L. D. BUNN.

Refrigerator.

No. 47,617. Patented May 9, 1865.

Fig. 1.

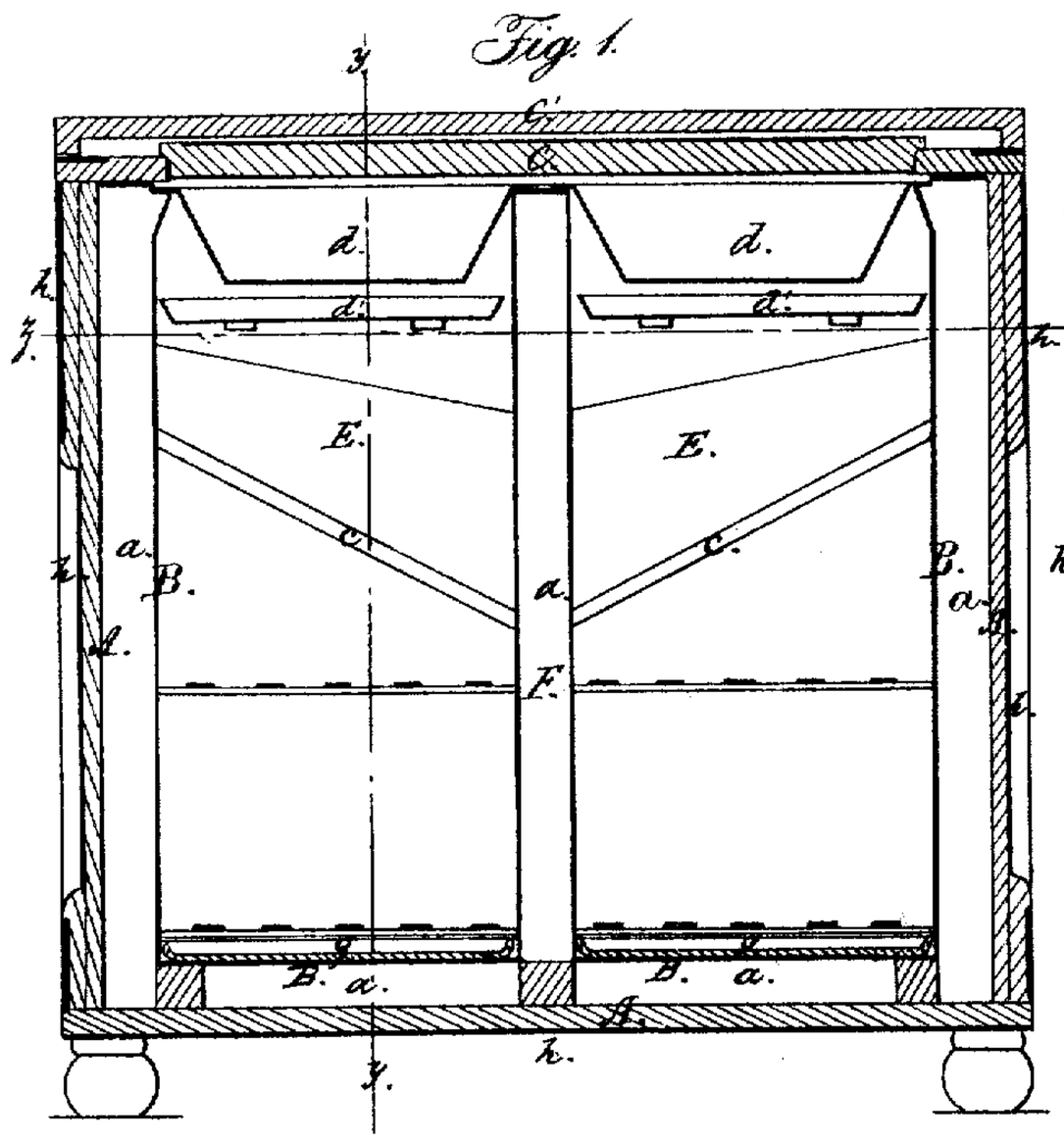


Fig. 2.

