

Jan. 6, 1953

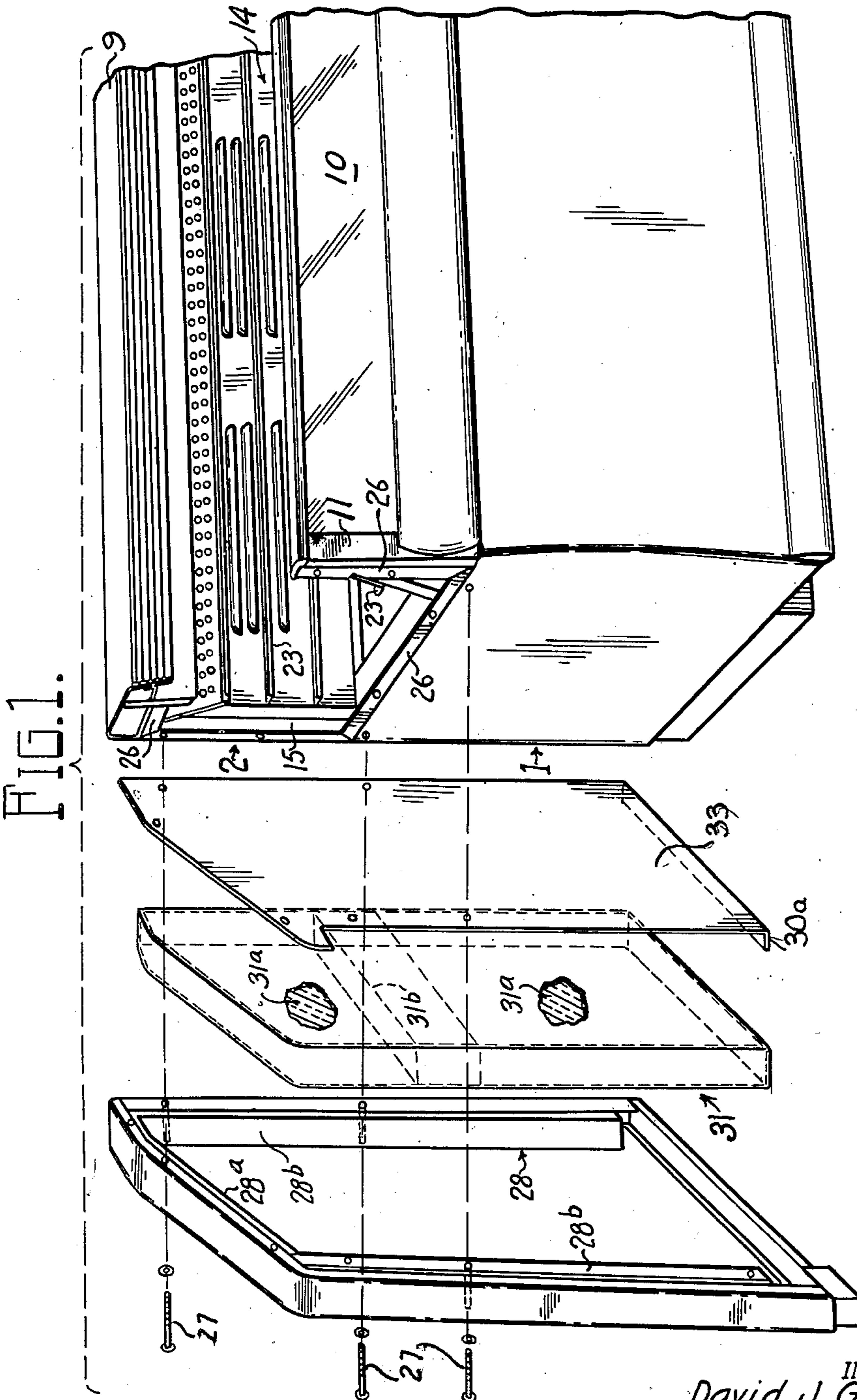
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2,624,649

SECTIONAL REFRIGERATED DISPLAY CASE

Filed April 13, 1950

4 Sheets-Sheet 1



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FIG. 3.

