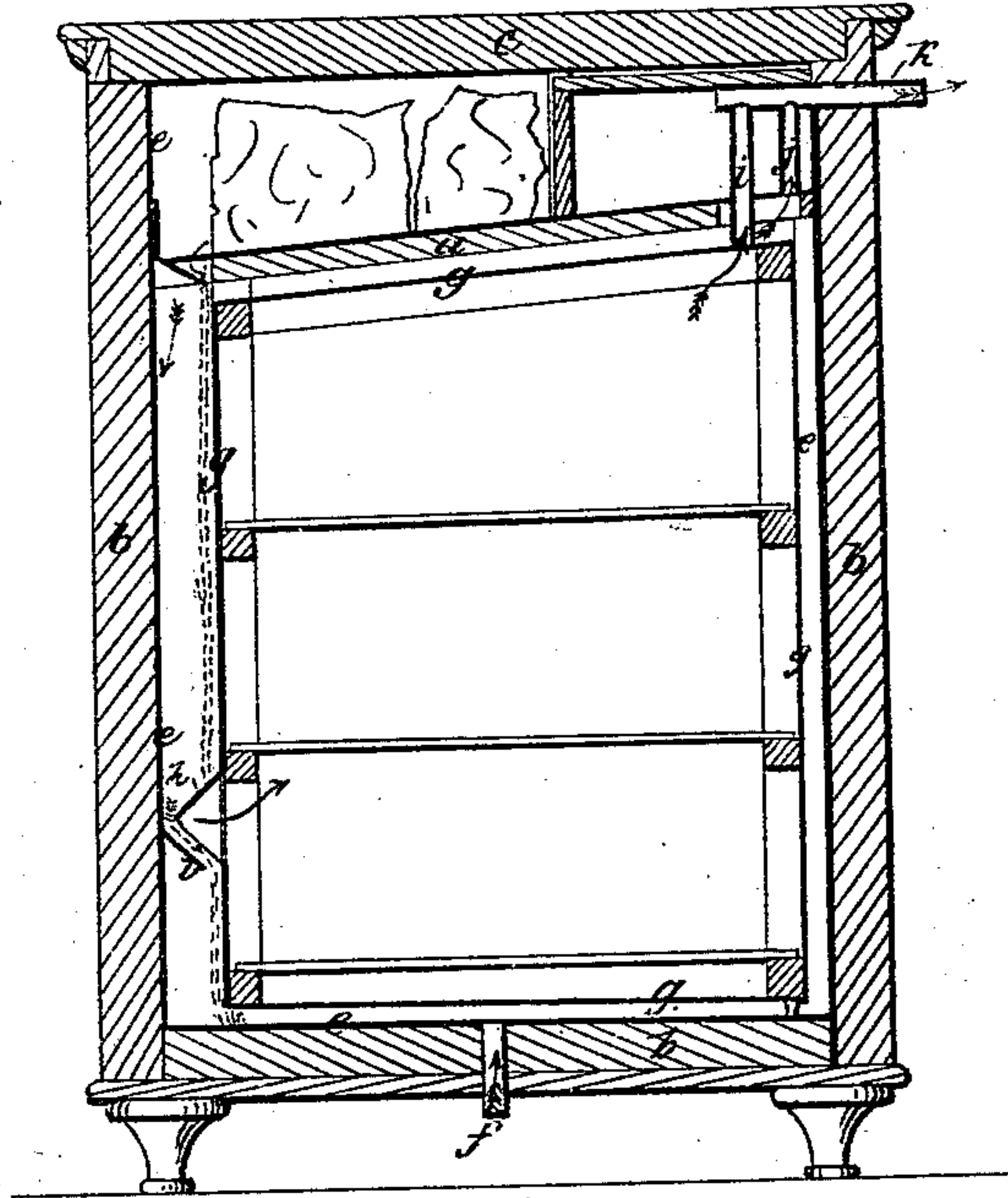


J. BRAGDON.  
Refrigerator.

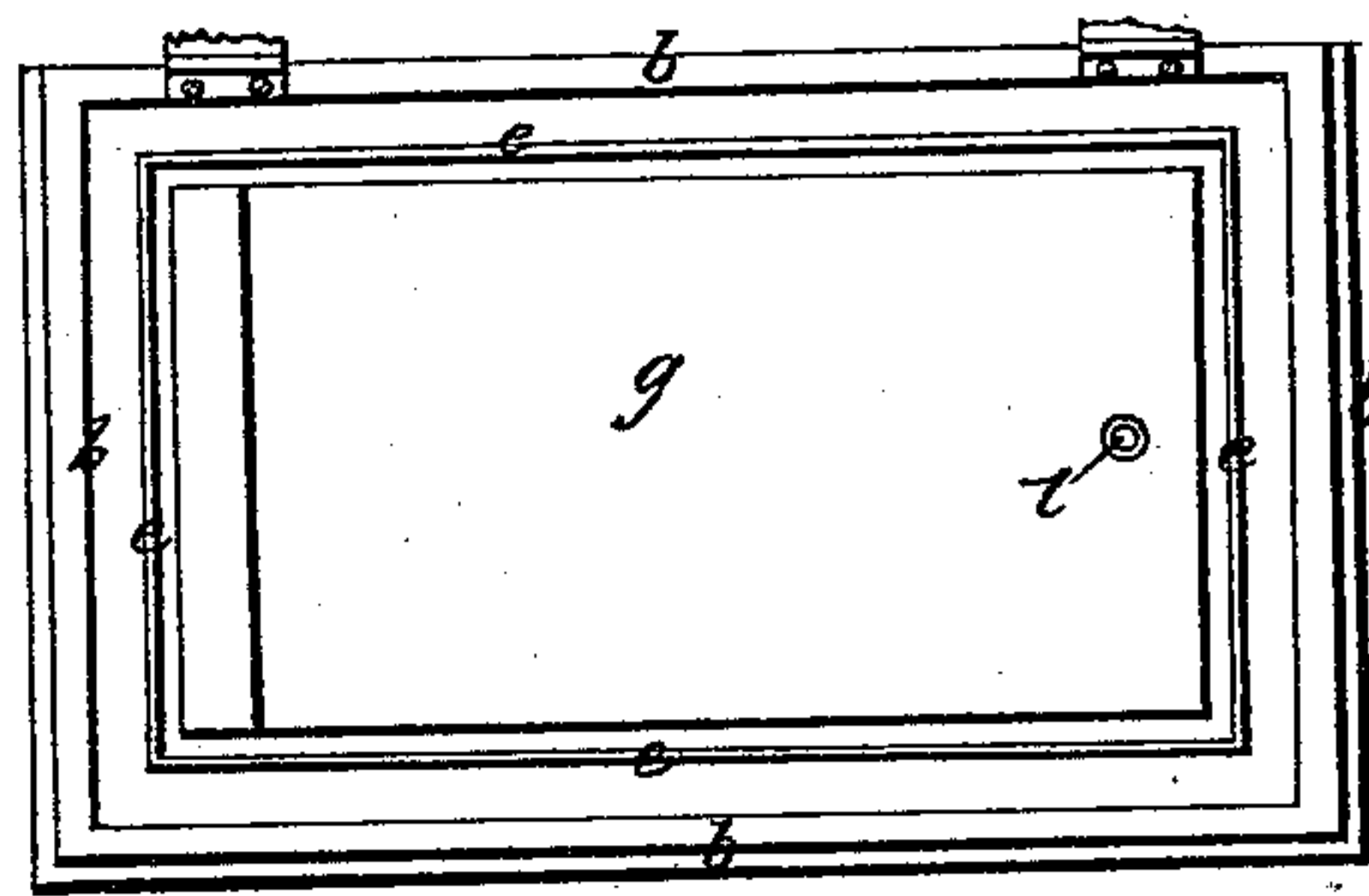
No. 64,405.

Patented May 7, 1867.

*Fig. 1.*



*Fig. 2.*



**Witnesses:**

*S. B. Kidder.*  
*M. W. Frothingham.*

**Inventor:**

*James Bragdon*

*By his Atty.  
Brook & Gould*

# United States Patent Office.

JAMES BRAGDON, OF BOSTON, MASSACHUSETTS.

