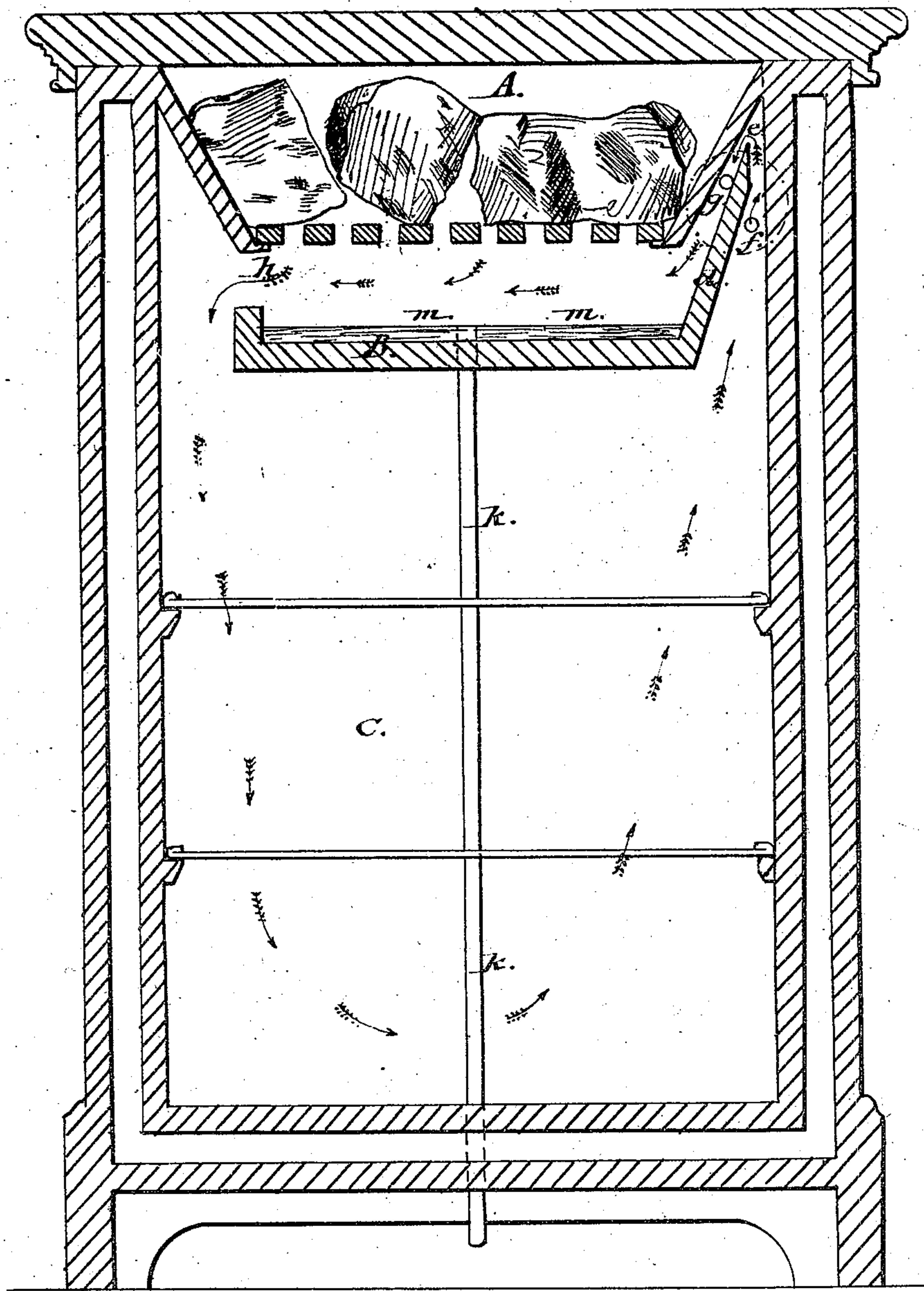


*J. C. Schooley.*

*Refrigerator.*

*N<sup>o</sup> 4,109.*

*Patented Jan. 5, 1864.*



**WITNESSES:**

*Rich<sup>d</sup> B. Church*  
*Henry B. Pierie*



# UNITED STATES PATENT OFFICE.

JOHN C. SCHOOLEY, OF NEW YORK, N. Y.

## IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. 41,099, dated January 5, 1864.

*To all whom it may concern:*

Be it known that I, JOHN C. SCHOOLEY, of the city, county, and State of New York, have invented a new and useful improvement in refrigerators or preserving-rooms for the preservation of meats, provisions, fruits, vegetables, and any organic substance from decomposition or the usual effects of warm and damp weather; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Figure 1 represents a longitudinal and vertical section of my refrigerator.

The great difficulty with all ventilated refrigerators has been the rapid decay of ice, caused by the leading of too much warm air onto the ice, or onto a surface cooled by the ice. When warm air is brought in immediate contact with ice, it will melt it with great rapidity, and if a solid surface is placed between the ice and the air, and if the air is made as cold as when brought in immediate contact with the ice, it is evident it requires precisely as much ice to accomplish it.

In Letters Patent granted to me January 1, 1861, for an improved refrigerator, I use the ice-meltings to cool the air down to a lower temperature before the air passes over the ice, thus reducing the rapid decay of the ice, and in which refrigerator it will be perceived I allow the air to pass over the ice and to come in immediate contact with it after being partially cooled by coming in contact with a surface submerged in the ice-meltings. It is therefore evident that in my refrigerator of 1861, and in all ventilated refrigerators, the ice has been employed to do all the work of ventilation, refrigeration, and desiccation, because the moving atmosphere has been led through the ice-chamber and into immediate contact with the ice before it passed into the preserving-chamber.

The great object of my improvement herein described is to ventilate a refrigerator without either passing air over the ice, or a solid surface cooled by ice, or even to lead either the internal or external air into the ice chamber, thus necessarily economizing greatly in the use of ice, and at the same time preserving all of the cooling and drying qualities.

In order that my improvement may be bet-

ter understood, and that others may be enabled to construct it, I refer to the annexed drawings and letters and figures of reference marked thereon.

A is the ice chamber. B is the horizontal plate or receptacle for the meltings. C is the preserving-chamber. *d* is the extended arm or end of the horizontal plate or receptacle B, reaching nearly to the top of the preserving-chamber. *e* is the opening between the top of the arm *d* and the top of the preserving-chamber. *f* is an opening in the front of the preserving-chamber for the exit of air when desired. *g* is an opening for the admission of external air into the receptacle when desired, made at a point higher than the exit-opening *f*. *h* is the opening to allow the cold air to fall from the plate or receptacle B into the preserving-chamber C. *k k* is the drain-pipe to carry off the meltings, which, when the meltings are to be collected, is made to reach a certain distance above the floor, so as to compel a certain depth of meltings to be collected before they are allowed to flow off. *m m* represent the accumulated ice-meltings.

When ice placed in the ice-chamber A, the operation of my refrigerator is as follows, viz: The ice will naturally melt, and the meltings will drop through and fall on the plate or receptacle B, and be collected to a certain depth before they are allowed to flow out through the drain-pipe *k k*. The air in the preserving chamber C is warmer at the extreme top, near opening *e*, than at any other point. This being the case, it will flow through opening *e* into receptacle B, because the meltings and the air in the receptacle are colder than the inflowing air. This inflowing air will become colder than before by passing over and coming in immediate contact with the cold drippings of the ice and the ice-meltings after they are collected, and mingling with the stationary cold air in receptacle B, and, of course, as its specific gravity is increased it will fall through opening *h* into preserving-chamber C, and as this air passes over warm meats, &c., it will take up the heat in its passage and rise to the opening *e* and pass again into receptacle B, and so rotate and circulate from chamber C to receptacle B, and from receptacle B to chamber C; but when I desire to ventilate by using the outside air, I open the double register covering openings *g* and *f*, and the



outside air will flow into receptacle B through opening *g* and become cold by flowing over the ice-meltings and mingling with the drippings as they fall from the ice, and, mixing with the cold air in the receptacle, will then fall, and, passing over warm meats, &c., will rise and flow out of opening *f*, thus producing a current of air continually through the preserving-chamber, and all air that does not escape at *f* in its passage will rise to *e*, and, passing into receptacle B, will continue its rotation and circulation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The peculiar construction of the plate or receptacle B, having an extended arm, *d*, so

arranged that the air for ventilation will enter it at a point above where it flows out into the preserving-chamber.

2. The combination of the open-bottom ice-chamber A, the receptacle or plate B, with its arm *d*, and the provision-chamber C, all so arranged that the internal air will be made to rotate and circulate, and the external air will pass in currents through the provision-chamber, the whole arranged and operating substantially in the manner and for the purposes set forth.

JOHN C. SCHOOLEY.

Witnesses:

RICHD. B. CHURCH,  
HENRY B. PIERCE.