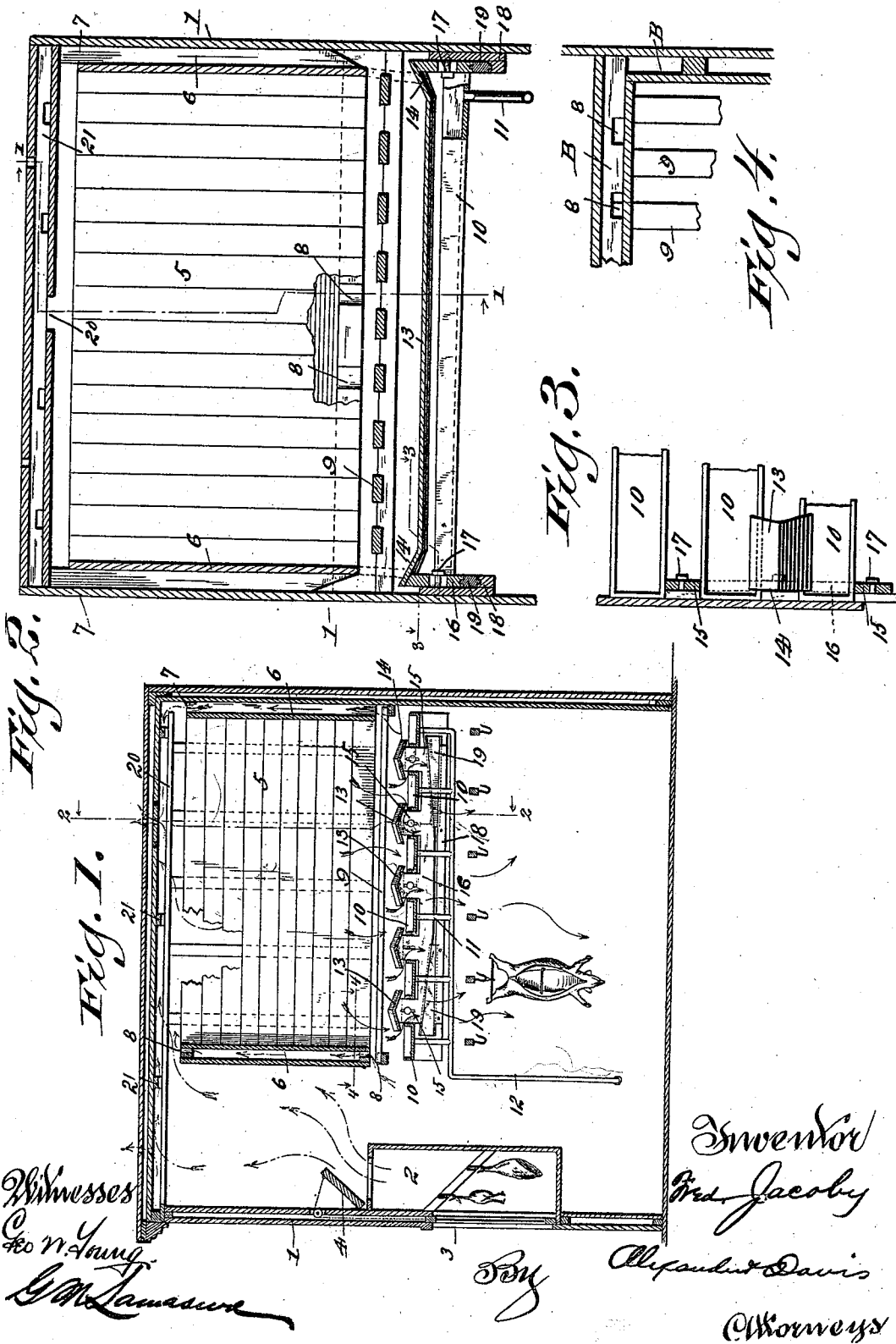


(No Model.)

F. JACOBY.
REFRIGERATOR.

No. 522,118.

Patented June 26, 1894.



UNITED STATES PATENT OFFICE.

FREDERIK JACOBY, OF MILWAUKEE, WISCONSIN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 522,118, dated June 26, 1894.

Application filed March 12, 1894. Serial No. 503 336. (No model.)

To all whom it may concern:

Be it known that I, FREDERIK JACOBY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to a new and improved refrigerator and has for its object to provide a system of circulation of air and of ventilation, which will keep the provision-chamber fresh and clean, and at the same time to so locate the ventilating openings and partitions that the contact of the rising air with the ice in the ice-chamber will be effectually prevented.

20 A further object of the invention is to provide a system of drainage-troughs and adjustable hoods therefor, for a purpose which will hereinafter more fully appear.

25 In the drawings:—Figure 1 is a longitudinal vertical sectional view of the refrigerator taken on line 1—1 of Fig. 2. Fig. 2 is a transverse vertical sectional view on line 2—2 of Fig. 1. Fig. 3 is a detail horizontal sectional view taken on line 3—3 of Fig. 2. Fig. 4 is a detail horizontal sectional view showing one corner of the ice-chamber.

