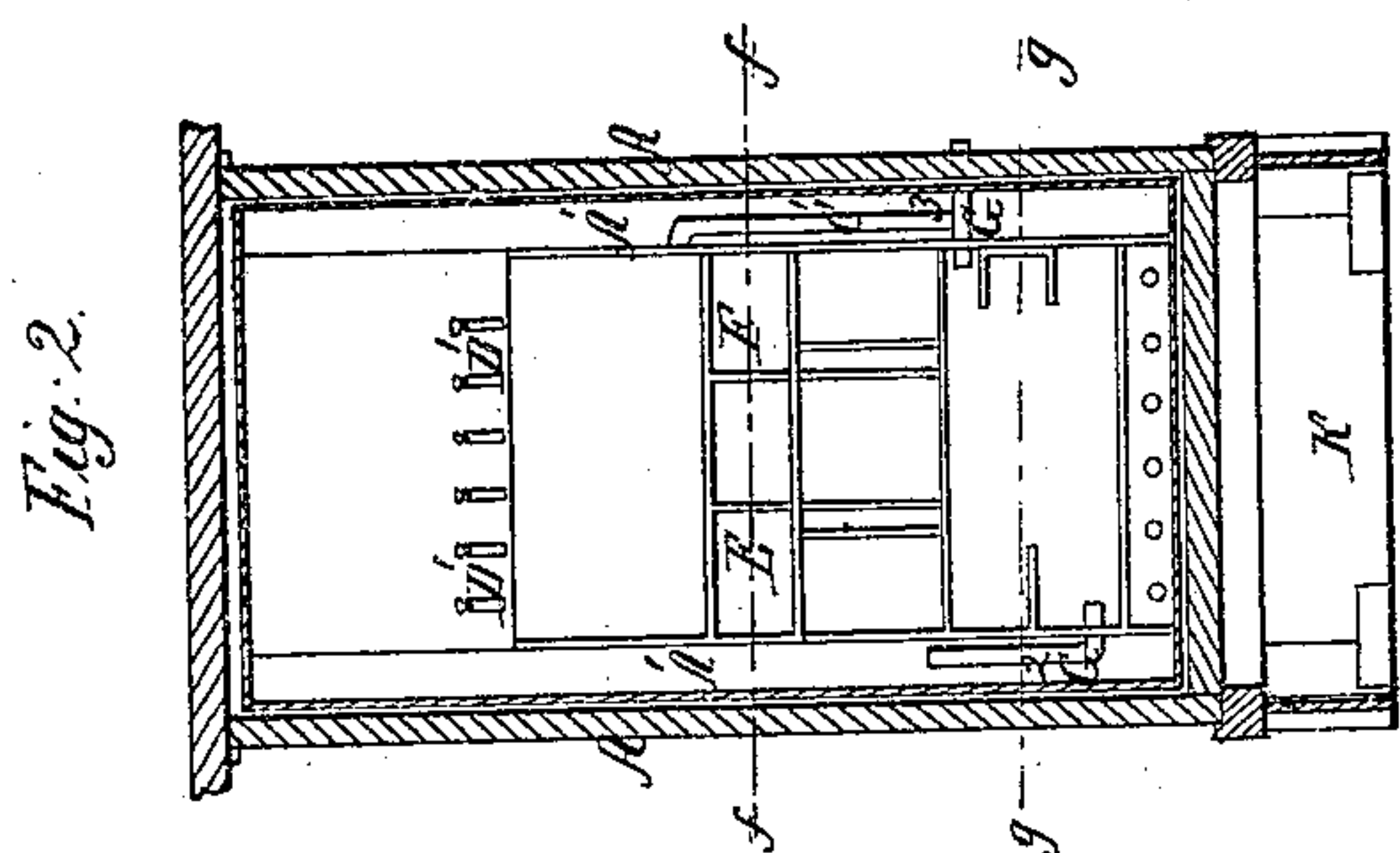
