

C. B. PAGE.
REFRIGERATOR.

No. 175,143.

Patented March 21, 1876.

Fig. 1.

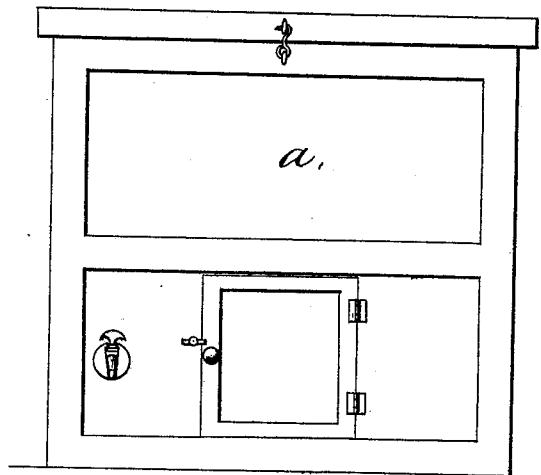
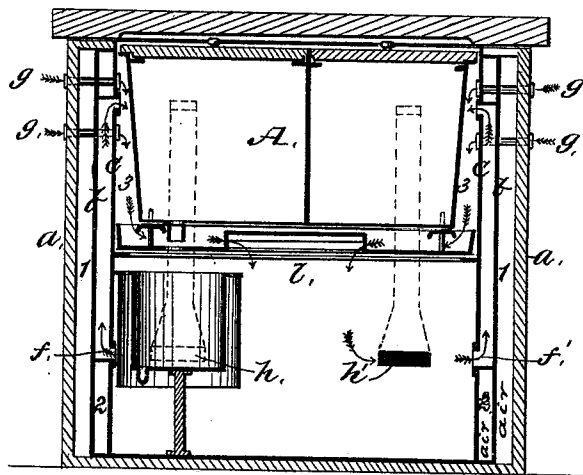


Fig. 2.



Witnesses:

Thomas G. Bonnoy,
A. Schupp

Inventor:

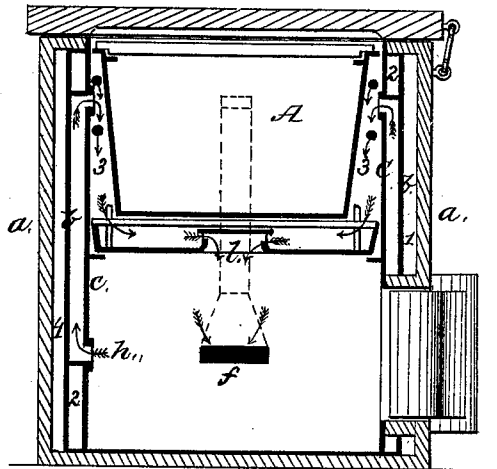
Carter B. Page.

C. B. PAGE.
REFRIGERATOR.

No. 175,143.

Patented March 21, 1876.

Fig. 3.



Witnesses:

Thomas L. Connolly,
A. Schaff

Inventor:

Carter B. Page

UNITED STATES PATENT OFFICE.

CARTER B. PAGE, OF BLADENSBURG, MARYLAND.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **175,143**, dated March 21, 1876; application filed February 26, 1876.

To all whom it may concern:

Be it known that I, CARTER B. PAGE, of the town of Bladensburg, in the county of Prince George and State of Maryland, have invented a new and useful Improvement in Refrigerators and Water-Coolers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to cause hot air to generate moisture upon the cold surface of the metal box which contains the ice, which moisture shall be a perfect protection to the ice within from heat without, and by the evaporation of that moisture to prevent the ice from melting, and at the same time produce intense cold.

A representation of the refrigerator is given in perspective view in Figure 1 of the accompanying drawings.

This machine is illustrated more in detail in Figs. 2 and 3.

The outer frame-work *a* is of wood. Within this is the frame-work *b* of galvanized iron or zinc, forming with it air-chamber No. 1. Within this again is another frame-work, *c*, of galvanized iron, forming, with the sides of chamber No. 1, chamber No. 2, thus protecting the wood-work from the moisture within, thereby preventing decay and any unpleasant odor arising therefrom.

Near the center of the refrigerator a horizontal partition, *l*, separates it into two apartments. Directly under this partition, on either side, are chimney-shaped flues *f f' h h'*, leading from the lower apartment through chamber No. 2 into the upper apartment near the top. In the upper apartment is suspended metal box *A*, forming, with the sides of chamber No. 2, chamber No. 3. Into this chamber, by means of air-holes *g* on either side near the top, the hot air is allowed to pass, where aqueous vapors as the air plays upon the cold surface of the ice-box are condensed into water. This air having given off its heat becomes heavy and falls, creating a partial vacuum, which vacuum is filled by warm air from without, which, in its turn, is chilled down and falls, thus producing a continuous descending current. This descending current is allowed to pass through the horizontal partition into the lower apartment,

where it displaces the warm air and forces it up through the chimney-shaped flues into the upper apartment, which, coming in contact with the cold surface of the ice-box, is also chilled down and falls, leaving a vacuum to be filled by the rushing in of more hot air.

By means of this ascending and descending current, the air is kept in constant circulation, which, as it plays around the surface of the ice-box, which has now become perfectly saturated with moisture, will evaporate that moisture, and in so doing will extract heat from surrounding objects, and the latent heat from the ice itself.

Under the ice-box, in the lower apartment, is a water-cooler, constructed on the principle described above, around which a current of air is made to circulate to evaporate the moisture generated thereon. A metal tube, extending down into the cooler, connects it with the ice-box, and imparts to the water a degree of coldness that renders it unnecessary to use the ice for that purpose.

The ice-box is divided into separate apartments, and when a greater intensity of cold is desired, a metal box containing salt and cracked ice may be inserted.

Not the least feature of this machine is, that none of its parts, except the water-cooler, are stationary, and may be removed, cleansed, and replaced at pleasure.

I claim as my invention—

1. The combination, in a refrigerator-case, of an apertured drip-pan, extending closely to the sides of the case, a close-sided ice-box apart from the sides of the case and bottom of the pan, and one or more flues connecting the space about the ice-box with the inferior food-chamber, as and for the purpose described.

2. In a refrigerator-case, the combination of an apertured drip-pan forming a partition, a close-sided and isolated ice-box, one or more flues connecting the air-spaces about the ice-box with air-passages from the exterior of the case, to the space about the ice-box, as and for the purpose described.

CARTER B. PAGE.

Witnesses:

THOMAS C. CONNOLLY,
A. SCHOEPP.