A. AXT.

REFRIGERATORS AND WATER-COOLERS.

No. 195,557. Patented Sept. 25, 1877.

Fig. 1.

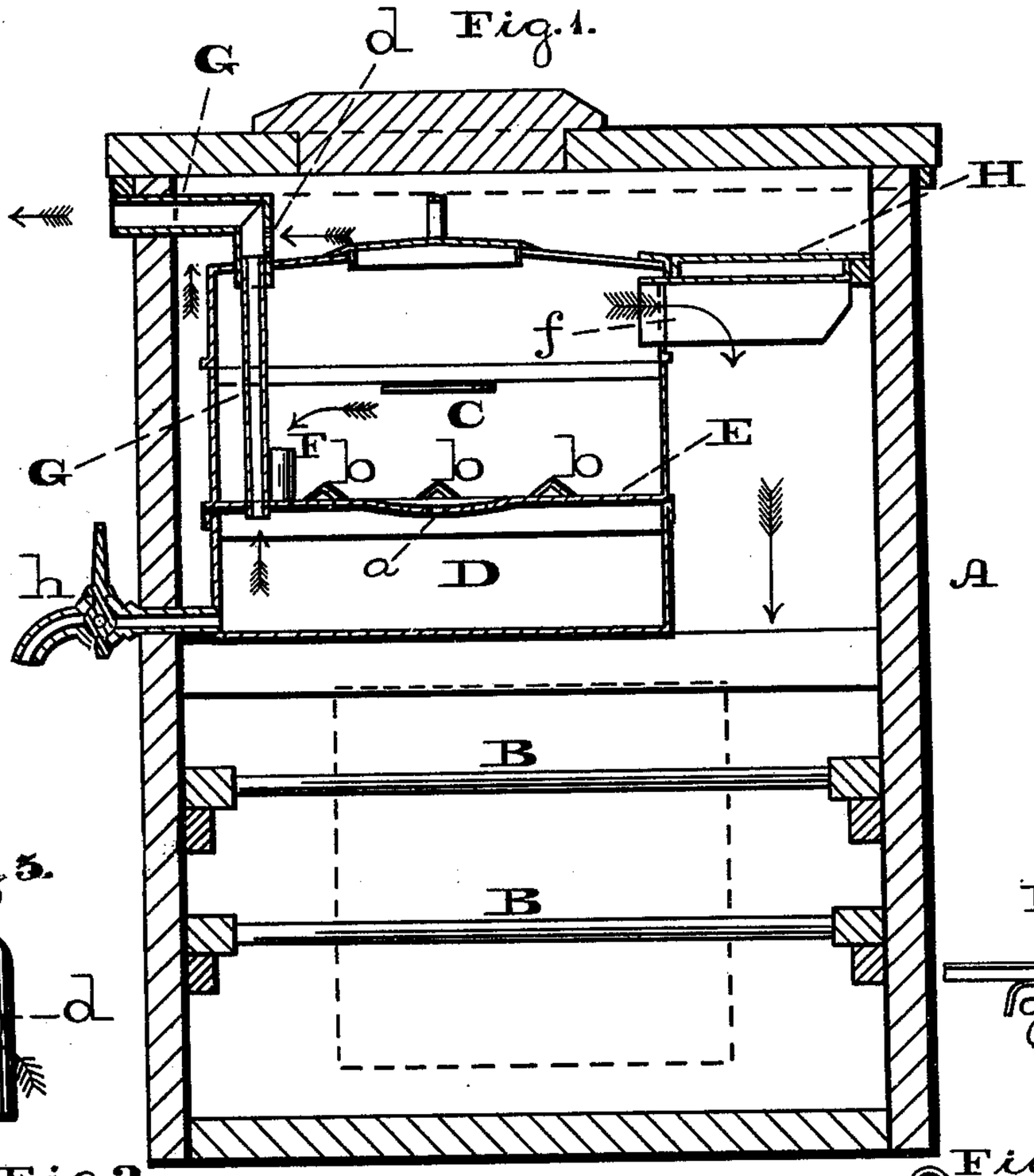


Fig. 5.

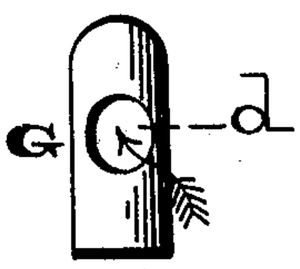
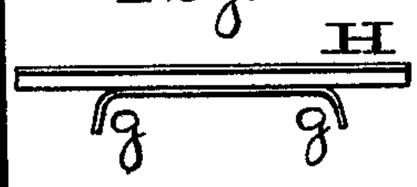


Fig. 2.

Fig. 6.



