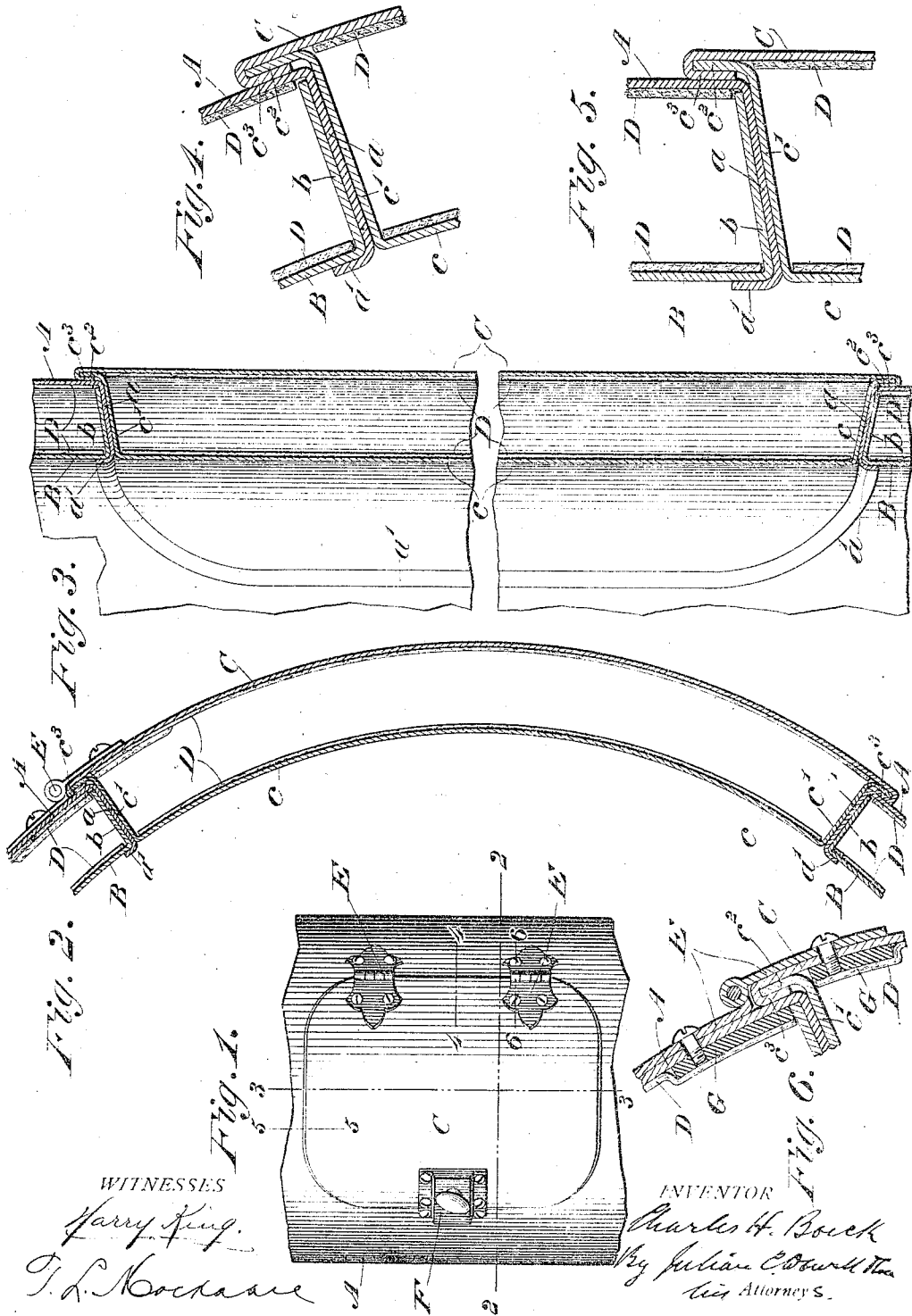


C. H. BOECK.
REFRIGERATOR DOOR.
APPLICATION FILED DEC. 8, 1905

1,000,963.

Patented Aug. 15, 1911.



UNITED STATES PATENT OFFICE.

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REFRIGERATOR-DOOR.

1,000,963.

Specification of Letters Patent. Patented Aug. 15, 1911.

Original application filed April 3, 1905, Serial No. 253,542. Divided and this application filed December 8, 1905. Serial No. 290,941.

To all whom it may concern:

Be it known that I, CHARLES H. BOECK, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Refrigerator-Doors, for which the present application is filed as a division of my pending application, Serial No. 253,542, filed April 3, 1905, for a refrigerator; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to refrigerators and more particularly to sheet-metal refrigerators, preferably constructed in cylindrical form and having double walls with an intervening air-space, such for example as the refrigerator shown and described in my aforesaid application, now Patent No. 835,395, dated Nov. 6, 1906.

