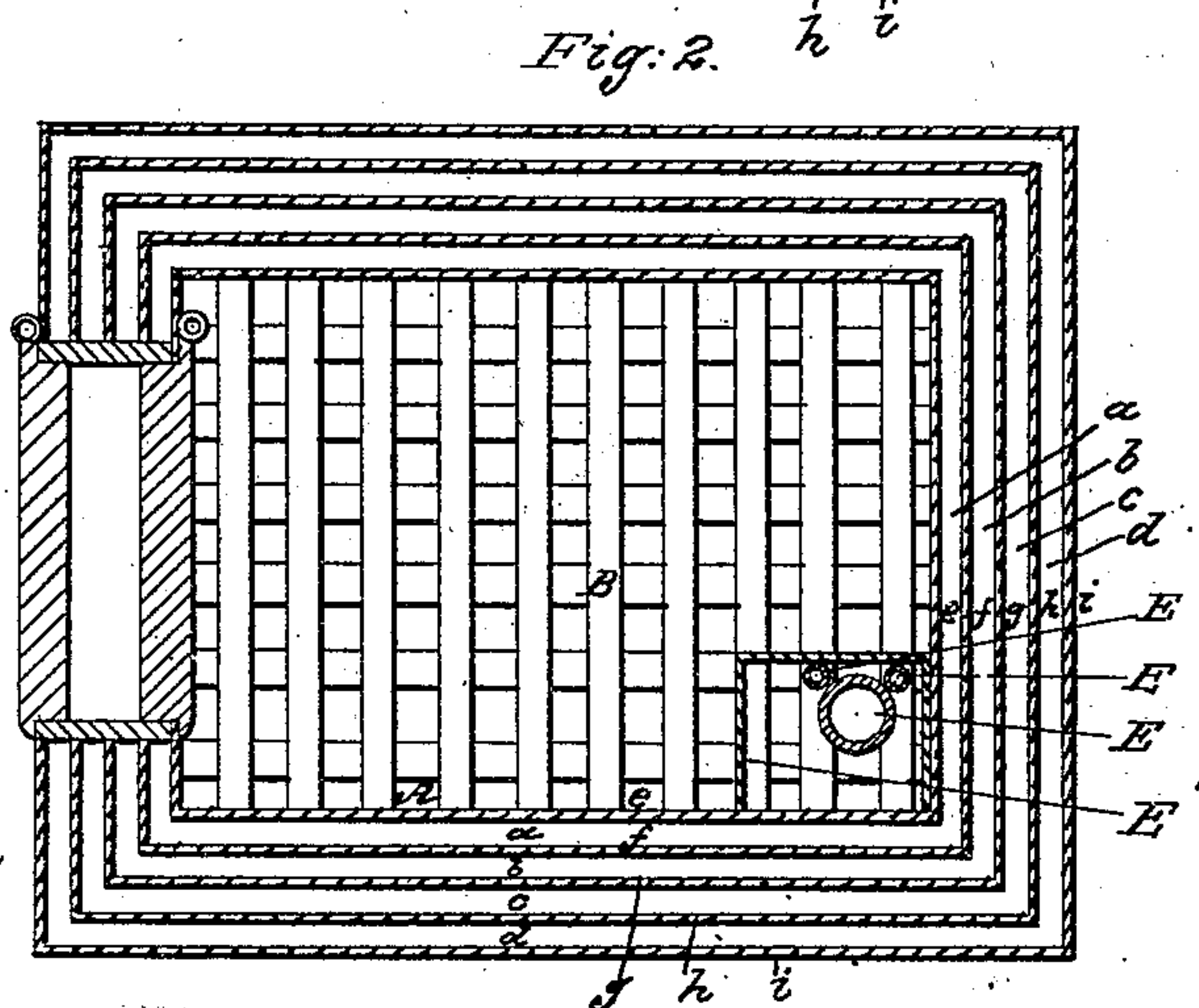