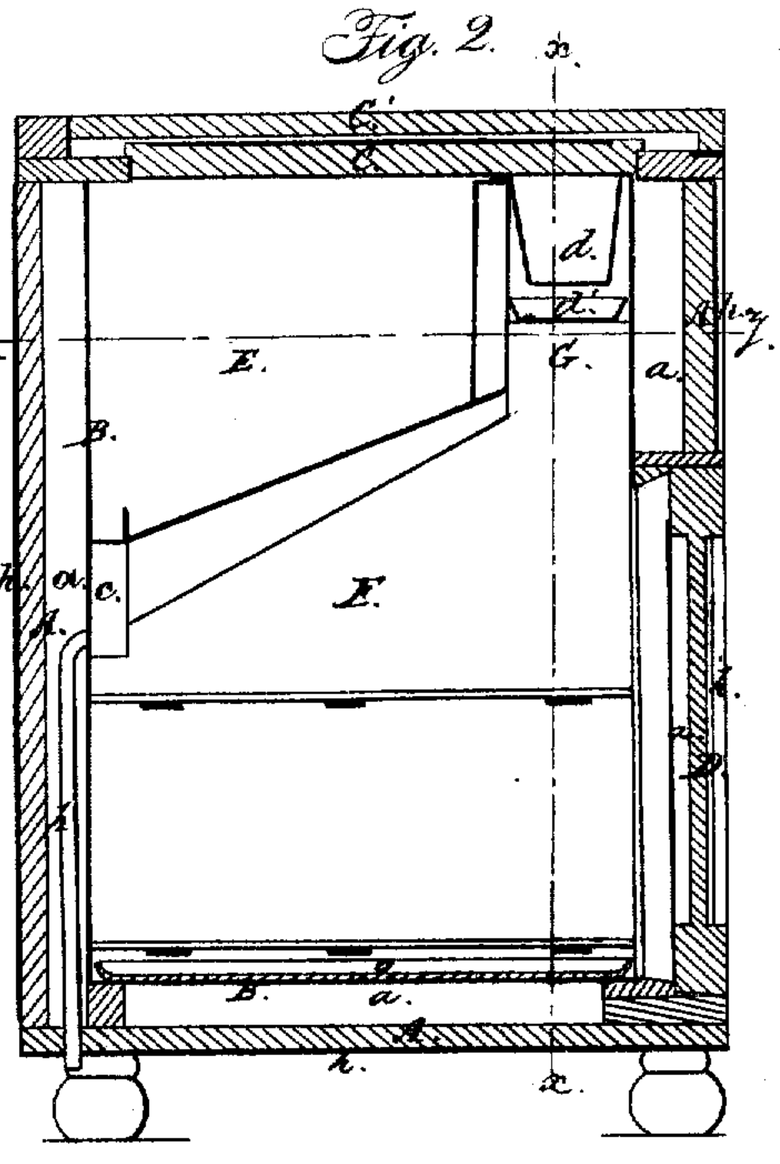


Fig. 3.

