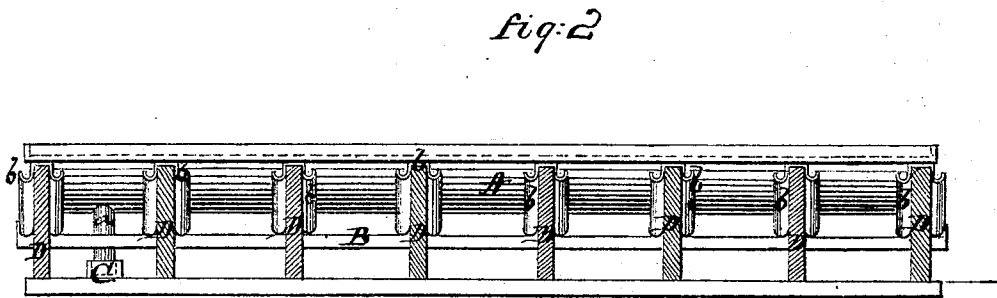
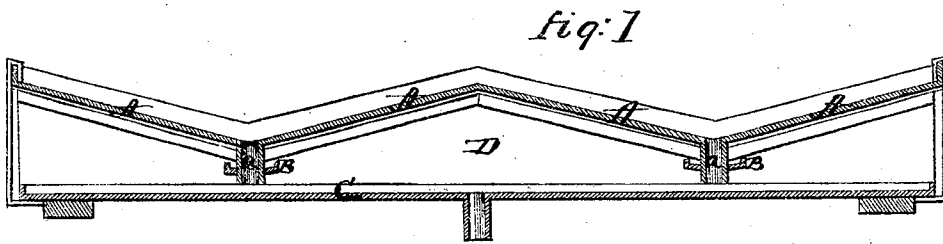


T. L. RANKIN.

Improvement in Ice Floor for Preserving Houses.

No. 124,386.

Patented March 5, 1872..



Witnesses.

C. L. Evert.
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Inventor.

Thos. L. Rankin
per
Alexander Watson
attor.

UNITED STATES PATENT OFFICE.

THOMAS L. RANKIN, OF QUENEMO, KANSAS, ASSIGNOR OF ONE-HALF HIS
RIGHT TO D. W. ROCKWELL, OF ELYRIA, OHIO.

IMPROVEMENT IN ICE-FLOORS FOR PRESERVING-HOUSES.

Specification forming part of Letters Patent No. 124,386, dated March 5, 1872.

To all whom it may concern:

Be it known that I, THOMAS L. RANKIN, of Quenemo, in the county of Osage and in the State of Kansas, have invented certain new and useful Improvements in Ice-Floor for Preserving-Houses; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of an ice-floor to be placed over rooms for the preservation of meats, fruits, or other articles, for curing meats in summer, and especially for the use of brewers, or for any other purpose where a cool atmosphere is desired.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a transverse vertical section, and Fig. 2 a longitudinal vertical section of my ice-floor.

In all houses built for such or similar purposes, as above mentioned, the condensation of the moisture from the air against the cold flat surface over head keeps up a continuous dropping of water from above, which is extremely disagreeable to the workmen, and keeps the joists under the floor completely saturated with water filthy and slimy; and in six or eight years at the furthest it is unsafe to work under them with from six to eight feet of ice put on the floor to run through the long summer.

On my plan a house can be built for cooling the lower story that will last as long as any other building.

I construct my ice-floor with a series of inclined metal surfaces, A A, as shown in Fig. 1. The vapor contained in the atmosphere rises to the highest point in the room, when it strikes the cold metal above and at once

deposits its moisture; not, however, to form in drops and fall to the floor, but as drops attempt to form they pass off on the inclines, and only fall when they reach the turning point of the floor. Along here I provide zinc troughs B B, about four inches in width, which receive the drops and conduct them to a small opening around the ice-water pipe a, through which they drop into the same trough C that receives the ice-water from the various outlets. To give these drops of condensed moisture a flow we allow the timbers on which the joists rest to have a fall of about one inch in ten feet. The joists D D upon which the floor rests are sawed out to correspond with the inclines, and their upper edges are covered with strips b b of zinc. The edges of these strips b b are turned up on each side, as shown in Fig. 2, to catch and conduct any drops that in their downward course run against the joist, and thus preventing any moisture from running against or getting on the joists. Thus in the room is obtained a much dryer atmosphere than out doors, because the most rapid method of condensation is constantly at work.

It will be seen that the joists D D are covered at their upper edges by the metal plates or strips b b, which form a narrow gutter on each side of the joists, so that any moisture which is collected at the points of contact of the metal surfaces with the joists will not fall upon the wood, but drop upon the metal covering and fall into the narrow troughs on each side and pass down the incline to the main gutter.

By means of the metal covering and troughs on each side of the wooden joists I am enabled to preserve the joists and prevent the same from becoming rotted as well as the floor beneath, which would be the case if the moisture was continually collected and allowed to percolate down the sides of the joists and onto the floor.

In a room cooled in this manner fruits, meats, or other articles may be kept for a con-

siderable length of time, and the wood-work preserved, and the floor beneath kept comparatively dry.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The joists D D, constructed as described, and covered on their upper edges with the metal plates *b b*, forming gutters on each side of the joists, substantially as and for the purposes set forth.

2. The combination of the joists D with metal covering A, tubes *a*, troughs B B and C, and the metal strips *b b* which cover the joists and form gutters at each side of each joist, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of June, 1871.

THOMAS L. RANKIN.

Witnesses as to THOS. L. RANKIN:

CORNELIUS L. COX,
W. S. PINCKNEY.