

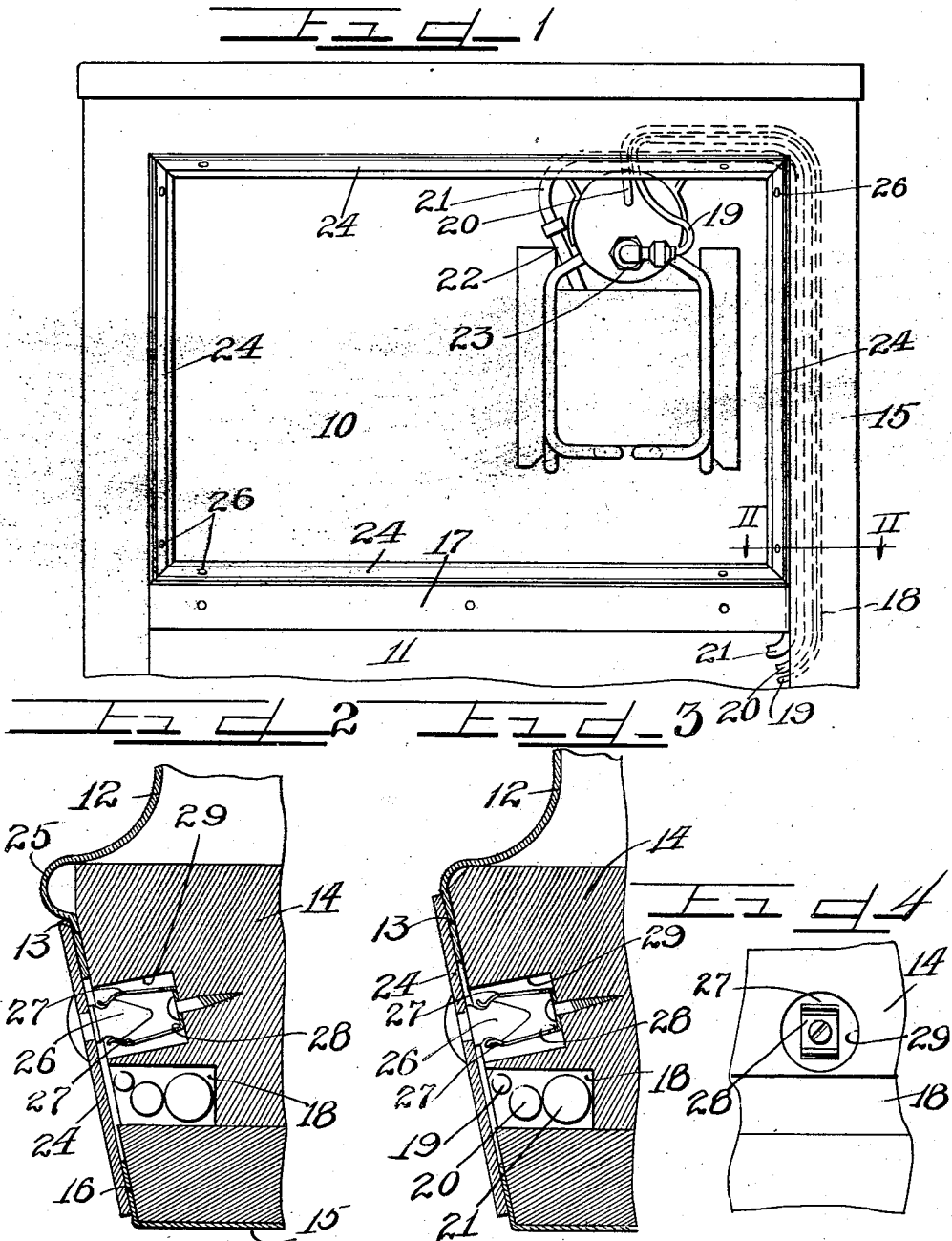
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REFRIGERATOR THROAT LINING

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REFRIGERATOR THROAT LINING

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5 Claims. (Cl. 220—9)

This invention relates to a refrigerator box construction for facilitating the assembly and servicing of a refrigerating apparatus therein.

It is an object of this invention to provide a refrigerator box construction adapted to receive a completely set up and tested refrigerating apparatus of the type wherein the power plant and condenser is disposed at a distance from the freezer and connected thereto by tubing and control wiring, provision being made in the box to receive said connections in such a way as to be readily positioned and removed without necessitating the separation of the sealed connections. Such an arrangement has the important advantage that the refrigerant can be sealed into the refrigerating apparatus and the whole unit can be tested prior to assembly in the box and can thereafter be removed at any time for adequate inspection, and test at a properly equipped service station instead of having to do the work in the owner's home. To accomplish this result a conduit channel is formed in the box framework, preferably, in the throat of the door opening, and this channel is normally covered by an easily removable throat lining which also serves to cover the edges of the inner or compartment lining and the outer casing.

It is accordingly an object of this invention to provide an improved throat lining, and fastening means therefor, for the door frame or opening into a refrigerator compartment, the lining being arranged for ready removal to facilitate the removal or assembly of refrigerant and control conduits extending from a separate machinery compartment to a freezer or evaporator unit in the refrigerated compartment.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawing.

