Feb. 4, 1936. I. COHEN 2,029,755

REFRIGERATOR DOOR CONSTRUCTION

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Fig. 1.

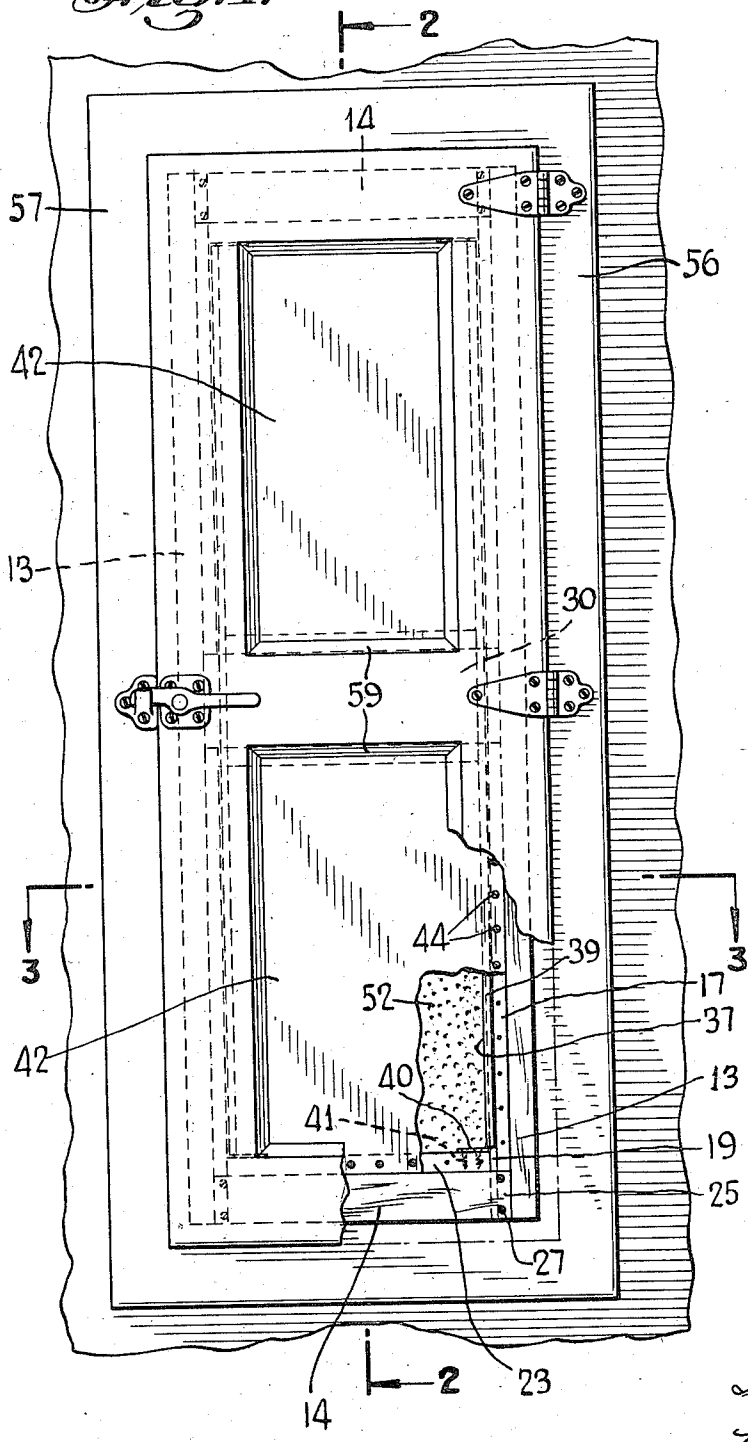
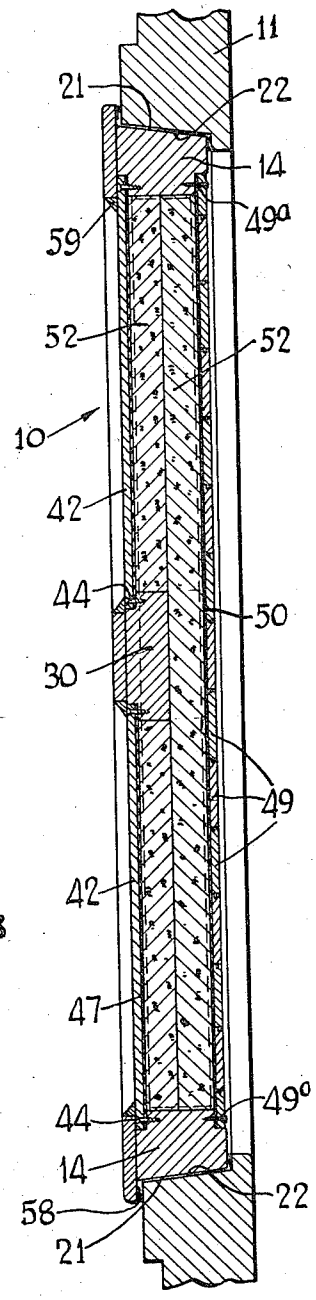


