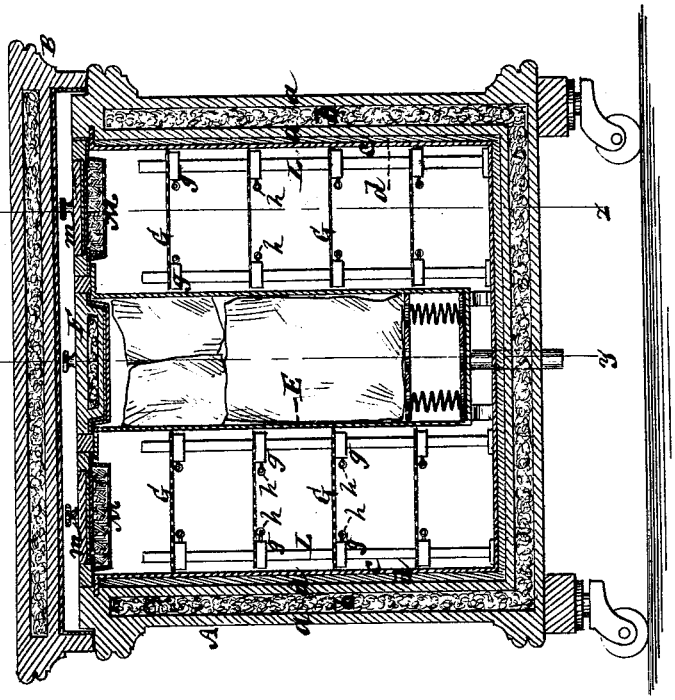
2 Sheets—Sheet 1.

C. H. OLEY.

REFRIGERATOR.

No. 188,173. Patented March 6, 1877.

Fig. 2.



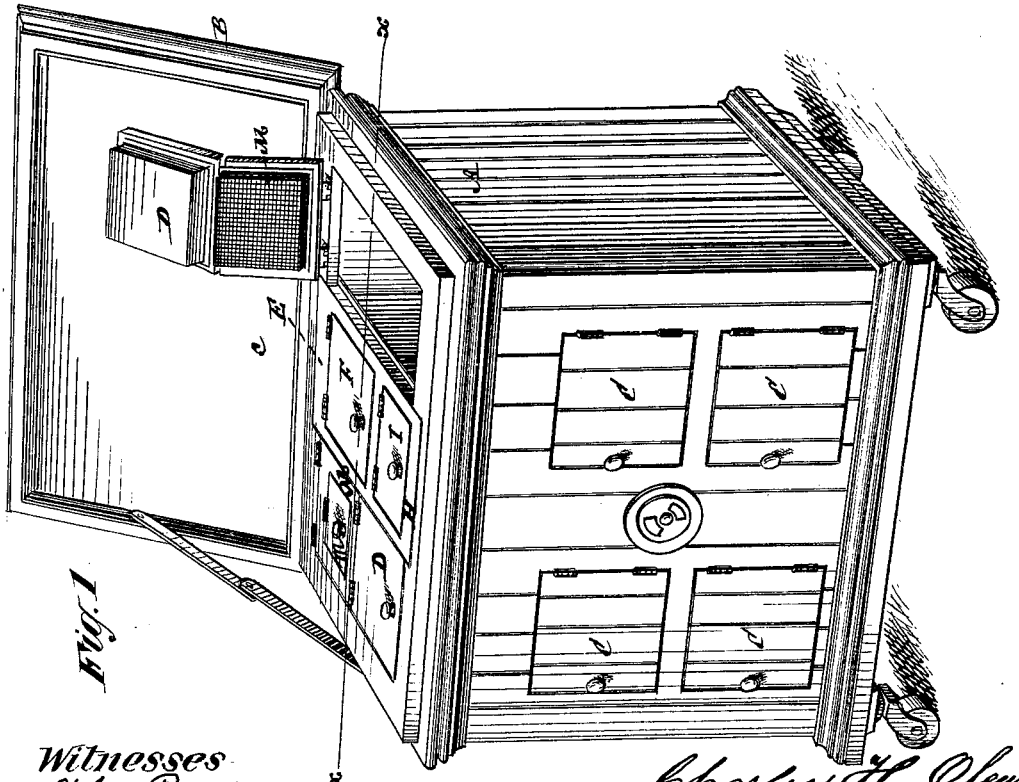


Fig. 1

Witnesses
John Booker
Fred. Haynes

Charles H. Oley
by his Attorneys
Brown & Allen

2 Sheets—Sheet 2.

C. H. OLEY.

REFRIGERATOR.

No. 188,173. Patented March 6, 1877.

Fig. 1.

