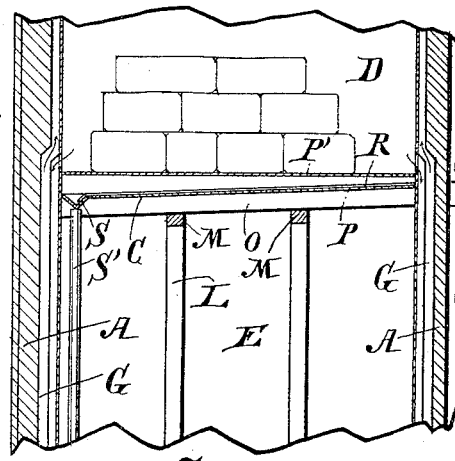
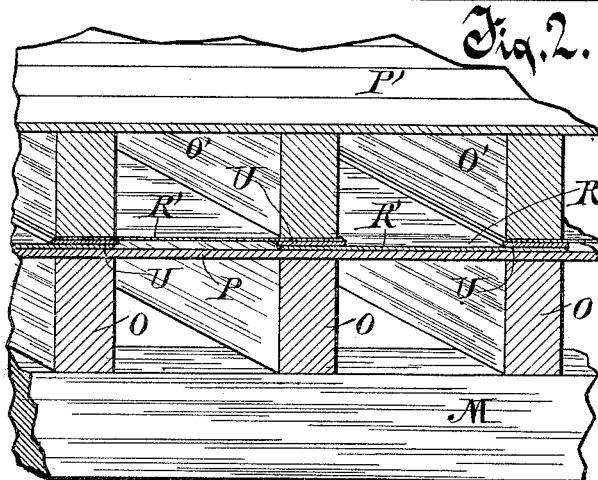
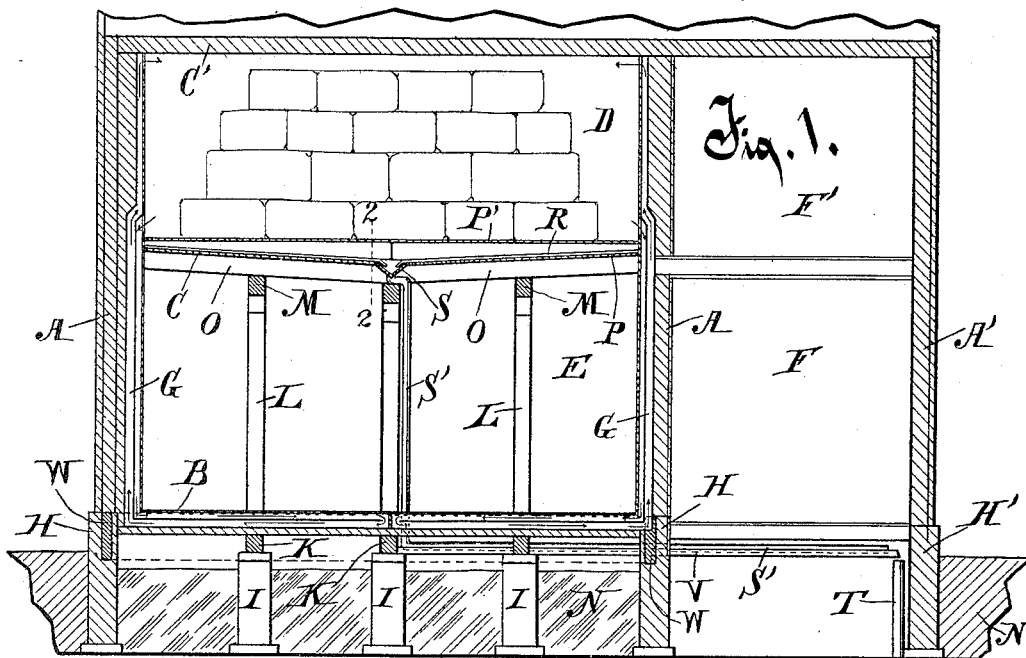


(No Model.)

A. I. DEXTER.
REFRIGERATOR.

No. 459,037.

Patented Sept. 8, 1891.



Witnesses.

W. Keener

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UNITED STATES PATENT OFFICE.

AVELYN I. DEXTER, OF WHITEWATER, WISCONSIN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 459,037, dated September 8, 1891.

Application filed May 1, 1891. Serial No. 391,242. (No model.)

To all whom it may concern:

Be it known that I, AVELYN I. DEXTER, of Whitewater, in the county of Walworth and State of Wisconsin, have invented new and useful Improvements in Refrigerators, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improvements in the class of refrigerators for which Letters Patent Nos. 371,180 and 384,965 were issued to me, respectively, on October 11, 1887, and June 26, 1888. These refrigerators include an ice-box or ice-room and cold dry storage rooms, and are usually constructed as a building of two or more stories in height.

