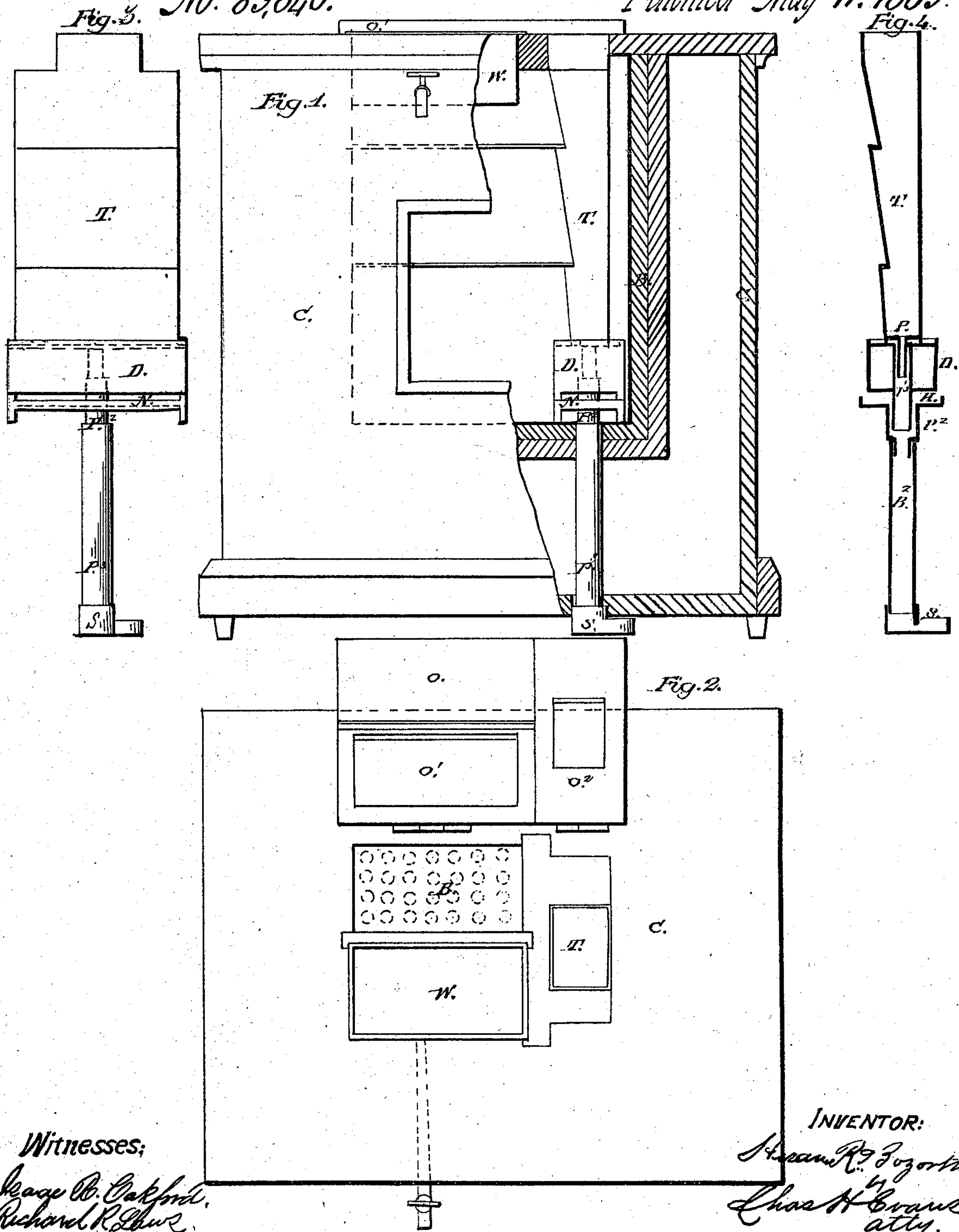


*H. R. Bozorth,
Refrigerator.*

Patented May 11, 1869.

No. 89,846.



*Witnesses:
Seage B. Oakford,
Richard R. Shaw.*

*INVENTOR:
H. R. Bozorth
Chas H. Brown
att'y.*

United States Patent Office.

HIRAM R. BOZORTH, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 89,846, dated May 11, 1869.