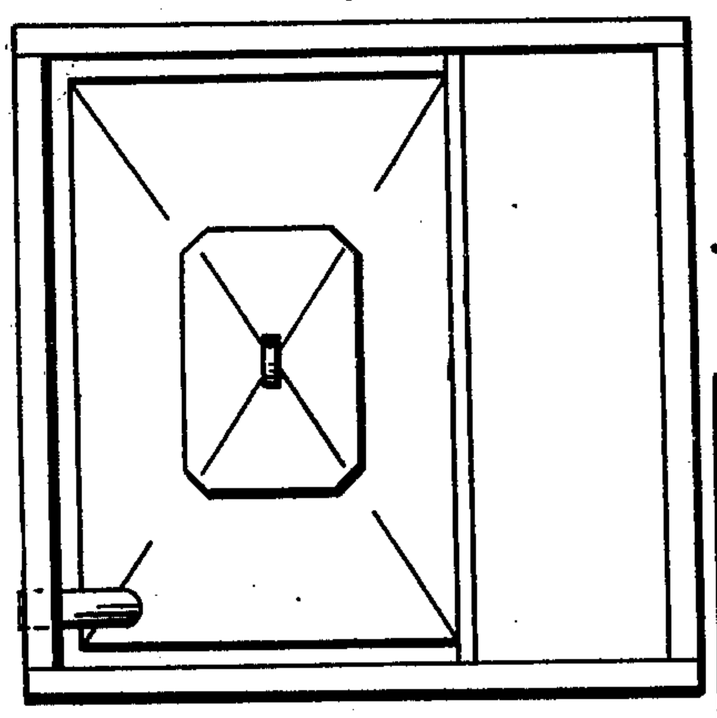


Fig. 3.

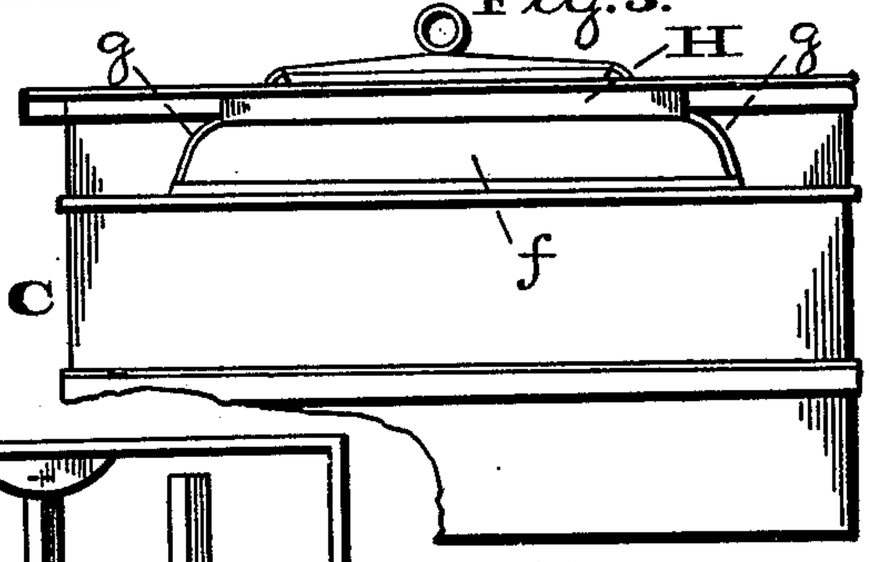
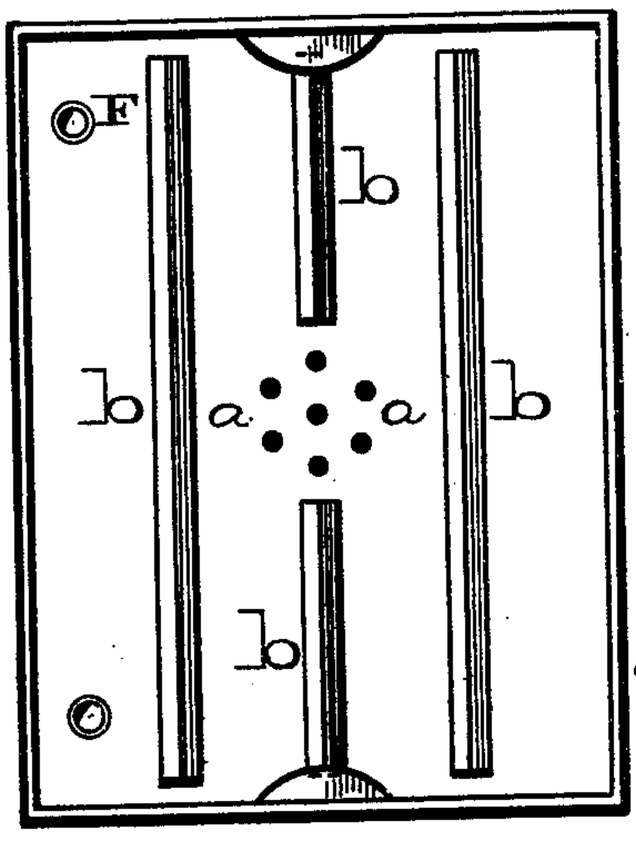


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

AUGUST AXT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO A. GENTZSCH, OF SAME PLACE.