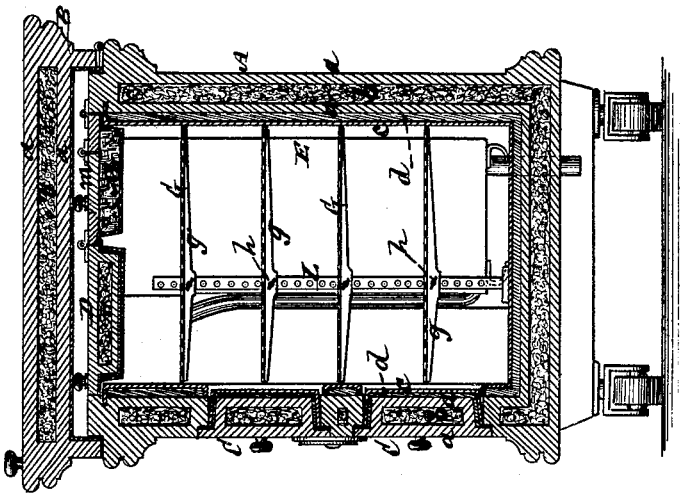
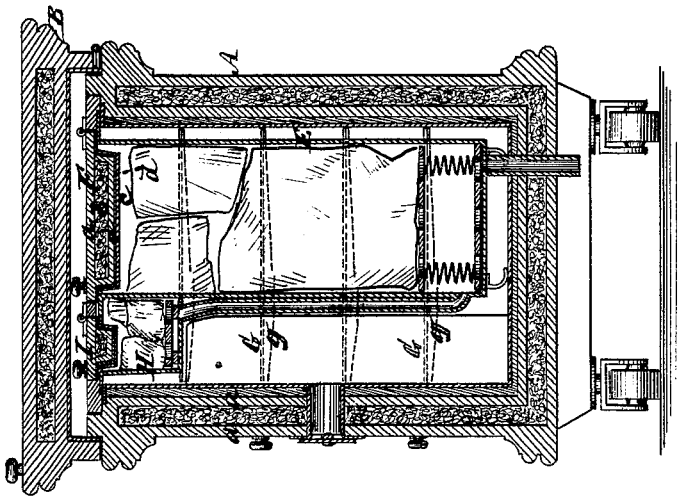


Fig. 2.



Witnesses.
John Becker
Fred. Haynes

Charles H. Oley
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

CHARLES H. OLEY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **188,173**, dated March 6, 1877; application filed December 27, 1876.

To all whom it may concern:

Be it known that I, CHARLES H. OLEY, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

My invention consists of a certain novel construction and arrangement of parts, whereby I am enabled to furnish a very efficient and desirable refrigerator.

The improvements will be fully hereinafter described, and specifically pointed out in the claims.

Figure 1 represents a view, in perspective, of an upright refrigerator constructed in accordance with my invention, and with certain of its lids thrown open and exposed. Fig. 2. is a vertical longitudinal section on the line *x x*, Fig. 1; Fig. 3, a transverse section thereof on the line *y y*, Fig. 2; and Fig. 4, a further transverse section on the line *z z*, Fig. 2.

A is the outer casing of the refrigerator, and B its main lid, both of which are hollow, or of a double wooden construction, being formed of wooden walls or sides *a a*, leaving a space in between them, which is filled with curled hair *b*, that I find, from experience, is one of the best non-conducting fillings for refrigerating purposes. Outside of the inner wall of wood is a zinc or other metal lining, *c*, and between said wall and metal lining is arranged one or more layers of woolen cloth, *d*, which may either be felted or woven. The doors C C of the refrigerator may also be constructed in like manner, as also, if desired, certain inner lids D. E is the columnar main ice-box, arranged to enter down between two series of shelves, G, on either side, and in front of the interior of the refrigerator, but which may be arranged more or less toward either one of the sides, or back or front, of the refrigerator. Said columnar ice-box E extends the whole, or nearly the whole, depth of the refrigerator, to effect a more perfect and economical cooling action, and the same may be removed, for cleaning and other purposes, by lifting it out of the case. This main columnar ice-box is packed with ice, to effect the necessary cooling and preservation of the contents of the refrigerator throughout the whole depth of the latter; or it may be packed with ice and salt, or any other suitable frigorific mixture, according to the extent of cooling required and other circumstances. The lid F to the main ice-box E may be constructed like the double walls of the outer casing. Said box is fitted with a false or spring perforated bottom for the ice to rest upon, and is provided with a suitable pipe, H′, extending from the same to or near the lower end of the main ice-chamber, for water resulting from melting of the ice.

H is a separate ice-box, which, however, may project as an upper wing from the main ice-box E, and which is designed to contain ice for use in water-pitchers, or for table use and other purposes. This supplementary ice-box is also fitted with a drainer and outlet for passing off water resulting from melting of the ice in it. Its lid I may be constructed like the lid F. By means of this separate ice-box H ice for outside use may be obtained without opening or exposing the main ice-box.

On opposite sides of the main columnar ice-box E, and extending in front of it, when said ice-box is arranged centrally down the back portion of the refrigerator-casing, are a series of loose or removable shelves, G, preferably perforated and arranged at any suitable distance, one above the other, on cross-bars or trees *g*, which are adjustable up or down uprights L, secured to the bottom of the case, and having upright rows of perforations, through which pins *h* are inserted to hold the shelves at their required distances apart. This construction not only provides for an adjustable arrangement of the shelves on which the contents of the refrigerator to be preserved are placed, but also for their ready removal when it is required to clean the refrigerator.

Arranged over the shelves, beneath the main lid B, are one or more inner lids, D. These inner lids may be constructed in sections, jointed together, as shown, to reduce the amount of exposure when opening them, and, as hereinbefore described, may be more or less like the walls of the outer case, so far as their non-conducting construction is con-

cerned; but said inner lids are provided with one or more receptacles, M, for charcoal or other deodorizing material, and have perforated bottoms, whereby the contents of the refrigerator are kept pure and sweet. These deodorizer-receptacles are provided with lids *m*, or other means for renewing the deodorizing material from time to time.

I claim—

1. A refrigerator in which the wooden walls *a a* are separated from each other to form an intervening space, provided with a filling of curled hair, the metallic lining *c*, with one or more intervening layers of woolen cloth, *d*, being attached to the inner wooden shell *a*, substantially as described.

2. A refrigerator composed of walls *a a*, metallic lining *c*, upright removable ice-chamber E, lateral supplemental ice-chamber H, pipe H′, extending from the chamber H to or near the lower end of the vertical chamber E, the vertically-adjustable shelves G, secured upon uprights L L on opposite sides of the vertical ice-chamber, and lids D, D, F, and I, the whole being constructed substantially as and for the object shown and described.

CHAS. H. OLEY.

Witnesses:
MICHAEL RYAN,
FRED. HAYNES.