

(No Model.)

C. PETTERSSON.
REFRIGERATOR.

No. 282,220.

Patented July 31, 1883.

Fig 1.

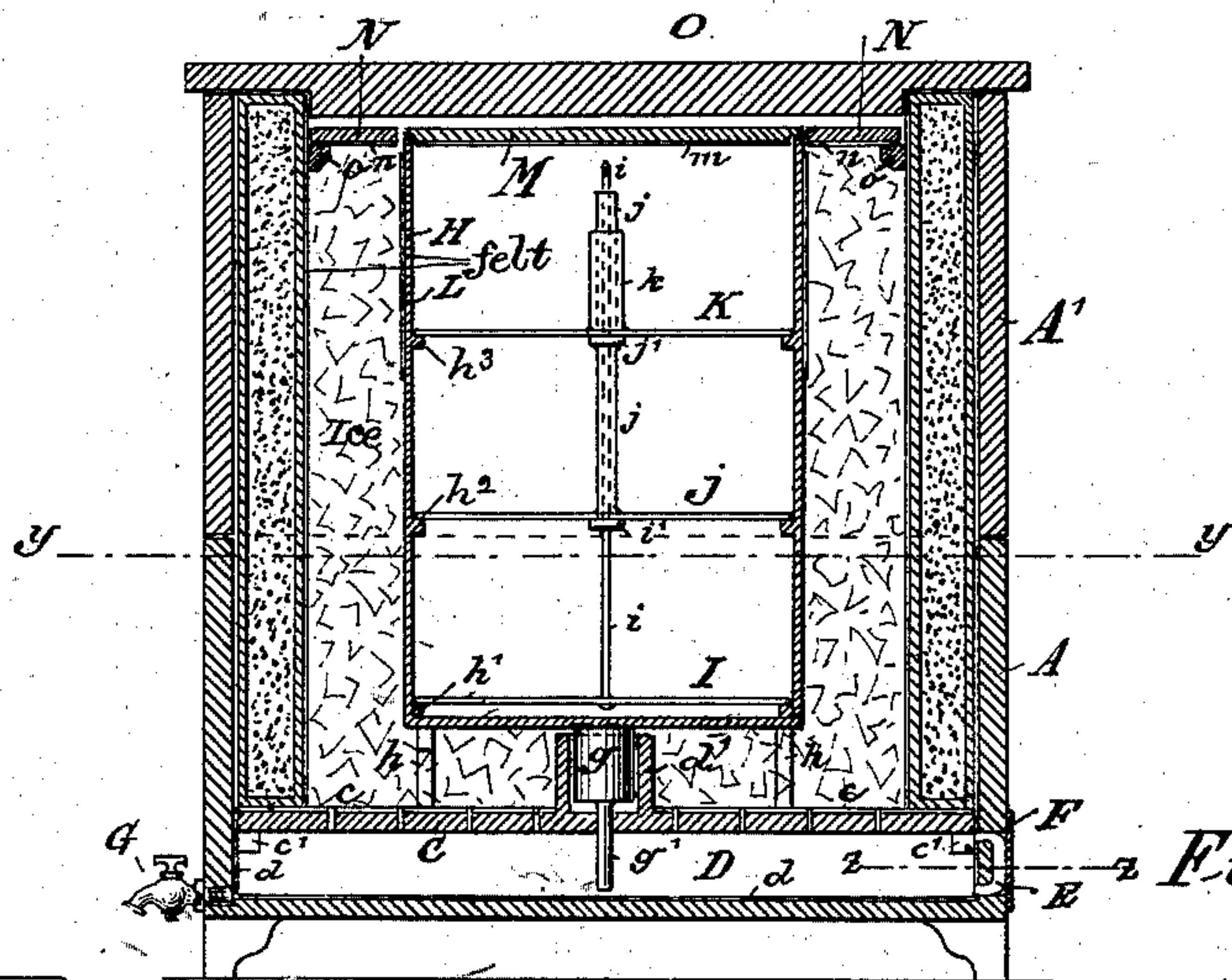


Fig 4.

