(No Model.) 2 Sheets—Sheet 1.

C. H. LEONARD.

REFRIGERATOR.

No. 597,725. Patented Jan. 25, 1898.

Fig. 1.

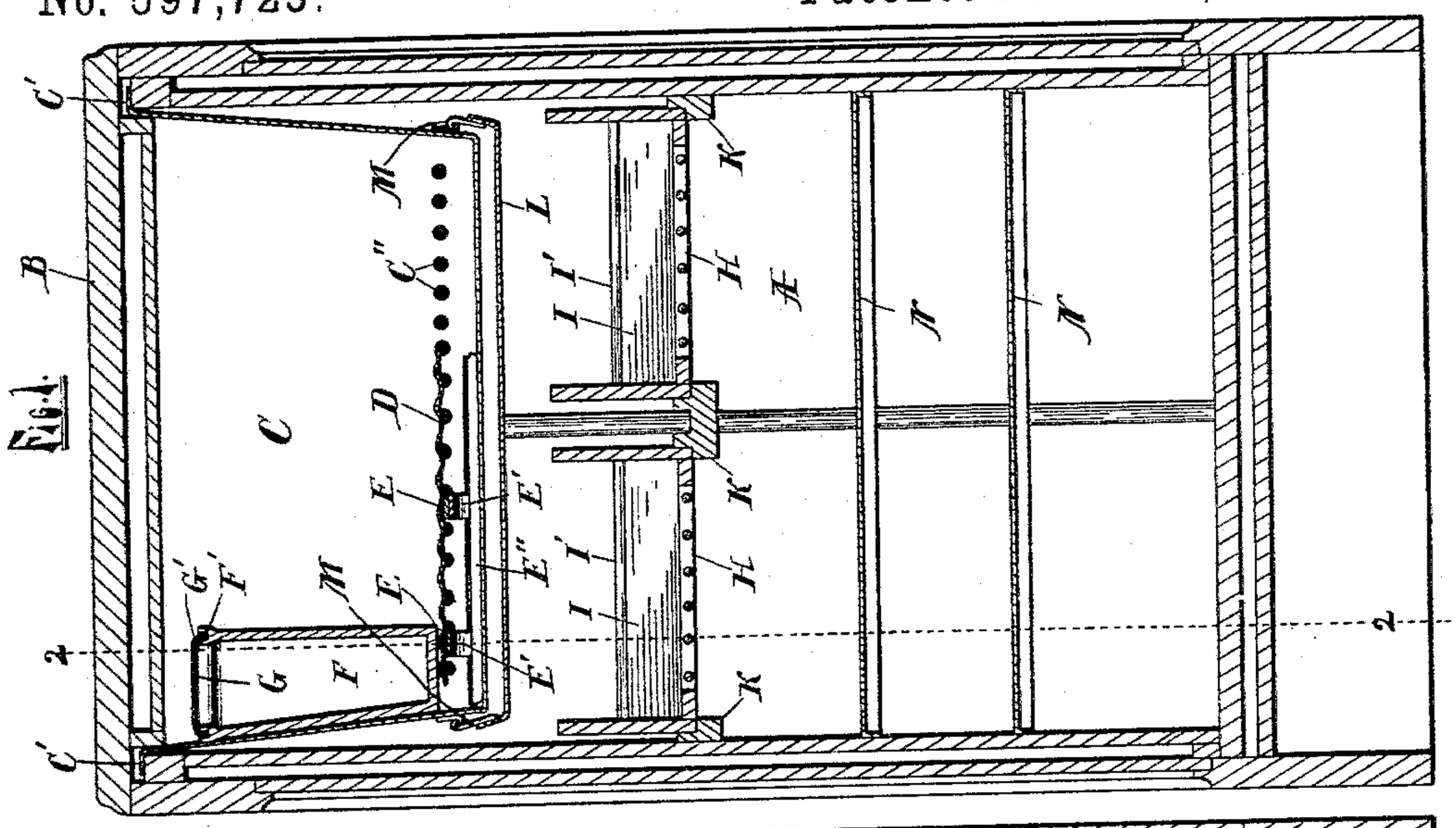


Fig. 2.

