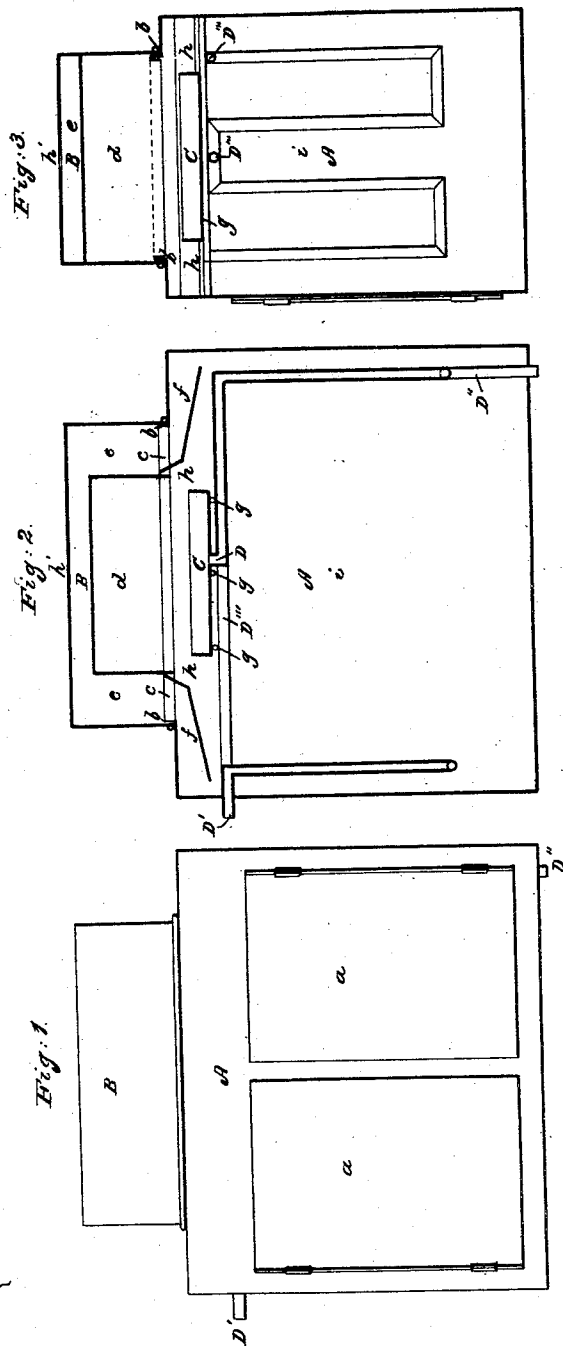


A. A. HINKLEY.

Refrigerator.

No. 55,655.

Patented June 19, 1866.



Witnesses:
Samuel W. Peffer
George Andrews.

Inventor:
Harold Hinkley.
 by his attorney,
R. H. Hinkley.

UNITED STATES PATENT OFFICE.

AARON A. HINKLEY, OF BOSTON, MASSACHUSETTS.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. 55,655, dated June 19, 1866.

To all whom it may concern:

Be it known that I, AARON A. HINKLEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Refrigerators or Ice-Safes; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, Fig. 2 a longitudinal, and Fig. 3 a transverse, section of a refrigerator provided with my invention.

In such drawings, A is a box or case, provided with one or more doorways in its front side, having one or more doors, *a a*, applied thereto. There is also an opening, *e*, through the top of the box, such opening being provided with a ledge, *b*, extending around it and above the said top. Such opening has a chambered cover, B, applied to it, it being hinged to the case. There is a chamber, *d*, within the said cover, and there is a passage, *e*, leading over the top and down the ends of such chamber, the said passage, when the cover is closed, being made to open into two other passages, *f f*, leading from it underneath the top and opening at two of the opposite sides of the case, in manner as shown in Fig. 2.

Within the upper part of the case, and below the chamber of the cover, is an ice-receiving box or pan, C, which is supported on a series of bars, *g g*, extending across the case. There is an open space or air-passage, *h*, entirely around the ice-box C, whereby air, as cooled within the ice-chamber, may flow out of such and into the refrigerating or cooling chamber *i* of the case A. Such case A may be a single box, or it may be made of two cases, one placed within the other, with either an air-space or non-conductor of heat arranged between them.

From the ice-receiver C a waste-pipe, D, is led toward one end of the case. It is coiled in a serpentine manner against or near to such end, and thence is carried across the upper part of the chamber, and is again coiled in a serpentine manner thence and near to its other end, and is finally led out of the end of the chamber, as seen at D', where it may terminate in a stop-cock, if desirable.

A branch pipe, D'', extends from the lower

part of one of the coils and leads out of the bottom of the case; and there may be one or more cross-pipes, D'', extending from the upper part of one coil at one end to the upper part of another coil at the other end, each of such cross-pipes being made to open into the coils.

There should be a hole, *h'*, or register in the top of the cover, such being for ventilation of the refrigerator.

The purpose of the pipes leading from the ice-reservoir is to convey the cold water therefrom, so as to employ it to advantage in cooling the air in the refrigerating-chamber and maintaining it at as even a temperature as possible.

The air in the chamber of the cover, as it becomes cooled by the ice, will descend into the refrigerating-chamber and toward its bottom, and, after rising in contact with or near to the coils of the pipe, will flow into and through the passages *f f* and E. Part of it will pass out of the opening in the top of the cover, and the rest will flow back upon the ice and there be re-cooled.

The sediment of the water in the circulating-pipes may be extracted by the branch pipe D'', the clear water being run off for drinking or other purposes through the part D'.

I do not claim the placing of an ice box or receiver in the upper part of the refrigerating chamber or box.

What I claim as my invention or improvement is—

1. The combination and arrangement of the chamber *d* and air-passage *e* of the cover with the passages *f f* and the ice box or pan C, arranged in the case A, substantially as specified.

2. The combination and arrangement of the cold-water coiled pipe D and its discharging-branches with the case A and the ice-pan, the chambered cover and its air-passage, and the air-passages leading therefrom, the whole being substantially as described.

AARON A. HINKLEY.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.