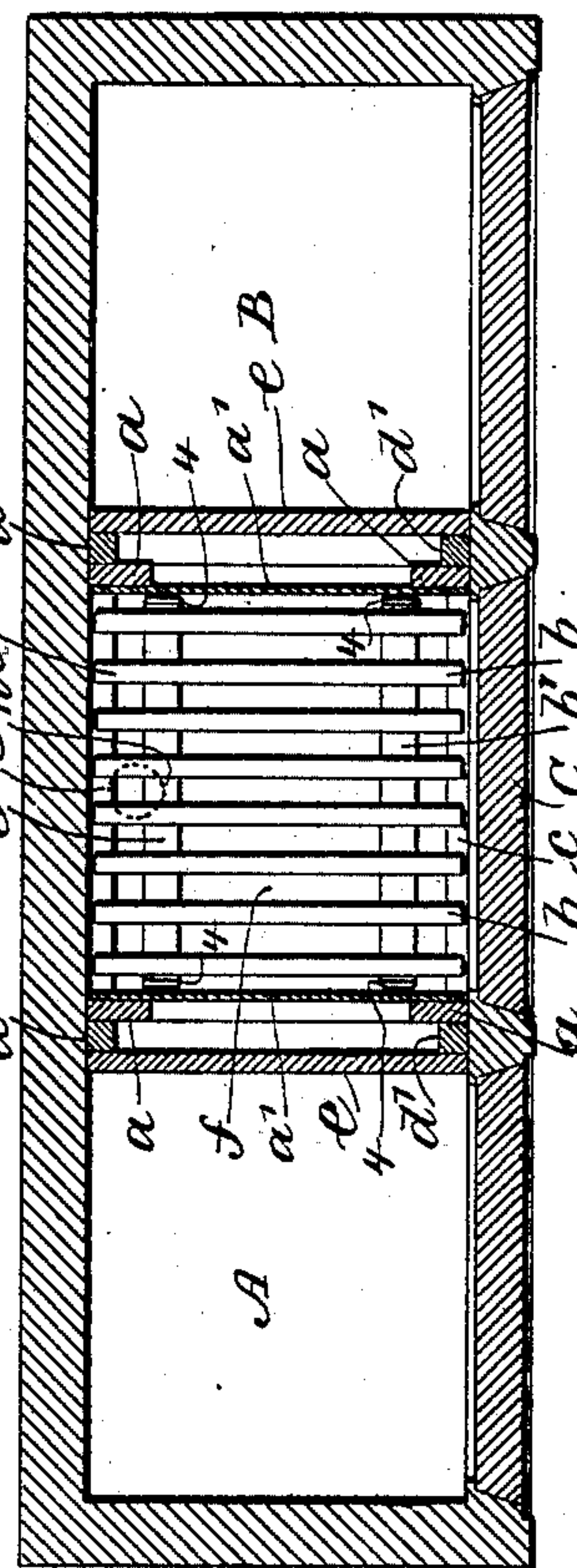