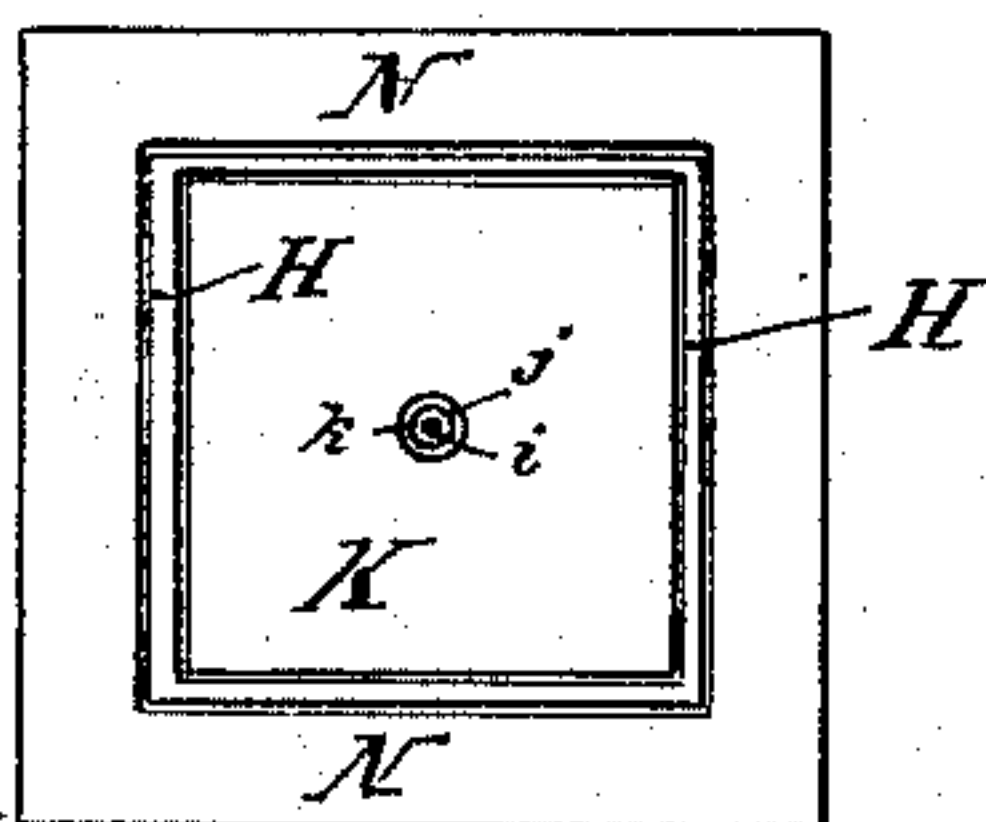


Fig 2.

