

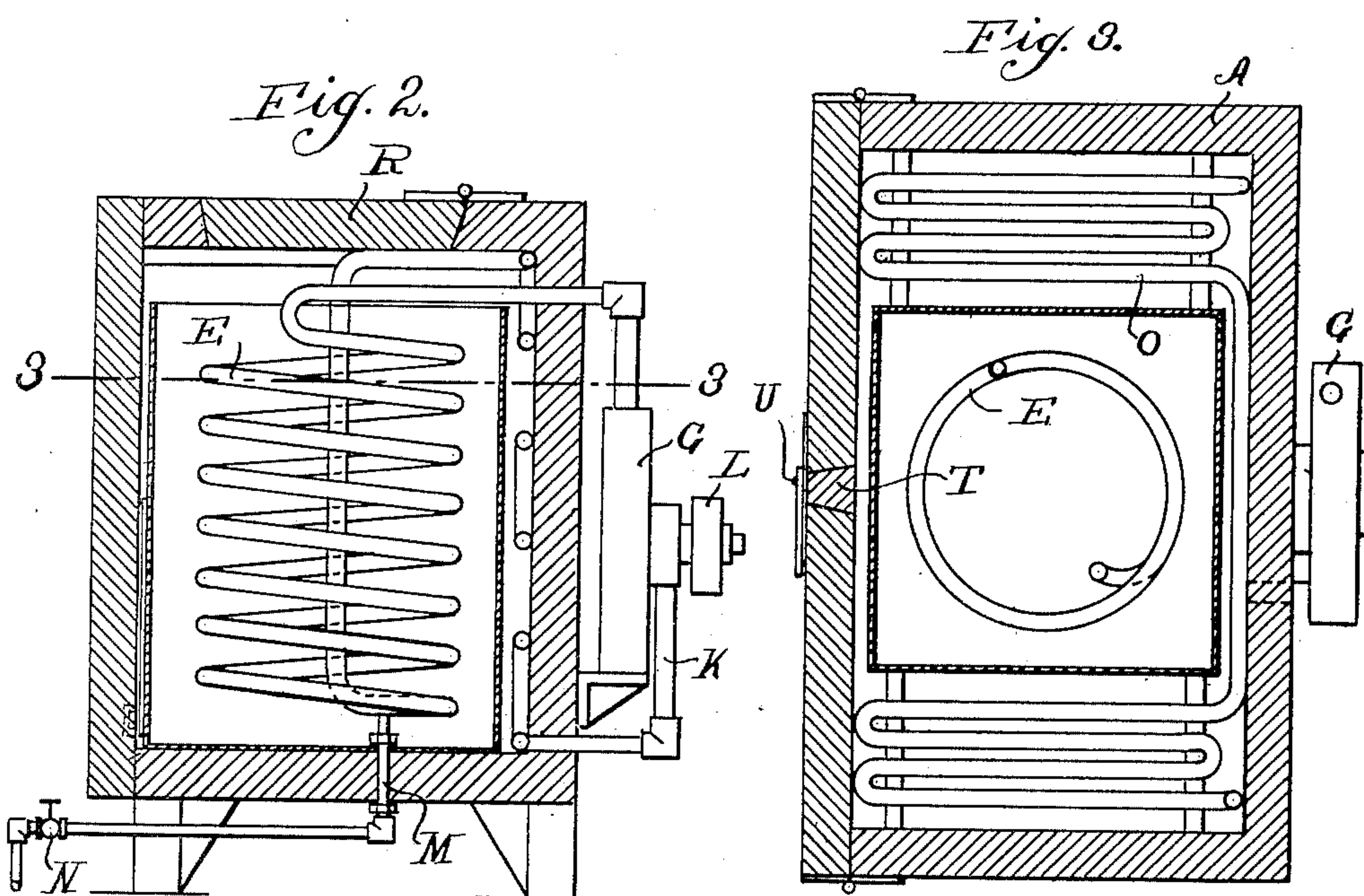