My invention consists in the improved means and method of construction of the refrigerator-building and devices used therewith for improving the refrigeration, particularly with reference to securing tight joints, while providing for the expansion and contraction of metal floors or the settling or yielding of timbers, to obviating the transmittal of heat through the walls, and to collecting and carrying off the water of condensation, so as to obviate dampness and the decay of the timbers and wood flooring of the building.

In the drawings, Figure 1 is a vertical section of a refrigerator in which my improvements are embodied. Fig. 2 is a perspective of a fragment of the refrigerator, the view being taken as a section on line 2 2 of Fig. 1. Fig. 3 is a fragment in section of a modified form of some of the features of the refrigerator.

The refrigerator constructed in the form of a two-story house or building has side walls A A', a lower floor B, an intermediate floor C, and an upper floor or ceiling C'. These several walls and floors are so arranged as to form an ice-chamber D, a cold dry storage room E below the ice-chamber, and other dry cold rooms F F', adjoining the ice-chamber and cold-storage room. The walls A and floor B are provided with cold-air passages G, through which the air cooled in the ice-chamber passes freely at the sides and below the cold-storage room E. The cold dry rooms F F' are auxiliary or supplementary rooms provided, in connection with the ice-chamber D and cold-storage room E, for such cool or

semi-cold purposes of refrigeration as they are adapted to.

The walls A and A' rest on foundation-walls H and H', and piers I provided, on which sills K rest, which in turn support the posts L, and the girders M rest thereon. The floor C is supported on the walls A and the girders M. The foundation of the walls H H' and the piers I are footed in the ground N and extend a little above its surface.

The floor C below the ice-chamber consists of the lower joists O, the floor P laid thereon, and the metallic lining R. Above this other joists O' are placed, on which are supported the loose boards or flooring P'. The floor P and its metallic lining R are somewhat inclined downwardly advisably to the center of the ice-chamber, as shown in Fig. 1, though the inclination may be entirely across the building in one direction to a side thereof, as shown in Fig. 3, particularly where the chamber is narrow. A trough S is provided at the lower edge of the floor P to catch the drip from the ice in the ice-chamber and carry it away through the pipe S' to the waste or sewer pipe T. The flooring P' is laid loose, so that the drip from the ice in the ice-chamber falls freely onto the metal lining R and runs off into the trough S.

To provide for the expansion and contraction of the metal of which the lining R is constructed and to obviate the warping or buckling of the metal lining caused by the yielding of the timbers, as is likely to occur by reason of the using and replenishing the chamber with ice or otherwise, I construct it of several independent sheets of metal R', which sheets of metal at their adjoining edges overlap each other, each alternate sheet at its edge being arranged to lie upon the adjacent sheet, and a strip of felt or similar material U, advisedly saturated with oil or other odorless water-excluding material, is interposed between the overlapping edges of the metal plates. These overlapping edges of the metal plates are preferably arranged to be directly above a joist O, and a joist O' is placed thereon, whereby the several sheets or plates R' of the metal lining are held in position and the joints are made tight and secure by the weight thereon. As the moisture in the atmosphere in the space be-

low the lower floor of the building would ordinarily condense on the colder floor-timbers, I run a portion of the ice-water drip-pipe S' below the floor of the building, and as the water it carries is nearly ice-cold and the pipe is consequently much colder than the timbers the vapor in the atmosphere condenses on this colder pipe, and thereby takes the moisture from the air in the space, saving the timbers from dampness and decay, the water of condensation on the pipe S' falling into a gutter V, located immediately below the pipe S', throughout so much of its length as is below the floor, which gutter is arranged to carry the water into the waste-pipe T or other suitable discharge for it.

As the foundation of this class of refrigerators is usually constructed of brick or stone or other material which in warm weather to a certain extent transmits the heat of the outer air through it to the space beneath the floor of the building, I provide a means to obviate this undesirable result by forming a channel or space W in the foundation-wall for the main building extending from the top of the foundation downwardly to or beyond the top of the surface of the ground, which channel or space I advisably fill with mineral wool or some equivalent material, which is substantially a non-conductor of heat, and thus prevent the transmission of heat from the outside air to the space within the foundation-walls below the floor of the refrigerator.

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

1. In a refrigerator or similar building, a metal floor or lining formed of independent plates or sheets of metal arranged to overlap each other at their edges and an interposed felt or similar packing, whereby the expansion and contraction of the metal and a water-tight joint are provided for, substantially as described.

2. In a refrigerator, an ice-chamber floor consisting of an inclined floor, as P, and a metal lining thereon constructed of independent overlapping plates provided with interposed packing, all combined substantially as described.

3. In a refrigerator-building the walls of which rest on a foundation footed in the ground, the foundation having therein a channel or space above the surface of the ground, and mineral wool or a similar material substantially a non-conductor of heat in the channel adapted to prevent the transmittal of heat from the outside through the wall to the space below the floor of the building, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AVELYN I. DEXTER.

Witnesses:

SAMUEL BISHOP,

EDWIN K. DEXTER.