

A. H. Phelps. Refrigerator.

108386

Fig. 1.

PATENTED OCT 18 1870

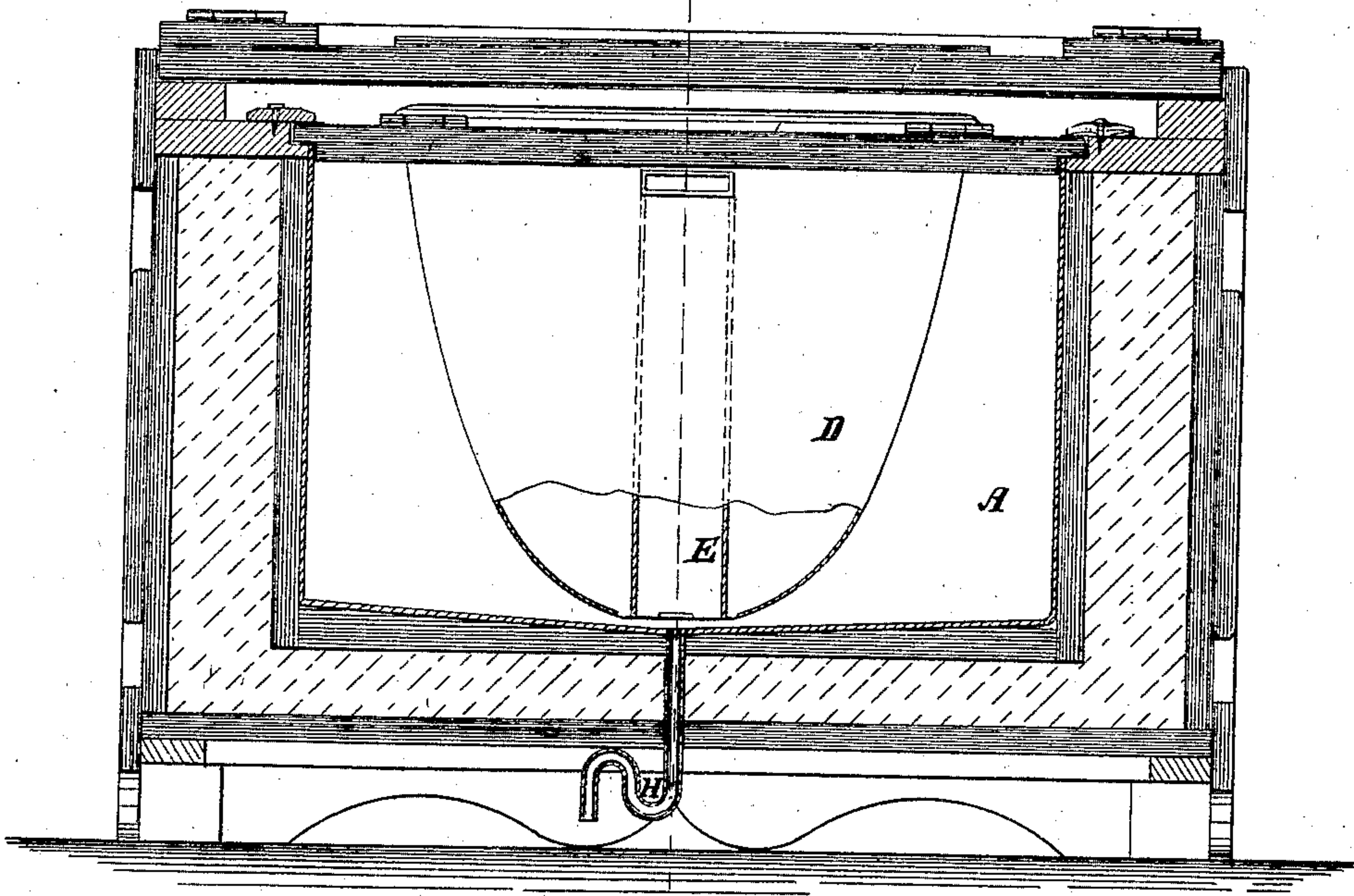
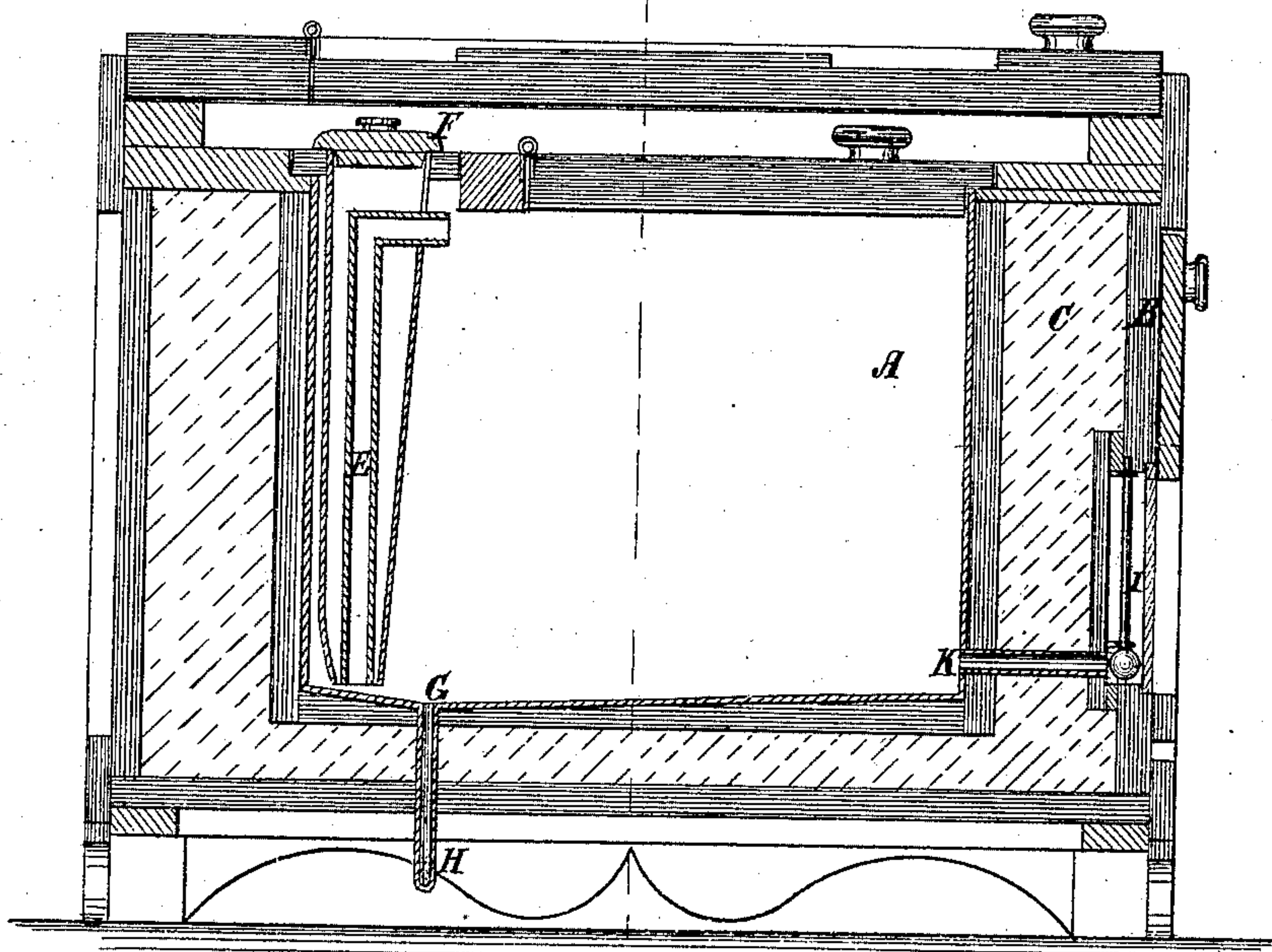