Fig. 2.



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Fig. 3.

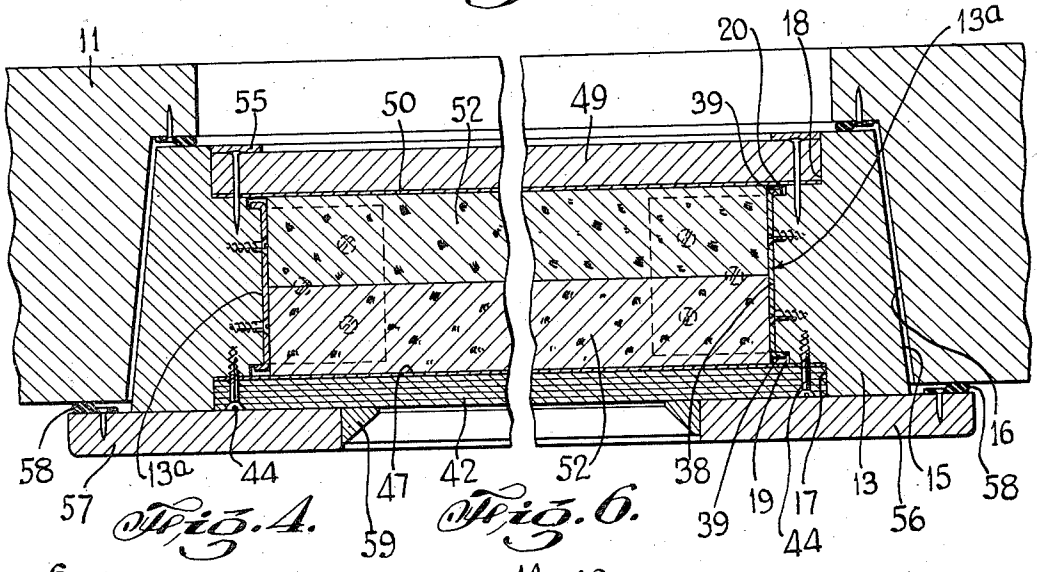


Fig. 4.

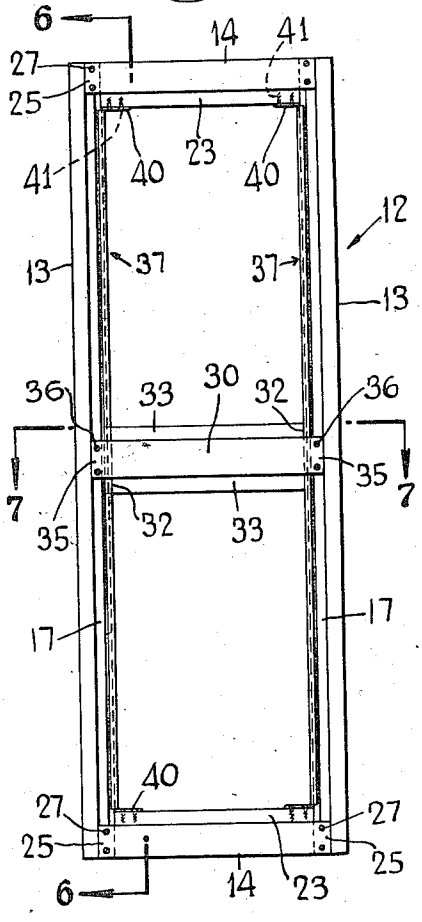


Fig. 6.