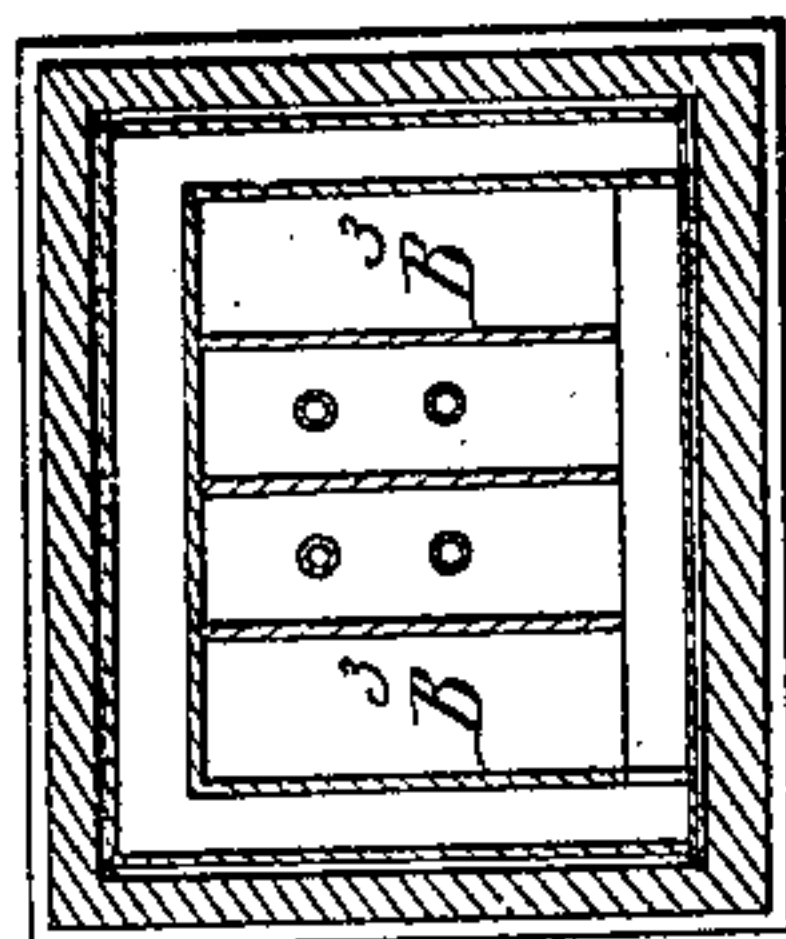
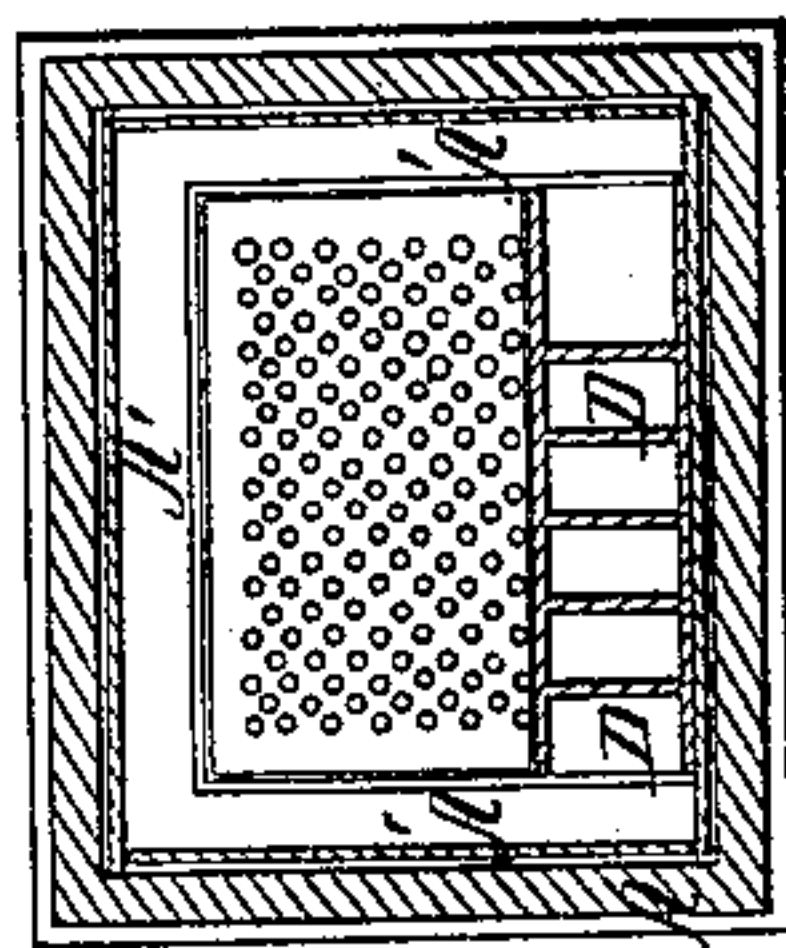
