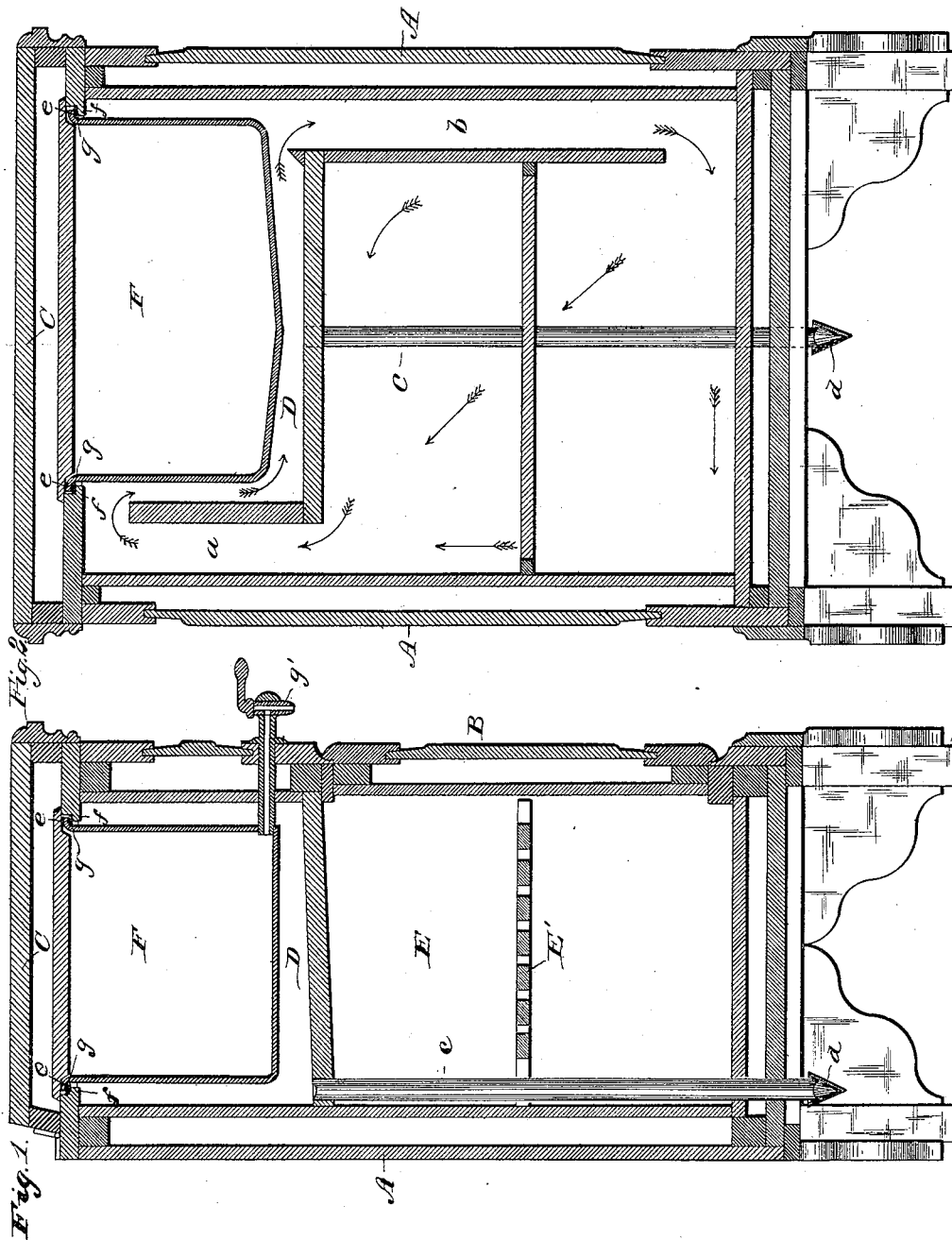


(No Model.)

J. LINSLEY.
REFRIGERATOR.

No. 345,240.

Patented July 6, 1886.



Witnesses:
N. M. Low
E. J. Dick

Inventor:
Joel Linsley
by Wm. Allen Taylor
his attorney

UNITED STATES PATENT OFFICE.

JOEL LINSLEY, OF BURLINGTON, VERMONT.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 345,240, dated July 6, 1886.

Application filed February 18, 1886. Serial No. 192,359. (No model.)

To all whom it may concern:

Be it known that I, JOEL LINSLEY, of Burlington, in the State of Vermont, have invented a new and useful Improvement in Refrigerators, of which the following is a specification.

My improvement has reference to a refrigerator of the same general kind as described in my Letters Patent No. 310,211, of January 26, 1885—that is to say, a refrigerator in which are combined the ice and provision chambers, passages through which the air is caused to circulate, so that when cold it will descend and pass into the provision chamber or space, to cool the articles therein, and will thence rise again and pass into and through the ice-chamber, to be again cooled, and an ice-tank located within the ice-chamber, so that the air may pass all around it while excluded from its interior, thus preserving the water resulting from the melting ice pure and untainted, and permitting it to be made use of for drinking purposes.