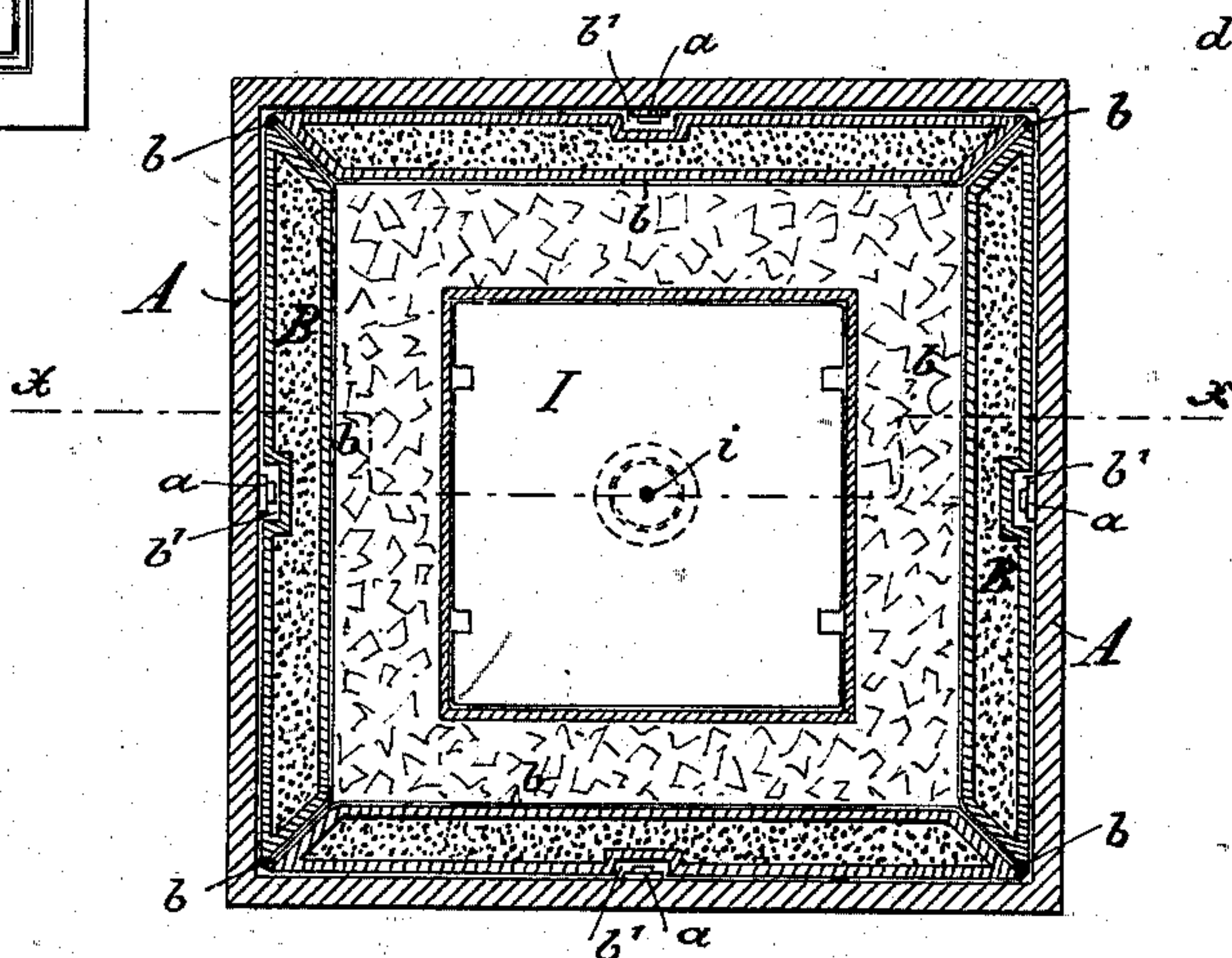


Fig 5.

