

(No Model.)

J. A. WIEDERSHEIM.  
REFRIGERATOR.

No. 309,593.

Patented Dec. 23, 1884.

Fig. 1.

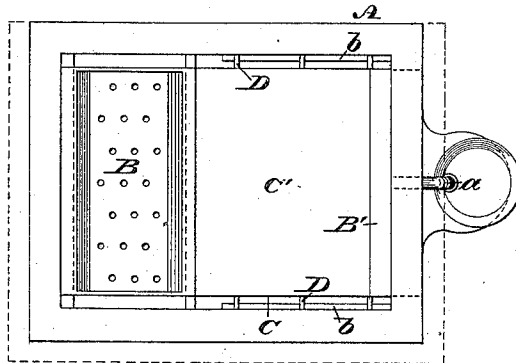


Fig. 2.

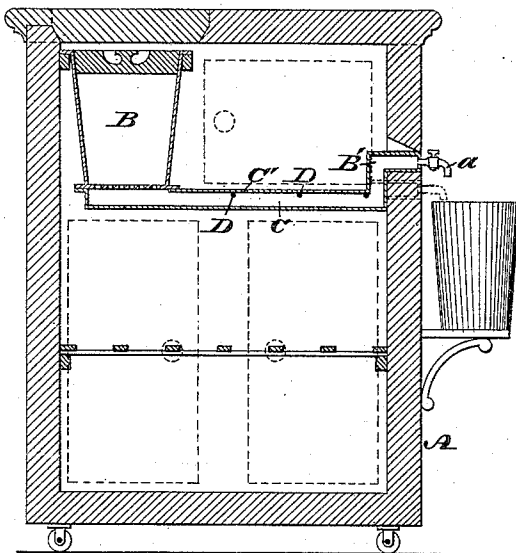


Fig. 3.

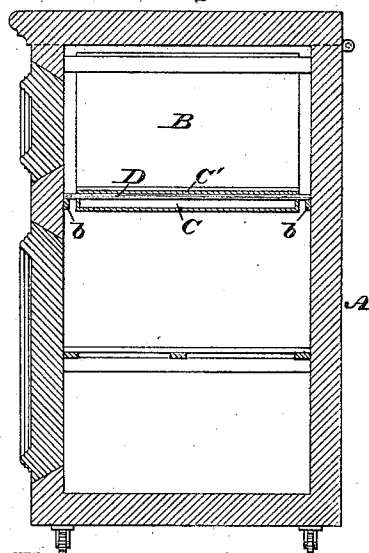


Fig. 4.

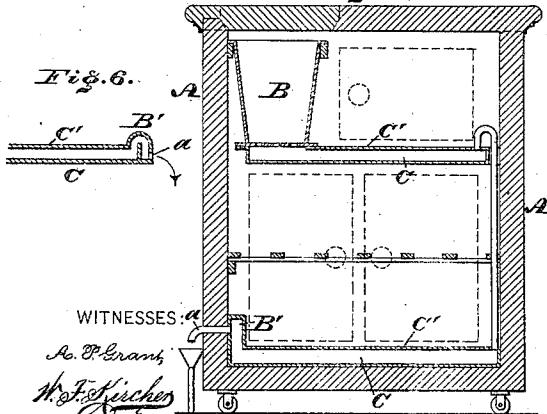
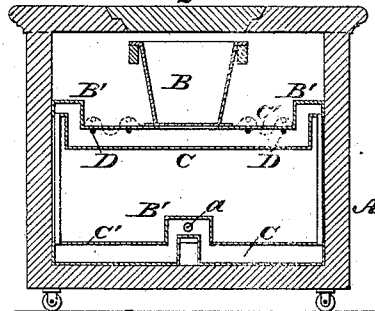


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 309,593, dated December 23, 1884.

Application filed April 21, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. WIEDERSHEIM, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Refrigerators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a top or plan view of the interior of a refrigerator embodying my invention. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a transverse vertical section thereof. Figs. 4 and 5 are longitudinal vertical sections of modifications. Fig. 6 is a section of a portion of the tray of the refrigerator, showing another modification.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is the utilization of the water or melted ice of a refrigerator for cooling purposes, and the adaptability of the tray which supports the food or material as a cooling-surface for said food, &c.

The invention consists of the tray of a refrigerator constructed to constitute a discharge-conduit which extends laterally from the ice-chamber, the discharge end of the same being projected or extended upwardly, so that the water or melted ice from the ice-chamber circulating through the tray is brought in contact with the upper wall of the same, thus effectively cooling the tray, the ice-chamber and tray being connected as one, so that they may be readily removed and reapplied, and when removed it may be washed and cleansed by water directed either into the ice-chamber or the discharge end of the conduit, and the discharge end of the tray is supported on the wall of the body of the refrigerator.

The invention also consists of a novel manner of supporting and strengthening the tray.

Referring to the drawings, A represents the body or case of a refrigerator, and B represents the ice chamber or holder, which is sustained within the body A, and formed of any suitable material, such as zinc, galvanized sheet metal, enameled cast metal, &c. The bottom of the ice-chamber B is open, and has con-

nected with it a tray, C, which is of tubular form, preferably flat, extends horizontally and laterally from or from near the lower end thereof, and is supported within the body, the same being in communication with said ice-chamber B. The end of the tray opposite to the chamber B is bent or deflected upwardly, as at B', and said end, as shown in Fig. 1, is passed through an opening in the side of the body A, where it is provided with either a faucet or a drip-cock, a, or may be entirely or partly open for the purpose of discharging the melted ice or water from the ice-chamber, as will be hereinafter explained. When the chamber B is supplied with ice, the water therefrom enters the tray C and bend B', so that it fills the tray, and consequently comes in contact with the upper wall, C', thereof, thus cooling said wall. As soon as the water in the bend reaches the faucet or cock a, or the discharge-opening of said bend, it is permitted or caused to escape, or may be occasionally drawn off for drinking purposes, it, however, being desirable to have the tray filled with water and allow the same to discharge slowly, thus causing the upper wall of the tray to be constantly subjected to the action of cold running water.

