

(No Model.)

F. R. BEAL.
COMBINED WATER COOLER AND REFRIGERATOR.

No. 542,217.

Patented July 2, 1895.

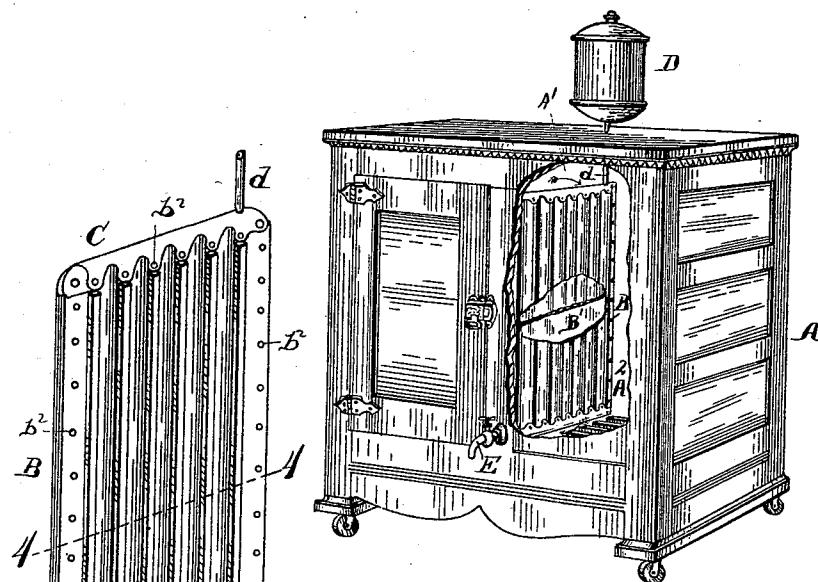


Fig. 1.

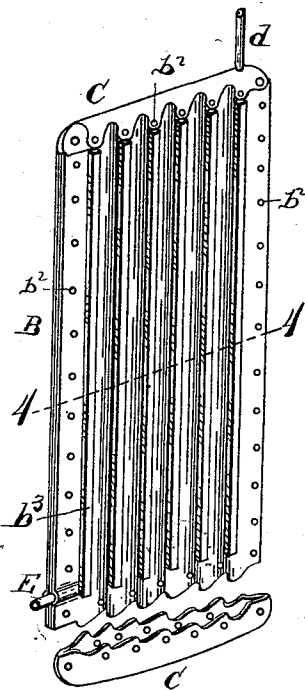


Fig. 3.

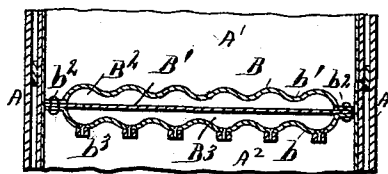


Fig. 4.

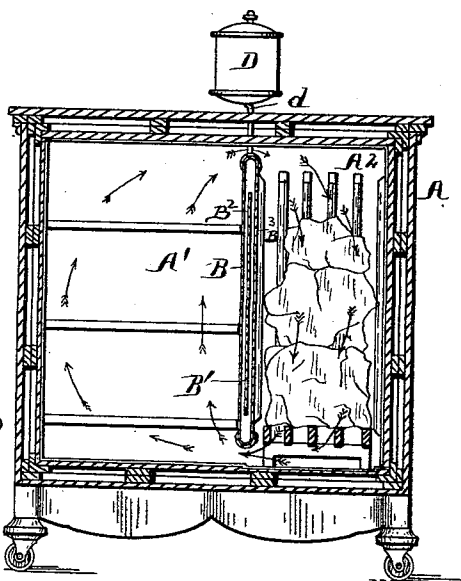


Fig. 2.

WITNESSES

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FRANCIS R. BEAL, OF NORTHVILLE, MICHIGAN.

COMBINED WATER-COOLER AND REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 542,217, dated July 2, 1895.

Application filed April 25, 1894. Serial No. 508,946. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS R. BEAL, a citizen of the United States, residing at Northville, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in a Combined Water-Cooler and Refrigerator; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object certain new and useful improvements in a combined water-cooler and refrigerator; and it consists of the construction, combination, and arrangement of devices and appliances hereinafter specified and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective, showing parts broken away. Fig. 2 is a vertical cross-section through the provision-chamber and ice-receiving chamber. Fig. 3 is a detail view of the water-cooler in perspective with certain parts detached. Fig. 4 is a cross-section on the line 4 4, Fig. 3, showing also adjacent portions of the case.