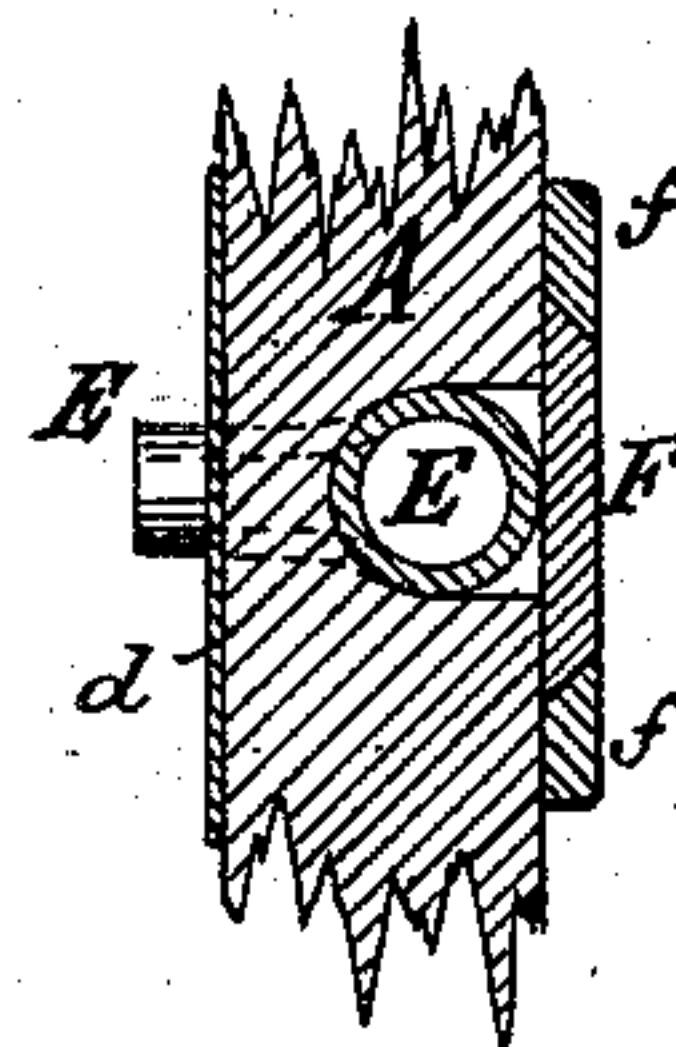
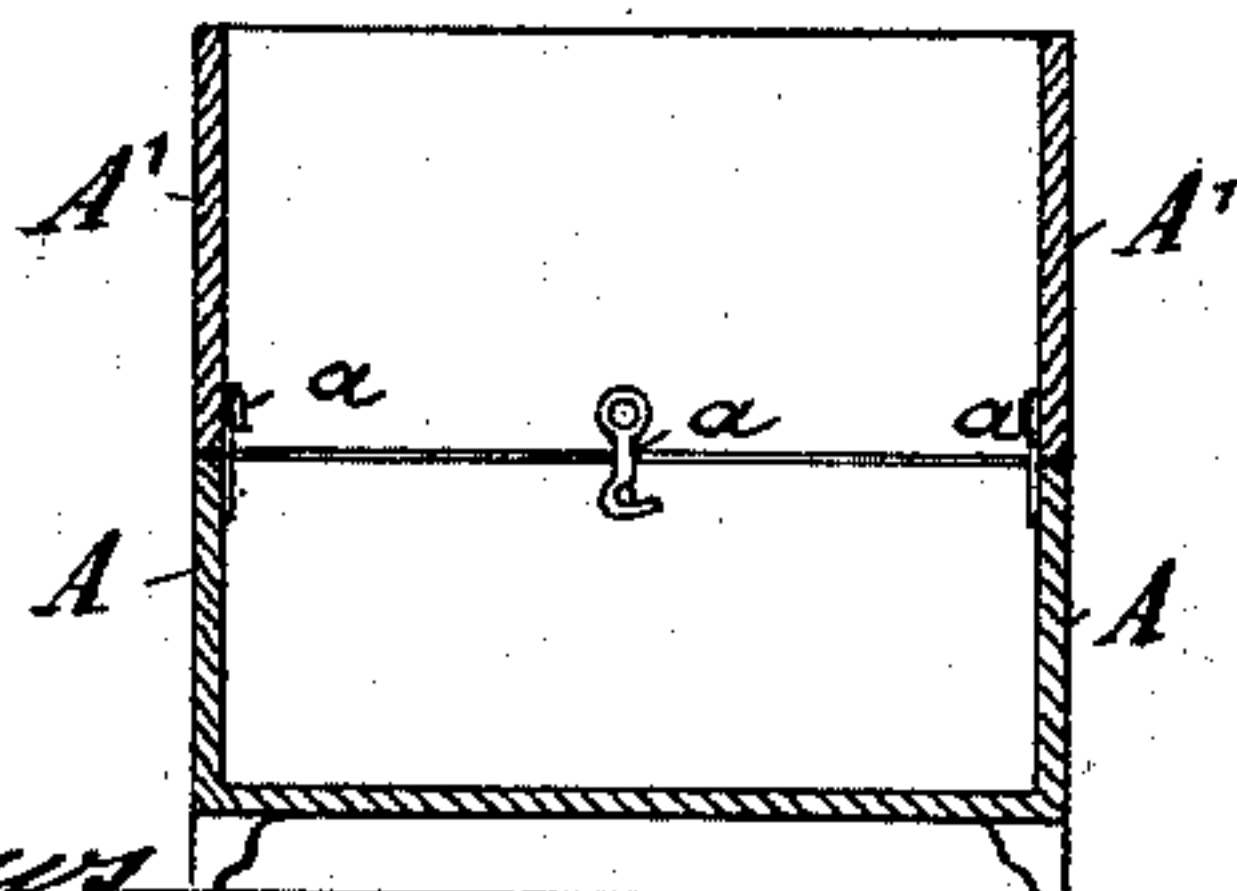


Fig 3.