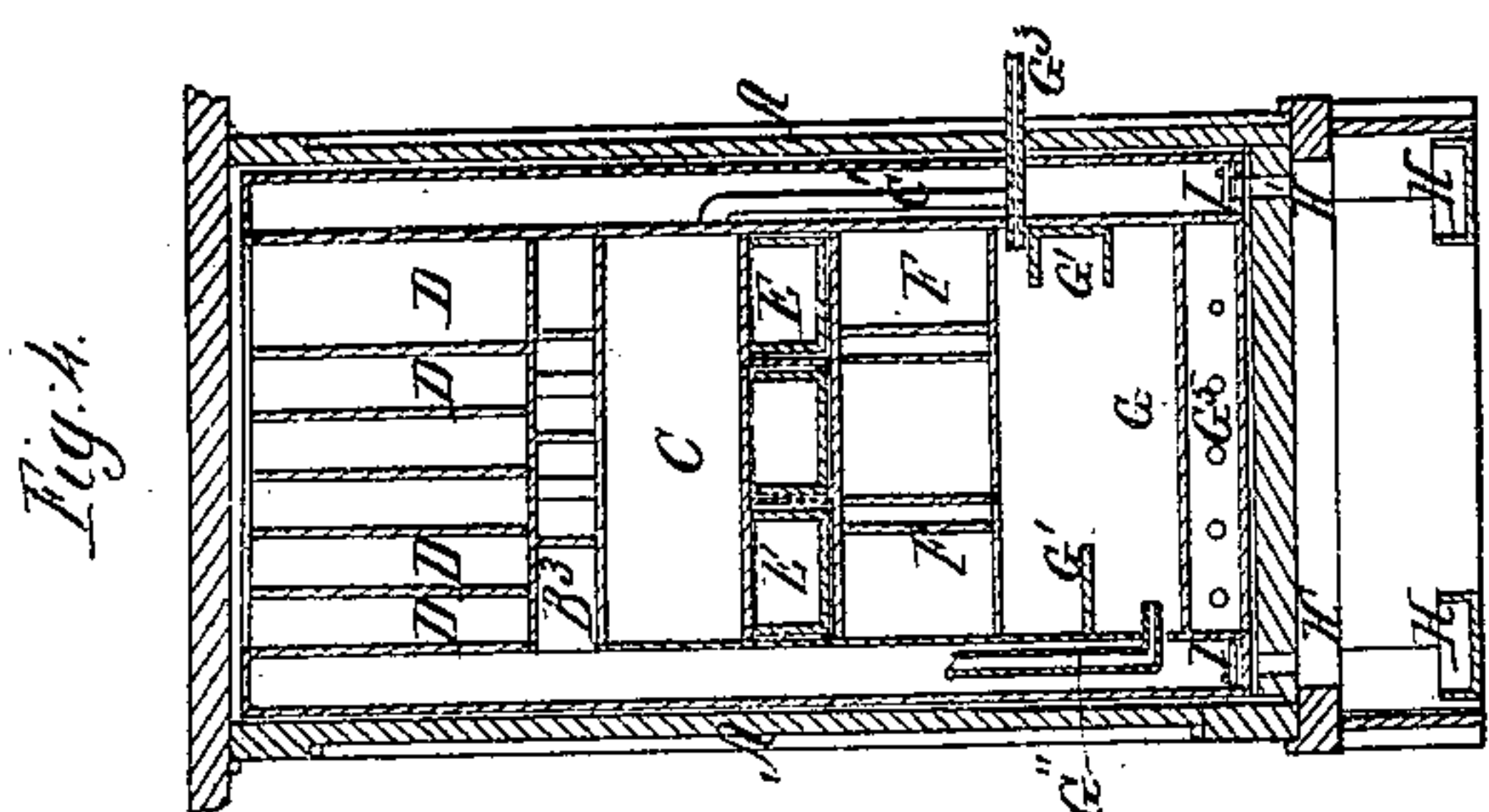
