

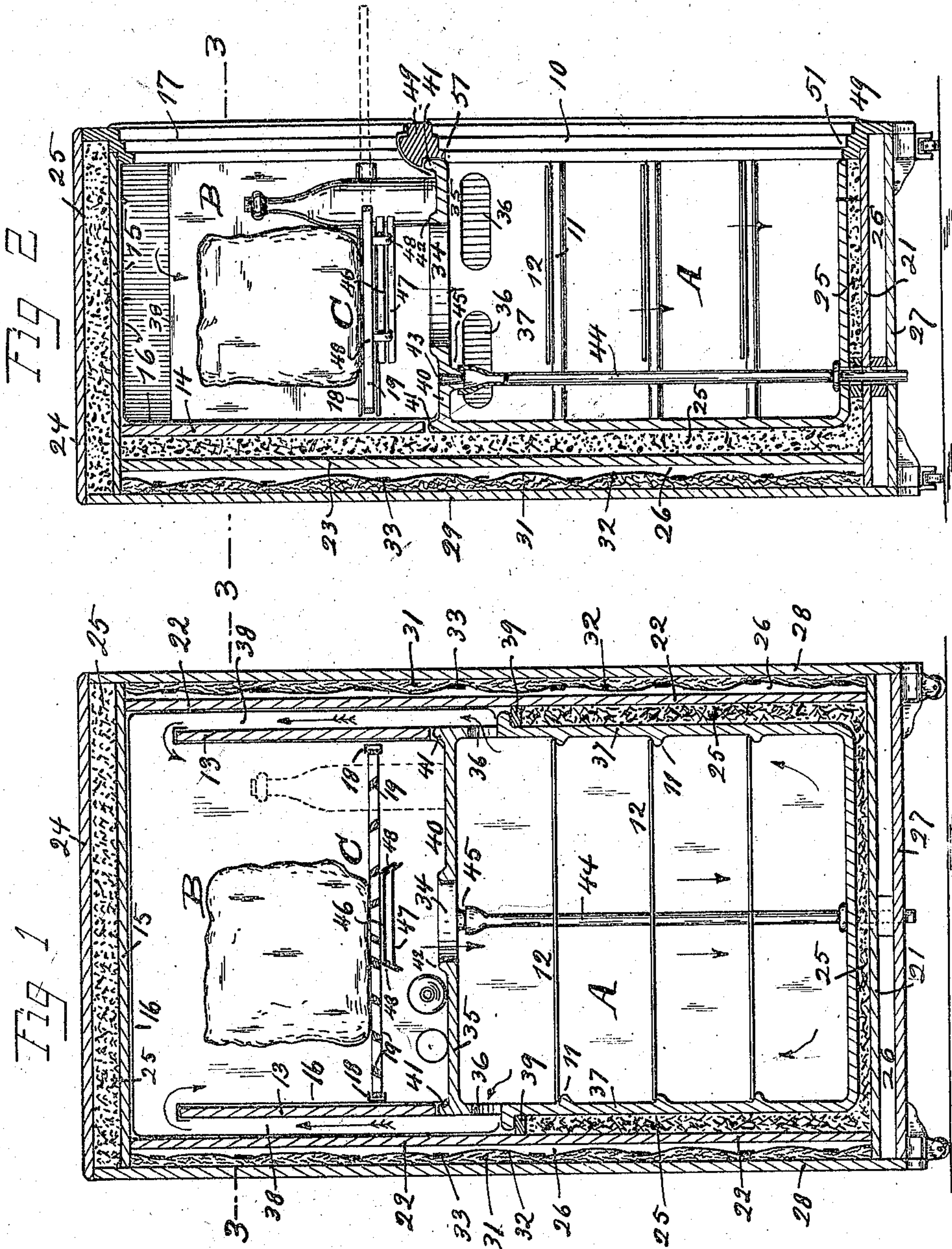
C. TETTENBORN.  
REFRIGERATOR.

APPLICATION FILED APR. 1, 1907.

905,118.

Patented Nov. 24, 1908.

