

W. M. BAKER.

Refrigerator.

No. 27,681.

Patented Apr. 3, 1860.

Fig. 1.

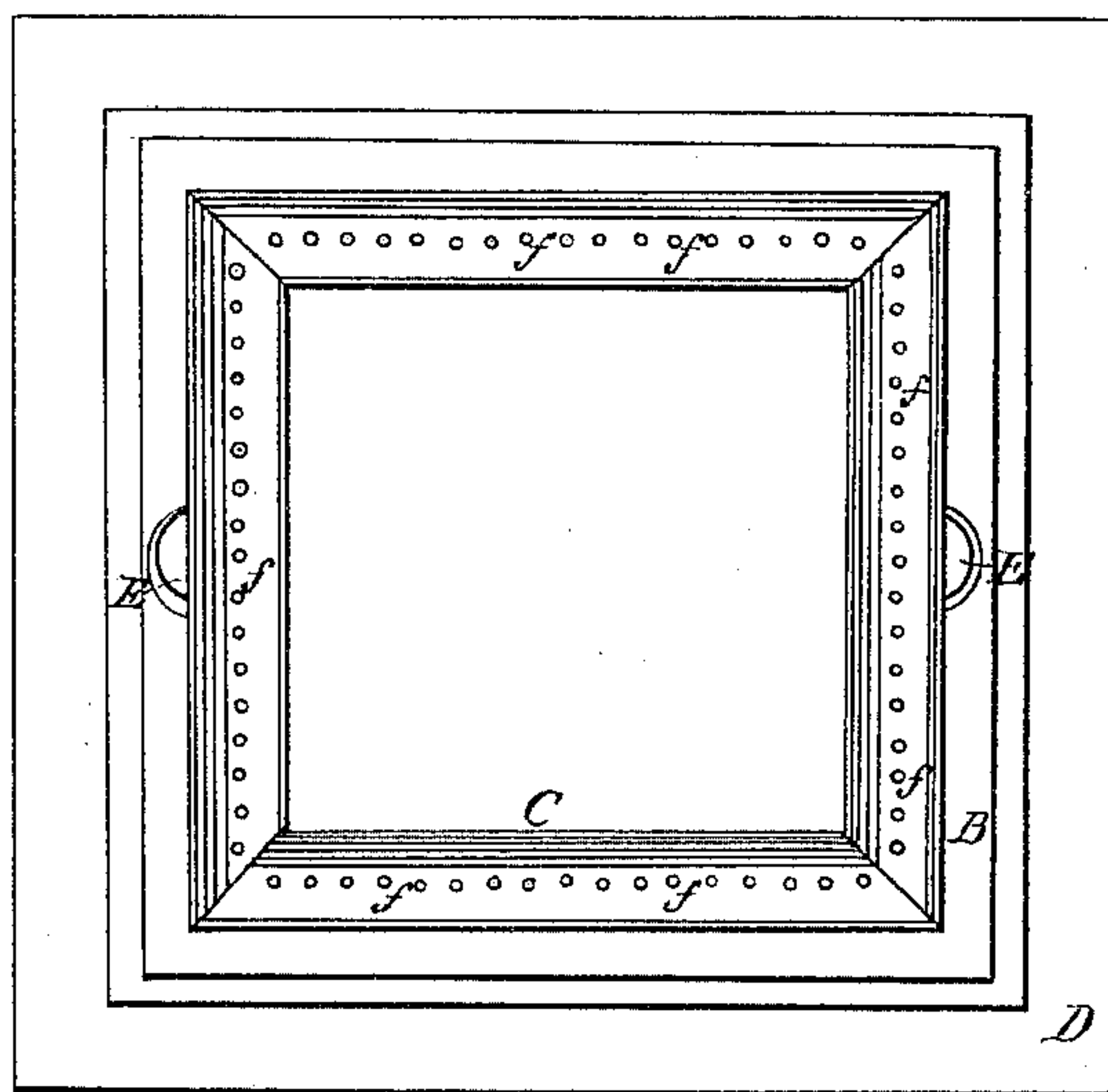
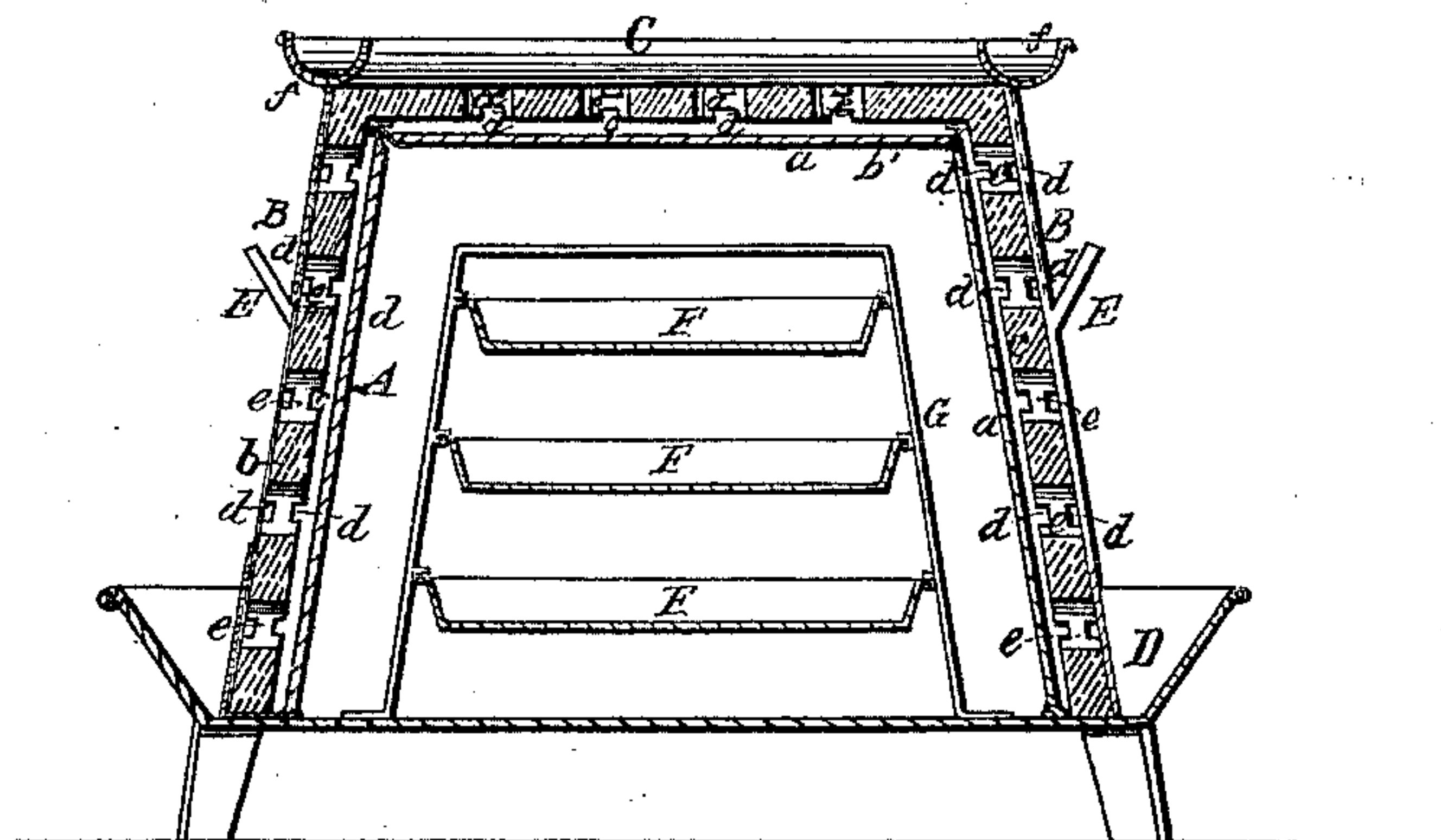


