(No Model.)

2 Sheets—Sheet 1.

C. P. JACKSON.

Refrigerator.

No. 231,324. Patented Aug. 17, 1880.

Fig. 1.

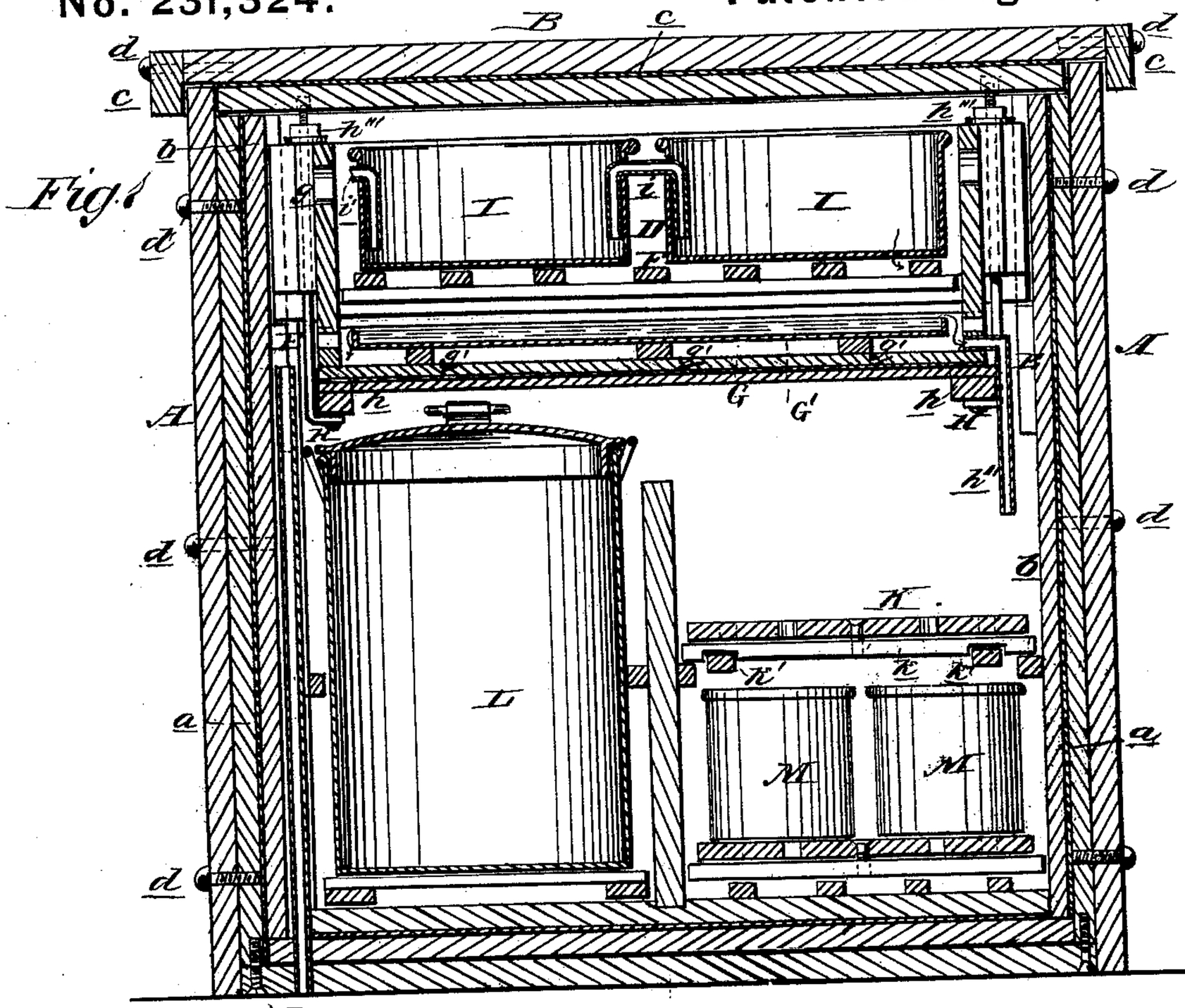
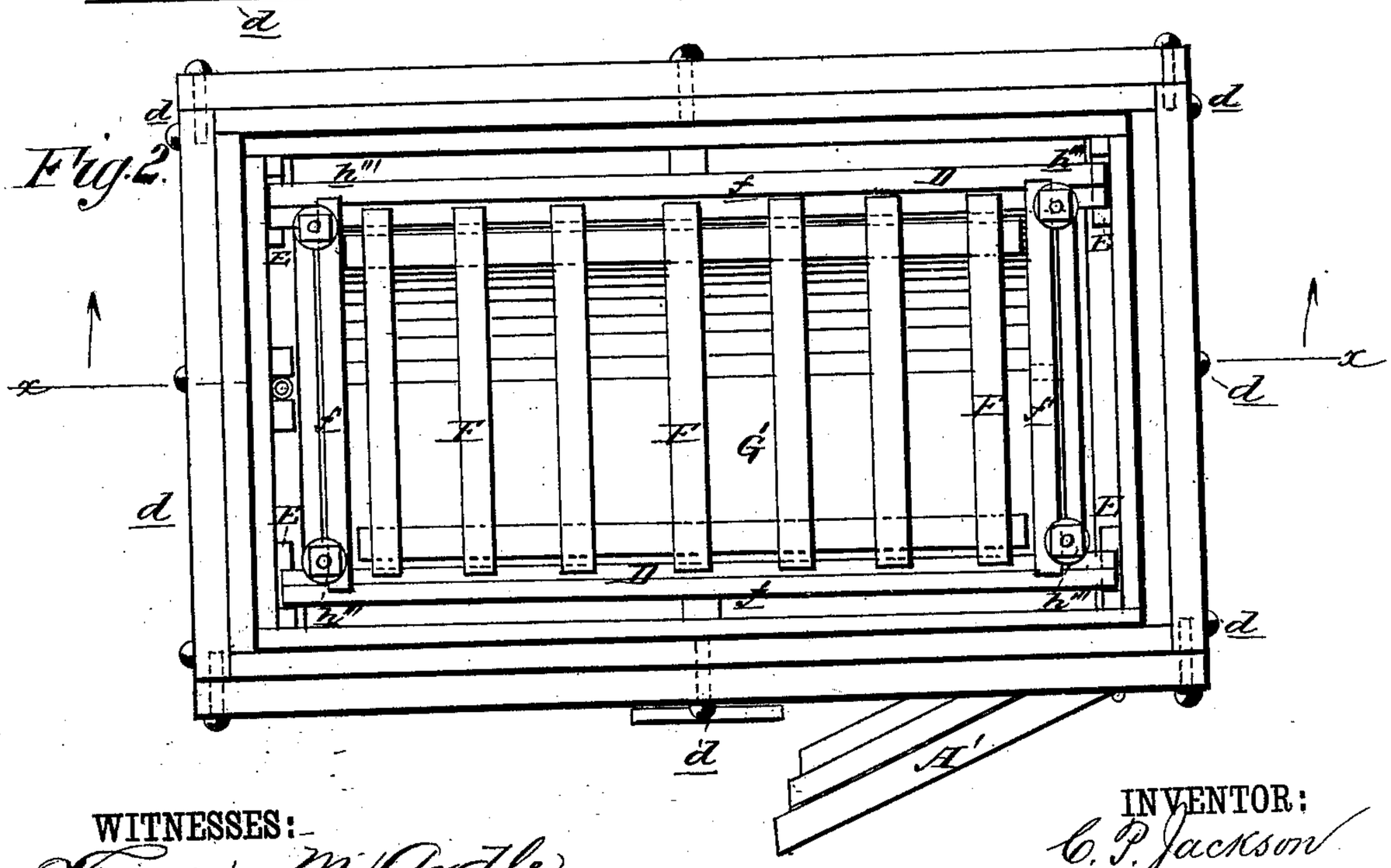