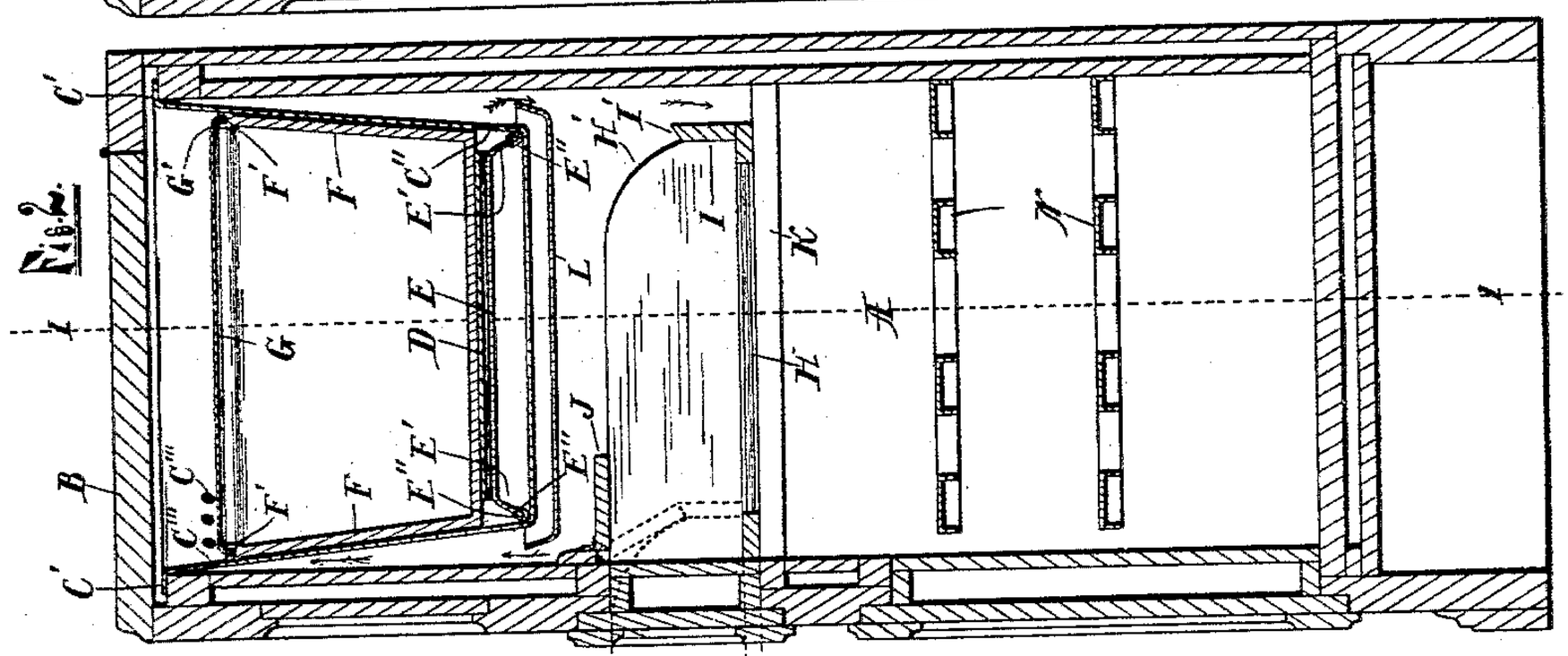


Fig. 3.