Fig. 2.



Witnesses.

J. Deunneendorf.
L. S. Haber

Inventor

A. H. Phelps
per
Attorneys.

United States Patent Office.

AUGUSTUS H. PHELPS, OF TRENTON, ASSIGNOR TO PHINEAS E. SAUNDERS AND MARY E. PHELPS, OF SAME PLACE, AND JOSEPH COOK, OF DETROIT, MICHIGAN.

Letters Patent No. 108,386, dated October 18, 1870.

IMPROVEMENT IN REFRIGERATORS.

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, AUGUSTUS H. PHELPS, of Trenton, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in refrigerators, and consists in a novel arrangement with the cooling-chamber of a removable ice-receptacle, and an air-circulating tube, calculated to cause such movement of the air within the cooling-chamber as to cool it very quickly after the ice is put in.

Figure 1 is a longitudinal sectional elevation of my improved refrigerator, and

Figure 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

A is the cooling-chamber for containing the article to be preserved. It is arranged in the outer case B, and non-heat-conducting packing C, in the ordinary or any approved way.

D is my improved ice-receptacle or pocket, which I prefer to make in the form indicated in the drawing, having a wide, open mouth at the top, and terminating in the narrow form at the bottom.

This pocket, having an opening at the bottom, and being provided with the tube or flue E, having the upper end projecting through one side, and the other terminating at the opening at the bottom, I suspend in the chamber A, from the top, preferably at the rear and behind the door of the said chamber, and I provide it with a cover, F.

The ice and salt, or other refrigerating-mixture, being placed in the pocket D, will cool the air in flue E, so that it, being heavier than the air in chamber A, will fall to the bottom thereof, causing the lighter

air in A to enter the top of E, and thereby a circulation will be set up which will cause all the air to come in contact with the cold, and be speedily cooled.

The escape-pipe G is arranged near the mouth of the pocket, when the bottom of A is made lowest, and a trap, H, is provided, to exclude the air.

As the freezing-compounds, especially salt and ice, are liable to reduce the temperature too low for some articles, it is highly desirable to be able to determine the temperature without opening the refrigerator. For this purpose I arrange a thermometer, I, in a suitable recess in the side of the case, behind a glass plate, and I connect the bulb with the chamber A by a pipe, K, calculated to let the cold air therein circulate freely around it. The glass may be covered by a slide.

My improved pocket with the air-tube may be made practically useful in cars, for transporting perishable articles, by hanging it up therein when properly charged, and hanging the walls of the car with felt, India rubber, or other non-conducting sheets which will exclude the external air.

A circulation will be established and maintained therein the same as in the refrigerating-case here shown, so that ordinary cars may, with slight modifications, be utilized for preserving perishable articles while in transitu.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The improved ice-receptacle or pocket D and flue E, combined and arranged substantially as specified.

2. The combination of the ice-receptacle D and flue E with the cases of a refrigerator, substantially as specified.

AUGUSTUS H. PHELPS.

Witnesses:

JOHN STEIGHT,
EDWIN SANDERS.