

I. A. LIVINGSTON.

Improvement in Refrigerators.

No. 129,897.

Patented July 30, 1872.

Fig. 1.

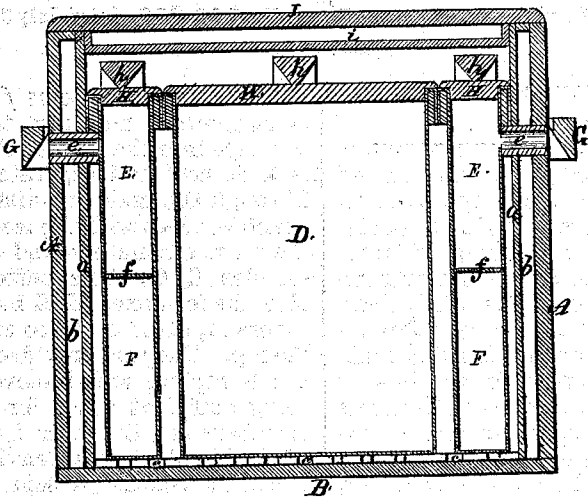
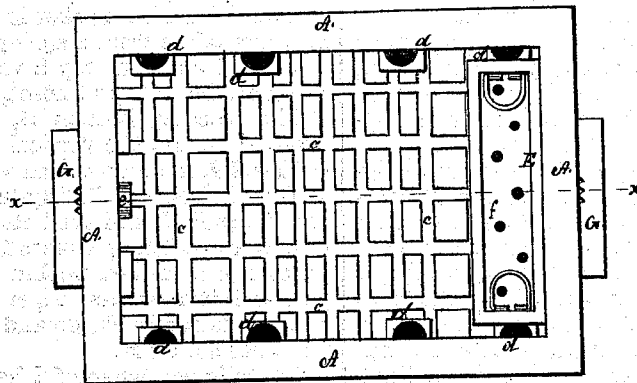


Fig. 2.



Witnesses,
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UNITED STATES PATENT OFFICE.

IRA A. LIVINGSTON, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 129,897, dated July 30, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, IRA A. LIVINGSTON, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in a Butter-Cooler or Refrigerating-Case, for shipping or transporting butter to market in the hot or summer season; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a vertical section across the center, longitudinally, of the case, showing the double walls, the ice-boxes, the water-receivers, ventilators, and the butter-chamber, with all the covers for the apartments. Fig. 2 represents a top view with all but one of the ice-boxes removed, looking in on the cleated bottom, and showing the ventilating-cleats or guiding and supporting bars to the chambers.

My invention relates to portable refrigerators; and it consists in the construction, arrangement, and combination of the chambers, ventilators, coolers, guide and supporting bars, cleats, &c., which will be more fully described, referring to the drawing and the letters of reference marked thereon.

The four sides of my cooling-box or refrigerator for transporting butter are made with thick outer walls or boards A A, and thinner boards a a for the inner walls or lining, leaving an air-space, b b, between them, which, if desirable, may be filled with any light non-conductor of heat, in the usual manner. The bottom board B, being single, is cut with sunken grooves c c at right angles, in order to have a circulation of air under the chambers. The vertical guides or supporting-cleats d d are grooved out next to the sides to form ventilators, both for the butter-chamber D and the ice-boxes E E at both ends, which extend down about half the depth, and are provided

with perforated bottoms f f, on which the ice is supported, allowing the water to drip through into the spaces F F below, where it is kept cool and separate from the ice, &c. Through the ends or walls A A are tubes e e, which connect with the ice-boxes E E to allow the air to circulate in and out under the cleat-handles G G. The butter-chamber D and also the ice-boxes E E have wooden lids or covers H, fitted close, to exclude the air from the top. They are provided with cleat-handles h h to replace and remove them with, there being sufficient space for them between the chambers and the cover I, which is also made of double thickness, leaving a space, i, between the boards the same as the sides of the box A A.

The advantages of my butter-cooler or refrigerator for shipping or transporting butter, &c., are that it can be made very light and portable; is easily kept clean and sweet, will retain small quantities of ice a long time, and deliver butter in market in as fine condition as when taken from a spring or ice house.

What I claim as my invention, and desire to secure by Letters Patent, is—

The recessed bottom B, with right-angle grooves c c and the vertical ventilating cleat-guides d d, in combination with the ice-boxes E E with their ventilating-tubes e e, the water-reservoirs F F, and the butter-chamber D, all having close-fitting covers H H, when all the parts are arranged within a double-walled portable box or case A, substantially in the manner as herein shown and described, for the purposes set forth.

In testimony whereof I hereunto subscribe my name.

IRA A. LIVINGSTON.

Witnesses:

CHAS. H. WOODS,
ANDREW LIVINGSTON.