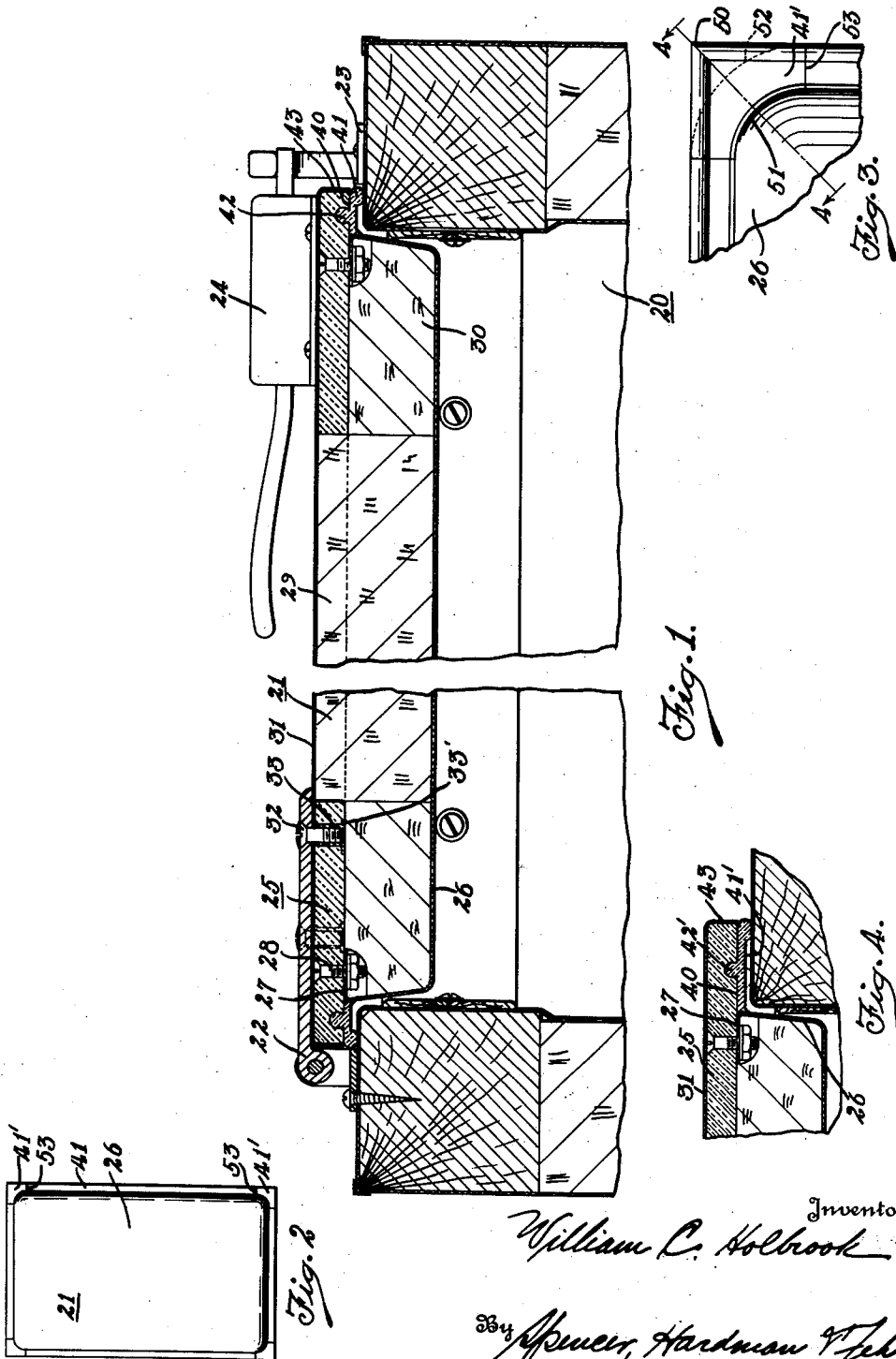


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REFRIGERATING APPARATUS
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REFRIGERATING APPARATUS

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This invention relates to refrigerators and more particularly to a refrigerator door or door opening.

5 An object of this invention is to provide a refrigerator door in which the frame of the door supports a metal pan and in which the exposed parts of the frame are made of some water-proof material, such as a molded composition.

10 Another object of this invention is to provide a frame for a refrigerator door made of molded material.

15 Another object of this invention is to provide a seal for the door opening of a refrigerator which may be readily secured to the member to which it is to be attached, without the use of such attaching means as tacks and the like.

20 Another object of this invention is to provide a seal for the door opening of a refrigerator which is adapted to cover sections of regular and irregular width, which sections may be sections of the door flange usually covered by a door seal.

25 Another object of this invention is to provide a seal for the door opening of a refrigerator which prevents an unsightly exposure of portions of a corner intended to be covered by the seal, but which ordinarily
30 are left uncovered because of the irregularity of the width of such portions.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the
35 accompanying drawings, wherein a preferred form of embodiment of the present invention is clearly shown.

In the drawings:

40 Fig. 1 is a cross sectional view of a portion of a refrigerator embodying my invention;

Fig. 2 is a reduced elevation of the door of a refrigerator embodying my invention;

45 Fig. 3 is an enlarged detailed elevational view of a corner of the door shown in Fig. 2, and

Fig. 4 is a cross-sectional view taken along the line 4-4 of Fig. 3.