Fig. 2.



WITNESSES:

Francis McArdle.

C. Sedgwick

INVENTOR:

C. P. Jackson

BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

C. P. JACKSON.

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Fig. 3.

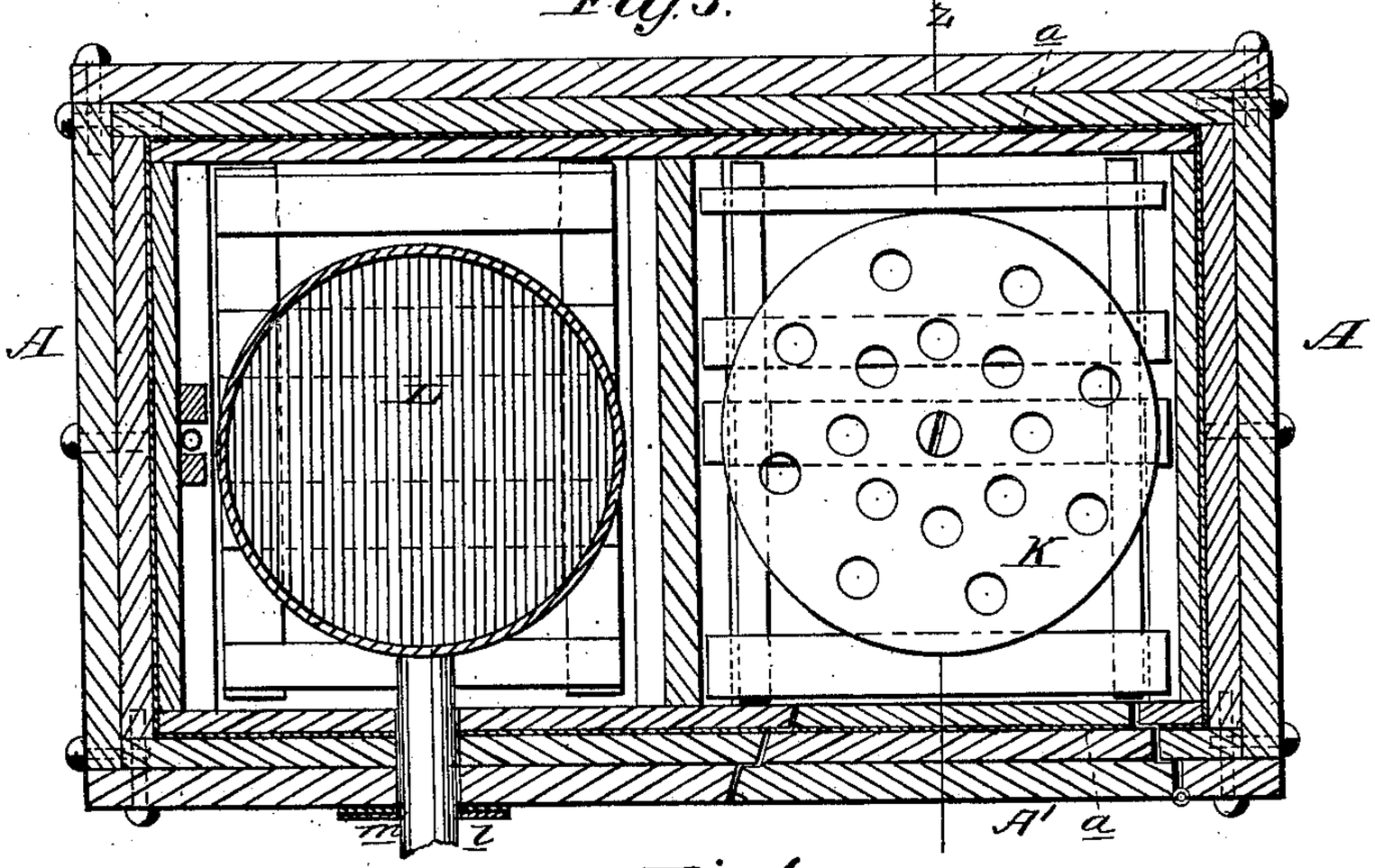
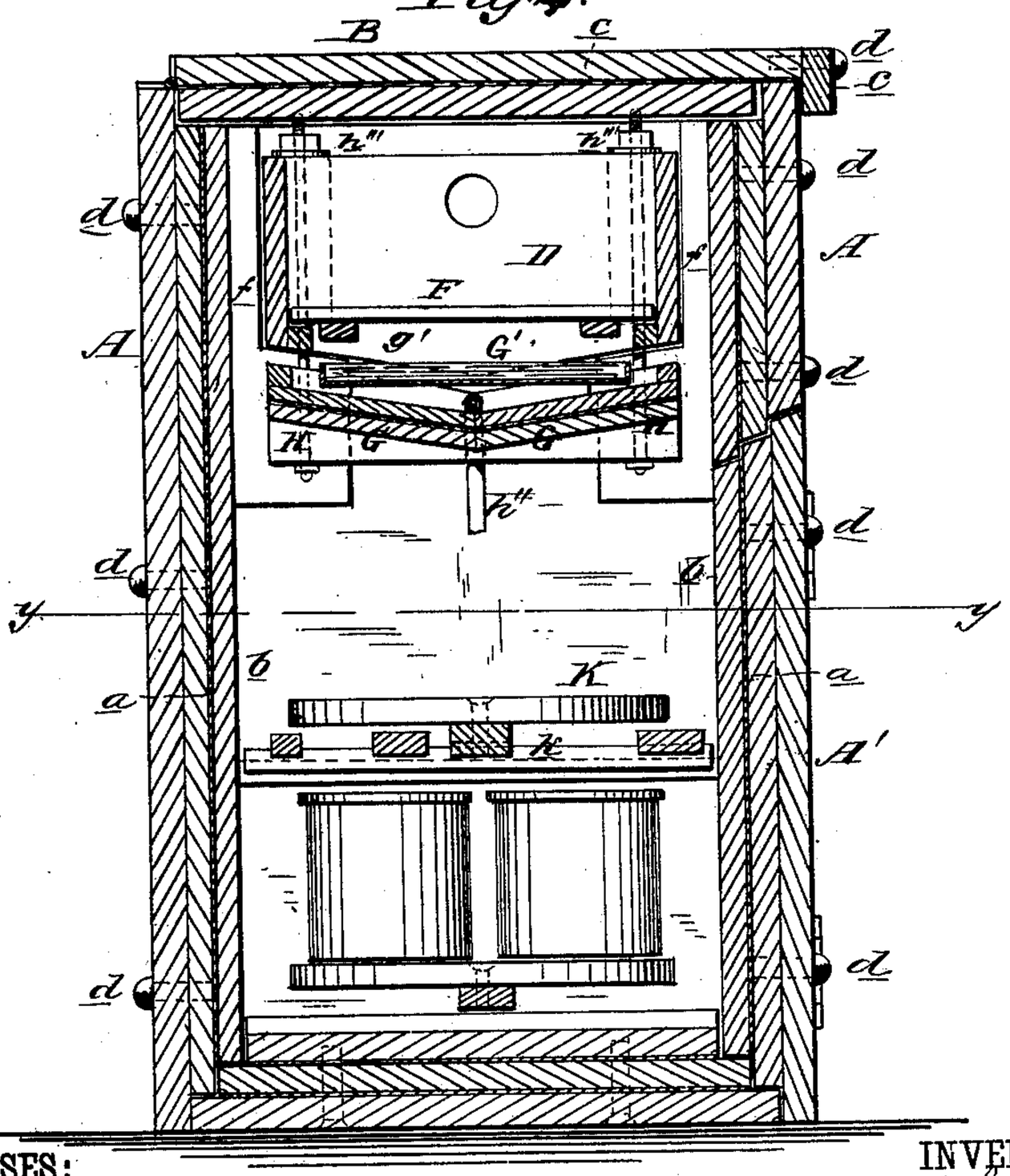