This invention (in a preferred form) is illustrated in the drawing and hereinafter more fully described.

On the drawing Figure 1 is a partial front elevation of a refrigerator box, with the closure omitted, showing the relationship of the throat lining of this invention to the refrigerant conduit channel leading to the freezer unit.

Figure 2 is a fragmentary enlarged section on the line II—II of Figure 1 illustrating the throat lining fastening means in elevation.

Figure 3 is a fragmentary section similar to Figure 2 showing a slightly different form of compartment lining.

Figure 4 is a fragmentary view of the socket portion of one of the throat lining fasteners.

As shown a refrigerator cabinet or box of the metal clad type has been chosen for illustrative purposes. Such a cabinet includes a refrigerating chamber or compartment 10 and a machinery compartment 11 separated therefrom. The compartment 10 is formed with a lining 12 which is preferably porcelain enameled sheet metal, the open end edges 13 of which overlap corner or door framing posts 14.

Similarly the external metal covering or casing 15 is applied with its edges 16, defining the compartment opening, overlapping the corner post structure but spaced from the inner lining edges 13. The lower part or sill of the compartment opening is formed as a separate removable panel 17.

A channel 18 is formed in one of the corner posts 14 between the lining and covering edges 13 and 16, to receive supply and return refrigerant conduits 19 and 20 as well as a control conduit 21 which may be either an insulated electrical conduit or a pressure tube in accordance with the type of pressure or temperature control, which as shown comprises a thermostat 22 associated with a freezer unit 23 to which the upper ends of the conduits 19 and 20 are connected. The channel 18 extends beneath the sill side panel 17 into the machinery compartment, and at its upper end preferably extends around the upper corner of the compartment opening to a position adjacent the top of the freezer unit.

Since the channel is positioned in the door frame between the edges of the compartment lining and the outer casing, it is normally covered by throat lining or removable trim strips 24 which finish off the door frame or opening. These strips may be of wood or molded composition if desired but are preferably molded of bakelite or other composition material, the strips being finished either to harmonize or contrast with the balance of the cabinet. The throat lining laps over the edges 13 and 16 as shown in Figures 2 and 3, the difference between these figures residing in the bead 25 formed in the compartment lining 12 in Figure 2.

The throat lining should be readily removable to facilitate access to the channel 18 for servicing, as by exposing the channel the freezer and compressor units can be removed together without disconnecting the connecting tubing with a consequent loss of some refrigerant and contamination of the remaining refrigerant by the admixture of air. In order to accomplish this

result, the throat lining is mounted by means of a series of spring fasteners such for example as are shown in Figures 2 and 4. These fasteners comprise a spear or wedge shaped male member 5 26 which is riveted or otherwise mounted to the throat lining and is pushed between the curved prongs 27 of a spring socket or female member 28 mounted in a recess 29 in the door framing. It will, of course, be evident that the female 10 member can be applied to the throat lining and the male member in the recess. Other forms of snap fasteners can also be used to retain the throat lining in place while rendering it readily detachable.

15 It will thus be seen that I have invented an improved refrigerator box structure wherein the freezer unit can be disposed at a distance from the compressor while being assembled as a complete unit or chassis separate from the box and 20 easily assembled therein by the ready removal and replacement of resiliently held trim members covering a channel provided for the necessary conduits connecting the freezer unit to the compressor.

25 I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and we, therefore, do not purpose limiting the patent 30 granted hereon otherwise than necessitated by the prior art.

I claim as follows:

35 1. A throat lining for refrigerator boxes, comprising a box having a frame defining a compartment opening, a compartment lining having 40 edges overlapping the opening in said frame, an outer casing having edges also overlapping the opening in said frame, a conduit channel formed in said frame between the edges of the lining and casing, removable trim covering the channel and the edges of the lining and casing, and separable means for yieldingly retaining said removable

trim in position, said means being separable and the separate parts thereof being rigidly attached to the frame and trim respectively.

5 2. A throat lining for refrigerator boxes comprising a box having a frame defining a compartment opening, a compartment lining having edges overlapping the opening in said frame, an outer casing having edges also overlapping the opening in said frame, a conduit channel formed in said frame between the edges of the lining 10 and casing, removable trim covering the channel and the edges of the lining and casing, and separable snap fasteners for yieldingly retaining said removable trim in position, said means being separable and the separate parts thereof being 15 rigidly attached to the frame and trim respectively.

3. A throat lining for refrigerator boxes comprising a box frame defining a compartment opening, a throat lining applied to said frame 20 about said opening, a conduit channel formed in said frame beneath said lining, and separable tensioned means for yieldingly retaining said throat lining in place over said channel, the separate parts of said means being rigidly secured 25 to the frame and the lining respectively.

4. A throat lining for refrigerator boxes comprising a box frame defining a compartment opening, a throat lining applied to said frame 30 about said opening, a conduit channel formed in said frame beneath said lining, and snap fasteners for yieldingly and removably retaining said throat lining in place over said channel.

5. A throat lining for refrigerator boxes comprising a box frame defining a compartment 35 opening, a throat lining applied to said frame about said opening, and separable tensioned means for yieldingly retaining said throat lining in place the separate parts of said means being rigidly secured to the frame and the lining 40 respectively.

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