

G. A. BANTA.
REFRIGERATOR.

No. 188,493.

Patented March 20, 1877.

Fig. 1.

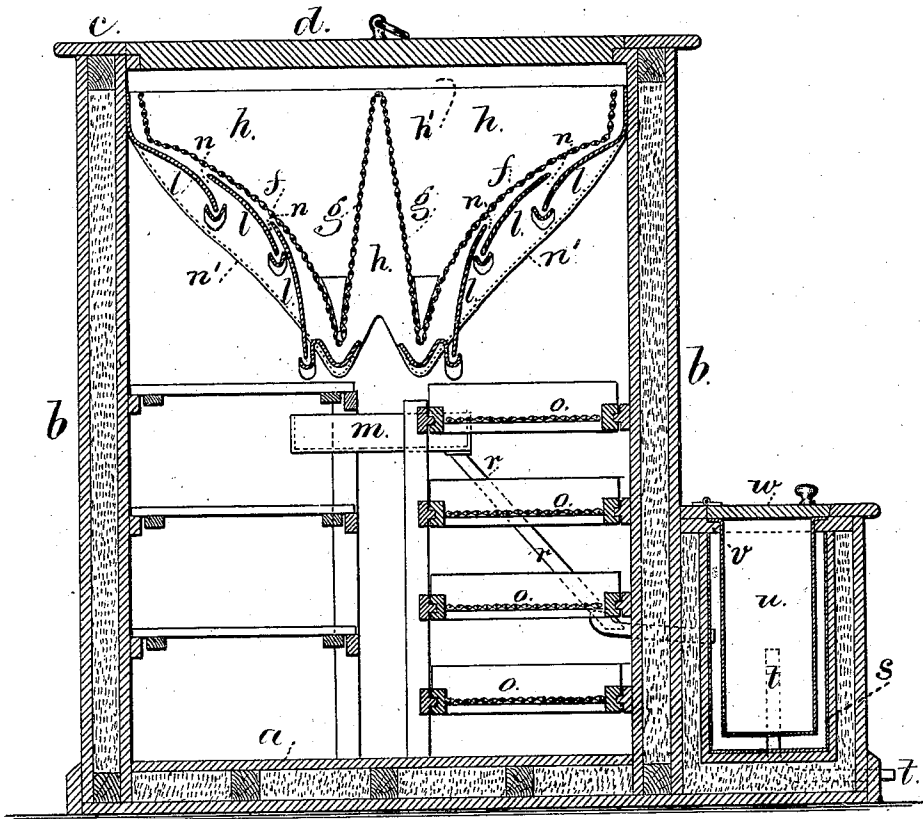
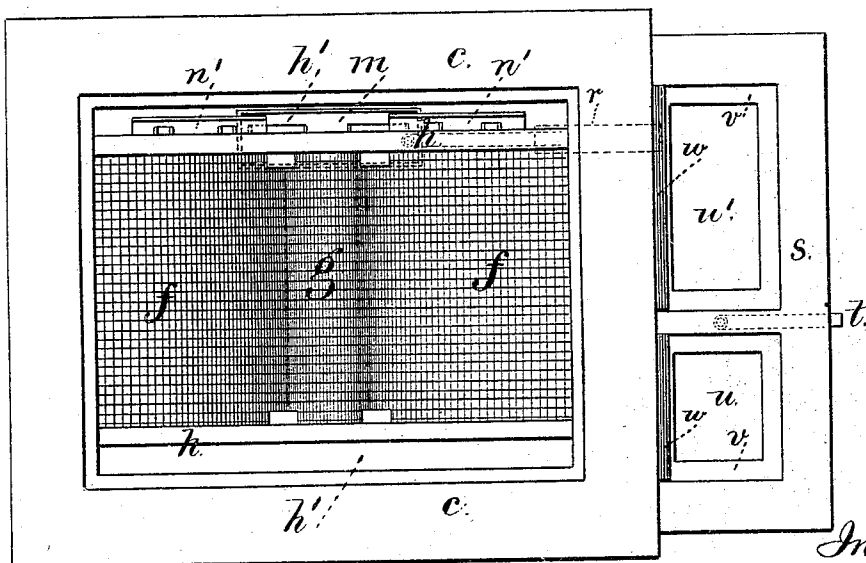


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. BANTA, OF NEW YORK, N. Y.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 188,498, dated March 20, 1877; application filed August 21, 1876.

To all whom it may concern:

Be it known that I, GEORGE A. BANTA, of the city and State of New York, have invented an Improvement in Refrigerators, of which the following is a specification:

In refrigerators and freezing-chambers it has been usual to employ crushed ice and salt to intensify the cold. In refrigerators of this character the ice and salt are confined between metallic plates or within sheet-metal vessels, the cooling being accomplished by conduction through the metal.

My present invention consists in the combination, with the refrigerator, of a wire-work holder, the meshes of which are sufficiently small to retain the ice and salt. The result is that the atmospheric air is allowed to circulate directly through and in contact with the frigorific mixture, and become cooled to a lower temperature than heretofore, and, at the same time, the objectionable condensation upon the sheet metal is avoided, because the condensation of vapors from the atmosphere takes place upon the ice itself.

I arrange, in connection with the ice-basket, deflectors of sheet metal that direct the currents of atmosphere upon the ice, and, at the same time, insure the delivery of the water into a receptacle, and as this water melted from the ice is very cold, I use it around a water-cooler.

In the drawing, Figure 1 is a vertical section of my refrigerator, and Fig. 2 is a plan of the same, with the top open.

The refrigerator-case is made of the bottom *a*, sides *b*, and with a closed back, and a front, preferably with doors, and with a top, *c*, with a flap, *d*, that is opened for inserting the ice in a crushed condition, and either mixed with salt or not.

The holder for the ice is made of wire-netting, preferably with galvanized wire-netting, with meshes of a size suitable to answer the purposes desired. The holder is to be made of a form adapted to the shape and character

of the refrigerator. I have shown the same, with the curved ends *f* and V-shaped central partition *g*. The sides of the holder may be either open netting or closed sheet metal. I have shown the latter at *h h*, and these are placed at a sufficient distance from the front and back of the refrigerator to leave air-spaces, as at *h'*, for the air to circulate through.

The deflector-plates *l l* serve to deflect any water that may drop from the basket, and insure its final passage to the pan *m*. There are openings at *n* between the deflector-plates, through which the air circulates back to the body of the refrigerator. At the lower ends of the deflector-plates *l* there are troughs that are slightly inclined and open into the end troughs *n'* leading to the pan *m*.

The shelves *o o* may be movable. It is preferable to make them in the form of trays or drawers, with perforated bottoms or nettings.

The water that melts from the ice and runs into the chamber or pan *m* is led by the pipe *r* to a tank; *s*, with an overflow-pipe at *t*, and into this tank the vessel *u* is inserted. This is preferably used for containing water to be cooled; but it may be used for any material, either solid or liquid, that is to be cooled. I have shown two vessels, *u* and *u'*, inserted in the tank *s*, and suspended from the top plates *v*, and provided with covers *w*.

I claim as my invention—

1. The wire-work ice-holder for a refrigerator, made with the central partition *g*, in combination with the pan *m* and deflector-plates *l*, substantially as set forth.

2. The combination, in a refrigerator, of the wire-work ice-basket *f g*, sides *h*, and air-spaces *h'*, substantially as set forth.

Signed by me this 31st day of July, A. D. 1876.

GEORGE A. BANTA.

Witnesses:

GEORGE T. PINCKNEY,
CHAS. H. SMITH.