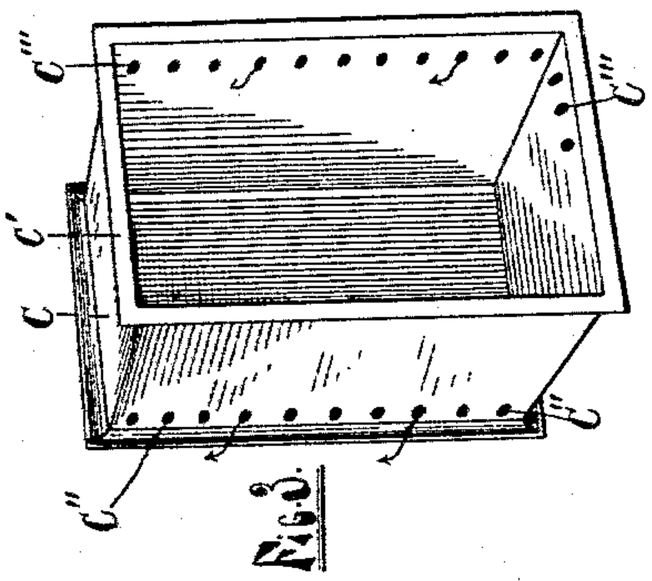


Fig. 5.

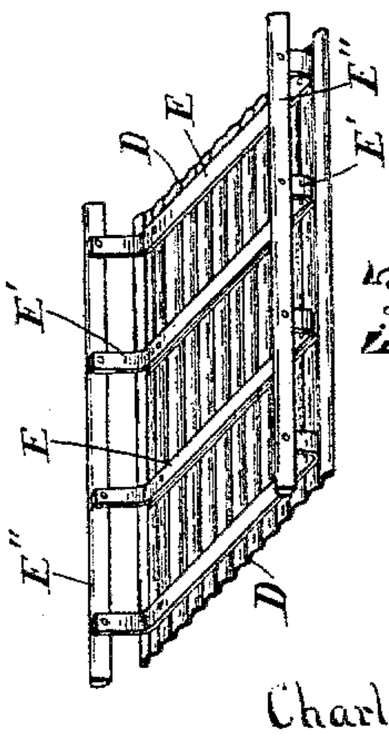
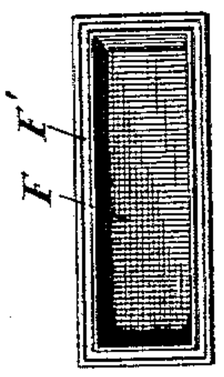


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

C. H. LEONARD.

REFRIGERATOR.

No. 597,725. Patented Jan. 25, 1898.