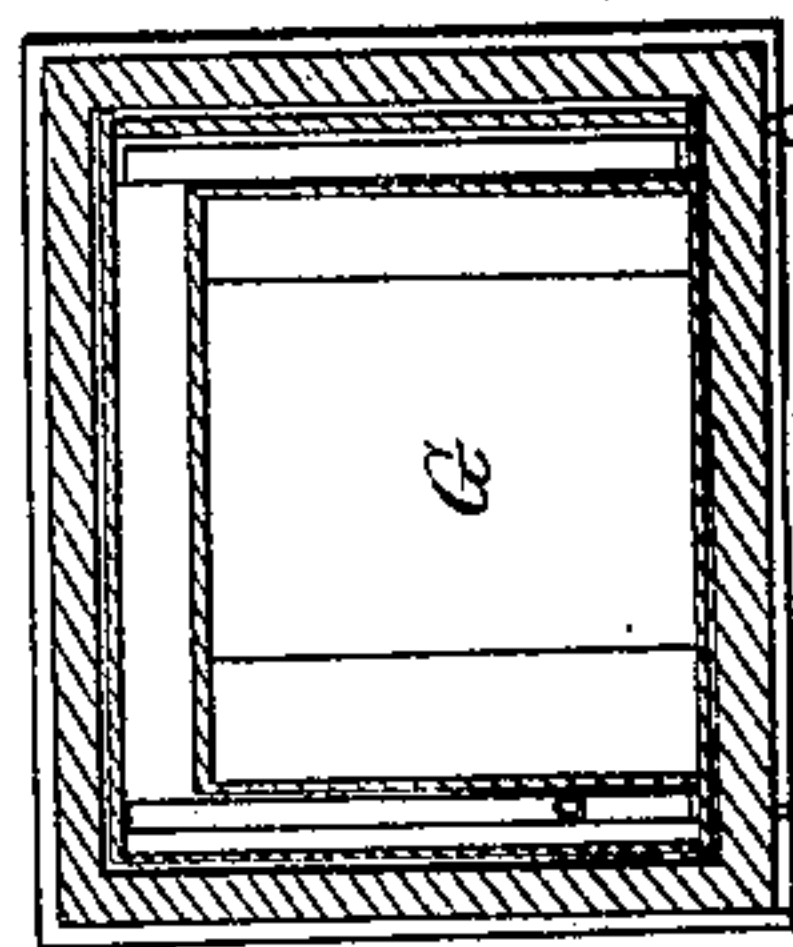
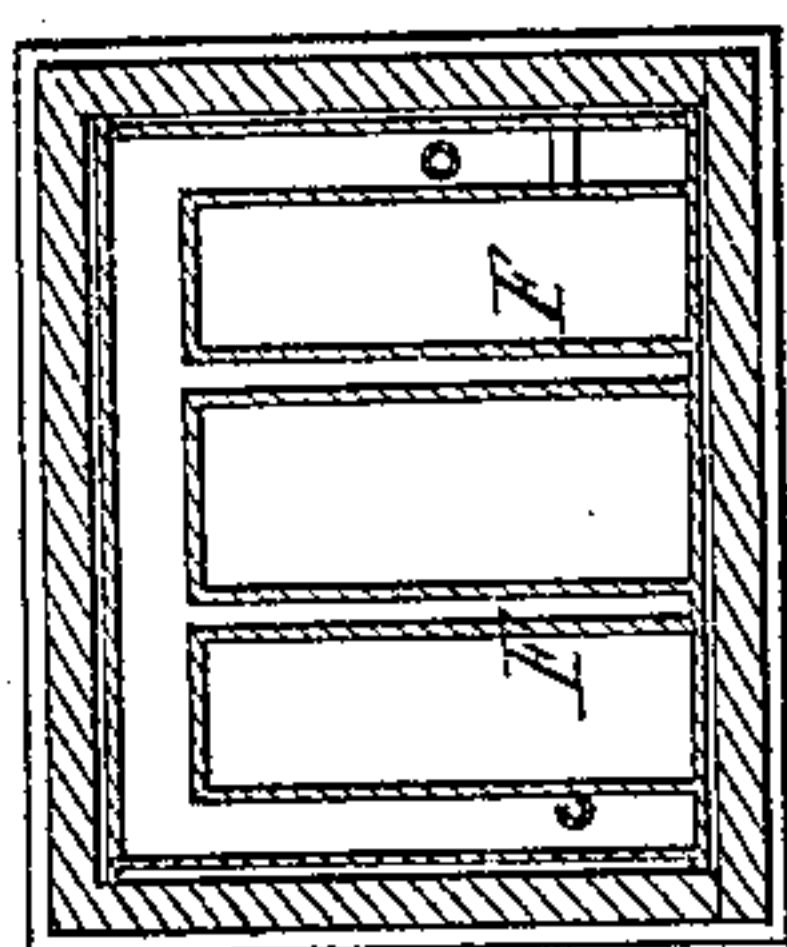