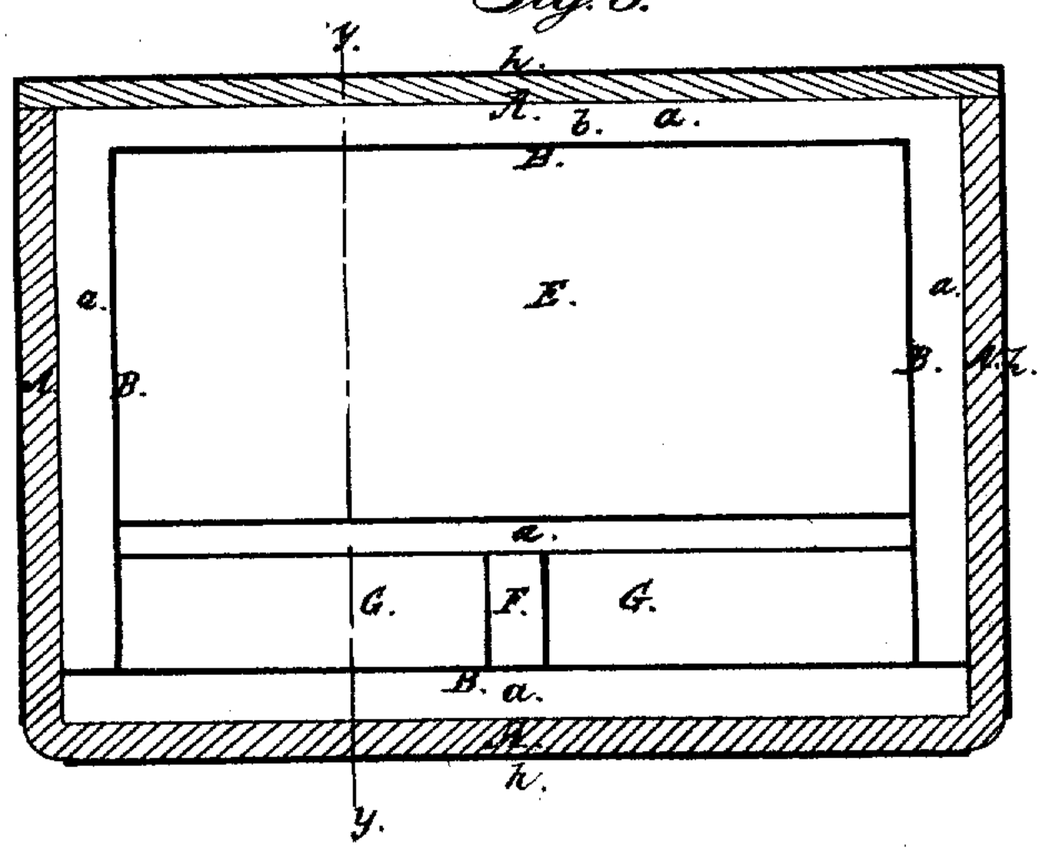
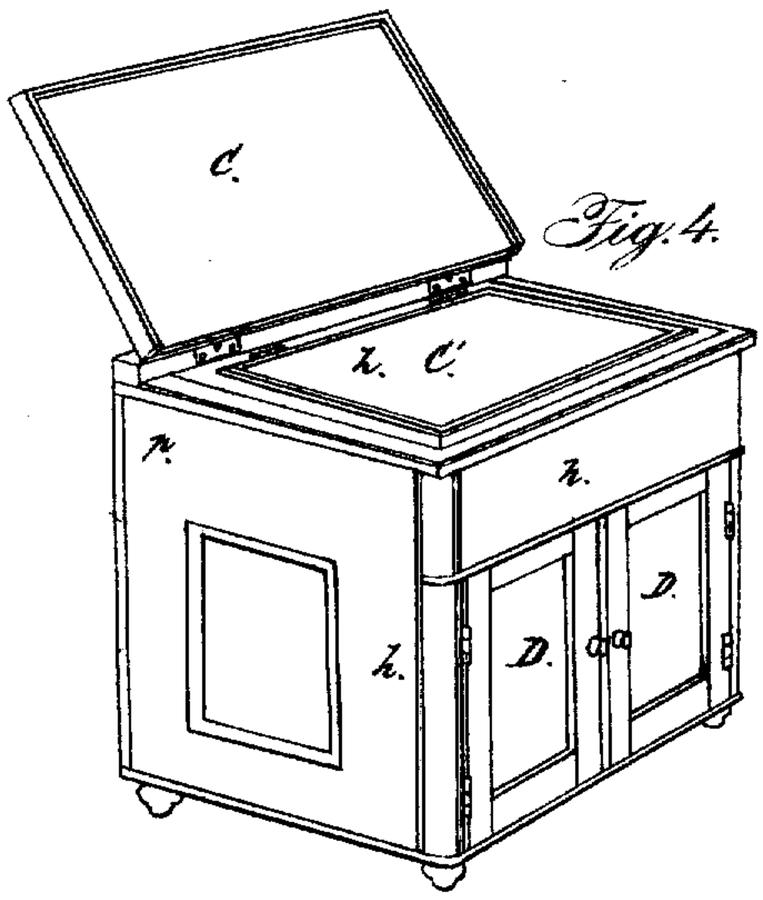


Fig. 4.



Witnesses:
R. F. Campbell
E. Schaefer

Inventor:
L. D. Bunn by his Atty
Marcus Learned

UNITED STATES PATENT OFFICE.

L. D. BUNN, OF MORRISTOWN, NEW JERSEY.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. **47,617**, dated May 9, 1865.

To all whom it may concern:

Be it known that I, L. D. BUNN, of Morristown, county of Morris, and State of New Jersey, have invented a new and useful Improvement in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section through the refrigerator, taken in plane indicated by red line *x x*, Fig. 2. Fig. 2 is a vertical section taken through Fig. 1 at the point indicated by red line *y y*, Fig. 1. Fig. 3 is a horizontal section through the refrigerator, taken at the point indicated by red line *z z*, Figs. 1 and 2. Fig. 4 is a perspective view of the refrigerator with the top thrown up.