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UNITED STATES PATENT OFFICE.

CARL PETTERSSON, OF BROOKLYN, NEW YORK.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 282,220, dated July 31, 1883.

Application filed May 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, CARL PETTERSSON, a citizen of Sweden, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

My invention relates to refrigerators, preferably of large size, and such in which it is desired to obtain a very low temperature, even low enough for freezing.

The invention comprises a refrigerator made in sections in such a manner that it can be taken apart for carrying and shipment, and then may be brought in through ordinary doors and put up in any place desired, to which its size otherwise would prevent access with it.

It also comprises the construction, combination, and arrangement of the various parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a vertical section of my improved refrigerator, the section being supposed to be taken on about the line *x x* of Fig. 2. Fig. 2 represents a horizontal section of the same, taken on the line *y y* of Fig. 1. Fig. 3 is a vertical section of the casing on a smaller scale than any of the previous figures. Fig. 4 is a top view of the ice-chamber cover and of the preserving or freezing chamber with its cover removed. Fig. 5 is an enlarged section taken on the line *z z* of Fig. 1.

The casing is made in two or more separate parts, *A A'*, the lower one, *A*, being in the shape of an ordinary square box with bottom and feet to support it, and each of the subsequent sections *A'* being four-sided, without bottom, and of proper size to fit exactly upon the lower section, *A*, and having hooks pivoted upon the inside of each of its four walls, which hooks engage with pins or staples upon the inside of the four walls of the lower box or section. The inner non-conducting lining of the refrigerator is made in four pieces, *B B*, each consisting of a hollow wooden wall filled with charcoal and covered with felt *b*. These lining-sections *B* have beveled edges, forming an angle of forty-five degrees, and are of proper size to fit tightly within the casing *A A'*, and, when within the casing, to join each other at their edges, the felt *b* (which covers also the beveled edges) forming an air-

tight packing between the said portions, as seen in Fig. 2. The lining-sections *B* are also provided with vertical grooves *b'* opposite to where the hooks *a'* are situated, in order to allow the said lining-sections to be pushed down to the proper depth in the casing *A* without interfering with the said hooks. The bottom pan, where the lower edges of the linings *B* rest, is a square wooden plate, *C*, covered with zinc *c*, and having perforations to allow of the water from the melted ice running through it to a chamber, *D*, the said chamber being formed between the bottom of the box or casing *A* and the aforesaid false bottom *C* by supporting the latter upon suitable cleats or ribs, *c'*, fastened within the casing *A*, as shown in Fig. 1. The bottom and sides of the water-chamber *D* are covered with zinc *d*.

In one part of the chamber *D* is inserted a small glass tube, *E*, communicating at its upper and lower ends with the top and bottom of the chamber *D*, so as to allow the water in the said chamber to freely enter the said tube *E*. The height of the water may be observed from the outside of the box by raising the small sliding cover *F*, fitted between cleats *f*, and which, when slid down to its place, protects the glass from injury, as shown in Figs. 1 and 5. From the side of the box, at the bottom of the chamber *D*, is inserted a stop-cock, *G*, by which the water in the chamber *D* may be drawn off at times, so as to prevent it from gradually rising above the false bottom *C*.

The preserving and refrigerating chamber is formed of a square metallic box, *H*, preferably of zinc. This is supported upon the false bottom *C* by four intervening feet or other support, *h*, and is provided with a central projection, *g*, which is inclosed in a socket, *d'*, (said socket being formed upon the false bottom *C*,) and by which, also, the chamber *H* and its contents are supported upon the bottom *C*. In order to relieve the said false bottom of excessive strain by the weight, the said projection *g* is provided with another projection, *g'*, which goes through a hole in the false bottom and rests with its lower end upon the bottom of the casing *A*, thus dividing the weight between the false and the permanent bottoms, as shown in Fig. 1. The object of the rim *d'*, which forms the aforesaid socket to receive the

central support, *g'*, is to prevent the crushed ice from getting between and interfering with the direct supporting of the projection *g*.