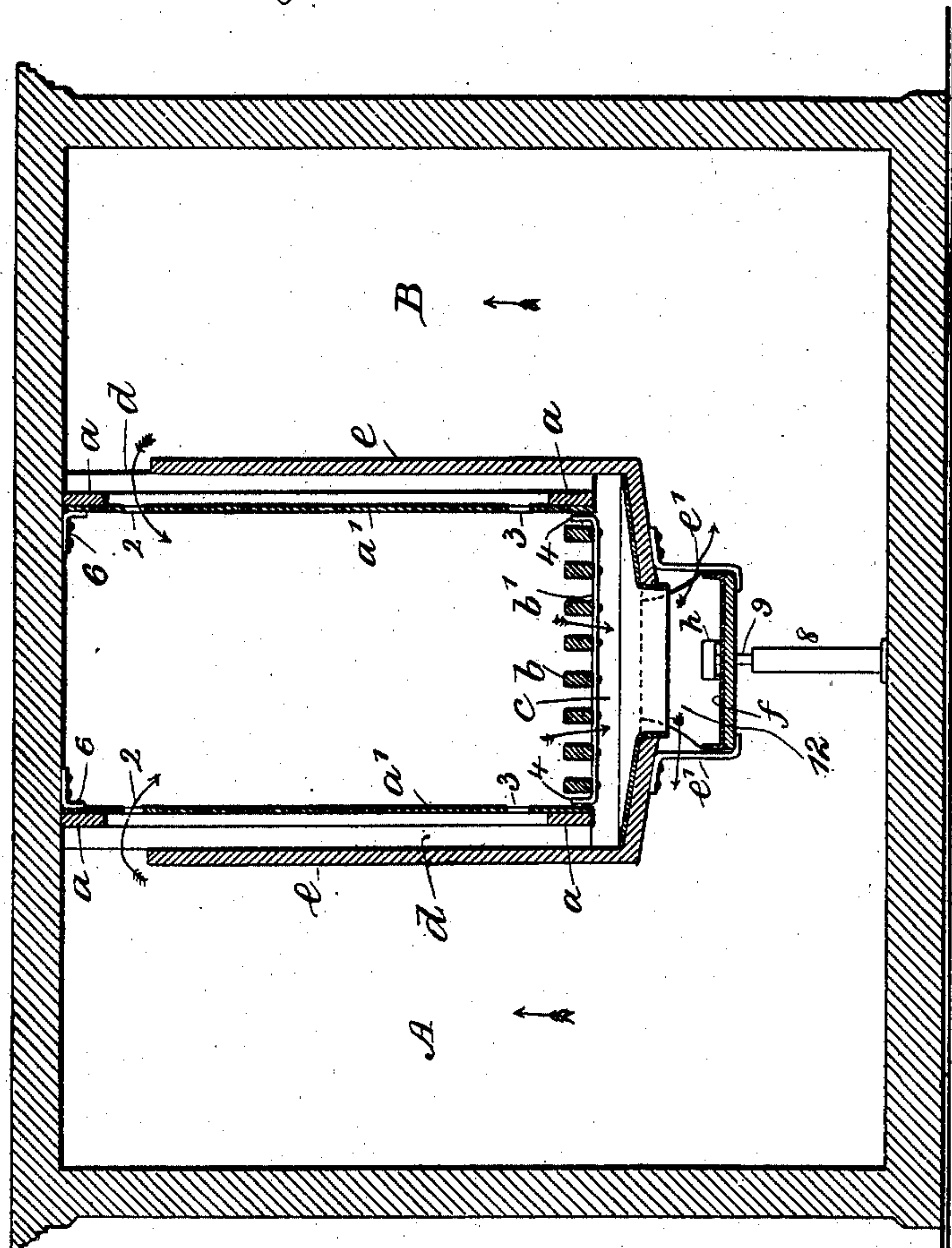
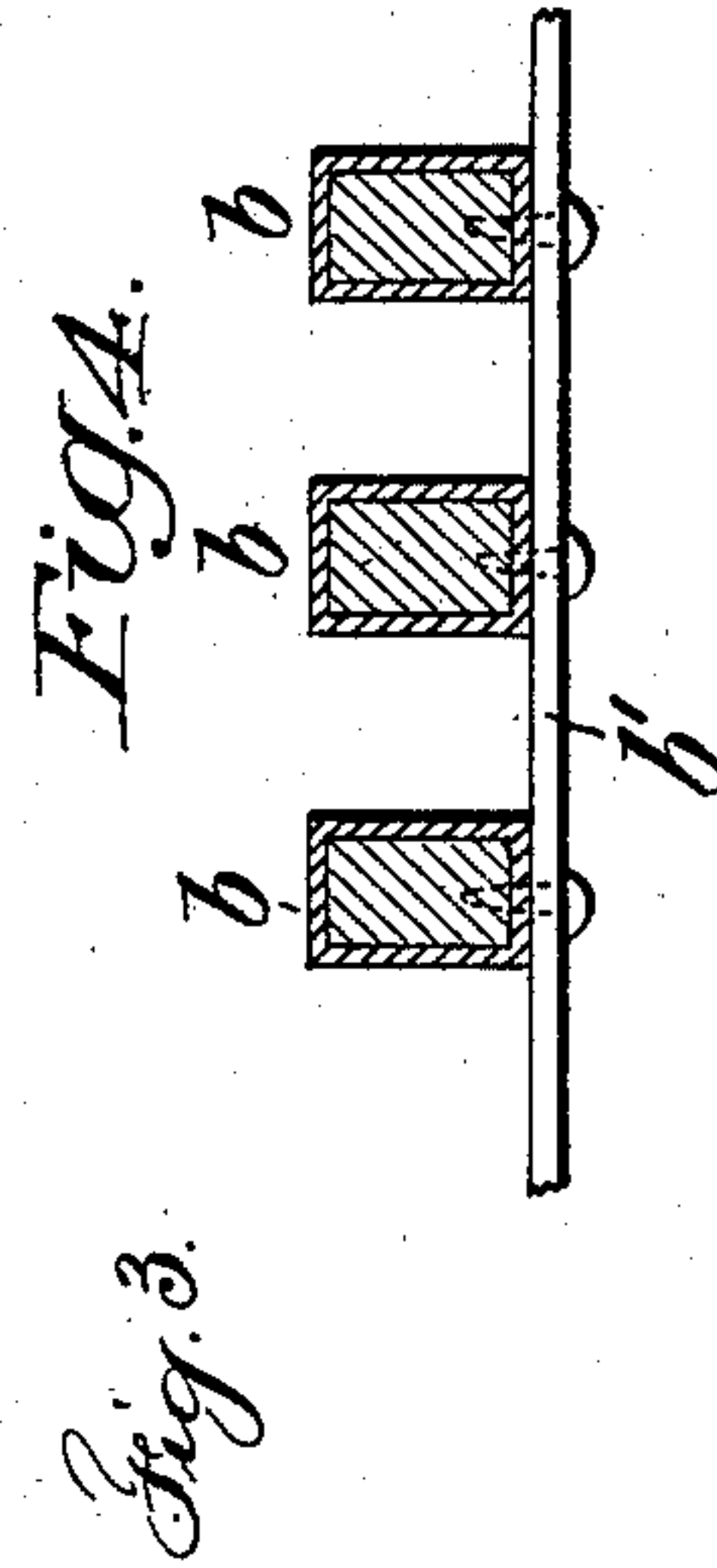