50 The refrigerator may comprise a cabinet generally designated as 20 to which a door

generally designated as 21 may be hinged. The cabinet may support one or more hinges designated as 22 which support the door 21 and the cabinet may also have a portion of the latch, generally designated as 23, with which the other portion of the latch generally designated as 24 may cooperate to fasten and unfasten the door. The door may comprise a frame generally designated as 25 which, in this instance, is a rectangular flat frame made of some water-proof material such as molded material. A metal pan, designated as 26, which may be provided with flanges designated as 27, may be secured to the frame 25 by means of the bolts 28 which pass thru the frame 25 and are secured thru holes in the flanges 27. The frame 25 and the pan 26 may be assembled together before other parts of the door are secured thereto.

After the pan 26 and the frame 25 have been secured together, insulating material such as corkboard 29 and 30 may be inserted into the cavity of the pan and frame. The frame 25 may then be covered by another pan 31 the flanges 43 of which may be adapted to fit over the edges of the frame 25. The pan 31 may be secured to the frame 25 by screws 32 which may also secure the hardware, such as the hinges 22 and the latch 24. These screws 32 may be embedded in the frame 25, and, if necessary, metal re-enforcing collars 33 may be inserted in the frame 25 before assembly, which collars 33 may have a non-rotatively engaging part, such as a non-circular flange 33' to be countersunk in the frame.

The pan 26 does not completely cover the frame 25 and leaves a margin 40 uncovered by the pan. This margin 40 may be the portion of the door which is adapted to cooperate with a portion of the cabinet 20 to form a tight joint. In order to form a seal between the margin 40 and the cabinet 20 a sealing strip 41 may be secured either to the door or to the cabinet and is shown in this instance as secured to the door. If placed on the door, the strip 41 may cover part or all of the margin 40. The sealing strip 41 may be provided with a bead 42 adapted to fit in a recess made in the member to which it is

to be secured. When placing the sealing strip 41 on the member to which it is to be secured, the strip is stretched longitudinally so that the bead 42 may be placed in the recess provided therefor, so that when the strip contracts the bead 42 expands and is held securely in the recess. Any other method of placing the bead 42 in its recess may be used. The bead may be a continuous one, or it may comprise short sections forming individual projections with enlarged heads.

When it is desired to cover the entire margin 40 of the door, I may provide a seal which is adapted to cover portions of irregular width, such as at the corners of the door. As shown in Figs. 2, 3, and 4, the door 21 may have an outer contour with sharp corners while the inner edge of the margin 40 may be bounded by the corner of the pan 26 having a rounded contour as at 51. Ordinarily a seal of uniform width is used and by so doing portion of the margin is left uncovered. For instance, by such practice the outer edge of the seal would follow the dotted line 52 in Fig. 3, and would leave the portion beyond the line 52 in an unsightly condition uncovered by the seal.

According to my invention, I form a seal adapted to cover such irregular areas. If the area occurs at the corners of the door such as at 50, the seal may be formed with contours to coincide. As an embodiment, I may form special corner pieces 41' to be secured at the corners, and these may be shaped to coincide with the boundaries of the irregular area either before or after they have been secured in place. These pieces may have beads 42' corresponding to bead 42 of the other part of seal 41. The sections 40 of the flange having a regular width between the sections 40' having irregular width may be covered by seal 41 of regular width. These sections may be integral or may be joined at 53 to form the entire seal.

It is seen that I have provided a door in which those portions of the frame-work which are not covered by the metal part, such as a pan 26 are made of molded material having water-proof qualities, and that therefore the door is not liable to become warped by climatic conditions.

While the form of embodiment of the present invention as herein disclosed, constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow:

What is claimed is as follows:

1. A refrigerator door comprising a frame, a pan secured to said frame, said pan being provided with a flange having a section of irregular width and a section of regular width, and a seal for said door covering all of said sections.

2. A refrigerator door having a flange comprising a section of irregular width and

a section of regular width, and a seal covering all of said sections.

3. A refrigerator door comprising a frame and a pan secured thereto to leave a flange having a section of irregular width and a section of regular width, and a seal covering all of said sections.

4. A refrigerator door comprising a frame, a pan secured to said frame, said pan being provided with a flange having section wider at a corner of the door than a section at the edges of the door adjoining said corner, and a seal covering all of said sections.

5. A seal for a polygonal refrigerator door having flanges of regular width along the straight sides and having flanges of irregular widths at the corners, said seal comprising strips of material each having a resilient projection provided with an enlarged head, said projection to be inserted in a recess in said door, and corner pieces of widths corresponding to said irregular widths of said flanges at the corners, said corner pieces also each having an enlarged head similar to the enlarged heads of said strips.

6. A refrigerator door comprising a polygonal frame having recesses, a pan enclosing one side and the outer edge of said frame, a second pan secured to the opposite side of said frame and leaving a flange, said flange having portions of regular widths along the straight sides and portions of irregular widths at the corners of said frame, a seal covering said flange, said seal comprising strip portions of material each having a regular width corresponding to the regular width portions of said flange and having a resilient projection provided with an enlarged head, said projection to be inserted in some of said recesses in said frame, said seal also having corner portions of widths corresponding to said irregular width portions of said flange at the corners, said corner portions of said seal also each having an enlarged head similar to the enlarged heads of said strip portions for insertion in some of said recesses.

In testimony whereof I hereto affix my signature.

WILLIAM C. HOLBROOK.