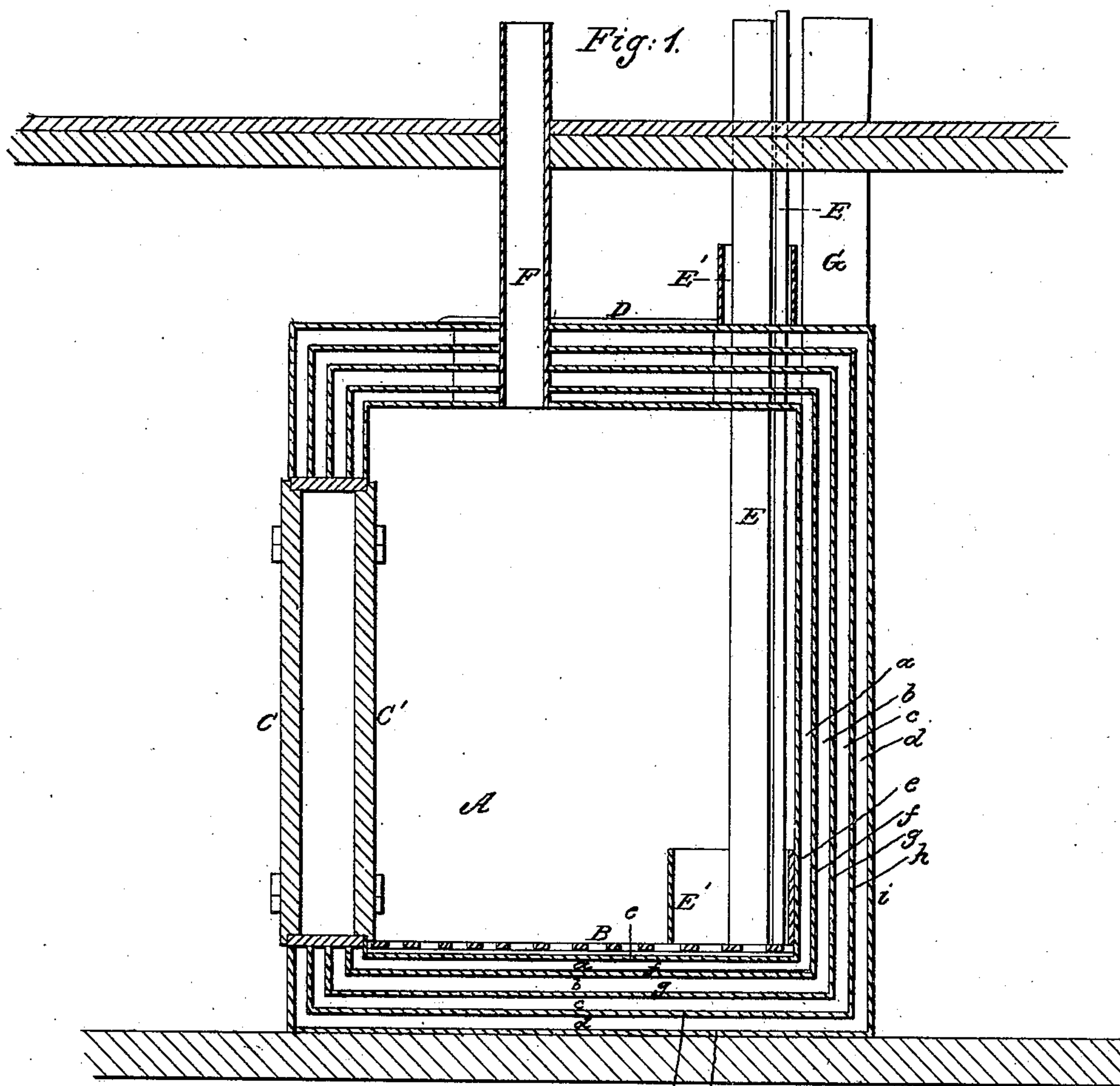