Fig. 4.



WITNESSES:
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INVENTOR:
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES P. JACKSON, OF CHICAGO, ILLINOIS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 231,324, dated August 17, 1880.

Application filed April 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. JACKSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Refrigerator, of which the following is a specification.

The object of this invention is to construct refrigerators so as to secure economy and convenience in shipping and storing them, and to secure a constant circulation of air and an extended refrigerating or cooling surface within them and especial conveniences for the introduction and removal of articles into and from them.

Figure 1 is a sectional front elevation of the refrigerator on line *x x*, Fig. 2. Fig. 2 is a plan of the same with cover removed. Fig. 3 is a plan of the same on line *y y*, Fig. 4. Fig. 4 is a sectional end elevation of the same on line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the frame of the refrigerator, consisting of two thicknesses of boards covered on the indside with stout building-paper *a*, and ceiled with boards, metal, paper, or felt, *b*; or in place of the paper covering *a* felt or other good non-conducting material may be placed between the frame and the ceiling.

The cover B of the refrigerator is constructed of two or more thicknesses of boards, metal, or paper, as shown, having a layer, *c*, of paper or other non-conducting material between them, and around the edges of the cover B are the strips C, that shut down over the joint between the frame A and its hinged cover B, so that when the said cover is closed twofold or more rabbets are formed at all the corners of the refrigerator, whereby the said refrigerator is made practically air-tight. The parts of the frame and of the cover are held together with screws or bolts *d d*, so that said frame A and said cover B may be separated from each other and taken apart or knocked down and set together again without difficulty.

The ice-tray D is supported in the top of the body of the refrigerator on shouldered corner pieces, E, and consists of two side pieces, *f f*, and two end pieces, *f' f'*, nailed, screwed, or otherwise fastened together, and strengthened by exterior vertical end strips, *g g*, and interior longitudinal strips, *g' g'*, on which latter rests a grating, F, for supporting the ice.

