

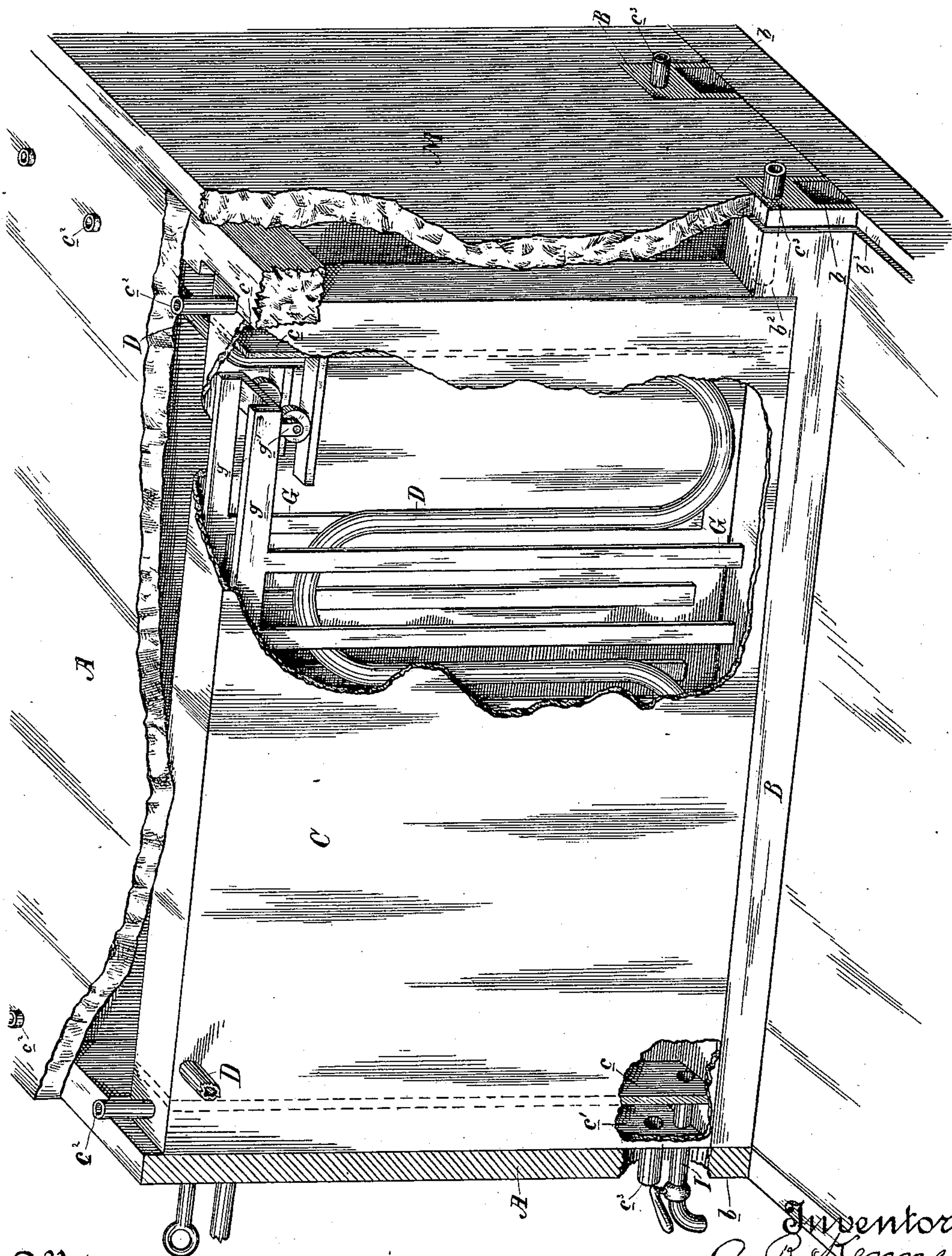
(No Model.)

A. R. KENNEY.

ICE MACHINE.

No. 334,120.

Patented Jan. 12, 1886.



Witnesses,
J. H. Nourse,
H. C. Lee.

Inventor,
A. R. Kenney,
By Dewey & Co
Attorneys

UNITED STATES PATENT OFFICE.

AUGUSTUS R. KENNEY, OF SAN FRANCISCO, CALIFORNIA.

ICE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 334,120, dated January 12, 1886.

Application filed August 28, 1885. Serial No. 175,600. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS R. KENNEY, of the city and county of San Francisco, State of California, have invented an Improvement in Ice-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of ice-machines in which partitional refrigerator-cans are placed within a casing or box and divide it into a number of parallel sweet-water compartments, in which the ice is formed. This class of machines is exemplified by Letters Patent of the United States No. 322,829, issued to me July 21, 1885.

My invention consists in a novel construction of the refrigerator-can, and in the manner of fitting it within the box.

The objects of my invention will be herein after particularly described.

Referring to the accompanying drawing, the figure is a perspective view showing a portion of the box, the side of which is broken away, the can within the box, a portion of the side of the can being broken away to show the interior parts and the manner in which the can fits within the box.

