

J. N. EHRSAM.

Refrigerator.

No. 41,690.

Patented Feb. 23, 1864.

Fig. 2.

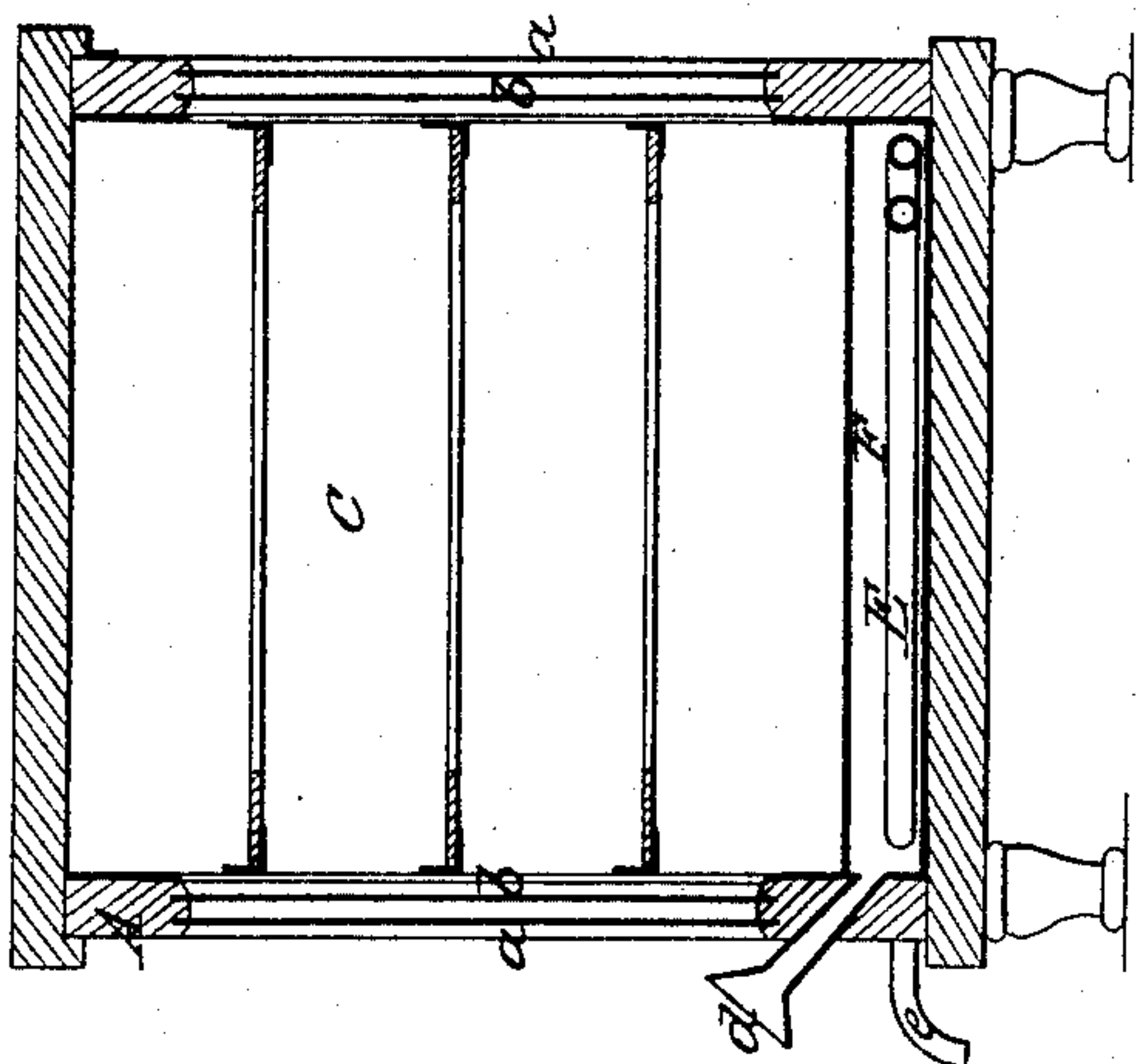


Fig. 1.