IMPROVEMENT IN REFRIGERATOR AND WATER-COOLER.

Specification forming part of Letters Patent No. **195,557**, dated September 5, 1877; application filed July 30, 1877.

To all whom it may concern:

Be it known that I, AUGUST AXT, of the city and county of Philadelphia, and 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 vertical section of the refrigerator embodying my invention. Fig. 2 is a top view of the interior thereof. Fig. 3 is a side view of a portion of the interior thereof. Fig. 4 is a top view of the ice-rack. Figs. 5 and 6 are views of detached parts.

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

My invention relates to improvements in the class of combined refrigerators and water-coolers.

The invention consists of pipes for directing the warm air from and the cold air to the water.

It also consists of a pipe, common to the cooler and refrigerator, for carrying off in one pipe the heated matters of both cooler and refrigerator.

It also consists of a partition for permitting the passage of cold air from the ice-chamber to the refrigerator, and preventing contact of said air with the heated matters of the refrigerator.

Referring to the drawings, A represents a refrigerator-case, which may have trays or shelves B, for support of articles of food, &c., access thereto being had by a door suitably applied.

In the upper part of the case there is supported a combined ice-chamber and water-cooler, C D, which consists of an upper and lower apartment, separated from each other by a partition, E, which constitutes an ice-rack, and is the floor of the ice-chamber and roof of the cooler, said partition having a series of perforations, *a*, in its depressed center, and on its upper face a series of ribs, *b b*, on which latter the ice will be placed, so that the rack is enabled to endure the blows of the ice when placed, as usual, roughly in the chamber, and also to withstand the weight of the ice, the perforations somewhat weakening the rack, and they are designed to convey the water of the melted ice into the cooler D.

F represents a pipe which rises from the partition E, and forms a communication between the chamber C and cooler D; and G represents a pipe which passes through the partition E and the top of the chamber C, and then through the adjacent side wall of the refrigerator, whereby said pipe G forms communication between the cooler D and the atmosphere.

In the bend of the pipe G above the chamber C there is an opening, *d*, whereby said pipe also forms communication between the interior of the refrigerator and the atmosphere.

In the side of the upper portion of the chamber C there is an opening, *f*, and supported on the top of the chamber and the inner wall of the refrigerator is a horizontal partition, H, which thus overhangs the opening *f*, and prevents communication of the spaces in the refrigerator above and below said partition.

To the under side of the partition there is secured an arch-shaped or curved piece, *g*, which enters the opening *f*, and rests on the bottom wall thereof, so as to assist in supporting the partition, and acts as a deflector for preventing lateral passage of cold air as it leaves the chamber C through the opening *f*.

The operation is as follows: Ice will be placed in the chamber C, the introduction of which is allowed through openings in the top of the refrigerator and chamber. As the ice melts the water therefrom drips through the perforations *a* of the partition E into the chamber D, thus providing a supply of cold water, which may be readily drawn off through the faucet *h*. The warm air in the cooler D will rise and enter the pipe G, so as to be directed to the atmosphere, and some of the cold air in the chamber C will descend through the pipe F, and thus assist in cooling the water in the chamber D. Another volume of cold air will escape through the opening *f* at the top of the chamber C, and descend to the tray portion of the refrigerator, so as to cool the same. The heated matters of the refrigerator will rise and pass between the chambers C D and the inner wall of the refrigerator, and reach the opening *d* of the pipe G, whereby they are

passed out, and, owing to the heated matters rising to the top of the case A, the partition H prevents contact of said matters with the cold air passing from the chamber C through the opening *f*, and thus said cold air will descend to the food in an untainted or pure state.

By removing the lid of the case A, the faucet *h*, the top bend of the pipe G, and the partition H, the combined ice chamber and cooler may be removed from the refrigerator-case, and as said chamber and cooler are made in detachable sections, they may be separated, whereby every part is accessible for cleansing or repairs.

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

1. The ice-chamber C and water-cooler D, in combination with a perforated partition, E, cold-air pipe F, and warm-air pipe G, substantially as and for the purpose set forth.

2. The cooler D and the refrigerator-case A, in combination with the pipe G, having the opening *d* forming a common exit for heated matters of the cooler and refrigerator, substantially as and for the purpose set forth.

3. The ice-chamber C, with opening *f*, and the refrigerator-case A, in combination with the closing partition H, overhanging said opening *f*, substantially as and for the purpose set forth.

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