D. E. SOMES.
Refrigerator Building.

No. 39,967.

Patented Sept. 15, 1863.



Witnesses:
A. S. Spencer
W. H. Baulf.

Inventor:
D. E. Somes.

UNITED STATES PATENT OFFICE.

DANIEL E. SOMES, OF BIDDEFORD, MAINE.

IMPROVED COOLING-ROOM FOR PRESERVING PROVISIONS.

Specification forming part of Letters Patent No. **39,967**, dated September 15, 1863; antedated July 20, 1862.

To all whom it may concern:

Be it known that I, DANIEL E. SOMES, of Biddeford, in the county of York and State of Maine, have invented a new and Improved Cooling-Room for the Preservation of Fruit and other Food for Vessels and Buildings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a horizontal section of the same.

Similar letters of reference in both views indicate corresponding parts.

This invention consists in the arrangement of a room surrounded by four (more or less) air-passages, that are separated from each other by suitable partitions, and which are supplied with fresh air by one or more air-ducts in combination with one or more pipes carrying fresh air down to the bottom of the room, and passing through one or more vats filled with salt and ice or other cooling-mixture, and with one or more tubes leading from the upper part of the room into the open air in such a manner that by means of the last-named pipes and tubes a circulation of pure and cold air is effected in the interior of the room, while at the same time, by means of the air-duct or air-ducts, a continuous supply of cold air is effected to the several air-passages surrounding the room, and that tropical and other fruit or other articles of food or ice placed into the room can be transported in a perfect state of preservation.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, with reference to the drawing.

The provision-room A is surrounded by four (more or less) air-passages, *a b c d*, which are formed and separated, one from the other, by the partition-walls *e f g h i*, as clearly shown in the drawings. The bottom of the interior of the room is covered by lattice-work, B, which is slightly elevated so that the air can circulate freely under it, and access can be had to the interior of the room by double doors C C' on the side and by a hatchway, D, in the top. The doors C C' may be so arranged that one

opens outward and the other inward, as shown in the drawings, or the inner door, C', may also be made to open outward, which will in many cases be more convenient than the arrangement shown in the drawings. The hatchway, as well as the doors, ought to be closed, except when the same must be opened to put some articles into the room or to take them out. The room A is placed into the hold or lower deck of a vessel, or into the cellar or any part of a building, and it is supplied with fresh air by one or more tubes E, which extend down below the lattice-work B on the bottom of the room A, and which pass up through the upper deck of the vessel, or through the roof of the building in which the room may be situated. The foul air from the interior of the room is carried off through a pipe, F, which passes through the several partitions on the top of the room A, and up through the upper deck of the vessel or through the roof of the building in which said room may be situated. By the aid of the tube or tubes E and pipe F a continuous circulation of fresh air is effected through the interior of the room A, and the articles which may be placed into said room are not endangered by being brought in contact with the foul air generally pervading provision rooms or chambers for preserving meat or other articles of the ordinary construction. In order to cool the air as it passes through the tube or tubes E, the latter pass through one or more vats, E', which may be situated either inside or outside of the room A, and which are intended to be filled with a mixture of ice and salt or some other suitable cooling-mixture. The air passages *a b c d* between the several walls of the room are supplied with fresh air by a tube, G, which extends through the top of the room, and which communicates with all the air-passages, as clearly shown in Fig. 1 of the drawings. This tube extends up through the upper deck of the vessel or through the roof of the building in which the room may be situated, and it may be so arranged that a portion of it can be surrounded with ice, so that a continuous current of cool air is thrown into the air-passages and that the temperature in the interior of the room is kept sufficiently low to prevent the food or other articles placed into it from decaying for a tolerably long time.

Suitable registers may be applied to regulate the supply of air to the room and to the air-passages, the air in the air-passages being intended only as a non-conducting medium to preserve the interior of the room against the influence of the surrounding atmosphere.

A room of this construction will be of particular advantage on vessels of war, or on all other vessels which are intended for long voyages to all parts of the globe, or for the transportation of tropical and other fruits and other food or ice. It may, however, be used with advantage in hotels or other buildings in which

it is desirable to keep on hand a large supply of fresh meat, fruits, and other victuals.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the insulated chamber A, vertical tube or tubes E, one or more vats E', and ventilating-pipe F, all constructed, arranged, and operating in the manner and for the purposes herein shown and explained.

Witnesses:

D. E. SOMES.

W. HAUFF,

C. W. COWTON.