

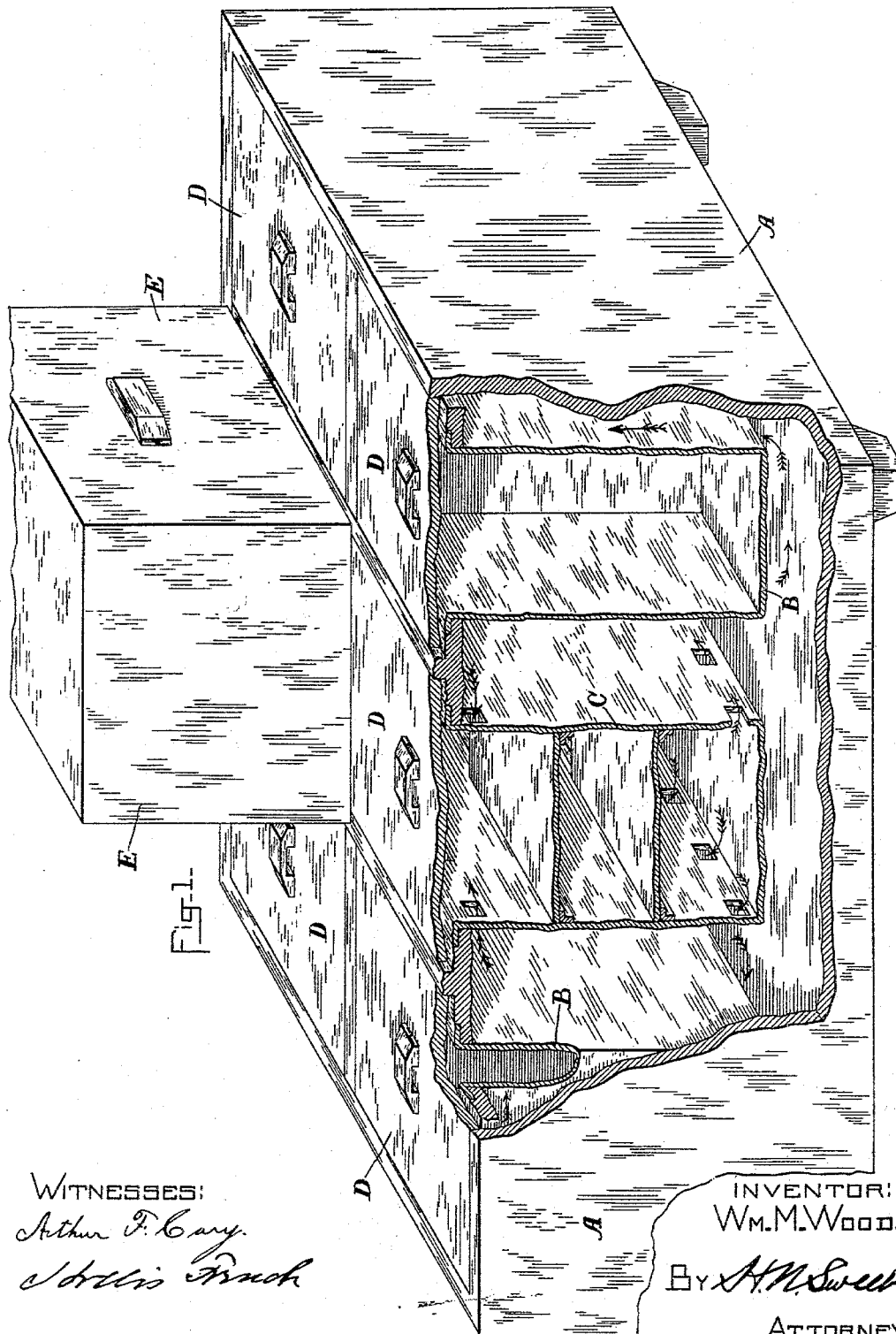
(No Model.)

2 Sheets—Sheet 1.

W. M. WOOD.
REFRIGERATOR.

No. 490,055.

Patented Jan. 17, 1893.