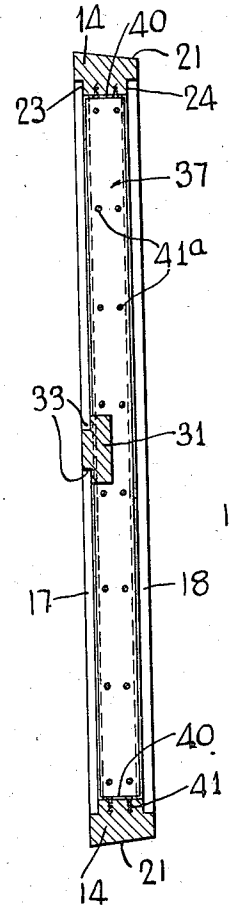


Fig. 5.

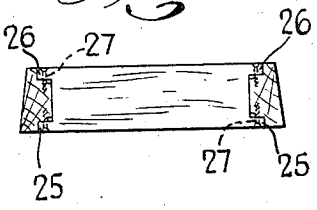
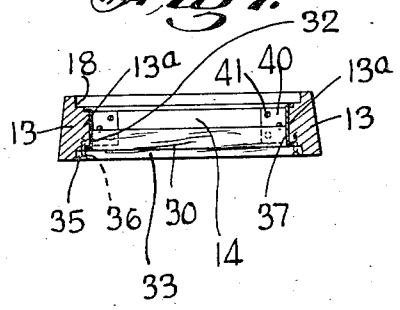


Fig. 7.



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2,029,755

REFRIGERATOR DOOR CONSTRUCTION

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Application February 26, 1934, Serial No. 712,865

12 Claims. (Cl. 20—35)

This invention relates to closure members and is particularly directed to refrigerator door construction.

An object of this invention is to provide a door of the character described having highly improved means for preventing said door from sagging, warping and the like defects.

A further object of this invention is to provide a strong and rugged door construction of the character described which shall comprise comparatively few and simple parts, be relatively inexpensive to manufacture, easy to assemble, neat in appearance, and withal practical and efficient to a high degree.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawings, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front elevational view of a door embodying the invention with parts broken away to show the interior construction;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 1;

Fig. 4 is a front elevational view of the door frame;

Fig. 5 is a top plan view of the frame shown in Fig. 4;

Fig. 6 is a cross-sectional view taken on line 6—6 of Fig. 4; and

Fig. 7 is a cross-sectional view taken on line 7—7 of Fig. 1.

Referring now in detail to the drawings, 10 designates a door embodying the invention mounted on a door jamb 11. The door 10 comprises a pair of similar, symmetrically disposed stiles or side members 13 and a pair of top and bottom members 14. The stile members 12 may be formed with inwardly bevelled outer surfaces 15 corresponding to the bevelled side surfaces 16 of the door jamb. Each stile member 13 is further formed on the inner side thereof with a pair of symmetrical shoulders or rabbets 17 and 18 and with further reduced shoulders or rabbets 19 and 20 for the purpose hereinafter explained.

The top and bottom members 14 are formed with outer bevelled surfaces 21 corresponding to the top and bottom bevelled surfaces 22 of the door jamb. Said top members are further formed with a pair of similar shoulders 23 and 24 at the inner sides thereof and with projections 25 and 26 at the ends thereof. The projections 25 and 26 are adapted to be received within the rabbets or shoulders 17 and 18 of the stiles 13, the members 14 being screwed to the upper and lower end of said stiles by screws extending through said projections.

A central rail 30 located at about the middle of the frame is provided with a portion 31 disposed between said frames and having end surfaces 32 spaced from the inner surfaces 13a of said frame. The member 30 is furthermore formed at the top and bottom of the front face thereof with rabbets or shoulders 33, aligned with the shoulders 23 and 17 of the members 14 and 13, respectively. The front portion of the member 30 is provided with extensions 35 at the ends thereof contacting the shoulder portions 17 of the stile members 13 and being secured thereto by screws 36.

