

E. RICHARDSON.
REFRIGERATOR COMPARTMENT.
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1,056,583.

Patented Mar. 18, 1913.

FIG. 1.

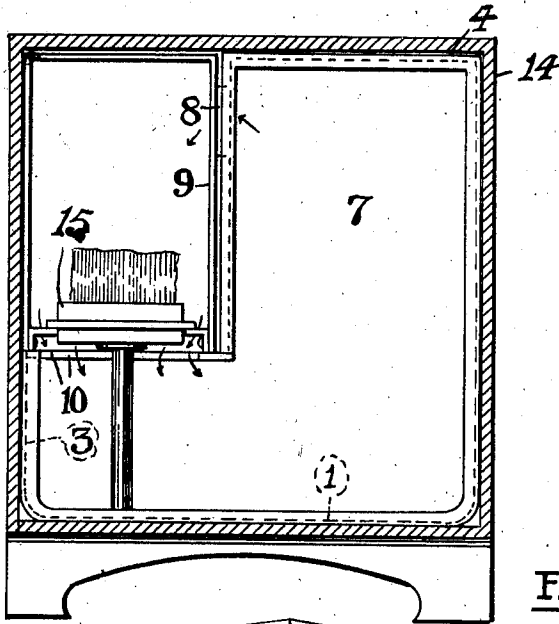
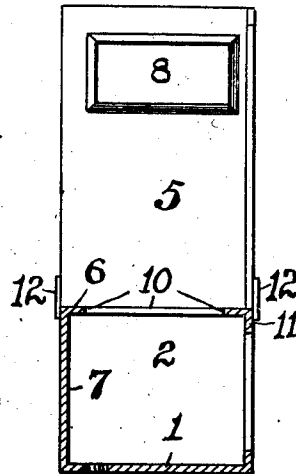
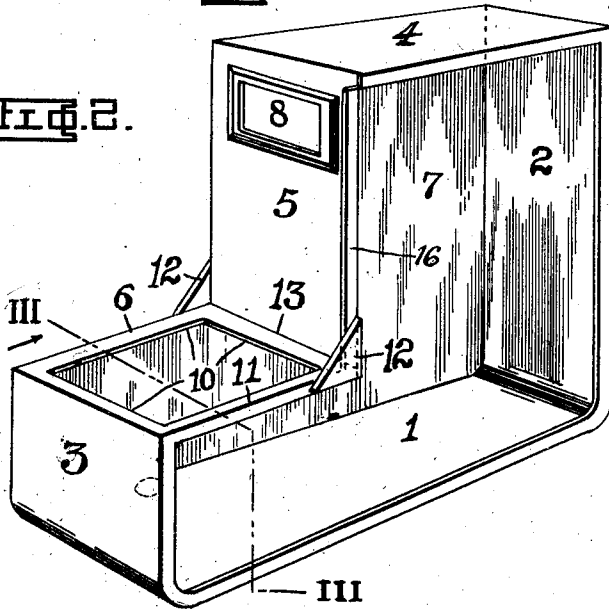


FIG. 3.

FIG. 2.



WITNESSES

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ERNEST RICHARDSON, OF BEAVER FALLS, PENNSYLVANIA.

REFRIGERATOR-COMPARTMENT.

1,056,583.

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To all whom it may concern:

Be it known that I, ERNEST RICHARDSON, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented new and useful Improvements in Refrigerator-Compartments, of which the following is a specification.

My invention relates to refrigerator compartments composed of sheet metal, preferably sheet-steel coated with enamel. It is the principal object to construct an L-shaped enameled sheet-metal refrigerator compartment composed of a single unit. Heretofore, it has been customary to construct L-shaped enameled sheet-steel food-compartments in refrigerators of parts separately enameled and subsequently assembled into L-shape, as, for example, shown in Letters Patent No. 997,210 granted to me July 4, 1911. This method has been necessary because the forward edge of the reëntrant portion of the L-shape would sag and become twisted or warped as the result of the intense heat to which the compartment would be subjected during the baking process.

By my present invention I am enabled to bake the enamel on L-shaped steel compartments, such, for example, as shown on Figure 2, without the reëntrant angle sagging or twisting.

Referring to the accompanying drawings, Fig. 1 is a perspective view of a refrigerator containing one of my improved L-shaped compartments, parts being broken away. Fig. 2 is a perspective view of one of the said compartments. Fig. 3 is a section on the line III—III, Fig. 2.