2 SHEETS—SHEET 1.



Witnesses  
T. LeBeau  
E. Kenney

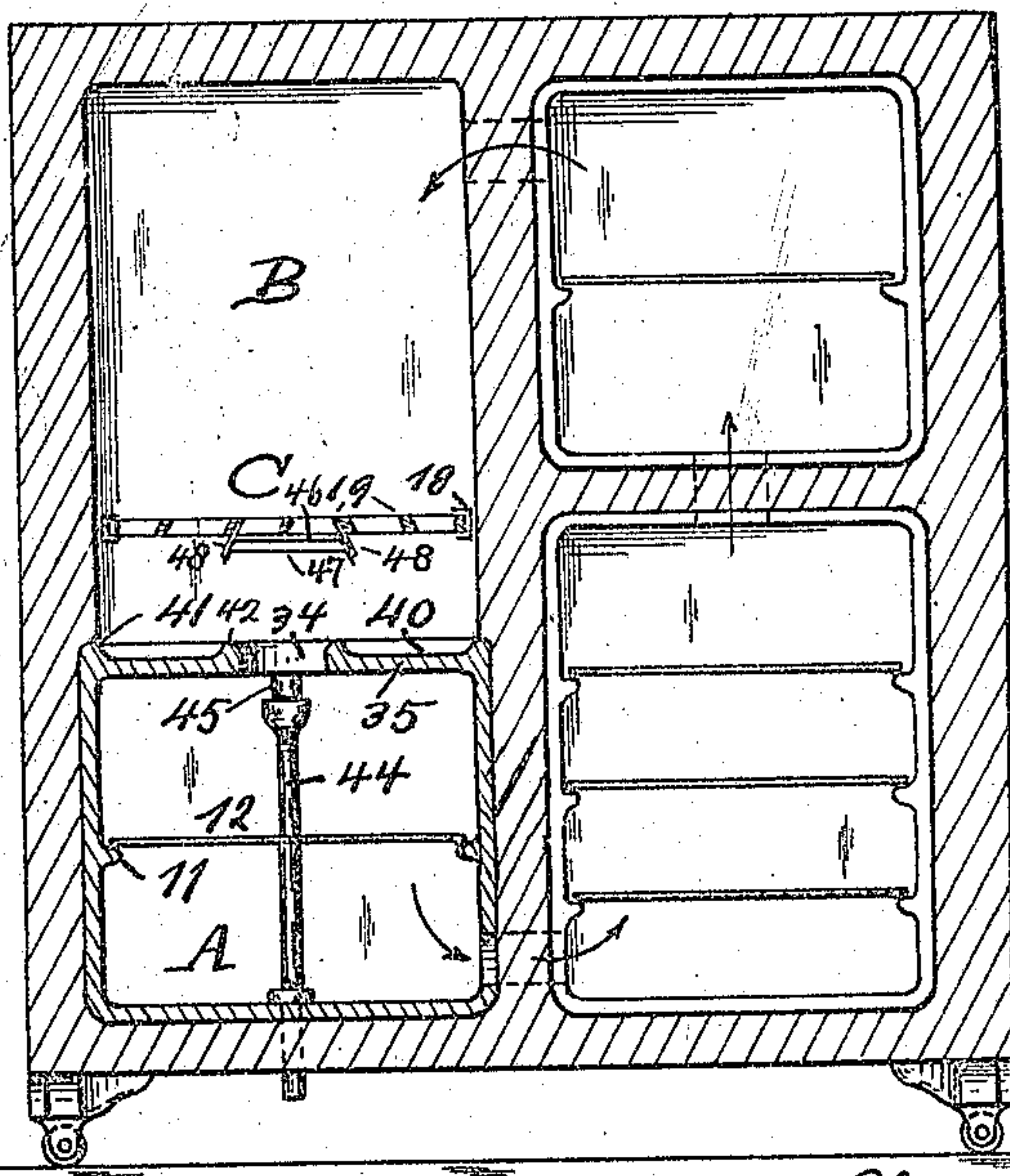