G is the doubly inclined or sloping suspended bottom of the ice-tray, preferably of wood, with strengthening end strips, *h h*, and preferably lined with sheet-zinc or other metal, and provided with a drip-pipe, *h''*, to carry off the water produced by the melting of the ice; or a plain level bottom with a pan of metal or any other suitable material, and provided with a proper drip to carry off the water, may be substituted for the inclined bottom. This bottom G is suspended from and below the ice-tray D by means of the rods H H, or other device, that pass down through the end strips, *g g*, and have their lower ends hooked under the strips *h h*, and are provided on their upper ends with nuts *h''' h'''*; or the rods may be reversed and the nuts be operated from the under surface of the section. This bottom G can be raised or lowered, as desired, by means of these rods and nuts H H *h''' h'''*, and in large refrigerators said bottom G is preferably made in sections of various lengths for convenience in handling, and also that one or more sections may be removed, together with the pan G' resting on it, in order to expose the whole under surface of the grating F and of the ice resting upon said grating, and in order, too, that the condition of the contiguous parts may be examined, and defective parts removed and replaced without interfering with other parts of the refrigerator, and without removing the mass of ice.

G' represents a shallow metallic pan resting on proper supports *g'* on the suspended bottom G of the ice-tray D, a little smaller than the suspended bottom G, into which pan G' the drip from the ice will fall and be retained to overflowing, the overflow from which pan will fall onto the suspended bottom G, and be carried off through the drip-pipe *h''*. By this arrangement the cold water dripping from the ice is retained within the refrigerator with great surface exposure, so that its refrigerating qualities are utilized, and ice is thus economized.

I I represent cylindrical tanks, of wood, metal, or other material, communicating with each other by means of a pipe, *i*, and provided

with an outlet-pipe, *i'*, at the bottom of the tank. When desired, these tanks I I may be placed within the ice-tray D, elevated above the contents of the refrigerator, and water be run into one tank, whence it will flow into the other, (or others, if there be more than two,) and thence overflow into the pan G' and suspended bottom G, whence it will pass off through the drip-pipe *h'*. By means of these tanks I I it is designed to present an extended water-surface for cooling the refrigerator and its contents in addition to the cooling-surface presented by ice, which ice may be placed around the tanks inside the ice-box, or in the water, if desired, or water only may be used. The flowing water also serves to condense and absorb and carry off the gases and odors from the articles contained in the refrigerator.

K is a rotary sliding shelf, consisting of a circular and preferably perforated or latticed plate pivoted on a cross-bar, *k*. Said cross-bar *k* may be grooved, as shown at *k'*, so as to slide on supporting-bars, as shown in Fig. 1, or it may be ungrooved, but short enough to allow room for sliding; or said shelf K may be supported on wheels or casters. This shelf can be turned or moved in any direction for the convenience of placing and removing articles on or from it.

L represents a convenient can for holding milk or other liquid in the refrigerator, said can being provided with a pipe, *l*, that projects out through an opening, *m*, in the refrigerator, so that its contents may be drawn off without opening said refrigerator or can.

M M represent smaller cans set beneath or on the rotary shelf K.

The suspended bottom G of the ice-tray D may be drawn up close against said tray, so as to prevent the escape therefrom of any cooling-air, or it may be lowered to any desired degree, and thereby expose the under surface of the ice and permit a full volume of cold air to enter the lower chamber or chambers of the refrigerator. Thus it will be seen that the temperature within the refrigerator may be regulated as may be desired.

It is designed to provide the refrigerator with suitable air-passages for permitting all necessary circulation of air within; and it is also designed to divide the refrigerator into two or more chambers, if it be desired, and each chamber may be provided with its separate ice-tray and suspended bottom, so that different degrees of temperature may be, if desired, kept in each chamber.

The hinged door or doors A' of the refrigerator are constructed of two or more thicknesses of boards, as shown, with twofold or more rabbeted edges to fit into corresponding openings and make tight joints.

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

The combination, with the ice-tray provided with the grating F, of the bottom G, suspended by rods H, passing through strips *g*, hooked at their lower ends under strips *h*, and having on their upper ends the nuts *h'''*, as and for the purpose specified.

CHARLES PRINGLE JACKSON.

Witnesses:

C. W. ANGELL,

H. B. GLEASON.