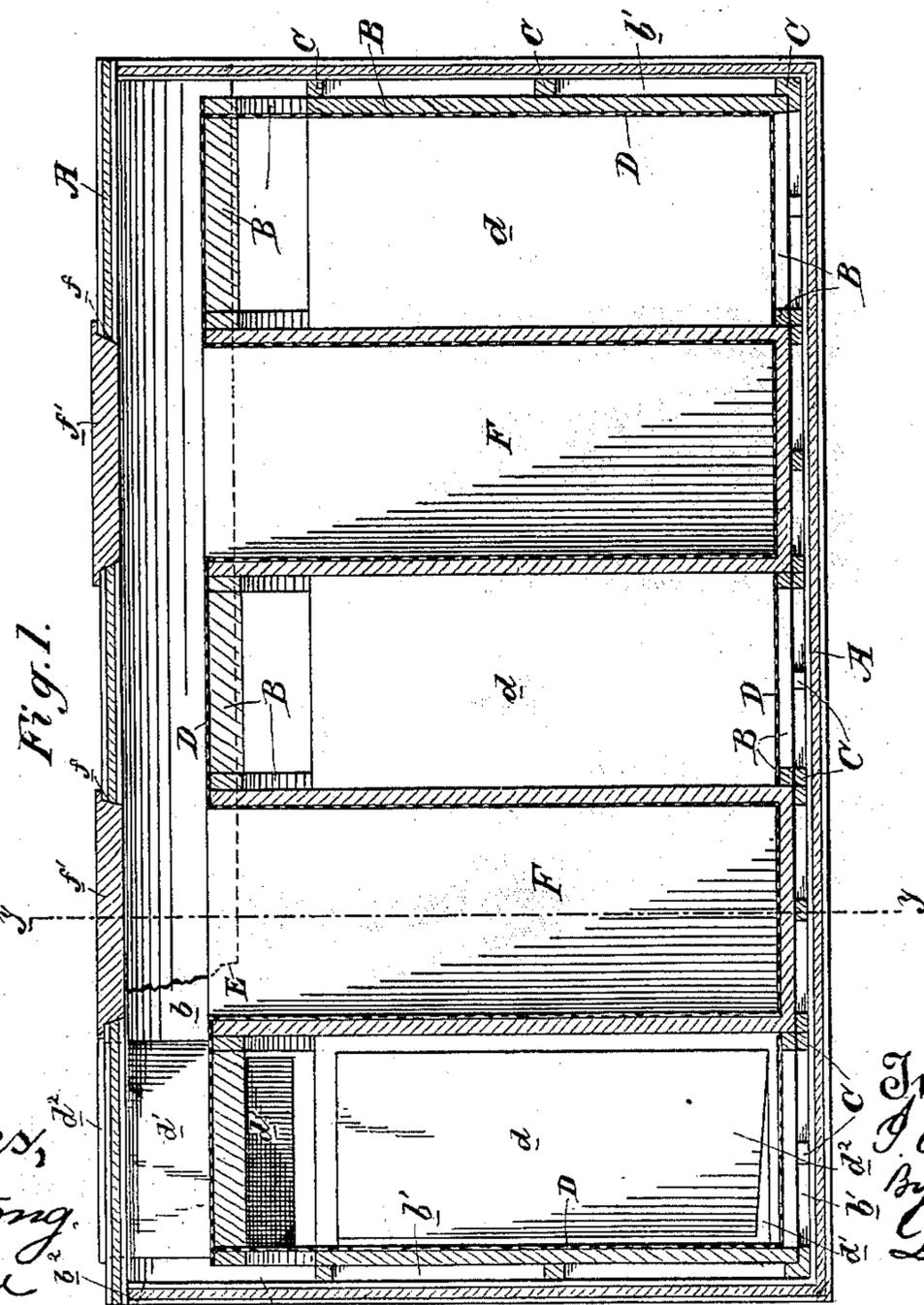
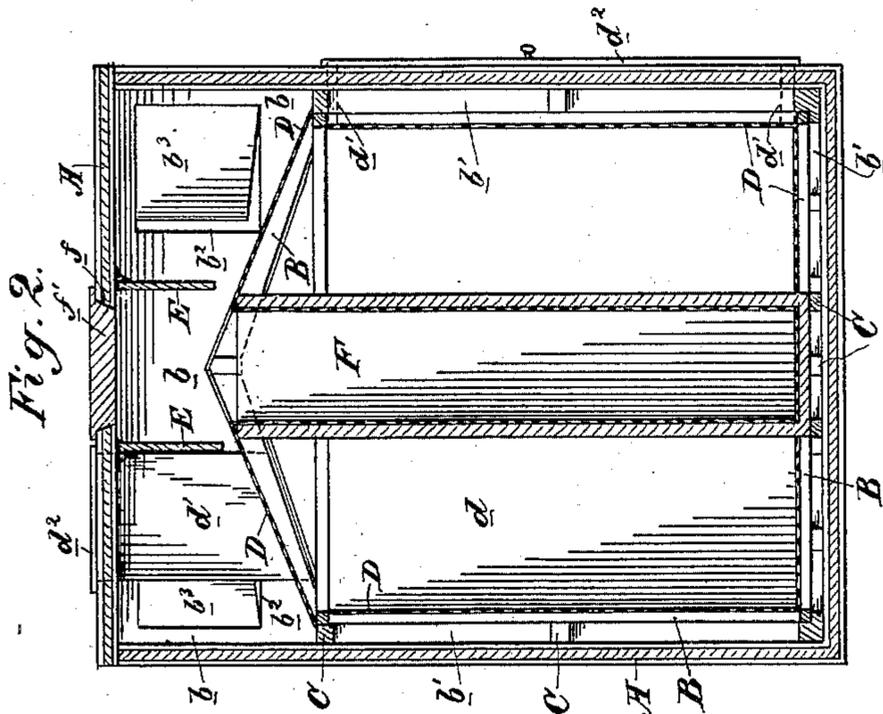


(No Model.)