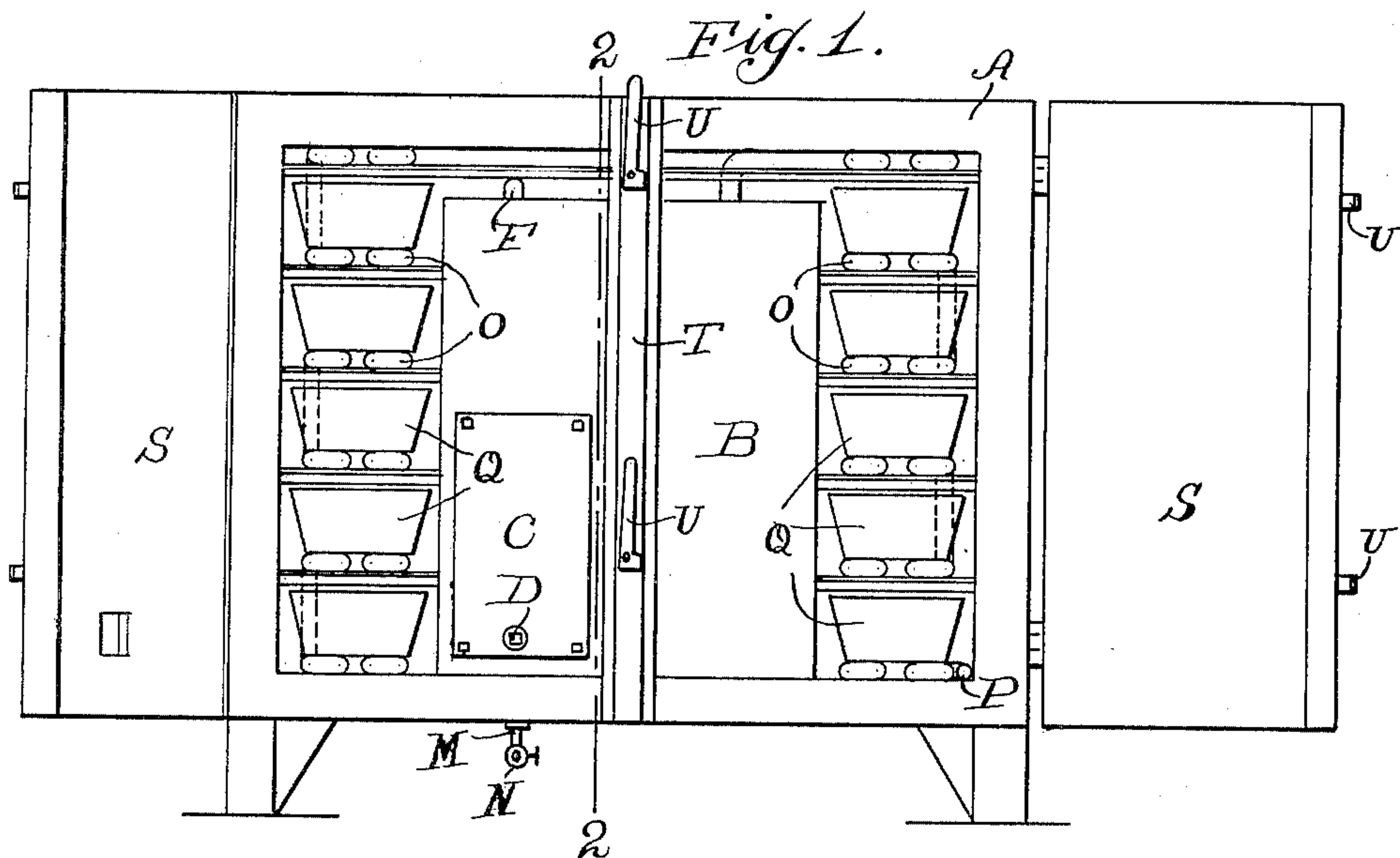
No. 675,671.