30 Referring to the various parts by numerals, 1 designates the outer casing of the refrigerator; 2 the retail or supplemental provision-chamber supported therein, said chamber being provided with an outer sliding door 3 which is connected by a chain or cord with an inner hinged-cover 4 in such a manner that when the sliding door is opened the hinged cover is closed and vice versa; 5 the ice-chamber which is supported near the top of the refrigerator and is formed on all its vertical sides with double hollow walls 6. The ice-chamber is set up in the corner of the casing of the refrigerator so that the walls of the latter will form the outer part of three or more of the double-walls of the ice-chamber, as shown. When the outer casing of the refrigerator is thus used to form the outer side of the double walls of the ice-chamber the top and bottom of the hollow walls so formed are preferably left entirely open, as shown at 7, to permit the free circulation of air therein,

but with the wall of the ice-chamber which is formed independently of the outer casing suitable openings are preferably formed in the top and bottom thereof to permit the circulation of air and the exit of the drippings as shown at 8.

Located directly below and close to the lower open end of the ice-chamber is a stationary slatted ice-rack 9, and suitably supported at a proper distance below this rack is a series of parallel, slightly-inclined, stationary drainage-troughs 10. These troughs are located at a suitable distance apart and are provided at their lower ends with depending drainage-tubes 11, and said tubes are connected at their lower ends by a pipe 12, which pipe carries the drainage outside of the refrigerator.

35 Above the troughs 10 and extending over the space between them are supported A-shaped hoods or deflectors 13 whose lower edges extend over the adjacent sides of said troughs. These deflectors or hoods are formed at their ends with upwardly and outwardly inclined portions 14, the outer ends of said inclined portions extending out beyond the inner walls of the ice-chamber in order to catch the drippings from said sides and deflect them inwardly into the troughs 10 and also prevent them from splashing onto the adjoining side-walls of the refrigerator and passing thence down into the provision chamber. The hoods or deflectors 13 are supported on the upper ends of arms 15 of horizontal bars 16 located beneath the troughs 10 and at each end of the hoods. The arms 15 pass up between the troughs 10 and are slotted vertically as shown and the bars 16 are loosely secured to the sides of the refrigerator, so as to be vertically movable, by means of headed bolts 17, which pass through the vertical slots in the arms 15 and into the refrigerator side. The bar 16 on its under side is inclined from its outer ends inwardly and downwardly for a portion of its length, and these inclined portions are longitudinally grooved on their under sides.

40 A stationary horizontal bar 18 is secured to the side of refrigerator directly below each bar 16 and in close proximity thereto and said bars are longitudinally grooved on their upper edges to receive tongues on the lower straight edges of wedges 19, the upper edges

of said wedges being also formed with a tongue which engages the groove in the inclined portions of the bar 16, as clearly shown in Fig. 2. Two of these wedges are used for each bar 16, one at each end thereof, as shown.

The ceiling of the refrigerator is formed double, with an air space between its two walls, and the inner wall thereof is formed with a central longitudinal slot 20 which extends along the whole space between said walls. The outer wall of the ceiling is provided with a series of small openings near its longitudinal edges at opposite sides of said central slot for the escape of the warm air.

The entire space between the walls of the ceiling is in communication by means of openings formed in the transverse spacing strips 21, which support the inner wall of the ceiling.

The operation will be readily understood by reference to Fig. 1 of the drawings, wherein the descending currents of cold air are indicated by arrows shown in full lines while the ascending currents of warmer air are indicated by arrows in dotted lines. The hoods 13 are raised from the troughs 10 a sufficient distance to permit the cold air to pass between them in descending from the ice-chamber to the provision-chamber, and the distance said hoods will be raised will depend on the amount of ice in the ice-chamber. The object of this adjustment is to prevent air rising through the ice-chamber by regulating the spaces between the troughs and hoods so that the spaces will be just sufficient to permit the passage of so much air as the ice will make cold. The warmer air will rise outside of the ice-chamber and a portion will pass through the central slot in the inner wall of the ceiling, and thence out through the openings in the outer wall thereof. By thus causing the air to flow to the center of the top of the refrigerator and to take a circuitous path before escaping, a more even degree of cold is produced over the whole of the refrigerator, and the circulation of the air through the whole of the refrigerator is secured.

The object of forming the walls of the ice-chamber hollow and open at the top and bottom is to permit warm air to pass upwardly through them.

By locating the ice-chamber in one of the

upper corners of the refrigerator and thereby bringing three of the hollow walls of the ice-chamber immediately adjacent to the refrigerator walls, it will be seen that a more complete circulation is caused through the hollow walls than would be the case if said hollow walls were set out into the refrigerator.

The essential advantages of my construction are that the refrigerator will be kept very dry and will consume less ice than the ordinarily-constructed refrigerator.

Having thus fully described my invention, what I claim is—

1. A refrigerator consisting of an outer casing, a provision-chamber, an ice-chamber having vertical walls, an ice rack in said chamber, a series of troughs below said ice-chamber, and a series of hoods supported above and between the troughs and spanning the spaces between the same, the ends of the hoods being inclined upwardly and outwardly, as shown, to take the drippings from the walls of the ice-chamber and direct them into the troughs, substantially as described.

2. In a refrigerator, the combination of an outer casing, a provision chamber and an ice-chamber, a series of separated drainage-troughs supported below the ice chamber, bars 16 adjustably supported below the drainage-troughs, said bars being beveled and grooved on their under sides, as shown, and provided with upwardly-extending arms, said arms extending up between the troughs, a series of hoods carried by said upwardly-extending arms and supported above the troughs, wedges supported below and in engagement with the bars 16, said wedges being formed with tongues on their upper and lower edges, a grooved horizontal support for said wedges, the inclined portion of the wedges engaging the beveled portion of the bars 16 and their lower edges engaging the grooved horizontal support, substantially as and for the purpose set forth.

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

FREDERIK JACOBY.

Witnesses:

JOHN VAN ELLS,
WM. G. PARSONS.