

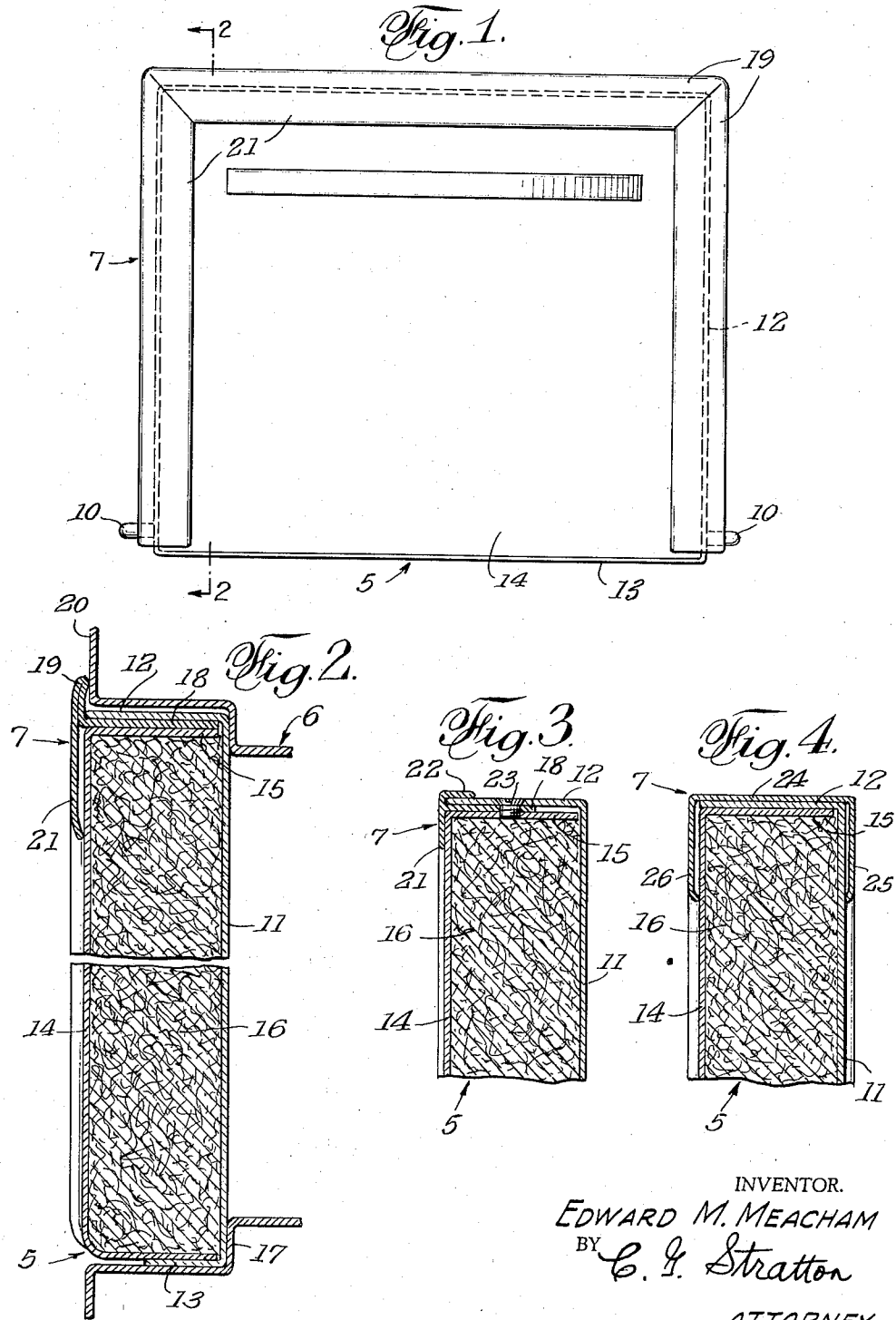
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DOOR STRUCTURE

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## DOOR STRUCTURE

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3 Claims. (Cl. 20—16)

This invention relates to a door structure, the door being of the type ordinarily used in household stoves or ranges, as well as cabinets, refrigerators, etc.

An object of the present invention is to provide a door that is seamless on its inner face and in which the seams formed by the inner and outer panels of the door are effectively concealed.

Another object of the invention is to provide seam concealing means in a door having inner and outer panels which also seals around the door edge where the same closes an oven or other enclosure.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes, preferred embodiments of the present invention, which are given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a front elevational view of a door provided with a seam-concealing molding according to the present invention.

Fig. 2 is an enlarged and broken cross-sectional view as taken on line 2—2 of Fig. 1.

Figs. 3 and 4 are cross-sectional views of modifications.

The present double panel door structure comprises, generally, a door 5, the same being shown in operative association with an oven 6, and a molding 7 applied to the door according to the present invention.

The door 5 is of the drop type and is swingable on trunnions 10, relative to the oven 6, between the closed position shown in Fig. 2 and an open position giving access to the interior of the oven.

The door 5 that is illustrated comprises an inner panel 11 that is formed with a peripheral flange that encompasses the top and the two sides of the door. Such flange, as shown at 12, extends forwardly. A shallower flange 13 is provided at the bottom of the door. Said door further includes an outer panel 14 with a marginal flange 15 that resides inward of the peripheral flanges 12 and 13 of the inner panel. In this manner, an interior space is provided between the inner and outer panels, and the same, in the usual manner, is filled with a heat-insulating material 16, such as rock wool, spun glass fibers, and the like.