*Letters Patent No. 64,405, dated May 7, 1867.*

## IMPROVED REFRIGERATOR.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES BRAGDON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful improvements in the detail of the construction of Refrigerators; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practise it.

Figure 1 of the drawings shows, in vertical sectional elevation, a refrigerator embodying my invention.

Figure 2 shows a plan of the same, with the lid opened and the ice-support *a*, seen in fig. 1, removed to show the arrangement beneath.

The outer part or case of the refrigerator is marked *b*, and is provided with a movable cover or top, *c*. This case is lined with a water-tight casing of zinc, marked *e*, and at the bottom of this, and passing through the bottom of the wooden case, is a pipe, *f*, which serves to pass off the water from the melting ice, and to admit into the refrigerator, for circulation therein, the outer atmospheric air. The inner case *g* of the refrigerator is made of zinc, provided with a wooden framework to stiffen it and support shelves therein. The size of this case is such as to admit it freely into the inside of the outer case, leaving all around, between the sides and bottom of both cases, air spaces, feet on the bottom of case *g* preventing the bottom thereof from resting directly on the zinc lining of the bottom of the outer case. The top of case *g* is made inclined, to suit the inclination of the ice-support *a*, this being inclined to give direction to the water proceeding from the ice, so as to cause it to run into a space which, as shown in the drawings, is wider than the space left on the other three sides of the case *g*. In constructing the refrigerator, the inner case is wedged or blocked in its place in the outer case, and then the metal covering of the ice-support *a* is soldered to the lining *e* of the outer case *b*. The wide space before referred to is seen at the left of the two figures of the drawings, and there may be seen a deflector, *h*, secured to the case *g*, so as to guard an opening into the case *g*, while beneath said deflector, but secured to the lining *e*, and slanting in the reverse direction, is another deflector, *i*. The air which enters the pipe *f* passes into the spaces between *e* and *g*, and is cooled, as it rises, to such an extent that very little of it passes off through pipe *j*, which connects with the outlet pipe *k*. The air in the wide space at the left of the figures is met by the water from the melting ice as it falls, and this carries downward with it enough of the adjacent air to create a gentle downward current, which, passing deflector *h* with the water, strikes deflector *i*, and not having the specific gravity of water, and being more mobile, passes into the interior of case *g* through the opening cut therein, and guarded by deflector *h*, the water continuing its downward course and escaping through the pipe *f* in a direction the reverse of the arrow shown therein, which denotes the direction of the air current entering, the pipe *f* being large enough to permit passage of both air and water at the same time. The place of the air thus disturbed and set in motion in the wide space is supplied from the narrow spaces on the sides and over the top of case *g* with air which is cooled by the influence of the ice; and as the cool current of air, thus supplied and entering the case *g*, becomes warmed therein a few degrees, it rises and escapes through the pipe *l* into the outlet pipe *k*. The space between *g* and *e*, at and around the door into the inner case, is filled with a frame, or with strips of wood or other suitable material. The inner case *g* is easily got at for repairs by simply unsoldering the metal of the ice-support *a* from the lining *e*, the case *g* being easily taken out from the top of case *b*, after the ice-support is removed.

It will be obvious that, consequent upon the described construction, there will always be in motion through my refrigerator air currents, as described, whenever ice is melting therein, such currents diffusing a cool atmosphere throughout the whole interior of the refrigerator, and keeping it perfectly well ventilated, passing off any exhalations from food or other matter placed in the interior case. The pipes *l*, *j*, and *k* are protected from injury by the ice by suitable boxing, shown in the ice-chamber.

I claim, in a refrigerator, so constructed as to have, between its food-chamber and the casing thereof, an air space, the air passages *f*, *l*, and *k*, so located and arranged as to operate, in conjunction with the deflectors *h* and *i*, and the falling water from the melting ice, to establish a current of pure, cool air through the food-chamber, substantially as described.

JAMES BRAGDON.

Witnesses:

J. B. CROSBY,

F. GOULD.