Patented June 4, 1901.

A. PETER.  
ICE MACHINE.

(Application filed Mar. 20, 1901.)

(No Model.)



Witnesses:

C. F. Wilson  
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Inventor:

August Peter  
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# UNITED STATES PATENT OFFICE.

AUGUST PETER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO  
JOHN COWMAN, OF SAME PLACE.

## ICE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 675,671, dated June 4, 1901.

Application filed March 20, 1901. Serial No. 52,059. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST PETER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Ice-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it  
10 appertains to make and use the same.

My invention relates to an improvement in ice-making machines, the object being to produce a machine which will produce a maximum quantity of ice with a minimum outlay  
15 for power and chemicals; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a front elevation of  
20 a device made in accordance with my invention, the doors of same being shown open. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a horizontal section on line 3 3 of Fig. 2.

25 In said drawings illustrating my invention, A is a box made in the style of a refrigerator-box with thick walls and doors to prevent as far as possible the transmission of heat from the exterior to the interior of same. The central  
30 portion of the box is occupied by a large square tank B, which rests on the bottom of the box and reaches nearly to the top of same. Said tank is adapted to contain ice, salt, sal ammoniac, and water or other heat-absorbing  
35 chemicals and is provided with a manhole-plate C on its front side for the purposes of inspection and cleaning, a plug D being provided for draining off the solution from said tank. A large spiral coil of pipe E is placed  
40 in said tank, which is adapted to convey air therethrough, thus cooling said air to the temperature of the chemicals in said tank. The inlet end F of said coil passes out through the rear wall of said box and is connected to  
45 the delivery end of a fan G. The inlet end of said fan is connected with the interior of said box, near the bottom of same, by means of the pipe K. A pulley L is provided on the shaft of said fan by means of which power  
50 may be applied to run same. As the air passing through said coil E frequently has con-

siderable moisture in it which will be condensed in said coil, a drain-pipe M is provided connected to the lowest portion of said coil. Said drain-pipe passes through the bottom of  
55 said tank and box and is provided with a valve N within convenient reach. The delivery end of said coil E is connected with a series of flat coils O, which form shelves in said box at each side of said tank, said coil E be-  
60 ing connected with the uppermost coil and the coils O being connected in series from the top to the bottom of the box. The bottom coil of the series is adapted to deliver the air passing through same into the interior of the box at P.  
65 Pans Q, adapted to contain water which it is desired to convert into ice, are adapted to rest on said coils O and occupy practically all of the remaining space between said coils O and between the sides of said tank B and the walls  
70 of said box. A large opening is provided in the top of said box A, through which said tank B may be filled, a door R being provided adapted to tightly close said opening. The doors  
75 S of said box A are adapted to close against a central post T. Said doors and post T are provided with any suitable fastening device U, adapted to hold said doors tightly closed while the machine is in operation.

In operating my machine the tank B is filled  
80 with suitable heat-absorbing chemicals, the pans Q are filled with water, and the doors of said box tightly closed. The fan G is then operated, which causes a circulation of air through said coil E, where it is reduced in  
85 temperature below the freezing-point. It then passes through the flat coils O, thus cooling the water in said pans Q and causing same to freeze, and finally is discharged into said box A, said fan drawing it out of said box and  
90 again causing it to circulate through said coils.

My system is very efficient and economical.

I claim as my invention—

1. In an ice-machine the combination with a box containing a continuous coil of pipe, a  
95 tank within said box adapted to contain heat-absorbing chemicals, one portion of said coil of pipe being immersed in said chemicals and another portion forming shelves in said box, and adapted to support pans containing wa-  
100 ter to be frozen, and means for producing a constant circulation of air through said coil.



2. In a device of the kind specified, a box containing a continuous coil of pipe, a tank in said box adapted to contain heat-absorbing chemicals, a portion of said coil being immersed in said chemicals, a pipe adapted to drain said immersed portion, a valve to control said drain-pipe, shelves in said box adapted to support pans containing the water to be frozen, and means for maintaining a constant circulation of air through said coil.

3. In a device of the kind specified, a box containing a continuous coil of pipe, the inlet end of which is connected with means for maintaining a circulation of air through said coil, and the delivery end of which is adapted to deliver the air within said box, a tank

within said box adapted to contain heat-absorbing chemicals, a portion of said coil being immersed in said chemicals, means for draining said immersed portion, shelves within said box adapted to support pans containing water to be frozen, and a pipe connecting the interior of said box with said circulating means whereby the air in said box is continuously circulated through said coil.

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

AUGUST PETER.

Witnesses:

E. F. WILSON,  
RUDOLPH WM. LOTZ.