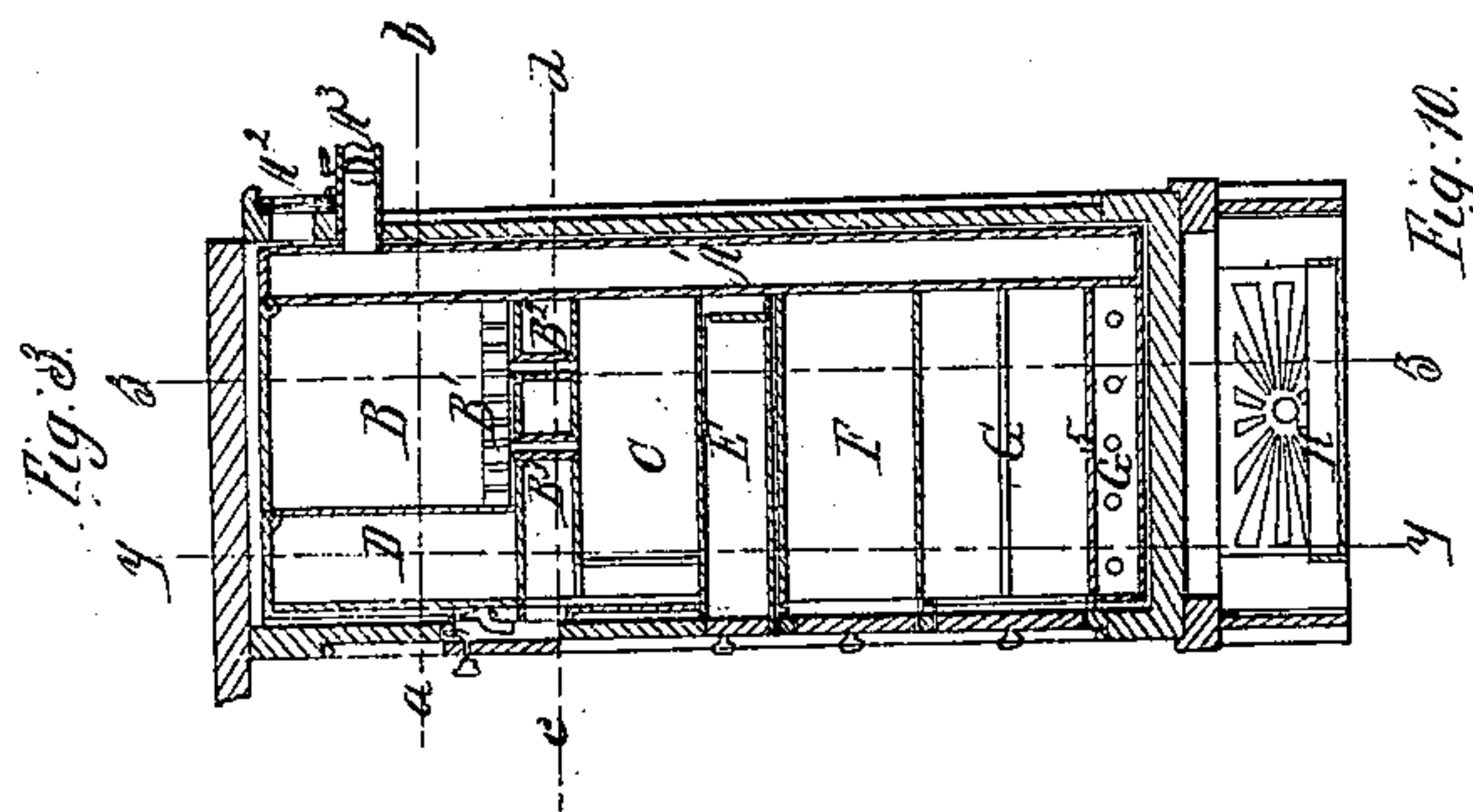