On the drawing, the compartment has the horizontal bottom 1 from which the vertical long side 2 and the vertical short side 3 extend. From the top of the side 2 the top 4 extends over the bottom 1 and parallel therewith for a portion only of the length thereof. From the end of the top not connected to the side 2 there extends downwardly parallel to the sides 2 and 3 the short side 5 which reaches the level of the top of the side 3 and is connected thereto by the top 6. The rear edges of the bottom, sides, and tops are covered with the back 7, preferably welded thereto; but the manner of connecting the back to the said edges or any of the other contiguous parts of the sides, tops, and bottom together forms no part of the

present invention. The back, bottom, sides, and tops are all made from sheet-metal, such as, sheet-steel composed of one or more parts having their joining ends or edges welded or otherwise secured together into a single structure so as to withstand the heat of the baking or burning furnace.

The side 5 is near its upper end provided with a flanged opening 8 for communication with the upper end of the ice-box 9, and the top 6 has a central opening surrounded by the rear and side horizontal flanges 10 and the front angle piece 11 having its horizontal member bounding the front of the said central opening and its vertical member extending downwardly. The front edges of the bottom, the sides 2 and 3, and the top 4 are turned inwardly, and the front edge of the side 5 is turned outwardly. The said flanges, the flanges about the central opening in the top 6, the angle piece 11, and the flanges around the opening 8 all stiffen the parts adjacent thereto and keep them in shape during the baking process and the subsequent cooling thereof. To further stiffen the lower end of the side 5 and the inner end of the top 6 where they meet to form a reëntrant angle 13, I weld or otherwise secure to their front edge and across their meeting angle the sheet metal brace 12 and I may also provide the rear edges of the side 5 and top 6 with a brace 12. The front brace 12 is very effective since it has considerable surface contact with the compartment as it is welded both to the vertical flange of the angle-piece 11 and to the vertical flange 16 extending outwardly at a right angle from the front edge of the side 5.

The described lining has the L-shaped back wall 7, but no front wall. The bottom wall 1, the top walls 4 and 6, and the side walls 2, 3, and 5, all extending forwardly from and continuously with the rear wall and at right angles thereto. The walls 1, 2, 3, 4, 5, and 6 are connected continuously at their meeting angles.

The refrigerator compartment being assembled or constructed into the L-shaped figure; stiffened and braced substantially as shown, it is coated with enamel and then placed in a suitable furnace, in which the enamel is burned and made into hard glazed porcelain adherent to the sheet metal in the usual manner.

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Without stiffening or bracing the reëntrant angle 13, the angle would not keep the position it had previous to the burning process, and the side 5 and top 6 would become
 5 twisted or warped, more or less distorting the top 4, the side 3, and the back 7. The braces 12 may be removed by a hack-saw or other tool previous to placing the compartment in the casing 14, if found necessary or
 10 advisable. The angle piece 11 may not be desired in the finished refrigerator. In this event it may be readily removed by a hack-saw. In either event, it has, like the braces 12, performed an important function.
 15 The open bottomed ice box 9 rests on or is supported by the flanges 10 and the angle piece 11, if retained. The top 6 consists merely of three or four marginal flanges, the center being open so that the air after
 20 its contact with the ice in the ice-box may pass in unrestricted volume around the edges of the ice-pan 15 to the food-compartment below. By bracing and stiffening the parts about the angle 13 with the flanges 10, the
 25 bracing plates 12, and the angle piece 11, I dispense entirely with any partition in the food compartment in line with the side 5, thereby greatly reducing the expense as compared with that required in the construction of food compartments provided
 30 with small opposing openings connected by short tubes or eyelets. Furthermore, by leaving the space in the food compartment and below the side 5 unrestricted, I provide
 35 for the circulation of the cooled air which passes down through the opening inclosed by the flanges 10 and the angle piece 11.

The opening 8 is also made large so as to facilitate the circulation of the air.

The compartment or lining described has 40 a vertical portion shown at the right of the ice-box in Fig. 1, and a horizontal portion shown below the ice-box.

Other means of bracing and stiffening the reëntrant angle 13 may be devised without 45 departing from the spirit of my invention.

I claim—

An L-shaped refrigerator-compartment, comprising a horizontal bottom, an integral vertical side, a second vertical side parallel 50 with and shorter than said first-mentioned side, an integral cover extending from the top of said first-mentioned side and of less length than said bottom, a third vertical side depending from said top and terminating in the plane of the top of said second side, and being provided with a flanged opening near its upper end, and an integral, apertured top connecting the top of said second side and the bottom of said third side, the space between the bottom of said third side and the said refrigerator-compartment bottom being unobstructed, and said refrigerator-compartment being provided with means for preventing distortion thereof in the region 60 of the meeting edges of said third side and said apertured top.

Signed at Pittsburgh, Pa., this 18th day of March, 1912.

ERNEST RICHARDSON.

Witnesses:

ALICE E. DUFF,
 ELVA STANIEK.