The box H is divided by shelves I J K into 5 compartments, the said shelves being of suitable size and shape to fill the cross-section of the interior of the box H, and resting upon stops or small cleats *h'* *h''* *h'''*, secured upon the inside of the box. In order to provide for a 10 difference of temperature in the different compartments, so that a freezing temperature may be obtained in the lowest compartment and a somewhat higher preserving temperature may be obtained in the upper compartment, the 15 lower portion of the box is in direct contact with the surrounding ice, while the upper portion is covered on the outside with felt L. In order to allow of lowering the shelves to rest upon their proper supporting-stops, the two 20 lower shelves I J are provided with notches in their edges in position to pass the supporting-stops of the superjacent shelves, while the stops which support each respective shelf are arranged at places not in line with the said 25 notches, as indicated in Fig. 2. To the center of each shelf is secured a rod, by which its contents may be lifted out of the box H. For this purpose the lower shelf I has a small central rod, *i*, reaching up to near the top of the box H, 30 on a level with the cleats *h''*. The said rod *i* is provided with a shoulder, *i'*, upon which the next superjacent shelf, J, is also supported. This latter shelf has another hollow rod or sleeve, *j*, fitting easily upon the rod *i*, and pro- 35 vided on a level with the upper stops, *h'''*, with a shoulder, *j'*, which in a similar manner supports the shelf K, the latter being also provided with a tubular rod, *k*, fitting easily upon the tube *j*. By this construction it is evident that 40 the shelves K J I may be lifted out of the box successively, one at a time, by grasping the rods *k j i* successively; or all three, with their contents, may be removed simultaneously by a hook or some similar means inserted through a small 45 hole in the upper end of the rod *i*, said hook being attached to a suitable cord and hoisting-tackle arranged centrally above the refrigerator.

The refrigerator-box H is covered on top with 50 a suitable lid, M, provided on the under side with a backing of cloth, *c m*. The ice-chamber which surrounds the box H between the latter and the lining B is covered on top with a frame or angular cover, N, as shown in Figs. 1 and 55 4, the said cover being also covered underneath with felt *n*, and supported upon suitable cleats, *o*, secured to the inside of the lining B. The entire refrigerator is covered by one com-

mon cover, O, which may be made hollow and filled with non-conducting material, if desired, 60 and is preferably hinged at one of its edges in the usual manner of ice-boxes.

It will be seen that the refrigerator-box H is surrounded by ice on all sides, and that there is no side door to the apparatus, but that the 65 shelves with contents, as well as the inner box, H, itself, are removed and inserted, when occasion requires, by being lifted or hoisted out, after first removing the cover O as well as the covers *m n*, when required. 70

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

1. In a refrigerator, an inner lining made of separate hollow walls B, filled with non-conducting material, and having beveled edges 75 provided with suitable non-conducting packing, *b*, in combination with an inclosing-casing, A, substantially as hereinbefore set forth.

2. In a refrigerator, the combination of a casing made of detachable sections, A A', and 80 an inner non-conducting lining, also made in detachable sections, B, substantially as and for the purpose set forth.

3. In a refrigerator, the combination of the sectional casing A A', the perforated false bot- 85 tom C, supported to form a water-chamber, D, above the bottom of the casing A, the non-conducting and felt-covered lining B, and the inner refrigerating and preserving box, H, partly covered with felt L, and supported, sub- 90 stantially as described, so as to form a surrounding ice-chamber between itself and the lining B, substantially as and for the purpose set forth.

4. In combination with a box, H, the same 95 forming the inner freezing or cooling chamber of a refrigerator, the shelves I J K, provided with their respective rods *i j k*, for removing and inserting said shelves successively and simultaneously, substantially as hereinbefore set 100 forth.

5. In a refrigerator composed of the inner freezing-chamber, H, the ice-chamber surrounding the same, the incased non-conducting lining-walls B B B B, perforated bottom 105 C, and water-chamber D, the combination, with the said water-chamber, of the glass gage *e* and discharge-cock G, as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my 110 invention I have signed my name, in presence of two witnesses, this 2d day of March, 1883.

CARL PETTERSSON.

Witnesses:

EDVARD ARFELT,
ROBT. W. MATTHEWS.