D. E. Somes.

Refrigerator.

N^o 95,612.

Patented Oct. 5, 1869.



Witnesses;

*A. Moore
E. W. B. Phillip*

Inventor;

D. E. Somes

UNITED STATES PATENT OFFICE.

DANIEL E. SOMES, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVED REFRIGERATOR, SIDEBOARD, AND ROOM-COOLER.

Specification forming part of Letters Patent No. 95,612, dated October 5, 1869.

To all whom it may concern:

Be it known that I, DANIEL E. SOMES, of Washington, in the county of Washington, and in the District of Columbia, have invented an Improved Refrigerator, Sideboard, and Room-Cooler combined; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a front view in elevation of my improved refrigerator and sideboard; Fig. 2, a similar view of the same, the front of the casing being removed; Fig. 3, a vertical transverse section of the same; Fig. 4, a vertical longitudinal section of the same, at the line *y y* of Fig. 3; Fig. 5, a similar section at the line *z z* of Fig. 3; Fig. 6, a view in elevation of the upper portion of the rear of the same; Fig. 7, a plan or top view, the cover being removed; Fig. 8, a horizontal section at the line *a b* of Fig. 3; Fig. 9, a similar section at the line *c d* of Fig. 3; Fig. 10, a similar section at the line *f f* of Fig. 2; and Fig. 11, a similar section at the line *g g* of Fig. 2.

The object of my invention is to provide a device which shall fulfil the requirements of a refrigerator, sideboard, air, water, and room cooler, ice-chest and safe for meat, vegetables, &c.; to which end my improvements consist in arranging suitable compartments for the reception of ice, water, meat, vegetables, liquors of various kinds, &c., within a chest provided with double sides, and maintaining a circulation of fresh air therein in a manner herein-after to be described.

In the accompanying drawings, which show a convenient arrangement of parts for carrying out the objects of my invention, the various compartments are shown as arranged in the interior of a case or chest, A, of wood or metal, or both combined, with spaces A¹ between their sides and those of the chest for the circulation of air.

The ice-chest B is placed in the upper part of the case, the ice resting upon a strainer, B¹, on its bottom. Air is admitted to the circulating-spaces A¹, either from the apartment in which the refrigerator is placed, by openings which can be closed at pleasure by the slide A², Figs. 3 and 6, or by the pipe A³, which

communicates with the external air outside the building or apartment in which the refrigerator or sideboard is placed, and which is provided with a damper to regulate or exclude the flow of air.

An open space, B³, intervenes between the bottom of the ice-chest B and the top of the water-chamber C, which is placed beneath it, for the purpose of presenting a greater amount of the surface of the ice-chest to the access of the air.