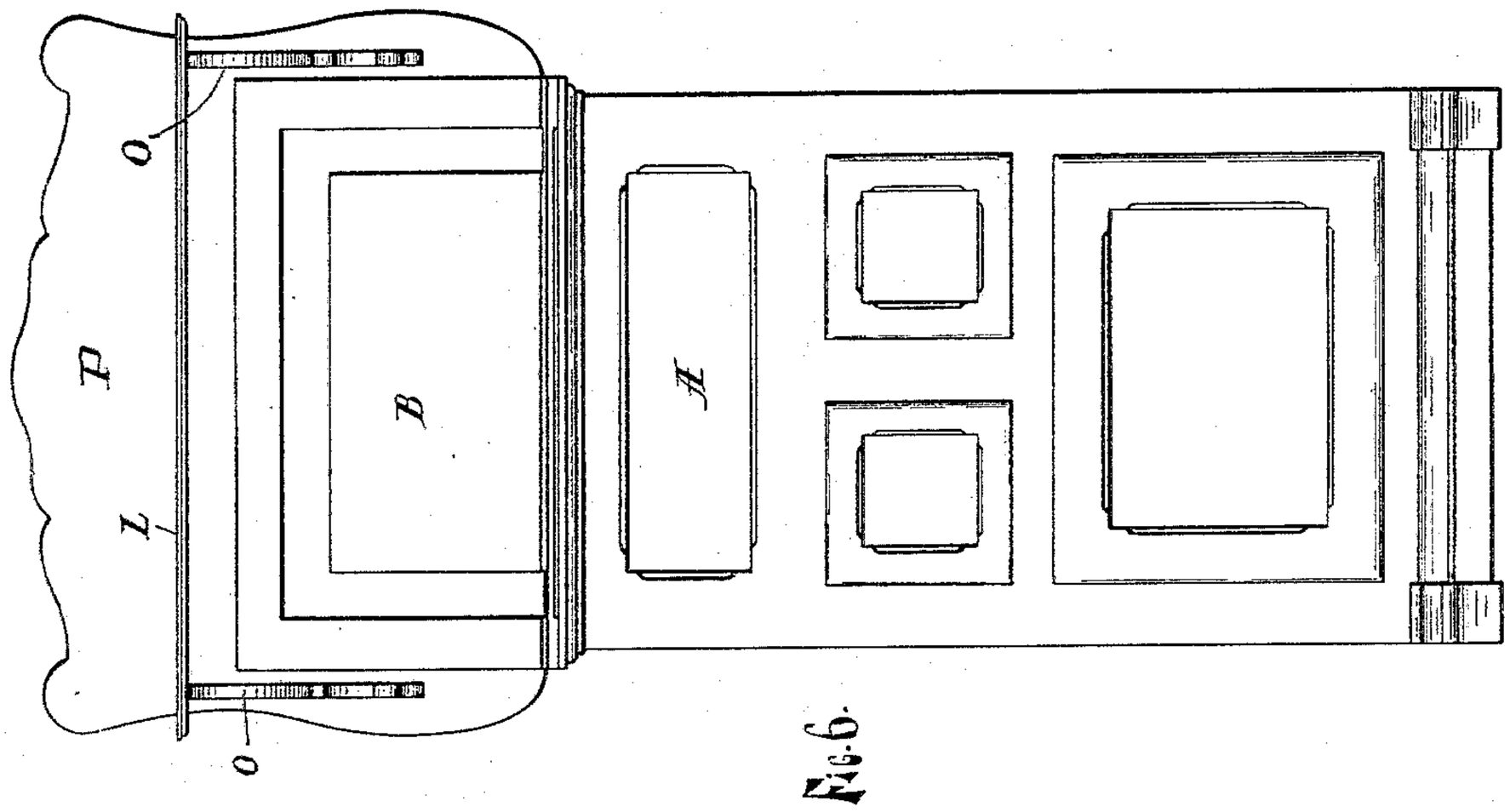

FIG. 6.

FIG. 7.

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UNITED STATES PATENT OFFICE.

CHARLES H. LEONARD, OF GRAND RAPIDS, MICHIGAN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 597,725, dated January 25, 1898.

Application filed February 20, 1897. Serial No. 624,371. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. LEONARD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Refrigerators; and I do hereby 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.

My invention relates to improvements in refrigerators; and its object is to provide the same with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a device embodying my invention, shown on the line 1 1 of Fig. 2. Fig. 2 is a vertical section of the same on the line 2 2 of Fig. 1; Fig. 3, a detail of the ice-box removed; Fig. 4, a detail plan of the water-cooler; Fig. 5, a detail plan of the ice-rack; Fig. 6, a front elevation of a sideboard-refrigerator, and Fig. 7 a side elevation of the same.

Like letters refer to like parts in all of the figures.

A represents the case of a refrigerator, having a lid B, hinged to swing upward.

C is the ice-box, having an outwardly-projecting flange C′ around the top, by which flange said box is suspended within the case. The walls of said box are inclined inward to form an air-space around the same. In the rear wall of said ice-box and near the bottom thereof are a series of openings C″ for the escape of cold air, and in the front wall of the same and near the top thereof and also near the tops of the front ends of the side walls of the ice-box are openings C‴ to admit the warm air that rises from the storage-chambers below. Thus the air circulation is downward at the rear and upward at the front in a single current, which is preferable to divided currents, and thus avoids interference of rising and falling currents, the circulation also being more rapid and thus more uniformly distributed as to temperature. The rising current being at the front there is less tendency of the air to "spill out" when any of the front doors of the case are open.