It will be seen that I provide a tray which may support articles of food, &c., and as its upper surface is cooled by the action of the melted ice or cold water, as has been stated, such articles rest on the cold surface of the tray and are kept in good condition, it being evident that steaks, chops, &c., may be laid directly on the tray, the surface whereof is long and wide and cold throughout, and said surface may be washed and kept bright and clean. In some cases the bend or deflector of the hollow or tubular tray has its upper limb or end projected through the side of the body, and the terminal wall has the faucet or drip-cock attached to it; or said wall may be within the body of the refrigerator, and the faucet or drip-cock passed through an opening in the side of the body. In either case the ice-chamber and tubular or hollow tray may be readily fitted in position within the body and removed therefrom. When the deflector is

passed through the side of the body, the tray has its discharge end supported on the wall of the opening in the side of the body. The faucet or drip-cock may be disconnected from the tray or made of such size as to remain connected with the tray and passed through the body while locating or removing the tray. Between the sides of the tray and body are spaces for the ascent of heat or vapor rising from the food placed in the refrigerator below the tray and the circulation of air from top to bottom of the body. It will also be seen that the body of the refrigerator is subjected to the cooling action of both the tray and ice-chamber, and thus every portion of the body is effectively cooled, the portion of the body below the tray being adapted to receive articles of food, &c., access thereto being had through doors, as usual in refrigerators. The ice-chamber and space in the body A above the tray may be reached through the lid, and a side door may also be provided to permit access to said space.

D represents rods or bars, which are passed through the tray C, and their ends project at the sides thereof, so as to rest on shoulders or cleats b, secured to the body, the openings in the walls of the tray through which the rods pass being fully closed by soldering or other means in order to prevent leakage at said openings.

It will be seen that the tray is firmly supported by the rods D, and the upper walls thereof stiffened by said rods, thus strengthening the tray. Rods may also pass through the bottom of the ice-chamber, and project therethrough for supporting the same, in which case the upper cleats or shoulders on which the flange at the top of the ice-chamber is rested may be dispensed with, this feature being advantageous, as no obstacle is presented to the introduction of the ice-chamber and tray into the body and removal of the same therefrom, said chamber and tray being preferably connected or constructed as one piece, but may be made separately. In the latter case suitable packing is interposed between the joint of the chamber and tray, to prevent leakage thereat.

In Fig. 4 the bend or deflector B' is substituted by a hollow goose-neck, and an additional hollow tray is shown at the bottom of the body, the same being in communication with the upper tray, so as to receive water therefrom, said bottom tray having at its discharge end a deflector or upward bend similar to that shown in Fig. 2.

In Fig. 5 the upper tray has a deflector or upward bend at each end, and the lower tray has such deflector or upward bend at the middle, thus showing that a deflector or bend may be variously located, its object in each case being to cause the water in the tray to rise against the upper wall of the tray and cool the same, Fig. 4, however, being only a duplication, and Fig. 5 a multiplication, of

the ice-chamber and tray, but the feature of the removability of the same being preserved in both.

In Fig. 6 the bend is in the upper wall, and the partition rises from the lower wall to a point above the level of the upper wall, whereby the water fills the tray prior to passage over the partition, so that the upper wall is cooled, with the advantages hereinbefore stated.

It is evident that the tray may be readily cleansed by directing water through the same, either while it remains within the body A, or by removing the tray and chamber and placing the chamber under a hydrant or other water-supply; and, if desired, the ice-chamber may be filled with both water and ice, so as to provide an ample supply of drinking-water or of running water, which is directed through the tray and serves to cool the same before being drawn off or discharged.

The rods or bars D may be connected with the upper or lower walls of the tray or sides or ends thereof; but when passed through the tray, as hereinbefore stated, they both sustain the tray within the body and strengthen the upper wall thereof.

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

1. A refrigerator having an ice-chamber and a hollow or tubular tray communicating therewith, said tray projecting laterally from the ice-chamber, and having at its discharge end an upwardly-directed deflector which is supported on the side of the body, substantially as and for the purpose set forth.

2. A refrigerator having an ice-chamber and a hollow or tubular supporting-tray, which extends laterally from said chamber and is in communication therewith, the discharge end of the tray having an upwardly-directed deflector, said chamber and tray being connected as one, and removably supported within the body of the refrigerator, substantially as and for the purpose set forth.

3. A refrigerator having a hollow or tubular tray for supporting food, &c., and an ice-chamber in communication therewith, said tray having an upwardly-directed deflector or bend, and rods or bars connected therewith for supporting the same within the body of the refrigerator, substantially as and for the purpose set forth.

4. A refrigerator having an ice-chamber, a hollow or tubular tray attached to and communicating with said chamber, and rods or bars connected with said tray for supporting the same, the tray having at its discharge end an upwardly-directed deflector or bend which is supported on the wall of the body of the refrigerator, substantially as and for the purpose set forth.

5. A refrigerator having an ice-chamber, and a hollow or tubular tray connected with said chamber and in communication there-

with, said tubular tray being supported within the body and having air-passages at its sides, substantially as and for the purpose set forth.

- 5 6. A refrigerator having a hollow tray or conduit in communication with the ice-chamber thereof, said tray discharging the water of said chamber and being cooled thereby,

and having secured to it rods or bars which support said tray and strengthen the same, substantially as described.

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Witnesses:

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