J. CONLY & J. B. WISE.

Refrigerator Building.

No. 214,887. Patented April 29, 1879.

Fig. 2.

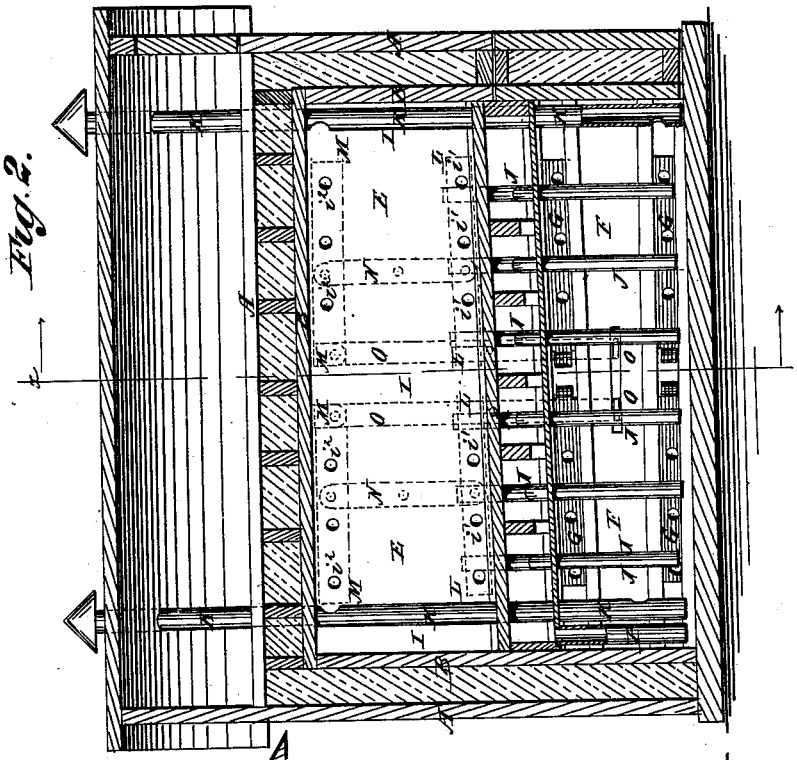
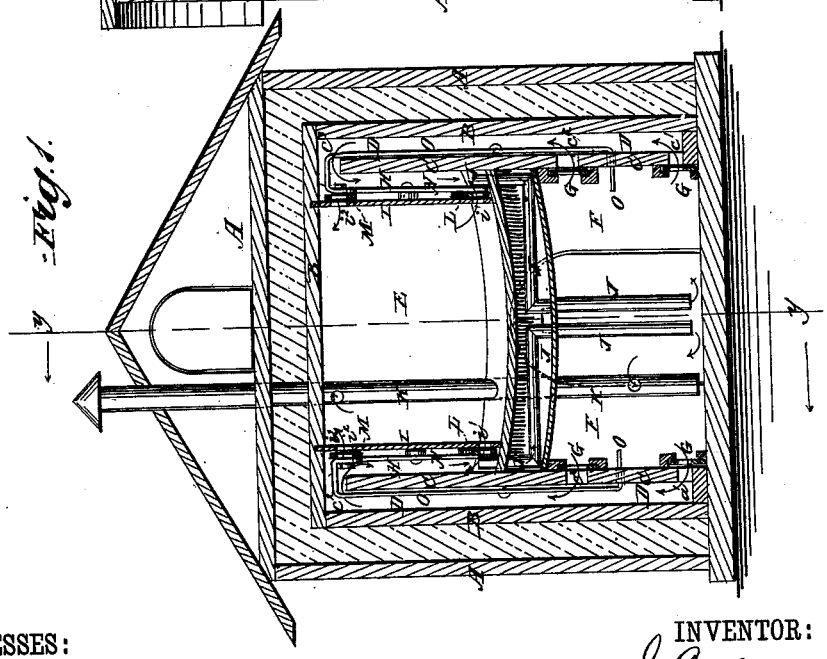


Fig. 1.



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JOSEPH CONLY AND JONAS B. WISE, OF SHARON, WISCONSIN.

IMPROVEMENT IN REFRIGERATOR-BUILDINGS.

Specification forming part of Letters Patent No. **214,887**, dated April 29, 1879; application filed January 31, 1879.

To all whom it may concern:

Be it known that we, JOSEPH CONLY and JONAS B. WISE, of Sharon, in the county of Walworth and State of Wisconsin, have invented a new and useful Improvement in Refrigerators, of which the following is a specification.

Figure 1 is a vertical cross-section of our improved refrigerator, taken through the line *x x*, Fig. 2. Fig. 2 is a vertical longitudinal section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved refrigerator for the preservation of fresh meat and other substances that require to be kept cool, which shall be simple in construction and convenient and effective in use, allowing the circulation of the air to be readily controlled and greatly diminishing the waste of ice.