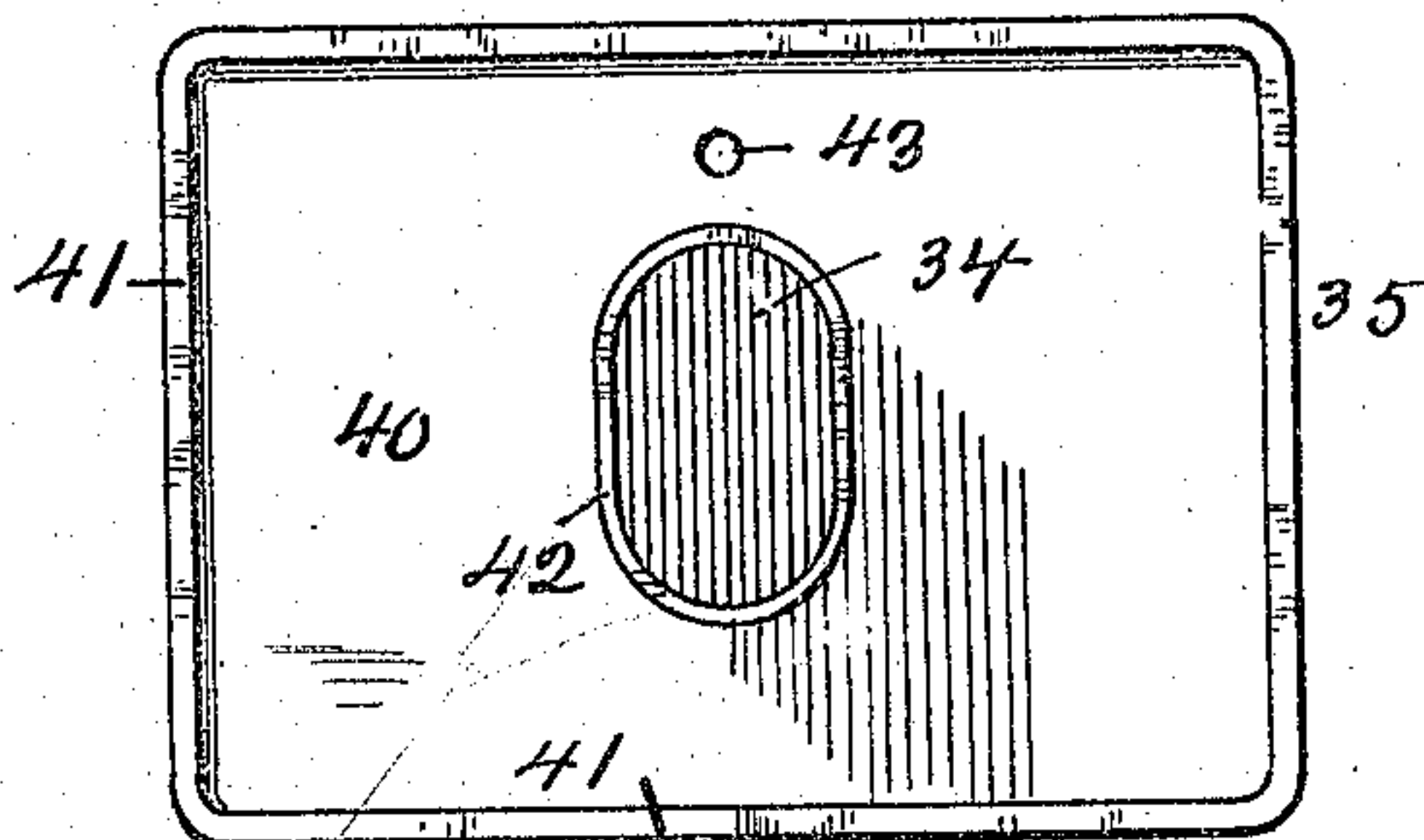
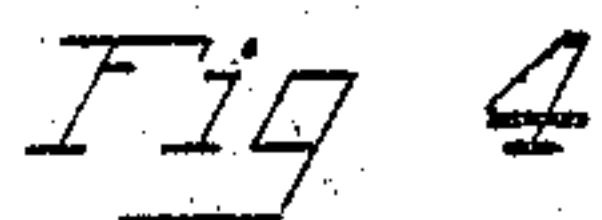
Inventor  
Charles Tettenborn  
by C. Spengel atty