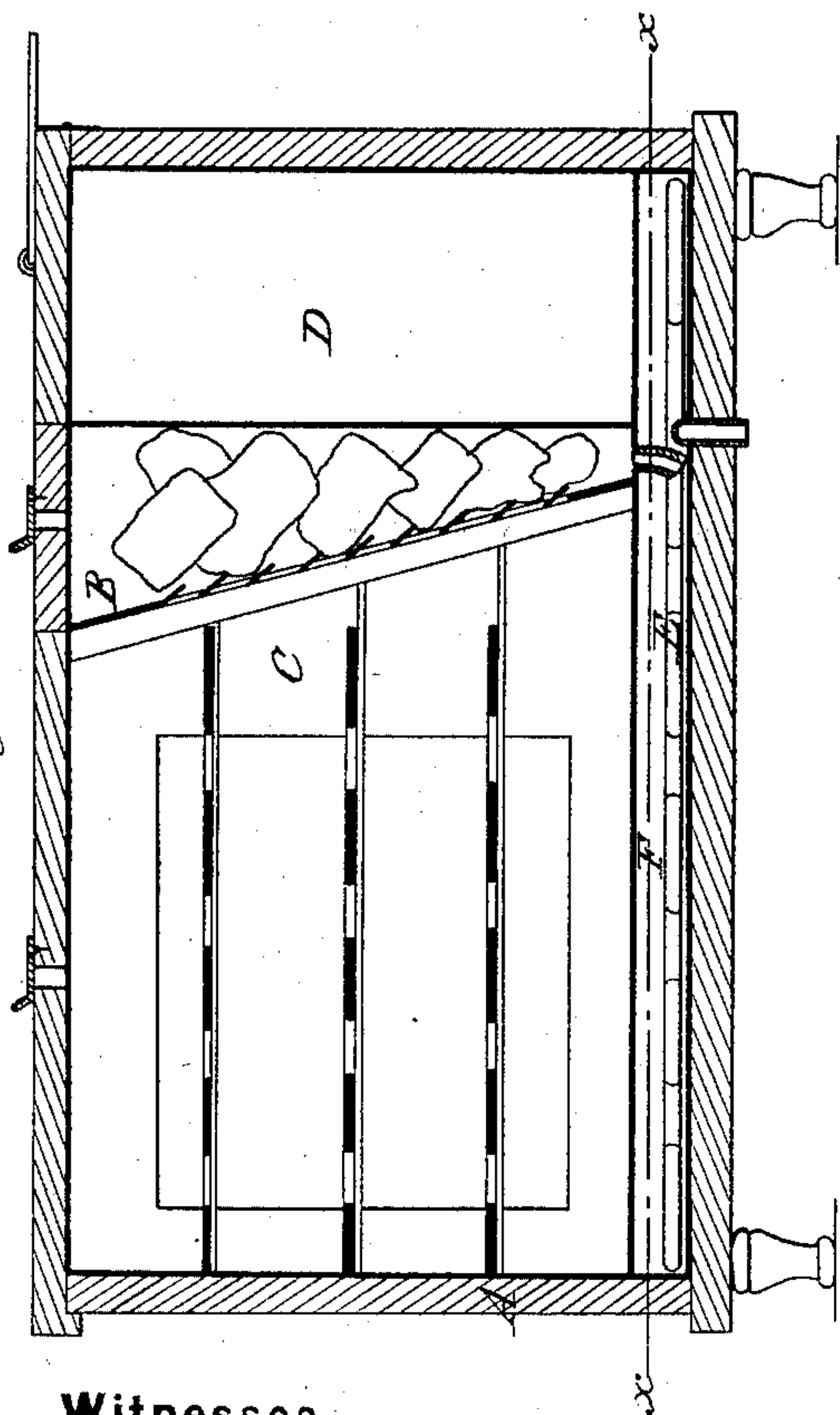
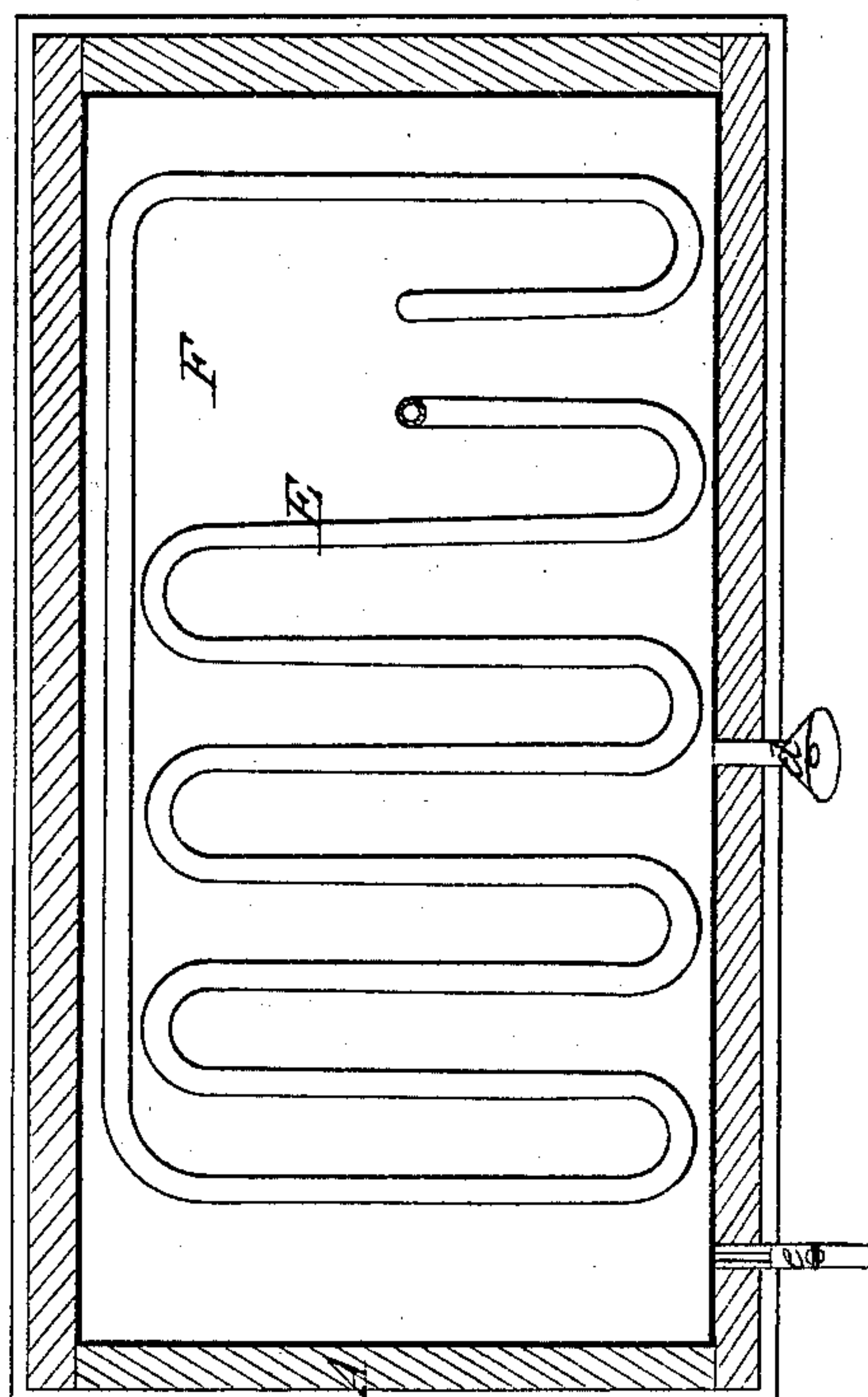