The ice-rack consists of a corrugated sheet D, smaller than the bottom of the ice-box, supported upon transverse bars E, bent downward and outward at each end, forming diverging legs E′, to which legs are secured parallel strips E″ which strips engage two opposite angles of the bottom of the ice-box and extend from corner to corner of the same. Said strips thus form a continuous support for the rack, resting in the angles of the box and engaging the corners thereof, thus preventing the ends of the legs from wearing or indenting the bottom of the ice-box, and whereby the rack is located properly to leave an air-passage all around the same and whereby there is no tendency to depress the bottom of said box or bend it out of shape.

Beneath the bottom of the ice-box and a short distance from the same is a drip-pan L, somewhat larger than the bottom of the ice-box and suspended therefrom by any suitable number of hooks M, consisting of strips of metal attached to the sides of the pan L and having their upper ends turned inward and downward and engaged with suitable hooks projecting from the ice-box, thus forming a cheap and effective support for said pan L.

F is a tank for cold water, suitably supported within the ice-box, at one side thereof, and preferably by resting it upon the end of the ice-rack. To prevent any access of odors to the same from the air circulating in the device, I provide the upper edge of said tank with a groove F′ and place upon said tank a cover G, having a downwardly-projecting flange G′ to enter said groove. By placing water or other liquid in said groove all air from without is effectually excluded from the tank F. The drawers H are provided with grated bottoms, and the sides thereof are rounded at the upper rear corner, as shown at H′, and the back I of each drawer is considerably less than the depth of the same and has a forwardly-inclined upper edge I′. Above the drawer-opening and hinged to swing inward and upward is a flap J, which flap rests on the sides of the drawer and is of such width that its width and that of the back I, taken together, is greater than the depth of

the drawer, whereby and so that as its movable edge swings downward over the rounded corner H′ when the drawer is pulled out it will engage the upper edge I′ of the drawer-back I and form an inclined stop against the same, as shown in dotted lines in Fig. 2. This back and flap effectually close the drawer-opening and prevent the escape of air from the case, and the drawer is also stopped and cannot be drawn out farther without raising the flap J, and also the back end of said drawer is held firmly down on the ways K, thus sustaining said drawer in a horizontal position when drawn out to its limit.

The trays N within the refrigerator may be of any suitable construction and supported in any suitable manner.

P is a back which is designed to support the top B when open, having a shelf L attached above the said top. Said back is made wider than the body A, and the brackets O O, supporting said shelf, are so located that the top B will pass between the same and pass beyond the vertical position and rest against the back end, whereby all occasion for any other support for the top is obviated.

Having thus fully described my invention, what I claim, and wish to secure by Letters Patent, is—

1. The combination of a case, a drawer movable in said case and having a back of less width than the depth of said drawer, and a flap hinged above said drawer and engaging said back, substantially as described.

2. The combination of a case having ways, a drawer sliding on said ways, a back on said drawer having an inclined upper edge, a flap hinged above said drawer to swing inward and upward, and to engage the edge of said back, and to stop and hold said drawer, substantially as described.

3. The combination with the casing of a refrigerator, and the ways therein, of a drawer slidably mounted upon said ways, said drawer having a back of less depth than its front and being formed with side walls narrowing in depth to said back, and a flap hinged at its front end adjacent to said drawer, said flap resting upon the side walls of said drawer, substantially as described and for the purposes specified.

4. In a refrigerator, the combination of the ice-box and the ice-rack in said box, said rack consisting of a metallic sheet, transverse bars secured to the bottom of said sheet and bent downward and outward therefrom at the ends to form diverging legs, and longitudinal strips attached to the lower ends of said legs and forming continuous supports for the rack, said strips engaging opposite angles of the bottom of the ice-box and extending from corner to corner of the same, substantially as described and for the purposes set forth.

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

CHARLES H. LEONARD.

Witnesses:
LUTHER V. MOULTON,
LEWIS E. FLANDERS.