The air becoming cooled through contact with the cold sides of the ice-chest, descends, by virtue of its greater gravity, through the spaces A¹, escaping into the room through apertures H' in the bottom, and being replaced by warmer and consequently lighter air, which undergoes the same cooling-process, thereby causing the refrigerator to act as an air-cooler for the room. The water derived from the liquefaction of the ice in the chest B drops through the pipes B² into the water-chamber C beneath, from which it can be drawn as required by the pipe C¹, which extends through the case A, and is to be furnished with a proper stop-cock.

Liquid-chambers D D are arranged adjoining the ice-chest B, in which liquids may be placed, either in bottles or on draft, and in the latter case may be drawn off by stop-cocks D¹, one of which is attached to each chamber.

Beneath the water-chamber are placed compartments E, furnished with removable drawers, and immediately below these are compartments F, to which access is had by doors in the front of the case. These drawers and compartments furnish convenient receptacles for different articles which it may be desirable to keep cool. The lowest compartment G is intended as a safe for keeping meat, vegetables, &c., fresh and cool, and is provided with shelves G¹. It is ventilated by means of the pipe G², which conducts cool air from one of the spaces A¹ into it near its floor, and the pipe G³, which carries off the warmer air from its top to the exterior of the case A. These pipes are to be provided with suitable stop-cocks. A space, G⁵, intervenes between the floor of the compartment G and the bottom of the case, into which air from the spaces A¹ has access by a number of openings. Any

moisture which may condense upon the sides of the spaces A^1 drops through the openings H' into drip-pans H , placed within the pedestal K upon which the refrigerator stands. These openings can be closed, when desired, by shutters I , operated from the outside of the case. Access is had to the stop-cocks D^1 of the liquid-chambers by a hinged door, D^2 , which, when turned down, forms a convenient shelf for glasses, pitchers, &c., enabling the apparatus to be used as a sideboard. The compartments F and G are likewise provided with doors F' and G' , Fig. 1, by means of which articles are inserted and removed.

It will be seen that my improvement is simple and economical in construction, and that its compartments are easy of access and constantly exposed to a circulation of cool air. Its use also affords a means of supplying the apartment in which it is placed with fresh air taken from the outer atmosphere by the pipe A^3 , and cooled in its passage through the spaces A^1 , as hereinbefore described.

An air-tight space may be left between the sides of the casing A , which may be either filled with air, or cotton, tow, or other good non-conductor. Any of its walls may be made of cork or glass. A water-tight space may intervene between the circulating-spaces A^1 and the compartments E F G , so that the water from the melting ice may fill the space surrounding the compartments, thereby maintaining a more uniform temperature within.

The use of my invention provides a means of ventilating parlors, dining or sleeping rooms, without opening the windows or doors, thereby excluding dust and flies, and an abundance of pure air can be circulated through the room. Sick-rooms may have their atmosphere purified in this manner, and the air which is supplied to them may be deprived of impurities by being passed over charcoal, lime, or the like, placed in the cir-

culating-spaces A^1 , or perfumed or medicated by passing over suitable substances therein, and by having a pipe or outlet for the vitiated air a constant ventilation is maintained.

The apparatus is portable and can be readily removed from one apartment to another. The separate compartments may have double walls, so that the air can be circulated between them on all sides but their front. The doors and drawers may be made air-tight by means of elastic tubes.

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

1. The movable shutter A^2 , or its equivalent, and pipe A^3 , in combination with the circulating-spaces A^1 and openings H' , as set forth.
2. The combination of the ice-chest B , liquid-chambers D , and sideboard-shelf D^2 , as set forth.
3. Refrigerating-compartments with circulating-spaces between them, cooled by means of air or water surrounding them, and having air from the ice-box excluded from within them, substantially as described.
4. Separate air-tight compartments, surrounded by cooled air on all sides but the front, substantially as described.
5. The ice-box, water-tank, liquid-cells, refrigerating chambers and drawers, circulating-spaces, ventilating pipes and tubes, registers, and dampers, or their equivalents, in combination, substantially as described, and for the purpose set forth.
6. Ventilating tubes and flues, shutters A^2 , ventilating-pipes A^3 , and ice-box B , all arranged as described.

D. E. SOMES.

Witnesses:

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F. C. SOMES.