Fig. 3.



Witnesses:

Thos H Douglas
Geo W Reed

Inventor:

J N Ehsam

UNITED STATES PATENT OFFICE.

JOHN N. EHRSAM, OF HOBOKEN, NEW JERSEY.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. **41,690**, dated February 23, 1864; antedated February 12, 1864.

To all whom it may concern:

Be it known that I, JOHN N. EHRSAM, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Refrigerator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a horizontal section of the same, the line *x x*, Fig. 1, indicating the plane of section.

Similar letters of reference in the three views indicate corresponding parts.

To enable those skilled in the art to make and use my invention, I will proceed to describe it.

A represents the box of my refrigerator, which is made of wood or any other suitable material, with double walls filled in with coal-dust, saw-dust, plaster-paris, or any other good non-conductor of heat in the ordinary manner. One or more of the sides of the box A are made or provided with double walls *a b*, of glass or other transparent material, placed at a small distance from each other, so that they inclose a stratum of air, which takes the place of the non conductor. By this arrangement I am enabled to expose the articles contained in the refrigerator to the view from the outside without exposing them to the influence of the outside atmosphere. My refrigerator, therefore, can be used with advantage by butchers, restaurants, &c., to expose their goods to the view of the public, and it serves the double purpose of a show case or show-window and of a refrigerator.

B is the ice-chamber, which may be situated on the side of the provision-chamber C, as shown in Fig. 1 of the drawings, or which may be brought in any other convenient position in relation to the provision-chamber. The partition-wall between provision and ice chamber is perforated or slotted so that the cold air from the ice can freely enter into the provision-chamber and cool off the articles that may be placed in the same.

One or more additional chambers or tanks, D, may be arranged on that side of the ice-chamber opposite the provision-chamber. The

partition-wall between these tanks and the ice-box ought to be made of thin solid sheet metal, or other material which is a good conductor of heat and impervious to water, so that the liquid or other substance placed in said tanks is readily cooled by the action of the ice. These tanks are intended for the reception of pickled meat, &c., together with the brine, and it is essential to have them perfectly watertight.

The ice-water produced by the melting of the ice in the ice-chamber passes off through a serpentine pipe, E, which extends through a reservoir, F, situated under the bottom of the chambers C and B and tanks D, or, more properly speaking, between the inner and outer bottoms of the box A. This reservoir is filled with salt-water, which is introduced through a funnel-shaped pipe, *d*, and drawn off through the faucet *e*, and the pipe E is made of thin metal, or other good conductor of heat, so that the ice-water, in passing through the salt-water in the reservoir E, exerts a cooling influence on the latter and brings its temperature down to a low degree. By these means an additional refrigerating agent is obtained and the temperature in the provision-chamber can be kept at a low point with a comparatively small expenditure of ice.

It is obvious that, instead of salt water, plain water or any other suitable liquid may be used for the purpose of filling the reservoir F; but I use salt-water, or a solution of common salt in water by preference, because by the act of dissolving the salt the temperature of the water is lowered, and, furthermore, the saline solution can be brought to a lower temperature than pure water, and can be procured with little trouble or expense.

What I claim as new, and desire to be secured by Letters Patent, is—

The arrangement of the water-chamber F, covering the whole area of the bottom of the refrigerator, in combination with the ice-chamber B and the serpentine pipe E, connected with and receiving the discharge from said ice-chamber, all as herein shown and described.

J. N. EHRSAM,

Witnesses:

THOS. S. J. DOUGLAS,
GEO. W. REED.