A pair of similar symmetrically disposed elongated metal channels 37 are attached to the inner surfaces 13a of the stiles 13. Each channel 37 is provided with a portion 38 contacting one of the surfaces 13a and with flanges 39 received within the shoulders 19 and 20. At the upper ends thereof each member 37 is provided with an inwardly projected tab or flange 40 contacting an inner surface of one of the members 14. The members 37 may be fixed to the frame by means of screws 41 extending through said flanges 40 and into the members 14, and also by screws 41a passing through the portions 38 of said members 37 and into the surface 13a of the stiles 13.

At the front side the door frame is mounted a pair of similar panels 42, each preferably comprising a plurality of veneer layers glued together. One panel sets in between the central rail 30, the stiles 13 and the upper member 14, and the other panel sets in between the central rail 30, the stiles 13 and the lower member 14. These panels contact the shoulders 33, 23 and 17 and are held in place by means of screws 44 screwed through said panels and into said shoulders. A sheet 47 of tar paper or the like, may be interposed between each panel 42 and the shoulders 17, 23 and 33 to provide an air tight seal.

Covering the rear of the door frame are a plurality of parallel boards 49 having tongue and groove connections and contacting the shoulders 18 and 24 of the stiles 13 and upper and

lower members 14. A sheet 50 of tar paper may likewise be interposed between said boards 49 and the shoulders 18 and 24 to provide an air tight joint at the rear of the door.

Between the wall formed by the boards 49 and the panels 42 are deposited blocks 52 of cork preferably previously dipped in hot asphalt. The blocks 52 may be in two layers, one layer being located on opposite sides of the central rail 30 and the other layer being disposed adjacent to the rear wall of the door. The boards 49 may be attached to the door frame by means of nails 49a driven into the shoulders 24 and 18. Said nails may be covered by stripping 55 located around the inner perimeter of the door frame.

There may be further attached to the front of the door frame at the top, bottom, central portion, and sides thereof panelling 56 projecting beyond the door frame as at 57 and having a rubber gasket 58 attached to the inner surface of said projecting portion contacting the front surface of the door jamb. Said panelling may be attached to the door frame in any suitable manner. A molding member 59 of any suitable construction may furthermore be attached to the inner edge of the panel 56.

It will be understood that the metal channels serve to prevent sagging, twisting or turning of the door and that the panels 42 likewise serve to prevent the door from getting out of shape after long periods of use. The screws and nails which attach the members 14 to the stiles 13 and the panels 42 and boards 49 to the frame members, it will be noted, are entirely hidden by the panelling 56 and stripping 55.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

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

1. A refrigerator door comprising a frame having a pair of parallel stile portions and a pair of members at the top and bottom connected at the ends thereof to said stile portions, and a pair of metal members each attached to an inner surface of one of the stile members, and having extensions at the upper and lower ends thereof contacting the inner surface of the top and bottom portions and attached thereto.

2. A door comprising a frame having side, top and bottom members, and a pair of elongated channels on the inner sides of said side members, each channel having outwardly extending, parallel flanges, inner portions of said side members being received between said flanges, and parallel portions extending inwardly from the upper and lower ends of said channels contacting the inner surfaces of said top and bottom members.

3. A door comprising a frame having side, top and bottom members, and a pair of elongated channels on the inner sides of said side members, each channel having outwardly extending, parallel flanges, inner portions of said side members being received between said flanges, and parallel portions extending inwardly from the upper and lower ends of said channels contacting the inner surfaces of said top and bottom members, a central cross member attached at the ends thereof to said side members, and a pair of multiple ply veneered panels attached to said frame above and below said central member.

4. A frame comprising a pair of side members, top and bottom members attached at the ends thereof to the ends of said side members, a central member attached to the side members and disposed parallel to said top and bottom members, a panel attached at the edges thereof to said central member, top member and side members, a second panel attached at the edges thereof to said central member, side members and bottom member, each of said panels comprising a multiple ply veneer.

5. A frame comprising a pair of side members, top and bottom members attached at the ends thereof to the ends of said side members, a central member attached to the side members and disposed parallel to said top and bottom members, a panel attached at the edges thereof to said central member, top member and side members, a second panel attached at the edges thereof to said central member, side members and bottom member, each of said panels comprising a multiple ply veneer, and a sheet of tar paper being interposed between each panel and the portion of the frame to which it is attached.