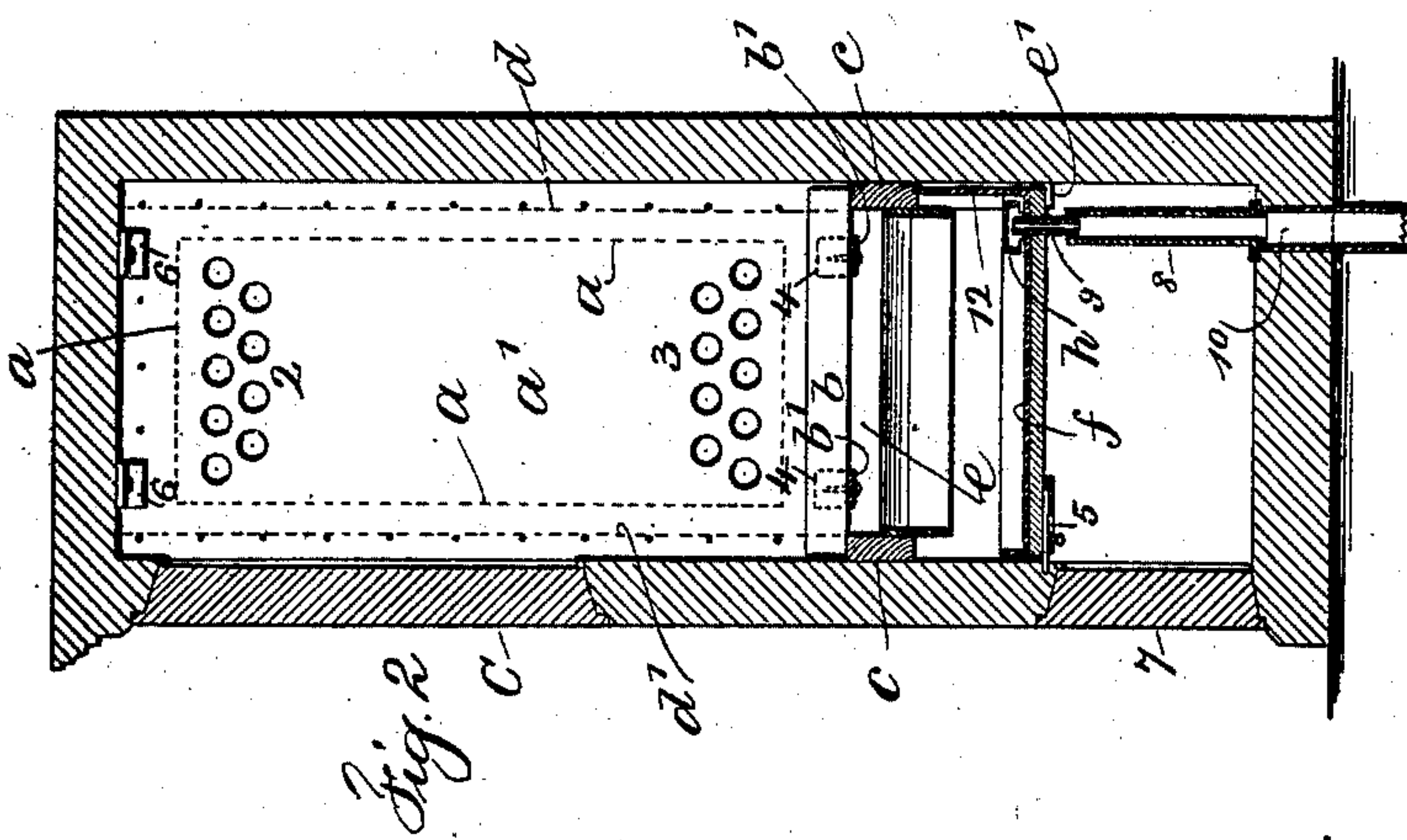