A is the box, and M is its front gate or door.

C is one of the refrigerator-cans.

D is the evaporator-coil within the can.

G are agitators within said can, to which a reciprocating motion is imparted. They are supported by means of the strips *g*, from which they depend, and wheeled trucks *g'*, traveling on short tracks within the can. These are all parts which are fully described in my previous patent.

Each end of the can C has a vertical diaphragm or partition, *c*, which is separated from the end of the can, and forms between itself and said end an air-chamber, *c'*. A vent-pipe, *c²*, opens out from the top of the chambers, and a similar pipe, *c³*, opens out from near their bottom and extends through the walls of the box A. In the bottom of the box is laid a platform-strip, B, which may be of any material, and which may be solid, or hollow, as here shown, its chamber opening out in front at *b*. The front ends of the platform-strips are shouldered and enlarged at *b²*, and the gate M is notched to fit over the said en-

larged ends. It makes a tight joint by means of suitable packing, *b³*. The lower vent-pipe, *c³*, of the forward air-chamber of the can extends through the enlarged end *b²* of the platform-strip, as shown. The can rests upon the strip B, abutting against its shoulder and against the rear wall of the box at the back.

I is a discharge-pipe, which passes through the back wall of the box A, through the air-chamber *c'*, and into the can, whereby its contents may be drawn off when required.

The general operation of the ice-machine is well known and will need but a brief description. Brine or other freezing agent is supplied to the can C, and the evaporating agent is forced through the coil D. In the compartments between the cans fresh water is placed, and is frozen therein in cakes of ice. By reason of the platform-strip B below, the ice-cake is not frozen to the box, nor are its ends frozen to the ends of the box, because of the air-chambers *c'* in the ends of the can, so that it follows when the cake is loosened from the freezing-surface of the can it is entirely free of any other part of the machine and may be taken out. A current of air is passing through the chambers *c'* all the time, so that the ice-cake does not freeze to the can any farther than the partition within the can, which defines said chambers. By thus preventing the cake from freezing to any part of the machine, except to the freezing-surface of the can, I avoid any cramping of the parts of the machine which would be due to the expansion of the material frozen.

By the construction of the air-chambers described I avoid joints which would have to be formed if the can were secured to pieces of wood, and thus any danger of leakage is avoided. Refrigerator-cans are generally soldered at their ends. It will be seen that in case of a leak the fresh water would be spoiled; but in my can, if a leak occurs, the brine will pass into the air-chambers and be carried away directly through their bottom pipes, and will have no tendency to enter the sweet-water compartments.

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

1. In an ice-machine, the refrigerator-can

C, having air-chambers c' in its ends, substantially as herein described.

2. In an ice-machine, the refrigerator-can C, having air-chambers c' in its ends and provided with suitable vents communicating with the outer air, for the purpose of permitting a free circulation of air through said chambers, substantially as herein described.

3. In an ice-machine, the box A, in combination with the refrigerator-can C, having the evaporator-coil D within it, the vertical diaphragm or partition c in the ends of the can, forming air-chambers c' , and the pipes c^2 and c^3 , passing through the walls of the box and communicating with the air-chambers, substantially as herein described.

4. In an ice-machine, the box A, having the platform-strip B in its bottom, in combination with the refrigerator-can C, mounted on the said strip, and the air-chambers c' in the ends of the can, substantially as herein described.

5. In an ice-machine, the box A, having the platform-strip B in its bottom, provided with an enlarged forward end, b^2 , and the gate M, notched out and fitting over the enlarged end of the platform-strip B, as described, in combination with the refrigerator-can C, within the box and resting on the platform B, the air-chambers c' in the ends of the can, the vent-pipes c^2 , passing through the top of the box and communicating with the top of the air-chambers, and the vent-pipes c^3 , communicating with the air-chambers near their bottoms and passing outwardly to the open air, substantially as herein described.

6. The box A, the platform-strip B, having enlarged forward end, b^2 , and the gate M of the box, notched out and fitting tightly said enlarged end, in combination with the refrigerator-can C within the box and supported on the platform-strip, the air-chamber c' in the forward end of the can, the vent-pipe c^2 in the top of the air-chamber, and the vent-pipe c^3 , communicating with said chamber near its top and passing outwardly through the enlarged end of the platform-strip, substantially as herein described.

7. In an ice-machine, the box A and hollow platform-strip B in its bottom, in combination with the refrigerator-can C, having air-chambers c' in its ends, with suitable air-vents, substantially as herein described.

8. In an ice-machine, the box A, having the platform-strip B, with enlarged forward end, b^2 , and the gate M, fitting over said enlarged end, in combination with the refrigerator-can C, having an evaporating-coil, D, within it, the vertical air-chambers c' in the ends of the can, having vents above and below communicating with the outer air, and the exit-pipe I, passing through the rear wall of the box, the rear air-chamber of the can, and into the brine in said can, substantially as herein described.

In witness whereof I have hereunto set my hand.

AUGUSTUS R. KENNEY.

Witnesses:

S. H. NOURSE,

H. B. APPLEWHAITE.