It will be noted that the above-described door is reversed with respect to the usual oven door, since the latter has the outer panel flanges outside of the peripheral flanges of the inner panel, thereby producing a seam or crease on the inner side of the door. In the present door construction, such crease is on the outside, rather than on the inside, and the same is incapable of filling with fats and greases and the condensed vapors produced

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in the oven 6 as is the case in the conventional door. It will also be noted that a space is provided between the flanges 12 and 15 in the formation of the door panel peripheral flanges. The same is clearly shown in Figs. 2 and 3.

The particular construction of the oven is not material to the present invention, it being understood that the same, in the usual way, is provided with a wall 17 against which the inner panel 11 of the door closes. Since the seam or crack between the panels is now outwardly directed and would be visible from the outside, the same is concealed by the molding 7 as herein contemplated. The oven 6 may be any comparable enclosure.

As shown in Figs. 1 and 2, said molding may comprise a leg 18 disposed between the marginal flanges 12 and 15 of the door, an outwardly directed flange 19 that extends beyond the marginal edges of the door and in overstanding relationship with the wall 20 of the oven, and an inwardly directed flange 21 forming a planar extension of the flange 19. Thus, the molding 7 that is illustrated in Figs. 1 and 2 is of generally T-shaped form, and the same is preferably rolled stainless steel molding or may be made of sheet metal and bent, as shown.

As will be seen from Fig. 1, the molding 7 is in the form of an inverted U and the same completely conceals the seam along the top and the sides of the door. It is not necessary to conceal the bottom seam because, as above described, the flange wall 13 is considerably shallower than the thickness of the door and would not ordinarily be visible from the outside.

The flanges 19 and 21 may be somewhat curled back, as can be seen in Fig. 2, so that said flanges respectively have intimate contact with the oven wall 20 and the front panel 14 of the door 5. Thus, the flange 19 serves to seal around the door in addition to the sealing effected by the door with the oven wall 17, and the flange 21 intimately hugs the front panel of the door to obviate introduction of foreign material between said flange and the door panel 14.

As shown in the modification of Fig. 3, the outer flange may be doubled back, as at 22, to overstand the outer flange 12 of the inner panel 11 of the door. The molding 7 shown in said Fig. 3 is in the form of an extrusion rather than the sheet metal form, as in Fig. 2. The modification of Fig. 3 also shows a fastening screw 23 that connects the door panel and the molding, and it will be realized that as many of these fastening screws as may be needed may be applied to connect the elements of the door in all forms of the invention.

In the modification of Fig. 4, the molding may have a U-shaped cross-section and encompass the marginal edges of the door, the same being formed with a web 24 and inner flange 25 and a similar outer flange 26. In this case, the flanges of the inner and outer panels 11 and 14 may have intimate contact and without the space that is needed for the use of moldings that are entered in the seam between the door panels.

It will be realized that the door provided is seamless on the inside and, therefore, is more cleanly than doors having seams, and that the outside seam that is formed by the assembly of the inner and outer panels is not only effectively concealed, but the concealing means has both utility and good appearance.

While the foregoing specification illustrates and describes what I now contemplate to be the best modes of carrying out my invention, the constructions are, of course, subject to modification without departing from the spirit and scope of my invention. Therefore, I do not desire to restrict the invention to the particular forms of construction illustrated and described, but desire to cover all modifications that may fall within the scope of the appended claims.

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

1. In a rectangular insulated door adapted to loosely fit a rectangular opening in an enclosure, said door being hinged along one edge and adapted to swing on its hinge outwardly from said rectangular opening, said door comprising inner and outer panels, and heat insulation between said panels, the improvement that comprises marginal flanges along all four edges of each panel and directed to interfit over the insulation, the interfitting flanges along the door edge opposite the hinged edge and along the adjacent side edges being spaced to define a U-shaped space that is coextensive with said opposite and side edges, and a U-shaped molding having a T cross-section disposed with the leg of the T in said U-shaped space, with the inner arm of the T in over-  
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standing relation to the marginal portions of the inner panel, and the outer arm of said T extending outwardly of the peripheral edges of the door and adapted to seal against the outer wall of the enclosure adjacent to the opening therein when the door is disposed in said opening.

2. A door comprising inner and outer rectangular panels, interfitted marginal flanges on said panels and along all four marginal edges of the door, a U-shaped molding disposed around three of the marginal edges of the door in position to conceal the seam defined between said interfitted flanges along said three marginal edges, the outer peripheral edge of the molding being disposed outwardly of the marginal edges of the door, a portion of said molding being disposed between said interfitted

flanges, the molding being of generally T cross-section and the leg of the T constituting the portion that is disposed between said interfitted flanges, the arms of the T being generally parallel to the outer face of the outer panel and intimately in contact therewith, and one arm extending outwardly past the door edge and adapted to seal against an enclosure when the door is closed.

3. A door comprising inner and outer rectangular panels, interfitted marginal flanges on said panels and along all four marginal edges of the door, a U-shaped molding disposed around three of the marginal edges of the door in position to conceal the seam defined between said interfitted flanges along said three marginal edges, the outer peripheral edge of the molding being disposed outwardly of the marginal edges of the door, a portion of said molding being disposed between said interfitted flanges, the molding being of generally T cross-section and the leg of the T constituting the portion that is disposed between said interfitted flanges, the arms of the T being generally parallel to the outer face of the outer panel and intimately in contact therewith, and one arm extending outwardly past the door edge and bent back into engagement with the door edge.

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