A. D. FRITTS.  
REFRIGERATOR.

APPLICATION FILED JUNE 27, 1899.

NO MODEL.



Witnesses  
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Fig. 1.

Inventor  
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per L. W. Serrell & Son  
Atty's.



# UNITED STATES PATENT OFFICE.

ATWOOD D. FRITTS, OF HOBOKEN, NEW JERSEY.

## REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 741,784, dated October 20, 1903.

Application filed June 27, 1899. Serial No. 722,004. (No model.)

*To all whom it may concern:*

Be it known that I, ATWOOD D. FRITTS, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Refrigerators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The invention relates to improvements in refrigerators or cooling-rooms, and particularly to the devices which receive the ice and carry away the drip-water.

The object of the invention is to provide a thoroughly sanitary refrigerator or cooling-room, and to accomplish this certain parts of the ice-chamber and parts connected therewith are made removable, so that access may be had to all parts of the ice-chamber and below the same to thoroughly cleanse the parts.

In carrying out the invention I construct at the sides of the ice-chamber adjacent to the provision-compartments removable and reversible tank-frames, and operating with the tank-frames I construct at the bottom of the ice-chamber a removable ice-rack, and operating with these parts I construct below the ice-chamber a removable gutter-board, trap, and drip-pipe, all of which will now be fully set forth in detail.

In the drawings, Figure 1 is a longitudinal section of a refrigerator provided with my improvement. Fig. 2 is a transverse section of same, and Fig. 3 is a sectional plan. Fig. 4 is a partial longitudinal section in enlarged size of the ice-rack, showing the metal covering over the wooden bars.