The invention consists in the combination of the inner walls, provided with openings closed by slides, and forming, with the outer wall and the vertical partition, passages, the metallic walls, forming, with the inner wall, passages, provided with openings closed by slides, operated by a series of levers, and the pipes extending from the spaces between the metallic wall and the inner wall, through the floor of the ice-chamber, and the ceiling of the cooling-chamber, nearly to the bottom of the same, as hereinafter more fully described.

A is the outer wall, and B is the intermediate wall, of the refrigerator or building, which are formed of planks attached to studs. The space between the walls A is filled with sawdust or other suitable non-conducting material.

C is the inner wall, which is placed at a little distance from the wall B.

The space between the walls B C is divided into a series of vertical passages, D, by vertical cross-partitions, or has a series of vertical pipes placed in it to serve as air-conductors. The surfaces of the walls B C should be lined with felt or other suitable material, to prevent air from passing through.

The interior of the refrigerator is divided into two compartments—an upper compartment or chamber, E, to receive the ice, and a lower compartment or chamber, F, to receive the meat or other substance to be kept cool.

The floor of the ice-chamber E is concaved or inclined toward its central line and inclined toward one end, so that the waste-water will readily flow off to and through the drip-pipe.

The floor of the ice-chamber E is attached to the upper edges of joists, to the lower edges of which is attached the ceiling of the provision or cooling chamber F.

The ceiling of the cooling-chamber F is covered with pitch, and is concaved and inclined to conduct any water of condensation to its lower end, where it flows into and out through the drip-pipe P.

In the wall C, at or near the floor of the cooling-chamber F, is formed a series of openings, c^1, leading into the lower parts of the passages D, and in the said wall C, at or near the ceiling of the cooling-chamber F, is formed another series of openings, c^2, leading into the passages D.

The openings c^1 c^2 are designed to admit the warm air from the cooling-chamber F to the passages D, the lower openings, c^1, being used when a more rapid circulation of air is required, and the upper openings, c^2, being used when a slower circulation of air is required. The openings c^1 c^2 are provided with slides G, so that either set of openings can be opened and closed, as may be desired.

The wall C does not extend quite to the top wall, B, which forms the ceiling of the ice-chamber E, or has openings formed through it to form passages c^3 for the air from the passages D into the spaces or passages H between the walls C and the walls I.

The walls I are made of galvanized sheet-iron or other suitable sheet metal, are placed at a little distance from the walls C, and extend from the floor to the ceiling of the ice-chamber E.

From the lower ends of the spaces or passages H pipes J lead down through the floor of the ice-chamber E, extend along between the joists of the said floor, pass down through the middle part of the ceiling of the cooling-chamber F, and extend to or nearly to the floor of the said cooling-chamber F.

With this construction the warm air from the cooling-chamber F will pass through the

openings c^1 or c^2 into and up through the passages D, and through the openings c^3 into the spaces or passages H, where it is cooled by contact with the cold metallic walls I.

From the spaces or passages H the cold air passes down through the pipes J, and escapes from their lower ends into the lower part of the cooling-chamber F, so that a constant circulation will be kept up with the same air.

The chambers F E are ventilated, when desired, through the pipes K, which pass up through the said chambers F E, and through the roof or top of the refrigerator. The pipes K have holes formed through them within the chambers F E, which holes should be covered with slides, so that the ventilation can be controlled as desired.

In the metallic walls I, near their lower and upper edges, are formed openings i^1 i^2, which are closed, respectively, by the slides L M, which slides are connected by the bars N. The ends of the bars N are pivoted to the slides L M, and their centers are pivoted to the walls I, so that both sets of slides L M may be moved by the movement of either.

O are levers placed in the space between the walls B C, and pivoted at their middle parts to the walls C. The upper ends of the levers O are bent inward to pass through the openings c^3 in the walls C, and are pivoted to the slides M.

The lower ends of the levers O are bent inward and pass through slots in the lower parts of the walls C, so that they may be operated from the interior of the cooling-chamber F to adjust the slides M L. The slides L M allow the circulating air to be passed through the ice-chamber E when desired.

Access is had to the chamber E for putting in ice, and to the chamber F for putting in and taking out the articles to be kept cool through doors in the end of the refrigerator.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, in a refrigerator, of the walls C, provided with openings c^1 c^2 c^3, closed by the slides G, and forming, with the walls B and the vertical partitions, the passages D, the walls I, forming, with the wall C, the passages H, and provided with the openings i^1 i^2, closed by the slides L M, operated by the connecting-lever N and the operating-lever O, and the pipes J, extending from the spaces H through the floor of the chamber E, thence through the ceiling of the chamber F down nearly to the bottom of the said chamber F, substantially as and for the purpose described.

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JONAS BENNETT WISE.

Witnesses:
WM. P. ALLEN,
H. B. HOWELL.