(No Model.)

D. BARCKDALL.

REFRIGERATOR.

No. 467,886. Patented Jan. 26, 1892.

FIG. 2.

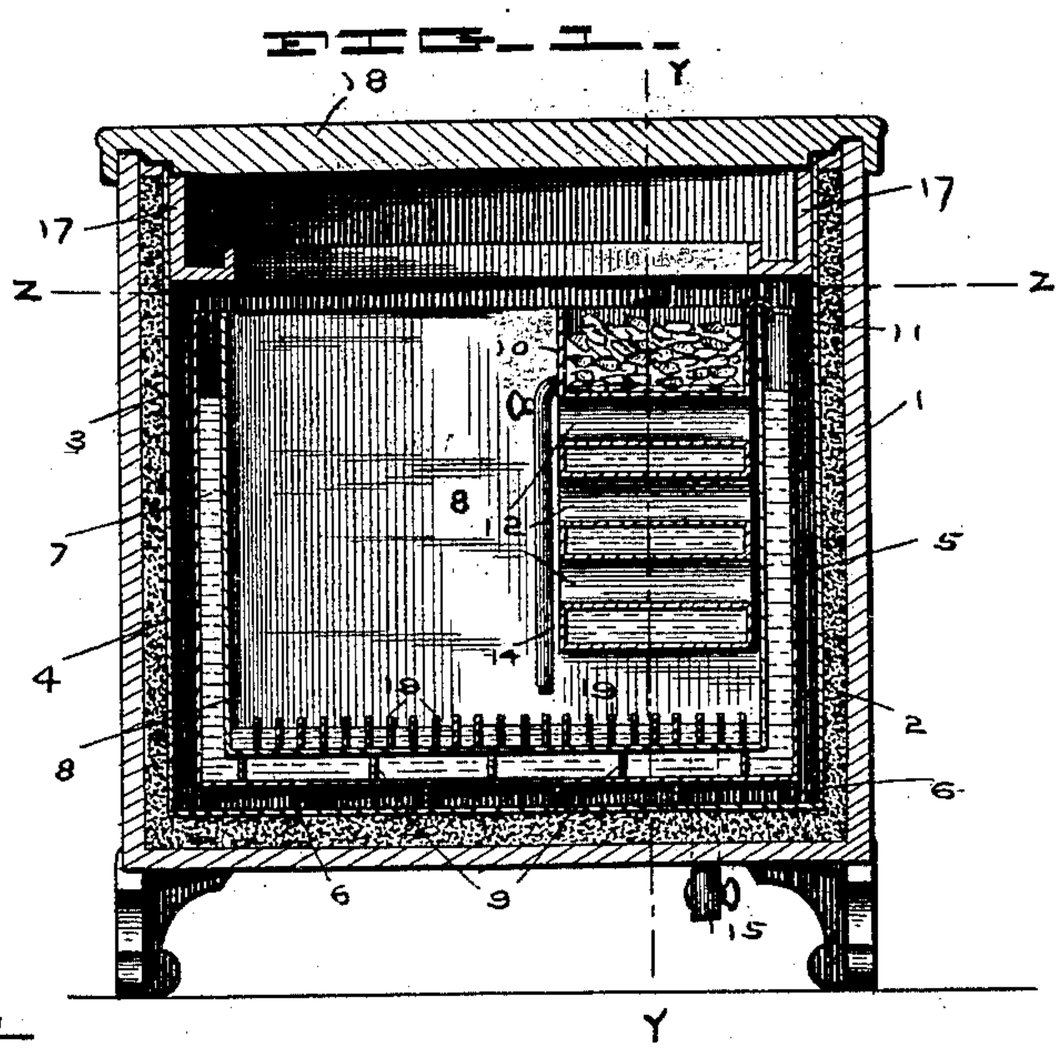


FIG. 1.