For the purpose of illustrating my invention I have shown a refrigerator arranged with an ice-chamber at the center and provision-compartments A and B on each side. The ice-chamber is provided with an ice-door C at the front of the refrigerator, while the compartments A and B on each side are closed by doors of usual character. The space underneath the ice-chamber is provided with a door 7 at the front of the refrigerator. At the sides of the ice-chamber adjacent to the provision-compartments are constructed removable tank-frames *a*, each composed of a wooden frame covered with metal and hav-

ing a face-plate *a'*, of sheet metal, secured thereto, said face-plate being perforated with holes at its upper and lower ends 2 3. These removable tank-frames are alike and are the same at their upper and lower portions. Consequently they are reversible and interchangeable also, so that in placing them in position it makes no difference which end of the tank-frame is placed uppermost nor upon which side of the ice-chamber the tank-frame is placed. Between the lower ends of the tank-frames and at the bottom of the ice-chamber is constructed a removable ice-rack *b*, composed of wooden bars, each covered with metal and connected together by metal bands *b'*, secured to the under side of each bar, said metal bands having their ends bent upward at 4.

The tank-frames and the ice-rack are supported within the refrigerator by arms *c*, placed horizontally and secured to the inner faces of the front and rear walls of the refrigerator, and by vertical strips *d d'*, also and in like manner secured to the front and rear walls of the refrigerator and rising above the respective ends of the arms *c*. When the tank-frames are in position, they are held against the edges of the vertical strips *d d'* and rest upon the upper surface of the arms *c*.

Upon the ceiling of the ice-chamber and secured thereto are placed angle-cleats 6, which form stops and come against the face of the tank-frames in a manner to confine the upper end of each tank-frame between the edges of the vertical strips *d d'* and the cleats 6, while the upturned ends 4 of the metal bands of the ice-rack also form stops and come against the face of the tank-frames in a manner to confine the lower end of each tank-frame between the edges of the vertical strips *d d'* and the upturned ends 4.

At the side of the tank-frames next to the provision-compartments and secured to the vertical strips *d d'* are fixed partitions *e*. These fixed partitions extend from a point near the ceiling of the refrigerator down to and underneath the tapering ends of the arms *c*. These fixed partitions, together with the tank-frames, form spaces for air-drafts at the top and bottom of the ice-chamber and serve to convey the water from the ice-chamber to the pan or gutter-board below.



Immediately below the opening in the bottom of the ice-chamber, and to receive the drip-water therefrom, is placed a removable gutter-board *f*. This gutter-board is constructed of wood covered with metal, having a removable trap *h* located in the bottom of same. Adjacent to the rear wall of the refrigerator and secured to the under side of the ice-chamber are placed hangers *e'*, formed of band-metal, with their lower or free ends bent toward one another. These hangers receive the gutter-board between their vertical parts and support the rear end of the gutter-board upon their lower or free ends.

Underneath the front end of the gutter-board and secured thereto is placed a bolt 5. This bolt operates with its corresponding part at the front wall of the refrigerator and supports the forward end of the gutter-board. To prevent the rear end of the gutter-board being raised from a level position, a stop is formed by continuing the rear end of the gutter-board upward at 12 to the under side of the ice-chamber or by placing lugs on the opposite inside surfaces of the hangers *e'* above the upper edges of the gutter-board.

Immediately below the trap *h* in the gutter-board and connecting it with the opening or pipe 10 in the floor of the refrigerator is placed a removable drip-pipe 8. This drip-pipe fits over the pipe 9 from the trap in the gutter-board and into the opening or pipe 10 in the floor of the refrigerator.

The removable parts above described are readily removed from within the refrigerator as follows: The ice-rack (when the ice-chamber is empty) is removed by lifting it up and out at the door C at the front of the refrigerator. The tank-frames are removed after releasing them from the top (by an inward movement at the bottom) by turning them diagonally and lifting them out at the door C at the front of the refrigerator. The drip-pipe is removed by lifting it out of the floor-pipe 10 and upward on the pipe 9, then out at the door 7 at the front of the refrigerator. The gutter-board is removed after retracting the bolt 5 by lifting it from the hangers *e'* and out at the door 7 at the front of the refrigerator. The trap being constructed within the gutter-board is removed with the gutter-board. These removable parts are readily replaced in position in the manner above described, except in a reversed order, the tank-frames going in the ice-chamber and behind the angle-cleats at the top, then the ice-rack at the bottom of the ice-chamber and between the lower ends of the tank-frames and the gutter-board upon its supports below the ice-chamber, then the drip-pipe over the pipe from the gutter-board and into the pipe in the floor of the refrigerator.

