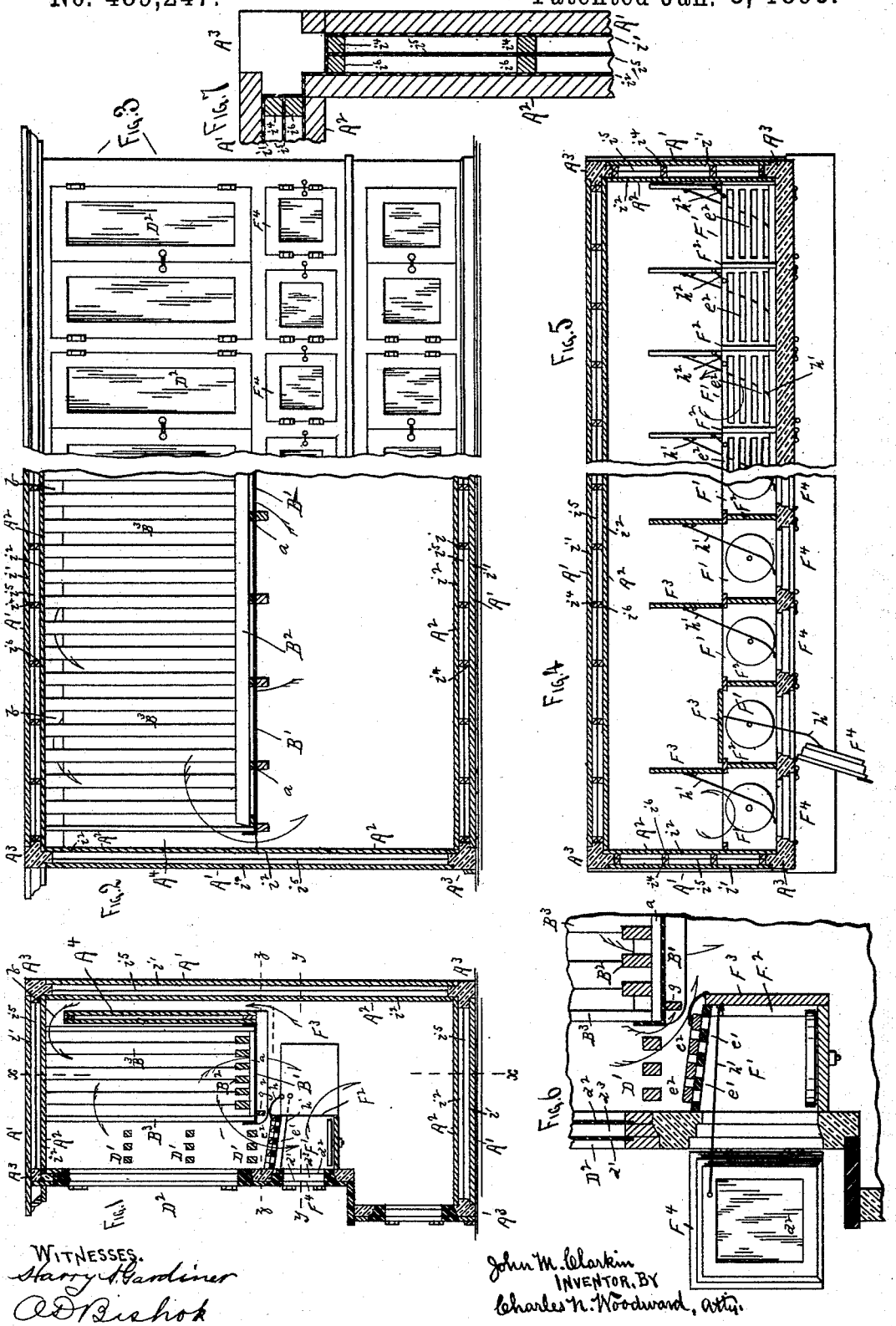
(No Model.)

J. M. CLARKIN.

REFRIGERATOR.

No. 489,247. Patented Jan. 3, 1893.



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JOHN M. CLARKIN, OF ST. PAUL, MINNESOTA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 489,247, dated January 3, 1893.

Application filed August 15, 1892. Serial No. 443,126. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. CLARKIN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

This invention relates to refrigerators, and it consists in the construction, combination, and arrangements of parts, as hereinafter shown and described, and specifically pointed out in the claim.