Similar letters of reference indicate corresponding parts in the several figures.

One object of my invention is to surround or partially surround refrigerating-chambers with a stratum of confined air, and also with felt flock, or some equivalent fabric, which will, in conjunction with the air-spaces, prevent to a great degree the conduction of heat through the walls of the refrigerator, as will be hereinafter described.

Another object of my invention is to provide for conducting the water of condensation, which accumulates upon the outside surface of the ice-receptacle, out of the refrigerator, and thereby keeping the refrigerating-compartments dry, as well as cool, as will be hereinafter described.

Another object of my invention is to provide for the absorption of the odors which arise from the articles placed in the refrigerator, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The front, back, side, and bottom walls of my refrigerator are made double, with a close air-space, *a*, between them. The outer walls, A, may be made of wood, and the inner walls, B, may be made of sheet metal, as represented in Figs. 1, 2, and 3 of the accompanying drawings. The top of the box which is thus formed is closed by means of a hinged lid, C, and an outer lid or cover, C′. The lid C may be made with double walls, inclosing an air-space, and this lid should be constructed so as to close the top of the refrigerator perfectly, so as to effectually exclude warm air from the ice-box and refrigerating-apartments. The doors D D in the front side of the refrigerator, may be made with double walls, as represented in Fig. 2, and these doors should be made so as to fit very tightly when closed for excluding air. The ice-receptacle E is located at the top of the refrigerator and occupies nearly the entire horizontal area thereof. The bottom of this box E inclines toward the back of the refrigerator at such an angle that any moisture which gathers upon its bottom surface, as well as the water from the ice inside of this box, will run down and escape through the drain-pipe *b*. The inclined gutters *c c* carry off the moisture from the outside of the ice-box bottom. By such an arrangement there will be no dropping of water from the ice-box into the cooling-apartments, which are in this manner kept dry.

The refrigerator which I have represented in the drawings has two cooling-apartments, which are separated from each other by a vertical central partition, F, that is composed of two walls with a close air-space between them. This partition extends up from the bottom of the refrigerator to the inclined bottom of the ice-chamber E, and from this point the partition extends up between the front walls of the ice-chamber and the front walls of the refrigerator-chest, so as to divide the narrow chamber G into two compartments. These compartments are formed by making the ice-chamber narrower than the refrigerator, and they are intended for receiving pans *d d*, which are intended for containing fine charcoal for purifying the air. Beneath these pans *d d* are shallow pans *d′ d′*, for catching any dust which may fall from the pans *d d*. The inside lid, C, extends over and closes the top of the ice-box, as well as the top of the chambers G, and when this cover C is down there is no communication between the ice-box and the refrigerating-chambers, nor between any portion of the interior of the refrigerator and the outer air.

The object of making the chambers G G is to allow the air rising from the bottom of the refrigerator and charged with the odors of the articles beneath the ice-box to pass through charcoal or some other suitable absorbent, and deposit its impurities therein.

If desirable, the pans *g* at the bottom of the refrigerator may be filled with charcoal or some other absorbent which will purify the air, and, in conjunction with the traps *d d*, prevent the air from communicating the odor or taste of the articles in some of the dishes to other articles.

By inclining the bottom of the ice-chamber I expose a greater amount of refrigerating-surface to the air confined in the cooling-chambers beneath this box, and at the same time am enabled to conduct off the water which gathers upon its surface.

By inclosing the several chambers of the refrigerator with double walls having a confined air-space between them, this air serves an excellent purpose as a non-conductor of heat and cold, and renders the refrigerating of articles within said chambers more perfect than if a single wall only was used. To still further insulate the chambers of the refrigerator from the heat of the external air, I cover the outside surface of the outer walls with felt cloth, flock, or some such material, which will obstruct the passage of heat through the walls of the refrigerator. The felt cloth *h h* may be pasted or tacked on the refrigerator, and one or more thicknesses of this cloth may be used. If flock is used it can be applied in the well-known manner of covering surfaces with such material.

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

1. A refrigerator constructed with double air-inclosing walls, and adapted for refrigerating meats and other articles when the exterior surface of the air-inclosing double wall is covered or coated with felt cloth or flock or other similar material, substantially as and for the purpose described.

2. The arrangement of chamber G, ice-chamber E, and a cooling-apartment, F, for containing the articles to be refrigerated, substantially as described.

L. D. BUNN.

Witnesses:
SAMUEL S. HALSEY,
E. D. HALSEY.