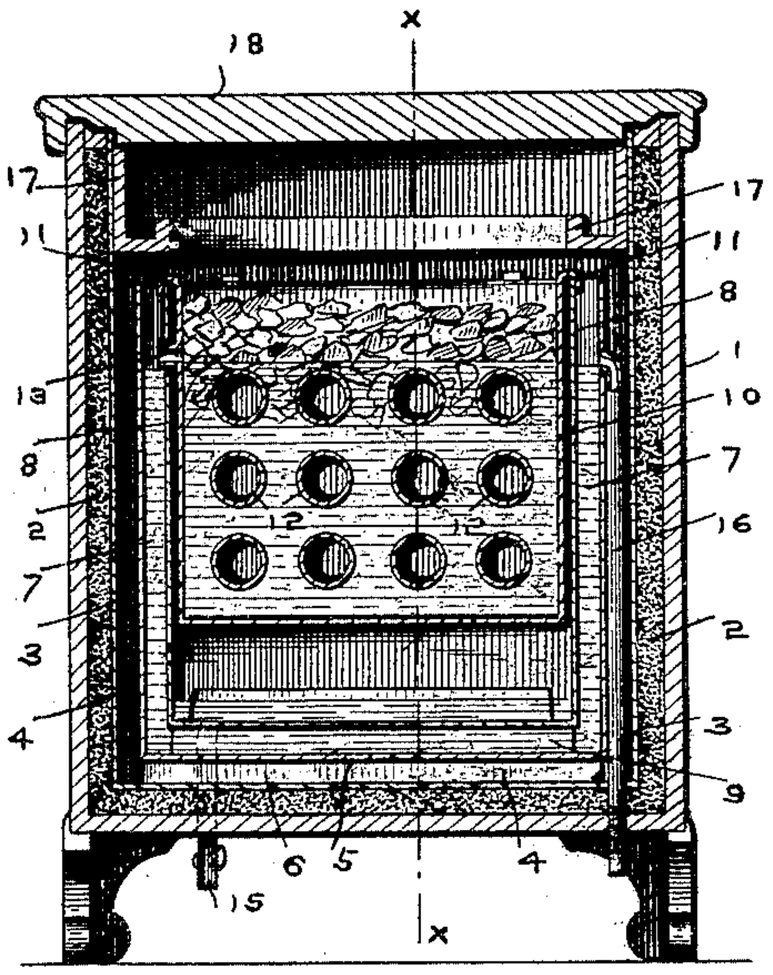
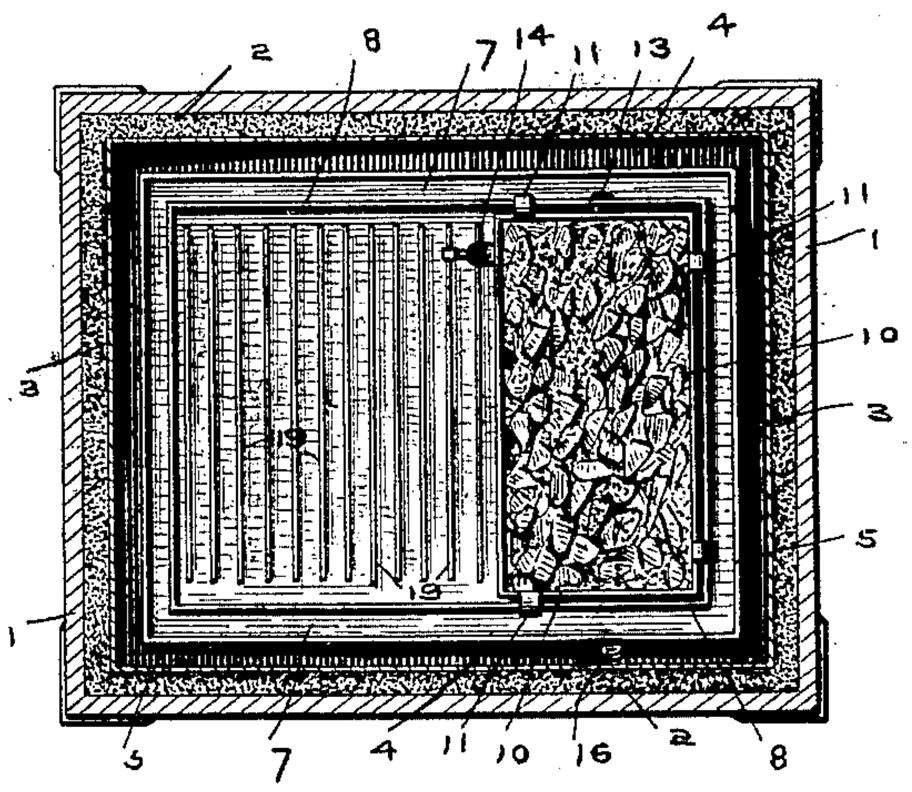


FIG. 3.



Witnesses

H. D. Neely

C. B. Griffith.

Inventor

Daniel Barckdall

By his Attorney

C. P. Jacobs.

UNITED STATES PATENT OFFICE.

DANIEL BARCKDALL, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIS J. WOODWARD, OF SAME PLACE.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 467,886, dated January 26, 1892.

Application filed May 20, 1891. Serial No. 393,482. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BARCKDALL, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements 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, in which like figures refer to like parts.

My invention relates to improvements in refrigerating-chests and will be understood from the following description.

In the drawings, Figure 1 is a vertical section on the line *x x*, Fig. 2. Fig. 2 is a vertical section on the line *y y*, Fig. 1. Fig. 3 is a horizontal section on the line *z z*, Fig. 1.