6. A frame comprising a pair of side members, top and bottom members attached to the ends of said side members, a central member attached to the side members and disposed parallel to said top and bottom members, a panel attached at the edges thereof to said central member, top member and side members, a second panel attached at the edges thereof to said central member, side members and bottom member, each of said panels comprising a multiple ply veneer, and a pair of elongated metallic members attached to the inner surfaces of said side members and having outwardly extending parallel flanges contacting side surfaces of said side members, and integral parallel portions at the opposite ends thereof contacting the inner surfaces of said top and bottom members.

7. A refrigerator door comprising a frame having a pair of side members and top and bottom members attached at the ends thereof to the upper ends of said side members, a central member attached at the ends thereof to the front of said side members and disposed parallel to said top and bottom members, a pair of panels attached to the front of the frame above and below said central member, a pair of metallic reenforcing members attached to the inner surfaces of said side members and having angular extensions at the ends thereof contacting the inner surfaces of said top and bottom members.

8. A refrigerator door comprising a frame having a pair of side members and top and bottom members attached at the ends thereof to the upper ends of said side members, a central member attached at the ends thereof to the front of said side members and disposed parallel to said top and bottom members, a pair of panels attached to the front of the frame above and below said central member, a pair of metallic re-enforcing members attached to the inner surfaces of said side members and having angular extensions at the ends thereof contacting the inner surfaces of said top and bottom members, a wall attached to the rear of said frame comprising a plurality of boards having tongue and groove connections, and blocks of cork disposed between said panels and said rear wall.

9. A refrigerator door comprising a frame having a pair of side members and top and bottom members attached at the ends thereof to the upper ends of said side members, a central member attached at the ends thereof to the front of said side members and disposed parallel to said top and bottom members, a pair of panels attached to the front of the frame above and below said central member, a pair of metallic reenforcing members attached to the inner surfaces of said side members and having angular extensions at the ends thereof contacting the inner surfaces of said top and bottom members, a wall attached to the rear of said frame comprising a plurality of boards having tongue and groove connections, blocks of cork disposed between said panels and said rear wall, and sheets of tar paper disposed between said panels and said frame and between said rear wall and said frame.

10. A refrigerator door comprising a frame having a pair of side members and top and bottom members attached at the ends thereof to the upper ends of said side members, a central member attached at the ends thereof to the front of said side members and disposed parallel to said top and bottom members, a pair of panels attached to the front of the frame above and below said central member, a pair of metallic re-enforcing members attached to the inner surfaces of said side members and having angular extensions at the ends thereof contacting the inner surfaces of said top and bottom members, and side flanges receiving therebetween portions of said side members, a wall attached to the rear of said frame comprising a plurality of boards having tongue and groove connections, blocks of cork disposed between said panels and said rear wall, sheets of tar paper disposed between said panels and said frame and between said rear wall and said frame, and panelling attached to the front of said side, top and central member and extending therebeyond and covering the edges of said panels.

11. A refrigerator door comprising a frame having a pair of side members and top and bottom members, each side member being formed on the inner surface thereof with parallel elongated shoulders, said top and bottom members having at the ends thereof parallel extensions contacting the opposite ends of said shoulders and being attached thereto, and elongated metal channels having parallel, outwardly extending flanges receiving said side members and inwardly extending flanges contacting the inner surfaces of said top and bottom members.

12. A refrigerator door comprising a frame having a pair of side members and top and bottom members attached at the ends thereof to the upper ends of said side members, a central member attached at the ends thereof to the front of said side members and disposed parallel to said top and bottom members, a pair of panels attached to the front of the frame above and below said central member, a pair of metallic reenforcing members attached to the inner surfaces of said side members and having angular extensions at the ends thereof contacting the inner surfaces of said top and bottom members, and side flanges receiving therebetween portions of said side members, a wall attached to the rear of said frame comprising a plurality of boards having tongue and groove connections, blocks of cork disposed between said panels and said rear wall, sheets of tar paper disposed between said panels and said frame and between said rear wall and said frame, and panelling attached to the front of said side, top and central member and extending therebeyond and covering the edges of said panels.

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