IMPROVED REFRIGERATOR.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HIRAM R. BOZORTH, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful "Improvement in Refrigerators;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a front elevation of my improvement in refrigerators, with a portion of the outside casing broken, in order to show the interior.

Figure 2 is a top view of the refrigerator with the covers open.

Figure 3 is a detached view of the ice-box or tank.

Figure 4 is a sectional view of same.

The object of my invention is to construct a refrigerator so that a low temperature can be obtained, and so kept, by the use of a small quantity of ice, thus preserving meats, vegetables, and other articles placed therein, in an effective and economical manner; also to arrange the water-cooler so that the top can be closed (perfectly air-tight) from the outside of the refrigerator, and the water kept perfectly cool, by means of the frigid atmosphere coming in contact with the outside of the cooler.

Formerly, where the water-cooler was placed entirely within the refrigerator, the top was allowed to remain open or partially so, and the water had a tendency to absorb the odors arising from the articles in the refrigerator, and give it an unpleasant taste.

To enable those skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

The inner box, B, of the refrigerator is made of wood, with the interior lined with zinc, and the outside covered with thick felting.

Enclosing the box B is a casing, C, placed a short distance from the box, thus leaving a space for the circulation of air.

The ice-box or tank T, made in the form as shown in figs. 3 and 4, is placed in any desirable position in the box B, so that a space will remain around it for a free circulation of air. The mouth of the tank being on a level with or above the top of the refrigerator, the box or tank T rests on an air-tight box, or drum, D, by means of short legs, so that a space will remain between the bottom of the tank and the upper side or surface of the box, or drum D, so as to allow a circulation of air.

The box, or drum D rests on a dripping-pan, N, with an intervening space, so as to allow the air to circulate through it. Pan N is provided with feet, which rest on the bottom of the box B.

Secured in the centre of the bottom of the box, or tank T, is a discharge-pipe, P, for the purpose of allowing the drippings from the inside of the box, or tank to run out.

Passing through the centre of the box, or drum D, and fitting air-tight in it, is a pipe, P¹. The said pipe also passes through the centre of the drip-pan N, and discharges the drippings which fall from the outside of box, or tank T, caused by condensation of the moisture on the tank, or box.

Enclosing the pipe P¹, and secured to the under side of the drip-pan N, is a pipe, P², which discharges the drippings falling from the surface of the box, or drum D, into the drip-pan N.

The lower end of the pipe P² is inserted loosely into the pipe P³, which extends down and through the bottom of the refrigerator, and bears on its lower end a siphon, S.

The pipes P, P¹, P², and P³, are inserted into each other, so that there will be but one egress, and are rendered air-tight, by means of the siphon S.

In constructing the box, or drum D, a rim is formed around its upper edge, so as to turn the drippings falling from the box, or tank T into the pipe P¹.

The water-cooler W, composed of zinc, or any suitable metal or material, is made rectangular in form, and provided with a flange on its upper end, and is inserted from the top of the refrigerator, into the interior of the inner box B. Cooler W is retained in place by means of its flange, which is on a level or projects a short distance above the top of the refrigerator, and is hermetically sealed, by means of the cover O.

The cover O has hinged to one side of it, a cover, O¹, which encloses the upper part of the inner box B.

The object in having the covers thus constructed, is to allow the cooler W to be opened and cleaned, or supplied with fresh water, without exposing the interior of the refrigerator to a warmer atmosphere, and increasing its temperature.

The mouth of the ice-box, or tank T, is closed air-tight by means of the cover O².

In practice it has been found, after reducing the temperature of the refrigerator as low as possible, and the box, or drum D being perfectly air-tight, the air coming in contact with it, (box, or drum D,) will become dry and crystallize on its surface. The ice-box, or tank T, will also become crystallized on its surface, according to the temperature of the refrigerator.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

The combination of the ice-box T, drum D, drip-pan N, pipes P P¹ P², and siphon S, with the water-cooler W, and inner and outer casings B C, the whole arranged and operating substantially as and for the purposes set forth.

In testimony whereof, I have hereunto signed my name, in the presence of two subscribing witnesses.

HIRAM R. BOZORTH.

Witnesses:

CHARLES H. EVANS,
ISAAC R. OAKFORD.