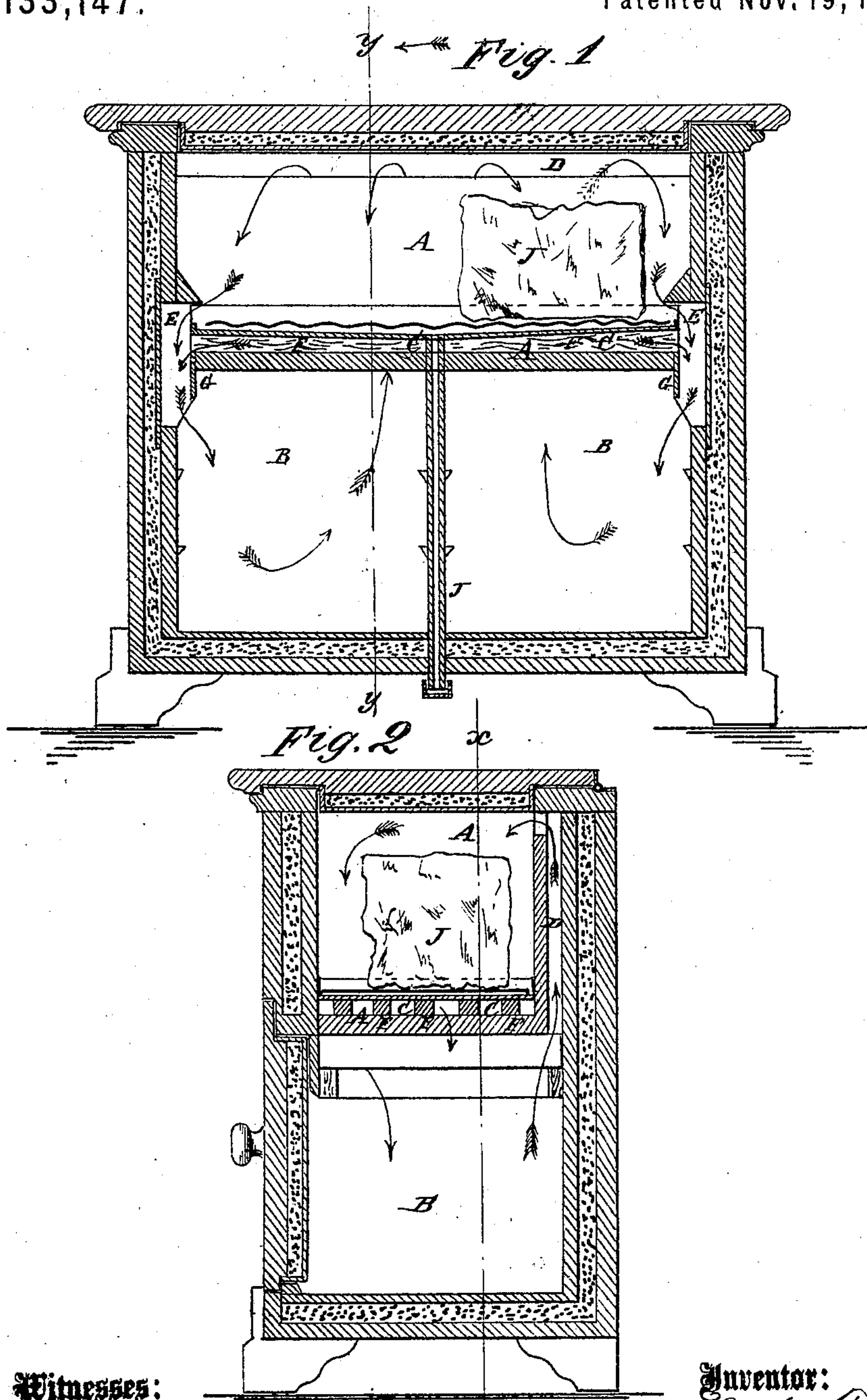


J. H. FISHER.

Improvement in Refrigerators.

No. 133,147.

Patented Nov. 19, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

J. HYDE FISHER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 133,147, dated November 19, 1872.

To all whom it may concern:

Be it known that I, JOSEPH HYDE FISHER, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Refrigerators, of which the following is a specification:

This invention relates to a new and useful improvement in refrigerators, having particular reference to a refrigerator for which Letters Patent of the United States were granted me, dated August 1, 1865, and reissued the 31st day of January, 1871, which present invention consists mainly in an air-space beneath the ice-chamber, arranged as hereinafter more fully described.

In the accompanying drawing, Figure 1 is a vertical longitudinal section of the refrigerator taken on the line *xx* of Fig. 2. Fig. 2 is a vertical cross-section of Fig. 1 taken on the line *yy*.

Similar letters of reference indicate corresponding parts.

A represents the ice-chamber or compartment. B B are compartments provided with shelves for refrigerating and preserving fruits, provisions, and other articles. The walls of the refrigerator are made double, and filled with non-conducting material, as indicated in the drawing. The main features which distinguish my refrigerator from other inventions for a similar purpose, as well as the mode of constructing it and arranging the chambers, &c., being minutely described in my said reissued Letters Patent, require at this time no particular description; suffice it to say that my improved refrigerator is provided with a double bottom, A, between the ice-chamber and the refrigerating or provision chambers, the lower portion of the bottom being of wood and the upper portion being metal, as seen in the drawing. Between these two parts is the air-space C, which constitutes my present invention. The circulation of air within the refrigerator is indicated by the arrows. D is an air-channel directly back of the ice-chamber, which is in communication with the chambers

B B. The cold air descends from the ice-box through the openings E into the chambers B B, as indicated, and forces the warmer air in those chambers upward through the channel D, and in contact with the ice, from whence it again descends. The circulation is maintained by the specific gravity of the air, the cold air constantly descending and displacing the warmer air below. The air-space C, being separated from the ice by only the metallic portion of the double bottom, the air therein partakes of the temperature of the ice, and assists in keeping up the circulation. In this space there is a series of longitudinal slats, F, upon which the upper or metallic portion of the bottom rests, which divide the space C into four (more or less) longitudinal channels, running the entire length of the bottom and communicating with the cold-air openings F at each end of the refrigerator. G G are metallic pieces secured at the front and rear, which support the double bottom. These pieces extend down into the provision-chambers below the bottom, and thereby confine the warm air and compel it to ascend through the rear channel D to the ice-chamber, as stated. I is the waste-water pipe, placed in the vertical partition which separates the provision-chambers. J represents a cake of ice in the ice-chamber.

Refrigerators with this improvement may be made of any size, and with a different arrangement of the chambers to suit the various purposes for which they may be required.

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

The ice-chamber A and provision-chamber B, connected by separate passages D E, combined with the intermediate air-chamber C, opening into downward channel E, and with the supporting-pieces G G, as and for the purpose described.

J. HYDE FISHER.

Witnesses:

FRANK BLOCKLEY,
ALEX. F. ROBERTS.