My present invention is intended more particularly as an improvement upon a patent granted to me January 2, 1894, No. 511,834. In said patent the inclosing-case was constructed with a partition, on one side of which was located a water-cooler within the ice-chamber. My present invention has for one of its objects the doing away of said partition and locating a water-cooling chamber between the ice-chamber and the provision-chamber, the water-chamber constituting in and of itself the sole partition between the ice-chamber and the provision-chamber.

The construction embodied in my present application is intended also to simplify the construction of the combined water-cooler and refrigerator, to effect an efficient water circulation, and to secure superior results thereby.

I carry out my invention as follows:

A represents any suitable inclosing-case divided interiorly into a provision-chamber A¹ and an ice-receiving chamber A². Between the ice-receiving chamber and the provision-chamber I locate a water-cooler B, so located

and arranged as to form the sole partition between the two chambers, as shown, the two chambers communicating one with another over and beneath said partition. The water-cooler B may be constructed in any suitable manner to constitute the partition between the two chambers. I prefer to provide the same with an interior diaphragm B', separating the water-chamber into two compartments B² and B³, the chambers B² B³ communicating one with the other over and beneath said diaphragm, as illustrated in Fig. 2.

The inclosing-case of the water-chamber is shown as constructed of corrugated-metal plates *b* and *b'*, suitably united at their sides and ends as by rivets *b*². The diaphragm B' may be engaged in place between the lateral edges of the corrugated plates, as indicated in Fig. 4. Said plates are also properly united at their upper and lower ends in any suitable manner. As shown, a metal cap C may be engaged with the ends of the two plates in any suitable manner to make the structure watertight.

D is a water-reservoir communicating with the water-chamber B, as by a pipe *d*, at the upper end of said chamber. The base of the water-chamber is provided with a discharge-pipe E, provided with a controlling-valve.

I do not limit myself to the construction of the water-chamber B of corrugated metal.

It will be understood by reference to the drawings that the cooled air is free to pass downward through the ice-chamber, the air passing thence underneath the water-chamber into the provision-chamber, the air as it becomes warmer in the provision-chamber ascending and passing over the water-cooler back into the ice-chamber, thereby effecting an air circulation through the ice-chamber and provision-chamber.

It will be obvious that the water in the compartment of the water-cooling chamber, next to the ice-receiving chamber, becomes cooled in consequence of its location adjacent to said ice-receiving chamber, and that the water in the compartment of the water-cooler adjacent to the provision-chamber rises in temperature, being exposed to the warmer atmosphere of the provision-chamber, in consequence of which there will be effected a water circulation within the water-cooler B. By corrugat-

ing the side of the water-cooler adjacent to the ice-chamber, there will be formed, obviously, vertical air-passages between the ice in the ice-chamber and the adjacent face of the water-cooler.

5 The face of the water-cooler adjacent to the ice-chamber may be provided with protecting strips *b*³, if desired, although these strips may be omitted without departing from my invention. If used they will serve as a protection for the metal face of the water-chamber.

10 What I claim as my invention is—

1. In a combined water cooler and refrigerator, the combination with a refrigerator, of a case forming an ice chamber and a provision chamber therewithin, of a water cooling chamber constituting a partition between the ice chamber and provision chamber having its sides constructed with corrugated plates and provided with an interior diaphragm separating the water cooler into two communicating compartments, substantially as set forth.

2. In a combined water cooler and refrigerator, a water cooling chamber with vertical

sides joined together to form a water tight compartment subdivided into two compartments by a vertical partition therein, said partition shortened at both top and bottom to allow free circulation between the two compartments, substantially as set forth.

3. In a combined water cooler and refrigerator, an inclosing case A forming an interior chamber, and a water cooler within said chamber constituting a partition dividing said interior chamber into an ice receiving apartment and a provision apartment, said water cooler spaced from the top and bottom of said interior chamber, one face of the cooler directly exposed to the ice receiving apartment and the opposite face of the cooler directly exposed to the provision apartment, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

FRANCIS R. BEAL.

Witnesses:

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C. C. CHADWICK.