In the refrigerator described in my patent the ice-tank is wholly inclosed within the ice-chamber. This has been found disadvantageous at times in practice, because of the inconvenience of getting at the tank, and also because of the arrangement taking up more room than can well be spared in the smaller sizes of refrigerators, besides which air will, from the provision space or chamber, at times get into the ice-tank, no matter how carefully the top of the latter is closed, and the result is, that the water resulting from the melting ice is not in so pure condition as is desirable for drinking-water. To remedy this difficulty I combine with the provision space or chamber the ice-chamber and passages leading on one side or end from the lower part of the ice-space to the lower part of the provision-space, and of the other side or end from the top of the provision-space to the top of an ice-chamber, an ice-tank, which at the top fits closely and tightly into an opening in the ice-chamber, and thence extends down into the ice-chamber in such manner that there shall be a space between all of its walls or exterior and the walls of the ice-chamber. In other words, the ice-tank is virtually suspended by its upper end in an opening in the top of the ice-chamber,

which it closes tightly, so that no air from the said chamber can escape therethrough. In this way the air which circulates through the refrigerator is brought into contact with all the surface needed to cool and dry it, while at the same time the ice-tank is supported in a position where it can be got at easily, and where it can be opened for the purpose of getting at the ice or putting more ice in without opening the ice-chamber or admitting air to the interior of the refrigerator.

In the accompanying drawings, Figure 1 is a transverse vertical section, and Fig. 2 is a longitudinal vertical section, of a refrigerator embodying my improvement.

The refrigerator is made with external walls, A, and a door or doors, B, of any convenient and suitable construction, having also a hinged top, C.

In the upper part of the refrigerator is the ice-chamber D, and beneath it is the provision space or chamber E, having one or more open shelves, E'. The two chambers have no communication with one another, save through the two passages *a b*. Passage *a* leads from the top of one side of the provision-chamber to the top of the ice-chamber, and passage *b* leads from the bottom of the opposite side of the ice-chamber to the bottom of the corresponding side of the provision-chamber. The warm air in the provision-chamber ascends through passage *a* into the ice-chamber, is there cooled, and thence descends through the opposite passage, *b*, to again enter the provision-chamber. In this way a continuous circulation is maintained, the course of which is indicated by the arrows in Fig. 2. There is also provided the usual drip or drain pipe, *c*, by which the water of condensation is led off from the refrigerator, a trap, *d*, being provided at the outer end of said pipe, to prevent the entrance of the external air.

In the top of the ice-chamber is formed an opening, in which is suspended the ice-tank F. This tank, made of galvanized or enameled metal, or of other suitable material, has its open top surrounded by a horizontal flange, *e*, which rests and fits snugly upon a ledge, *f*, on the top of the ice-chamber, and between the two I sometimes interpose a gasket or packing-

ring of rubber, *g*, or other material, which will pack the joint tightly, so as to seal it and prevent the passage therethrough of the external air into the refrigerator. In other words, the ice-tank seals the opening in the top of the ice-chamber. The tank, however, is of such size relatively to the ice-chamber that between its sides, ends, and bottom and the sides, ends, and bottom of the ice-chamber there shall intervene an open space, through which the air will be caused to pass, in this way being brought into contact and maintained with the cold external surface of the ice-tank.

As a measure of convenience, the ice-tank may be provided with a removable lid or cover, so that it may not be exposed whenever the top *C* is raised. It will be noted, however, that the top of the refrigerator can be opened, and access can be had at any time to the ice-tank without in any sense opening the ice-chamber or admitting air to the ice or provision chambers of the structure. At the same time the ice in the tank is completely shut off from contact with air from the interior of the refrigerator, so that the water resulting from it is kept entirely pure and uncontaminated, and is thus kept available for drinking, for which purpose a spigot, *g*, (as in my former patent,) is provided, which extends from the tank out

through the walls of the refrigerator, and is removable, so as to permit the tank to be taken out from the refrigerator whenever desired. The passages *a b*, it will be understood, are typical of any passages whereby air is caused to circulate between the ice and the provision chambers, following substantially the course indicated.

Having described my improvement and the best way known to me of carrying the same into effect, what I claim as new, and desire to secure by Letters Patent, is—

The hereinbefore - described refrigerator, having the provision and ice chambers *E D*, the air-circulation passages *a b*, connecting said chambers, and the ice-tank *F*, suspended in said ice-chamber by its flange *e*, which completely closes on all sides the opening through which the tank enters the chamber, said tank having its walls separated from those of the ice-chamber by a space which forms a communicating passage between the passages *a* and *b*, as and for the purposes set forth.

In testimony whereof I have hereunto set my hand this 10th day of February, 1886.

JOEL LINSLEY.

Witnesses:

ED E. GREENLEAF,
G. T. SMITH.