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# UNITED STATES PATENT OFFICE.

CHARLES TETTENBORN, OF CINCINNATI, OHIO.

## REFRIGERATOR.

No. 905,118.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed April 1, 1907. Serial No. 365,631.

*To all whom it may concern:*

Be it known that I, CHARLES TETTENBORN, a citizen of the United States, and residing at Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Refrigerators; and I do declare the following to be a clear, full, and exact description of the invention, attention being called to the accompanying two sheets of drawings, with the reference characters marked thereon, which forms also a part of this specification.

This invention relates to refrigerators and concerns improvements in the general construction thereof as well as of certain parts and their arrangement whereby the manufacture of such structures is simplified and their usefulness increased.

In the following specification and particularly pointed out in the claims at the end thereof, will be found a full description of my invention, together with its parts and construction, which latter is also illustrated in the accompanying two sheets of drawings, in which:—

Figure 1, is a sectional elevation of such a refrigerator, the section being taken on a plane between front and back walls. Fig. 2, is a vertical section taken at right angles to the section shown in the preceding figure. Fig. 3, is a horizontal section taken on line 3—3 of Figs. 1, and 2. Fig. 4, is a top-view of the drip-receiver. Fig. 5, in a view similar to Fig. 1, shows parts of my invention applied to a refrigerator modified as to its internal arrangement.

A, indicates provision spaces or chambers, the two opposite sides of which, also back, bottom and top are all contained in an integral structure as shown and formed out of porcelain or clay which is burned and glazed, or other equivalent material may be used. The front is open and may be closed by a door 10, supported in the front wall of the refrigerator. The sides have integral ledges 11, for supporting shelves 12, which may be of wirework. Above the provision-chamber there is an ice-chamber B, which contains the ice, which is supported upon a rack C. 13 13, are the sides of this chamber, 14 is the back wall thereof, and 15 the top, all being covered with a lining 16, of zinc or galvanized or enameled iron. For closing the open front of this chamber, there is a door 17, sup-

ported in the front-wall of the refrigerator 55 and above door 10 therein.

The ice-rack is supported at opposite edges in channeled guide-ways 18, attached opposite each other to the sides of the ice-chamber. This permits the rack to be slid partly 60 out as shown in dotted lines in Figs. 2, and 3, to facilitate placing the ice. The parallel bars 19, composing the ice-rack are tilted as best shown in Fig. 1, to lessen their tendency to cut edge-wise into the melting ice. Around 65 these chambers A and B, there are spaces provided which are closed outwardly by intermediate walls, preferably of boards, 21 being the wall below the bottom of chamber A, 22, 22, and 23, being those opposite sides 70 and backs of chambers A and B, and 24, the one above top 15 of the ice-chamber. These spaces so formed between the outside of the chambers and these intermediate walls, with the exception of the spaces outside of the 75 sides of chamber B, and outside of the upper part of the sides of chamber A, are filled with ground cork 25. Outside of these intermediate walls 21, 22, 22, and 23, there are air spaces 26 closed outwardly by the 80 outer inclosing walls of the refrigerator, this being the bottom 27, the sides 28 28, and the back 29. Sides 28, 28, and back 29, are lined on their inside with a layer of mineral-wool 31, which is confined in position by paper 85 coverings 32, and held by cleats 33 tacked in place. This mineral-wool lining is limited in thickness so as not to close up the air-spaces 26, in which it is contained.

Circulation within the refrigerator is induced by an opening 34 in top 35, of chamber A, through which the cold air passes down. The warmer air displaced thereby passes out through openings 36, 36, in sides 37, 37, and close under top 35. From here 95 it passes upwardly through flues 38, 38, formed between the sides 13, 13, of the ice-chamber and the boards 22, 22, opposite them. Sides 13, 13, terminate below the top of the ice-chamber, thus rendering the upper 100 ends of the flues open towards this chamber, and permitting the air passed up from below to reënter the circulation. At their lower ends these flues are closed against the cork-space 25, below, by strips 39, which 105 in combination with ledges on the outside of sides 37, serve also to center chamber A. in position.



The drip from the ice is caught by a receiver 40, the bottom of which is formed by the upper side of top 35 of chamber A, for which purpose a ridge 41 is provided all around this top to confine the water. The lower edges of the walls of ice-chamber B, meet this ridge, and lining 16 passes over the joint to prevent leakage thereat as shown in Figs. 1, and 2. Another ridge 42, is provided around opening 34 in top 35, to prevent any water from entering provision-chamber A, below. The drip-water passes out through an opening 43, and is carried off in the usual manner through a waste-pipe 44, the upper end of which connects to a nipple 45 on the underside of top 35, and below opening 43. This nipple forms an integral projection on the underside of top 35. To prevent water from the ice dripping directly through opening 34 into chamber A, I provide a shed 46 on the underside of the ice-rack and of an area sufficient to cover the opening below (see Fig. 3). Below this shed, but spaced therefrom, there is another shed 47, which catches the condensation forming on the underside of the upper shed and also directs the same into receiver 40. These two sheds are secured by lugs 48, and attached thereby to some of the rods 19, which form parts of ice-rack C. It will be seen that I dispense with the usual drip-pan, since top 35, of provision-chamber A, constitutes the same. The space thus set free may be utilized for other purposes or for reducing the dimensions of the refrigerator. I utilize this space for storage of bottles, canned goods, etc., which are thus cooled by the drip-water as shown.