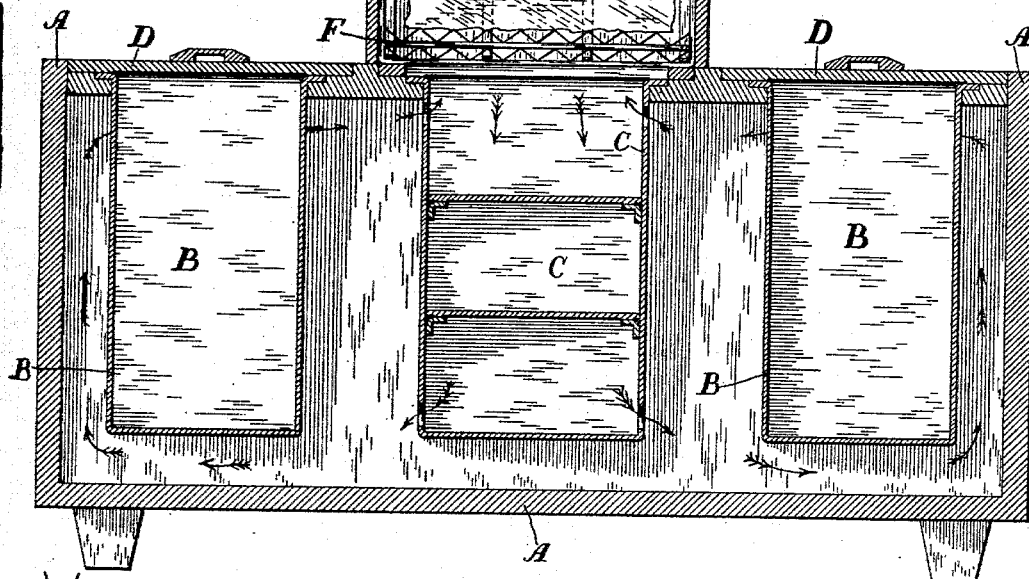
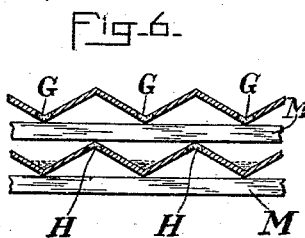
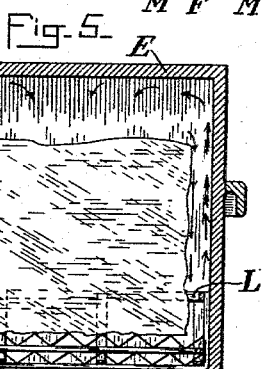
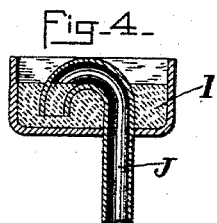
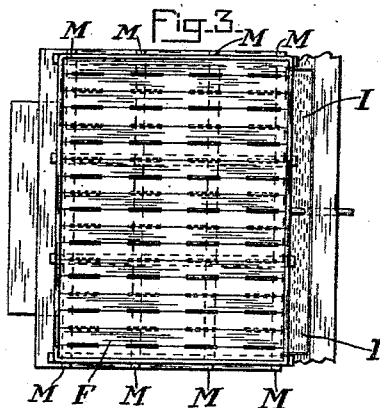
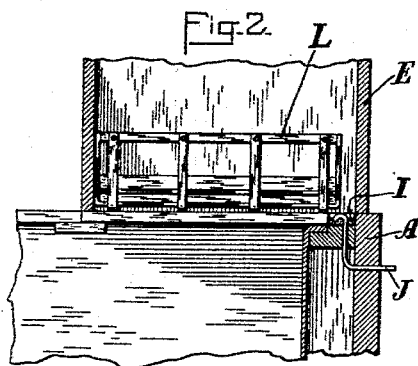
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WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM MAXWELL WOOD, OF BOSTON, MASSACHUSETTS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 490,055, dated January 17, 1893.

Application filed April 8, 1892. Serial No. 428,266. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MAXWELL WOOD, a citizen of the United States, and a resident of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Refrigerator, of which the following is a specification.

My invention relates to improvements in the construction of refrigerators designed for the storage of perishable provisions and general refrigerating purposes.

The object of my invention is to provide a refrigerating chest or box in which provisions of various kinds may be stored separately so that there will be no tainting by contact of one with another, and to provide for the removal of the various parts for cleaning, &c.

My invention consists of a chest or closet constructed of any suitable material which is a non-conductor of heat, having a suitable chamber for ice or other refrigerant and a number of smaller boxes, each of which is so placed and arranged that it may be opened or removed without disturbing any of the others.

My invention further consists in certain details of construction which will be hereinafter described.

The principal features of my invention are illustrated by the accompanying drawings, in which—

Figure 1 is a general view of a refrigerator made in accordance with my invention. Fig. 2, is a detailed vertical cross section through the ice chamber and that portion of the refrigerating chamber adjacent thereto. Fig. 3, is a plan view of the grating for supporting the ice. Fig. 4, shows in vertical cross section the trap provided for carrying off the water at the back of the box. Fig. 5, is a longitudinal vertical section of the refrigerator through the ice chamber and the cooling compartments. Fig. 6, is a detail showing the construction of the ice support.