The main object of my present invention is to provide a door for a refrigerator of the character referred to constructed of sheet-metal and forming a segment of the refrigerator body adapted to fit snugly an opening therein and seal the joints between the contiguous edges of said body and door, the latter possessing great strength and durability yet simple in construction and not liable to get out of order or come apart in practical use.

In the accompanying drawings, which form a part of this specification, and in which is shown a fragment of the front of a sheet metal double-walled refrigerator having a door hinged thereto embodying my invention, Figure 1 represents a front elevation of a fragmentary portion of a refrigerator having my improvements applied thereto, the door being closed; Fig. 2 is an enlarged horizontal section of the same, taken for example on line 2—2 of Fig. 1. Fig. 3 is an enlarged vertical cross-section, taken on line 3—3 of Fig. 1, and with an intermediate portion of the figure broken away. Fig. 4 is a detail section on line 4—4 of Fig. 1, still further enlarged. Fig. 5 is a similar section on line 5—5 of Fig. 1. Fig. 6 is an enlarged detail section through one of the door hinges and its contiguous parts on line 6—6 of Fig. 1.

A particular explanation of the illustrated construction is as follows:

The body of the refrigerator or other receptacle, (a fragment only of which is represented) comprises the outer and inner sheet-metal walls or casings A and B, which may be of any desired configuration but are shown as concentric cylinders.

In order to provide a suitable door-way an opening is formed through the cylindrical body of the refrigerator to be closed by a swinging door C, and a door-frame continuous with the sheet metal plates or walls A and B, may be formed around this opening by means of a flange b, on the inner wall B extending to the inner side of the outer wall A, and an inwardly projecting flange a, on said outer wall overlapping said flange b, and having a reverse bend a' fitting tightly against the inner side of the inner wall, thus forming a door-frame integral with the inner and outer walls of the refrigerator body.

The door C consists of inner and outer sheet-metal plates, spaced apart and shaped to conform to the shape of the inner and outer walls of the refrigerator body or receptacle and form a segment thereof closing the opening through said body. The inner plate c of the door has a wide outwardly projecting flange or upset portion c' constituting the peripheral edge of the door and tapering or inclined so as to fit snugly within and against the reversely inclined side or edge of the door-frame. The flange c' terminates in a marginal flange c² which is embraced by a marginal flange or return bend c³ on the outer or front door-plate, which return bend underlies the terminal flange c² on the inner plate and conceals the connection between the two parts. Thus the door, like its surrounding door-frame, is made strong and rigid, its outer and inner walls being spaced and connected in such manner as to avoid separation of the parts, and the peripheral edge of the door is continuous with the inner wall c thereof so as to shut easily with a perfect fit, closing into the door-frame with a wedge-like action yet adapted to open out therefrom easily and without strain upon the parts, while the front door-plate, with its return bend or flange c³ embracing the terminal

flange c^2 of the inner plate, provides an overlapping flange sealing the joint around the outer edge of the door-frame and at the same time strengthening the structure and concealing the connection between the parts. Both the door and the double-walled refrigerator body in which the door-frame is formed are shown lined with asbestos sheets D, to render the walls of the structure non-conductive of heat.

In Fig. 1, the door is shown attached to its door-frame by leaf-hinges E, and the swinging edge of the door is provided with a fitting F, either a lock-member or catch, adapted to coact with a fitting on the adjacent edge of the door-frame. By reference to Figs. 2 and 6, it will be observed that the butts or leaves of the hinges are secured to the sheet-metal walls of the door and door-casing or refrigerator body by screwing or otherwise attaching them to liners G, which are simply metal pieces applied to the under or interior faces of the walls. The fittings F for the handle and locking members are attached in like manner. By this means, the door hinges and fittings are rigidly and permanently attached to the thin sheet-metal walls of the structure, without liability of working loose or tearing out, and without causing the weight of the door or strain on the hinges or fittings to dent the sheet-metal, since the liners G fit closely against the interior sides of the walls, which are clamped between the liners and the hinges or fittings.

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

A refrigerator having a cylindrical body composed of inner and outer curved sheet-metal plates constructed with an opening for a door in one side of said body and a door-frame composed of overlapping portions of said sheet-metal plates extending transversely of the refrigerator walls around said opening, in combination with a door for said opening forming a segment of said body and composed of inner and outer plates curved in conformity with the curvature of said sheet-metal plates, the inner door-plate having a marginal flange extending transversely of the refrigerator walls parallel with said overlapping door-frame-plates and a terminal flange extending parallel with the outer door-plate, the latter having its marginal portion formed with a return bend clasping said terminal flange of the inner door-plate and forming therewith a continuous rigid marginal portion overlapping the edge of the door-frame, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

CHARLES H. BOECK.

Witnesses:

D. R. TARBELL,
A. J. NICHOLS.