I. ALLEGRETTI.
REFRIGERATOR.

No. 370,591.

Patented Sept. 27, 1887.



Witnesses,
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attys

UNITED STATES PATENT OFFICE.

IGNAZIO ALLEGRETTI, OF WEST BERKELEY, CALIFORNIA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 370,591, dated September 27, 1887.

Application filed September 18, 1886. Serial No. 213,961. (No model.)

To all whom it may concern:

Be it known that I, IGNAZIO ALLEGRETTI, of West Berkeley, Alameda county, State of California, have invented an Improvement in Refrigerators; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of refrigerators for the preservation of perishable material; and my invention consists in the peculiar construction and combination of devices, which I shall hereinafter fully describe and claim.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a longitudinal vertical section of my refrigerator. Fig. 2 is a vertical cross-section of the same, taken on line $y y$, Fig. 1.

A is the outer shell or casing, which may represent any suitable box, vessel, car, chamber, or apartment, having its walls double and filled in with non-conducting material of any suitable character. Within the shell or casing is fitted a skeleton frame, B, made of suitable bars, strips, or scantling, and having a height less than that of the shell or casing, so that an ice-space, b , is formed between the top of said frame and the top of the said shell or casing. The sides, the ends, and the bottom of the skeleton frame are separated from the corresponding parts of the outer shell or casing by means of independent separated blocks C. These are nailed or otherwise firmly secured to the walls of the outer shell or casing, and the scantlings or bars of the skeleton frame are nailed or otherwise firmly secured to the blocks, so that said frame is permanently secured in place. The intervention of these blocks provides an air-space, b' , all around the sides, the ends, and the bottom of the skeleton frame. The skeleton frame is lined with plates, D, of zinc, galvanized iron, or other material which has good conducting properties. These plates are secured in suitable manner to the inner surface of the sides, the ends, and the bottom of the skeleton frame and to the upper surface of the top of said frame, and they thus form and inclose a chamber, d , in which the material to be refrigerated is contained. Access is had to the chamber d from the outside by means of tight passages

d' , which are controlled by doors d^2 . These passages may be located in any suitable portion of the refrigerator. I have here shown one opening from the side of the outer shell or casing into the side of the chamber d and another opening from the top of said shell or casing into the top of said chamber. These passages may be formed in any suitable manner and must be tight—that is to say, of such a character that they have no communication whatever with the air-space or with the ice-space through which they pass. The former result may be obtained by means of bars, forming, as it were, the jambs of the doors and crossing the air-space, and the latter result may be accomplished by a close frame-work such as is shown. Access may be had to the ice-space b by means of apertures b^2 , controlled by doors b^3 , and located in any suitable portion of the outer shell or casing. They are here shown in the end of said shell or casing, and are two in number, one on each side. The object of having two in this case is to communicate with the separate divisions into which I divide the ice-space by means of the hanging flaps or strips E, which are hinged to the under surface of the top of the outer shell or casing, their lower edges coming down closely to the zinc lining D of the skeleton frame.

F are movable ice-chambers, the details of construction of which I need not here enter upon, for the reason that I have secured them in a separate application heretofore made. It will therefore be sufficient for the purposes of my present application and the claim which I intend to make to describe them simply as consisting of skeleton frames lined with plates of conducting material. These ice-chambers are here shown in a vertical position within the chamber d . They may be arranged in any other suitable position, their object being to effect refrigeration throughout the mass of material in the apartment d . The upper ends of these movable chambers are open and communicate directly with the ice-space b above. Access may be had to them when arranged vertically by means of apertures f made in the top of the outer shell or casing, which apertures are controlled by doors f' . When they are arranged in other than a vertical position, their open ends are brought into close relation

with the outer shell or casing, and through apertures made therein ice may be introduced. They may be secured in any suitable manner adapting them to be readily removed
5 and replaced in the same or other positions.

The operation of my refrigerator is as follows: Material to be refrigerated is introduced to the apartment *d* through the passages *d'*, which are then closed by their doors. Ice is
10 introduced to the ice-space *b* above the skeleton frame through the door-controlled apertures *b*², and ice may be introduced into the movable ice-chambers *F* through their door-controlled apertures *f*. The object of the
15 hanging strips *E*, which divide the ice space, is simply to regulate the distribution of the ice, and at the same time, by reason of their swinging, to not interfere with the ice in transferring it from one side to another.

20 The space formed by the intervention of the blocks *C* does not contain any ice, but is merely an air-space. These blocks provide for a very

simple, practical, and effective way in which to form this air-space, and by means of which the skeleton frame may be permanently se- 25
cured in its place.

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

In an improved refrigerator comprising an 30
outer shell or casing, an inner skeleton frame, and an ice-space, the combination of said shell and frame with door-controlled apertures *b*², leading to the ice-space, and the flaps or strips *E*, hinged to the under surface of the top of 35
the shell and having their lower edges contiguous to the top of the skeleton frame, substantially as specified.

In witness whereof I have hereunto set my hand.

IGNAZIO ALLEGRETTI.

Witnesses:

S. H. NOURSE,
H. C. LEE.