In the drawings—Figure 1 is a cross sectional elevation. Fig. 2 is a longitudinal sectional elevation, on the line *x x* of Fig. 1, of a portion of one end of the refrigerator through the ice receptacle, and Fig. 3 is a front elevation of a portion of the other end, showing the arrangement of the doors. Fig. 4 is a plan view in section on the line *y y* of Fig. 1. Fig. 5 is a plan view in section on the line *z z* of Fig. 1. Fig. 6 is an enlarged sectional detail illustrating more fully the construction of the butter receiving chambers. Fig. 7 is an enlarged detail illustrating the manner of constructing the walls of the refrigerator.

The casing or walls of the refrigerator are formed of an outer shell A′ having a lining i' of paper or other similar suitable non-conducting material, and an inner shell A^2 placed some distance from the outer shell, as shown, so as to leave large air spaces between the two shells. This inner shell is also provided with a paper or other suitable non-conducting lining i^2 the two shells being secured at the corners by corner posts A^3, as shown.

Attached to the interior of the outer shell A′ at suitable intervals are wooden strips i^4 to form supports for a paper or other similar suitable non-conducting partition i^5, while strips i^6 similar to the strips i^4 are attached to the inner shell opposite to and projecting toward the strips i^4 as shown, so as to form additional supports to the partition i^5. By this simple arrangement the walls are formed with two distinct and separate air spaces, which insures a much more complete and perfect insulation and at a very slight cost. This construction also greatly decreases the weight, as no heavy non-conducting filling is required for the walls.

The ice receptacle consists of a galvanized iron or other suitable pan B′ suspended about midway across the interior of the refrigerator, and provided with an ice rack B^2 upon which the ice rests. The pan is surrounded on all sides by upright guards B^3 forming racks to retain the ice in place but with sufficient space between them to afford free circulation of the air, as indicated by the arrows, in Figs. 1—2 and 6. The ice rack B^2 is elevated a short distance above the bottom of the pan B′ by cross strips *a*, so that the water from the melting ice will freely flow off through the drainage tubes, as well as to permit the air to freely circulate around the slats, of which the rack is formed. The rear edge of the ice pan does not extend to the back of the interior of the casing, but ends at an interior non-conducting partition A^4 which in turn ends a short distance below the top of the casing, so as to afford a passage for the air currents at *b*, as shown in Figs. 1 and 2. The lower edge of the partition A^4 comes flush with the bottom of the pan B′, as shown. Depending from the bottom of the pan B′ near its front edge, is a stop strip *g* which serves as a check to the rising warmer currents of air and prevents them from flowing upward against the descending currents of colder air flowing downward in front of the ice receptacle, but which causes them to flow backward and upward behind the partition A^4. The front edge of the pan B′ does not extend to the front of the casing but space is left for a series of slatted shelves D′, access to which is had through doors D^2 in the front of the casing A, as shown.

In the front of the interior of the casing beneath the line of the pan B′, are a series of small compartments F′ formed by short cross partitions F^2, (see Fig. 4.) and each provided with an inner hinged door F^3 and an outer hinged door F^4, the latter formed with suitable non-conducting walls, preferably with two plates of glass d' d^2 and with an air space d^3 between them. The tops of these compartments are formed of slats e', and with a corresponding slatted grating over each with its slats e^2 "registering" with the slats e', so that when the slats e^2 of the gratings are placed above the slats e', currents can freely pass downward between them into and through the compartments F′, as indicated

by the arrows in Fig. 1, but when the grating is moved so that its slats e^2 come above the spaces between the slats e', as in Fig. 6, the grating forms a cut off plate to shut off the air currents. Each of the doors F^3 is connected to its corresponding door F^4 by a rod h', so that as the door F^4 is opened the connected door F^3 will be closed, and vice versa, and by connecting each of the gratings to its contiguous door F^3 by a short rod h^2, the slats e^2 of the latter will also be closed over the spaces between the slats e' at the same time that the door F^3 is closed, as in Fig. 6. By this simple arrangement, when one of the doors F^4 is opened all communication between the interior of the compartment F′ with which it is connected and the interior of the refrigerator, is shut off automatically, so that no substantial portion of the cold air of the interior of the refrigerator is lost by the act of opening one of the compartments F′, all the cold air that is lost being that contained in one of the compartments.

Having thus described my invention, what I claim as new is—

The combination in a refrigerator of compartments F′ having solid side and bottom walls, and with outer doors F^4 and inner doors F^3 connected by rods h' so that the opening of the outer door will close the inner door, the upper or top wall of said compartments formed of parallel slats e' and a frame composed of corresponding slats e^2, and adapted to be actuated by the opening and closing of said doors, to cover and uncover the spaces between the slats forming the top wall of said compartments, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN M. CLARKIN.

Witnesses:
C. N. WOODWARD,
H. S. WEBSTER.