In detail, 1 is the outside of the chest, formed of wood.

2 is a layer of mineral wool or any other non-conducting material.

3 is a lining of metal.

4 is an air-space.

5 is the wall of an inner metal casing, which is supported by feet 6 above the metal floor of the main chest itself.

7 is a water-space, and 8 is the wall of a second inner casing, which is supported by feet 9, which rest upon the bottom floor of the metal casing 5.

10 is a metal box, on whose sides are hooks 11, hooking over the upper edge of the walls of the metal casing 8 on three sides, as shown in Fig. 3, whereby the metal box 10 is suspended.

12 are tubes which pass through the box 10 from side to side, as shown in Figs. 1 and 2, forming cold-air ducts, and the box 10 is filled partly with water and the remainder of the way with broken ice, which is preferably salted to increase the cold.

13 is an overflow-pipe leading from the box 10, so that as the water increases by the melting of the ice it will run out and fill the water-space 7 between the metal casings 5 and 6.

14 is a pipe leading from the ice-box 10 downward to within a short distance of the floor of the metal casing 8, so that by opening the faucet connected to the pipe 14 a small amount of water may be discharged into the casing 8 upon the bottom thereof to assist in keeping the latter cool.

19 are vertical projecting strips connected to the bottom of the casing 8, upon which may rest cans or receptacles containing material to be kept cool.

15 is a drain-pipe, with a faucet attached, connected with the bottom of the inner casing 8, by which the water in the latter may be drawn off, if desired.

16 is an outlet-pipe connected near the top and to the water-space on one side and below the line of the overflow 13 in the box 10, as shown in Figs. 2 and 3, by which the water may overflow and is carried by this pipe down through the bottom of the refrigerator-chest.

17 is a projecting recessed shelf secured inside the refrigerating-casing just below the cover, forming a hood over the air and water spaces 4 and 7 and aids in holding the cold air in them, and its top affords a place for standing bottles.

18 is the cover which closes the chest, the latter being only open at the top.

My device therefore comprises an outer chest with two interior casings, a cold-air space between the outer part and the first metal casing, a water-space between the first and second metal casings, and a third metal casing or box for holding the ice, containing air-tubes still within. A current of air freely circulates through the tubes and the various parts of the interior of the casing, and the water contained in the lining in connection with the air is also cooled by the ice and salt and keeps the whole interior cold at all times and effects a great saving of ice. The large opening in the inner casing 8 is for receiving the articles to be cooled, and they rest directly upon the projections 19, and below this is the water, as before mentioned. It is not necessary in all cases to allow the water to escape into the interior of the chest 8; but it sometimes may be advantageous to do so, and when the water is drawn off from the water-space it may be poured back again upon the ice in the box 10 and again cooled, thus effecting a saving of time and handling of water and utilizing all the cold that it has received while in the interior of the chest.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. A refrigerator comprising an outer casing of wood lined with metal, an inner metal casing supported above the metal lining of

the outer casing, an air-space between such casings, a second inner metal casing supported upon feet above the floor of the first metal casing, a water-space between such metal casings, an overflow-pipe tapping the water-space and leading outside the refrigerator, a metal box for ice suspended from the wall of the inner metal casing and having air-pipes through the same below the ice-box, an overflow leading from the ice-box to the water-space between the metal casings, and a cover closing the refrigerator at the top, all combined substantially as shown and described.

2. A refrigerator comprising an outer casing lined with metal and a packing of mineral wool or other non-conducting material between, an inner casing formed of metal or other suitable material, an air-space between the outer wall of such casing and the metal lining of the outside casing, a second casing inside the first casing, with a water-space between, an ice-box suspended from the wall of the innermost casing, an overflow connected therewith leading to the water-space, each casing supported above the other by legs or feet, an overflow from the ice-box to the floor of the innermost casing, a pipe leading from such floor outside the refrigerator and a top for closing the refrigerator, and shelves above the ice-box for supporting bottles and acting as a cover for the air and water spaces of the casings below, all combined substantially as shown and described.

3. A refrigerator comprising an outer shell or casing, an inner casing with an air-space between it and the outer casing, a second inner casing having a water-space between it and the first inner casing, an ice-box suspended from the wall of the second inner casing, an outlet leading from the ice-box to the water-space, and an overflow-pipe leading from the water-space outside the refrigerator, in combination with a cover closing the top of the chest, and a shelf below such cover and above the ice-box for supporting similar articles, such shelf acting as a cover for the water and air spaces between the casings below, all combined substantially as shown and described.

In witness whereof I have hereunto set my hand this 16th day of May, 1891.

DANIEL BARCKDALL.

Witnesses:
E. B. GRIFFITH,
H. D. NEALY.