The front-edge of ice-rack C, is curved in a manner as best shown in Fig. 3, and so as to recede at the front corners, thereby setting the space free thereat above the drip-water-receiver and permitting larger sized bottles like mineral water bottles to occupy this space while resting in the drip-receiver. In Fig. 5, I show the features of such a drip-receiver formed on the top of a provision-chamber also as applicable to a refrigerator in which provision-chamber and circulation are differently arranged.

In all forms, the opening provided in front-frame 49, for the door of the provision-chamber is arranged to be larger than the open side of the provision-chamber back of it, so that the inner edge of said opening, or jamb 51 does not project above the inner front edge of the walls of said chamber back of frame 49. (Observe Fig. 2). This permits this chamber and the walls of it to be cleanly and completely wiped out, since the edge of the jamb does not form an interfering projection, behind which impurities might lodge and accumulate unseen. Sanitarily considered, this is an important factor, since by this construction projections, form-

ing inaccessible corners, are avoided and effective cleaning is made possible.

Having described my invention, I claim as new:

1. In a refrigerator, the combination of a provision-chamber, the inclosing bottom, side and top-walls of which form an integral structure, an outer inclosure fitted against the outer side of bottom and side-walls of this chamber so as to closely surround the same thereat, but extending above the top thereof so as to form an ice-chamber, and means in this latter chamber adapted to support ice above the top of the provision chamber, which top on its upper side is provided with an integral ridge which extends continuously all around its edges, so as to form a receiver for the water dripping from the ice supported above.

2. A structure adapted to serve as a provision-chamber for a refrigerator and consisting of an inclosure which comprises parallel top and bottom walls, parallel sides and a back wall, the front side being left open, there being also openings provided in this inclosure to serve for ventilating purposes and the top having an opening with a nipple around it at its underside to permit passage of drip-water and attachment of a waste pipe, and ridges projecting upwardly from said top and arranged continuously all around the edges of the same and around the edges of the opening therein, the entire structure with all its appending parts, including these ridges, being integrally constructed of porcelain or other equivalent material.

3. In a refrigerator, the combination of a provision-chamber and a superposed ice-chamber, both open at their front side and provided with communicating ventilating openings, the side walls of the ice-chamber terminating below the top of said chamber, and an outer wall fitted around both chambers, but spaced from them at the upper part of the sides of the lower chamber, so as to form flues thereat which serve in conjunction with the ventilating openings mentioned.

4. In a refrigerator, the combination of a provision-chamber and an ice-chamber, a general inclosure which contains both these chambers and consists of two walls spaced from each other and from the walls of said chambers, the space between these latter walls and the walls next to them being filled with cork, and the inner sides of the outer walls being covered with a lining which is limited in thickness to leave insulating air spaces between it and the side of the opposite walls.

5. In a refrigerator, the combination of a provision-chamber, the walls of which form an inclosure which is open in front, the top-wall being provided on its upper side with a ridge all around at its edges, an ice-cham-



ber above this top the back walls and side walls of which terminate above said ridge, a metallic lining covering the inner side of these walls and extending down over the ridge below their lower edges and a support for the ice in this latter chamber.

6. In a refrigerator, the combination of an outer inclosure, a provision-chamber formed in the lower part thereof, an ice-chamber above the same the rectangular bottom of which is arranged to catch the drip-water from the melting ice and is also adapted to serve to support articles to be cooled and an ice rack above said bottom of the ice cham-

ber supported at its edges, so as to extend transversely across the space between the sides of said chamber, but terminating with its front-edge, which is curved, in the manner shown and so as to leave a clear space thereat between bottom and top of the ice-chamber.

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

CHARLES TETTENBORN.

Witnesses:

C. SPENGEL,  
T. LeBEAN.