Fig. 2.



Witnesses:

R. S. Spencer
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Inventor:

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UNITED STATES PATENT OFFICE.

W. M. BAKER, OF WALPOLE, INDIANA.

REFRIGERATOR.

Specification of Letters Patent No. 27,681, dated April 3, 1860.

To all whom it may concern:

Be it known that I, W. M. BAKER, of Walpole, in the county of Hancock and State of Indiana, have invented a new and Improved Refrigerator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1, represents a plan or top view of this invention, and Fig. 2 is a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts.

This refrigerator belongs to that class, in which the evaporation of water or other fluid is employed for the purpose of cooling articles kept within it, and the invention consists in the arrangement of a piece of canvas or other fibrous fabric over the corrugated or slatted inclined sides of the case, that incloses the articles to be kept cool in combination with a perforated reservoir on the top, and a receptacle on the bottom, in such a manner that water or other fluid poured into the reservoir on the top is spread by the canvas or other fibrous fabric over an extended surface where it is rapidly evaporated by the influence of the air that is allowed to circulate on both sides of the canvas or other fibrous fabric, and that by such rapid evaporation, a pretty low temperature is effected in the interior of the case.

To enable those skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

The case A, is constructed with double walls *a*, *b*, and the inner wall *a*, is made of slate or some other good conductor of heat. The outer wall *b*, on the other hand is made of wood or some other bad conductor, and the sides of the case are inclined, as clearly shown in Fig. 2.

Between the two walls *a* and *b*, is an air space *c*, and the outer wall is furnished with channels or grooves *d*, on the inside as well as on the outside. These grooves extend all around the case, and holes *e*, serve to connect the inside and outside grooves, so that a free communication between the air space *c*, and the external air is effected. Instead of constructing the walls *b*, with grooves

and holes, they may be made with slats, secured at certain distances, one from the other, so as to leave the air free to circulate. The outside of the wall *b*, is covered by a sheet B, of canvas, or other fibrous material, and a reservoir C, is secured on the top edge of the case. The bottom of this reservoir is perforated with a number of small holes *f*, so that water or other fluid poured into the same is caused to flow down slowly, and to spread over the canvas. The fluid collects in a pan or receptacle D, which surrounds the bottom edge of the case, and handles E, serve to lift the case off. The articles to be cooled are kept on shelves or flat pans F, secured to a standard G, and surrounded on all sides by the case A.

The operation is as follows: If water or other fluid is poured into the reservoir C, it spreads slowly over the canvas, and the circulation of the air behind said canvas through the grooves *d*, holes *e*, and air spaces *c*, and in front of the same, causes the fluid to evaporate very rapidly. The latent heat they absorb, during the process of evaporation causes the temperature of the interior of the case to sink down very low, and the articles in the case can be kept cool even without ice. By placing ice into the reservoir C, the temperature can be reduced still further. That part of the fluid which does not evaporate as it passes down from the reservoir C, collects in the receptacle D, so that the bottom edge of the canvas is continually kept moist and the moisture spreads more easily over the whole surface.

This refrigerator is very simple, and cheap in its construction, and it produces a better effect than any of the refrigerators now in use.

What I claim as new, and desire to secure by Letters Patent, is—

The arrangement of a sheet B, of canvas or other fibrous material in combination with the grooved and perforated or slotted sides *b*, of the case A, and with the reservoir C, or its equivalent, constructed and operating substantially in the manner and for the purpose specified.

W. M. BAKER.

Witnesses:

SAMUEL BROOKS,
ELI RAMMEL.