When the removable parts are in place and the refrigerator is in operation, the cold air from the ice-chamber passes downward between the bars of the ice-rack and over the upper edges of the gutter-board into the lower

part of the provision-compartments, where it becomes warmer, rises to the upper part of the provision-compartments, and passes over the top of the fixed partitions *e* into the ice-chamber, where it becomes cold, descends, and circulates again in like manner. The water from the ice-chamber drips into the gutter-board and passes through the trap in same, then down the drip-pipe into the floor-pipe and out of the refrigerator at the bottom.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a refrigerator, the combination with the ice-chamber and provision-compartments, of fixed partitions separating the ice-chamber from the provision-compartments, and removable and reversible tank-frames within the ice-chamber adjacent to the fixed partitions, an ice-rack composed of suitable bars, and metal bands secured to the under side of each bar and connecting the bars together, said metal bands having upturned ends which bear against the face of the tank-frames and hold the lower end of each tank-frame in position, substantially as shown and described.

2. In a refrigerator, the combination with the ice-chamber and provision-compartments, of fixed partitions separating the ice-chamber from the provision-compartments, and removable and reversible tank-frames within the ice-chamber adjacent to the fixed partitions, vertical strips behind the tank-frames, an ice-rack adapted to hold the lower ends of the tank-frames in position against the said vertical strips, and angle-cleats secured to the ceiling of the ice-chamber and coming against the face of the tank-frames to hold the upper end of each tank-frame in position against the said vertical strips, substantially as shown and described.

3. In a refrigerator, the combination with the tank-frames, of an ice-rack composed of suitable bars, and metal bands secured to the under side of each bar and connecting the bars together, said metal bands having upturned ends which bear against the face of the tank-frames and hold the lower end of each tank-frame in position against the vertical strips coming behind the tank-frames, substantially as shown and described.

4. In a refrigerator, the combination with the tank-frames, the vertical strips behind the tank-frames, and an ice-rack, said ice-rack being adapted to hold the lower end of the tank-frames in position against the said vertical strips, of angle-cleats secured to the ceiling of the ice-chamber and coming against the face of the tank-frames to hold the upper end of each tank-frame in position against the said vertical strips, substantially as shown and described.

5. In a refrigerator, the combination with the tank-frames, the vertical strips behind the tank-frames, and an ice-rack, said ice-rack being adapted to hold the lower end of the tank-frames in position against the said vertical strips, and stops secured to the ceil-



ing of the ice-chamber and coming against the face of the tank-frames to hold the upper end of the tank-frames in position against the vertical strips, of a removable gutter-board constructed of wood covered with metal, having a trap formed within the same and supported below the opening in the bottom of the ice-chamber, substantially as shown and described.

6. In a refrigerator, in combination with the tank-frames, ice-rack, and gutter-board, of metal hangers secured to the under side of the ice-chamber and adjacent to the rear wall of the refrigerator to support the rear end of the gutter-board, and stops connected to said hangers and extending above the upper edges of the gutter-board to prevent the rear end of the gutter-board being raised from a level position, and a bolt secured to the front end of the gutter-board and operating with its

corresponding part at the front wall of the refrigerator to support the forward end of the gutter-board, substantially as shown and described.

7. In a refrigerator, in combination with the tank-frames, ice-rack, and gutter-board, said parts being removably supported within the refrigerator, of a removable drip-pipe fitting over the pipe from the trap in the gutter-board and into the opening or pipe in the floor of the refrigerator, and connecting the gutter-board with the pipe in the floor of the refrigerator, substantially as shown and described.

Signed by me this 21st day of June, 1899.

ATWOOD D. FRITTS.

Witnesses:

GEO. T. PINCKNEY,  
E. E. POHLI.