The same numbers indicate similar parts throughout the different figures.

In Fig. 1, the principal box, or chest, A, is cut away to more clearly show the internal arrangements. This box is made of any suitable non-conducting material, made waterproof on the inside or covered with a metallic lining. I prefer for this purpose one of the preparations of wood pulp, such as the indu-

rated fiber material, this being a good non-conductor, light, cheap, and in every way desirable for the purpose. This box is provided with a top, T, which is separable from the chest and arranged to support the receptacles B B for containing provisions, &c. These receptacles are provided with a rim around the upper part to make an air tight joint where fitted to the top T, and may be made of any suitable material, such as metal, glass or porcelain. The top T, is arranged to form an air tight joint with the principal box, A, as shown in the drawings, and is removable therefrom for convenience in cleaning and airing the refrigerator. Lids or covers, D, made of non-conducting material and provided with handles, are nicely fitted so as to close these compartments, as shown in Figs. 1 and 5.

In any convenient position on the top of the chest, A, above the tops of the food compartments an ice chamber is located consisting of an inverted box, E, of insulating material and so constructed that it may be easily removed from the chest leaving the ice exposed and entirely outside of the box or chest proper. This is found in practice to be of very great convenience and advantage, the whole mass of ice being easily accessible and fresh ice may be placed in position without in any way disturbing the other compartments of the refrigerator.

Directly under the ice chamber is the box, C, which is supported in position by a lip on its upper edge and may be supplied with supports underneath if desirable. The walls of this box are perforated along the upper and lower edges to allow free circulation of the cold air from the refrigerant which takes the direction indicated by the arrows, descending to the bottom of the compartment, C, passing out through the lower openings, around the food compartments, then rising as it becomes heated and entering the box, C, through the upper openings, ascending to the ice chamber, where it is again cooled, thus causing a continuous circulation of cold air around the provision compartments.

It will be seen that by my improved arrangement the circulating air does not come in contact with the provisions as in present refrigerators, carrying the scent of one kind of food to another, until all are more or less tainted

with the odors of the various articles present, but each is kept at the desired low temperature, in its separate compartment perfectly fresh and free from all foreign odors.

5 The compartment, C, is provided with some narrow shelves, accessible from above and so arranged as not to interfere with the free circulation of the cooling atmosphere, on which articles in jars, bottles and the like may be
10 conveniently placed.

Over the rear portion of compartment, C, a grating, F, is placed for supporting the ice, which consists of two corrugated sheets of metal each having a series of perforations,
15 those in the upper one being along the lower corrugations, as shown at G, in Fig. 6, and those in the bottom plate being at the upper curved portions, as seen at H in the same figure. Narrow strips of metal, M (see dotted
20 lines in Fig. 3,) are riveted to these corrugated plates fastening them together and a frame, L, is provided for keeping the ice in position. This grating permits the free circulation of the cold air from the ice and prevents the
25 drip from falling into the chamber below. The water collects in the lower corrugations of the lower plate, see Fig. 6, and as the grating slightly inclines to the rear, it flows back into the trough, I, as illustrated in Figs. 2 and
30 3. Fig. 4, is a detail of this trough in which a common S trap, J, carries off the drip at the back as shown in Fig. 2, without allowing the warm air outside to enter the ice chamber.

35 Any refrigerant may be used in the box, E, in place of ice without departing from my invention. A refrigerating coil being especially desirable when it can be used to advantage.

It will be seen that the food retaining vessels, B, B, C, dip down into the cold air in the chest, A, which, by conductivity, cools whatever is placed in them. When it is desired to remove any article from one of these compartments it is not necessary, as in present refrigerators, to open the whole or a large
45 portion to the warm air outside, but only to uncover the particular compartment containing the article desired. The cold air of the compartment being much heavier than the warm air outside, there is but very little, if
50 any loss occasioned thereby. When it is desired to cleanse one of these compartments, it is simply lifted out and the lid replaced over the opening, and when desired, the separable top T and all of the compartments, including the ice chamber and grating, may be removed so as to allow access to the whole
55 interior of the chest which may be washed out and properly aired.

Having fully described the character of my invention what I claim is:—

The herein-described refrigerator consisting of the case A of non-conducting material, provided with a top having openings into which separately removable boxes B, B, C are
65 fitted, and the removable chamber E for containing a refrigerant arranged above and communicating with the interior of the refrigerator, substantially as described.

Signed at Boston, in the county of Suffolk
70 and Commonwealth of Massachusetts, this 5th day of April, A. D. 1892.

WILLIAM MAXWELL WOOD. [L. s.]

Witnesses:

CHAS. H. RICHARDSON,

D. F. QUINN.