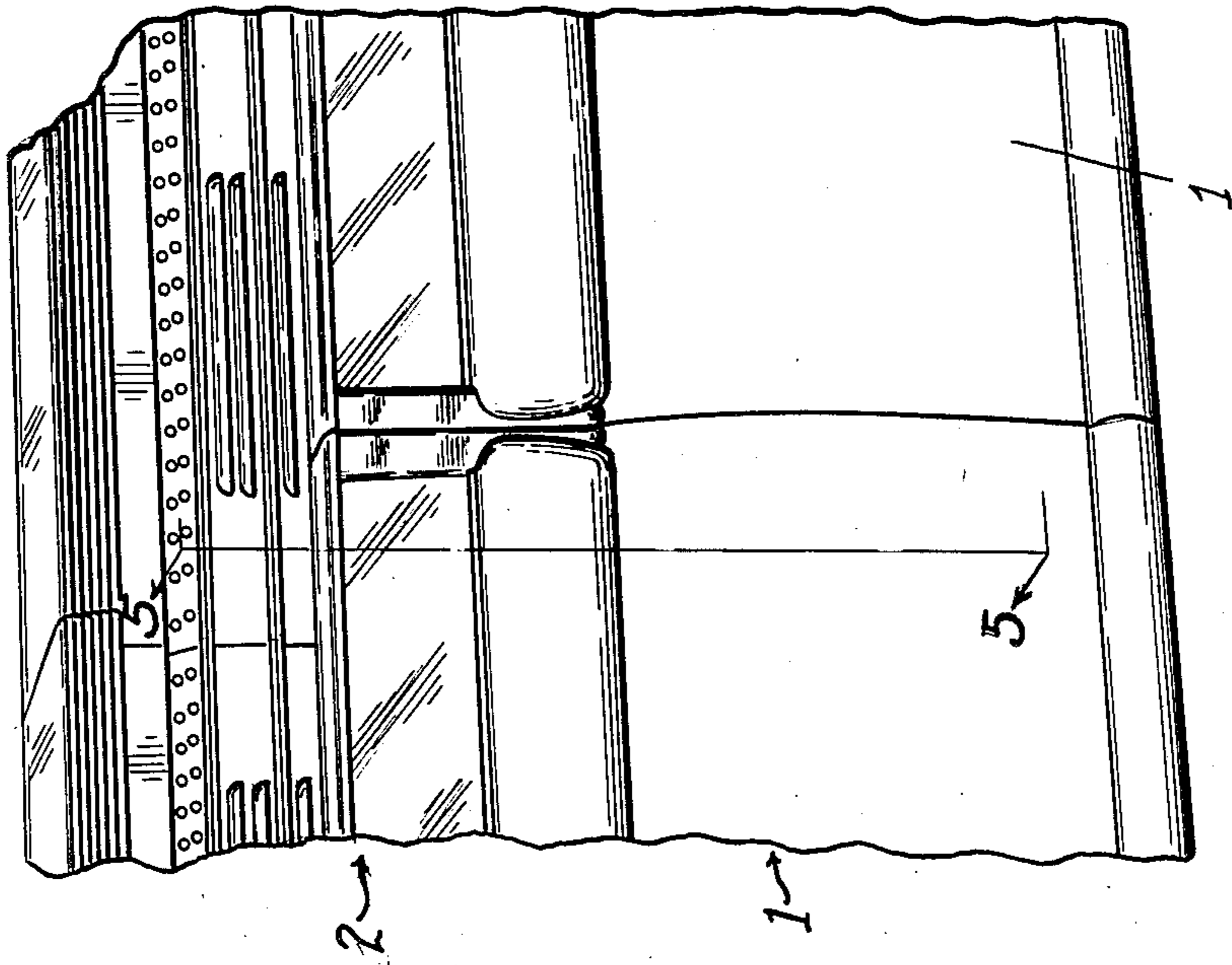
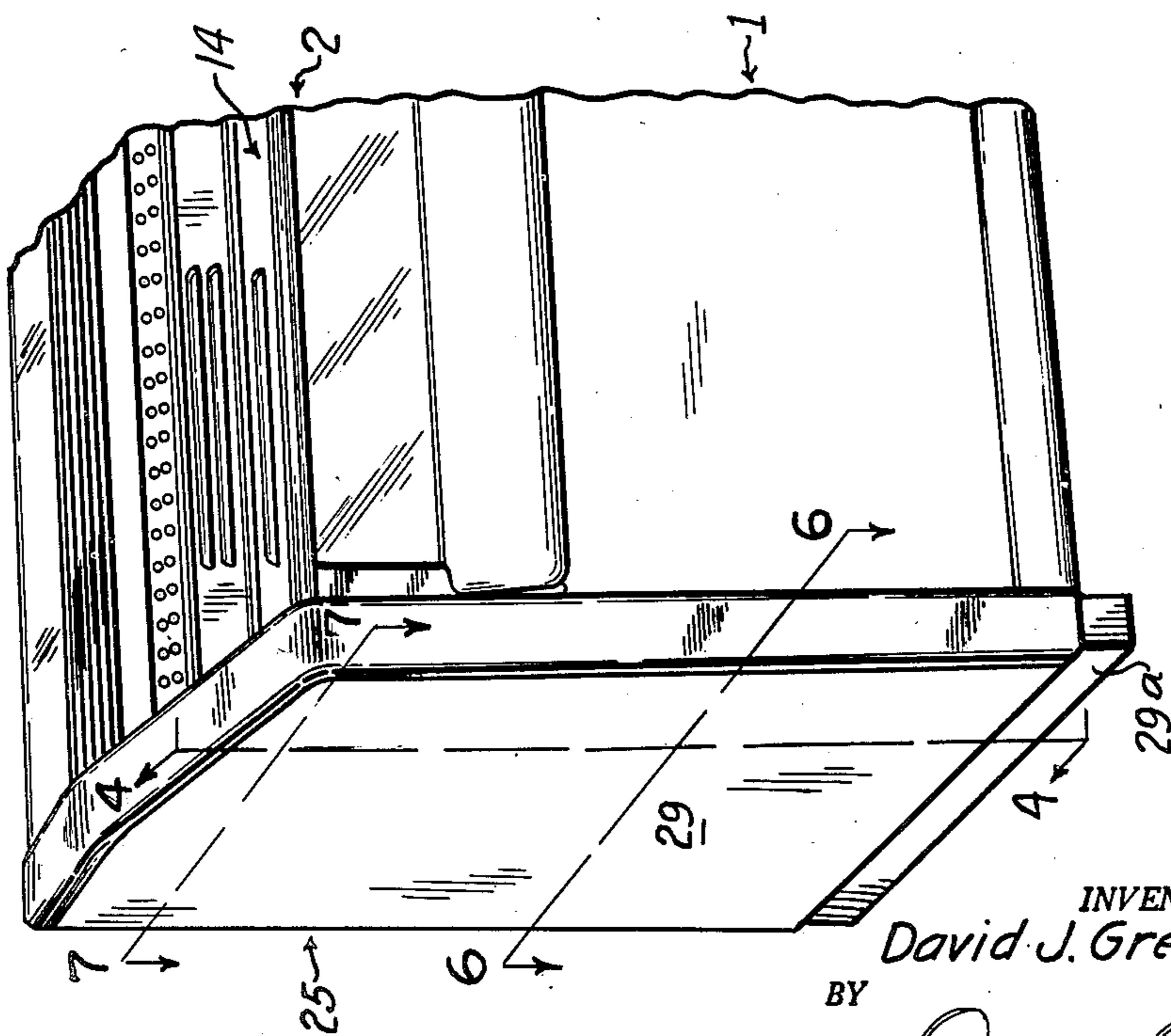


FIG. 2.



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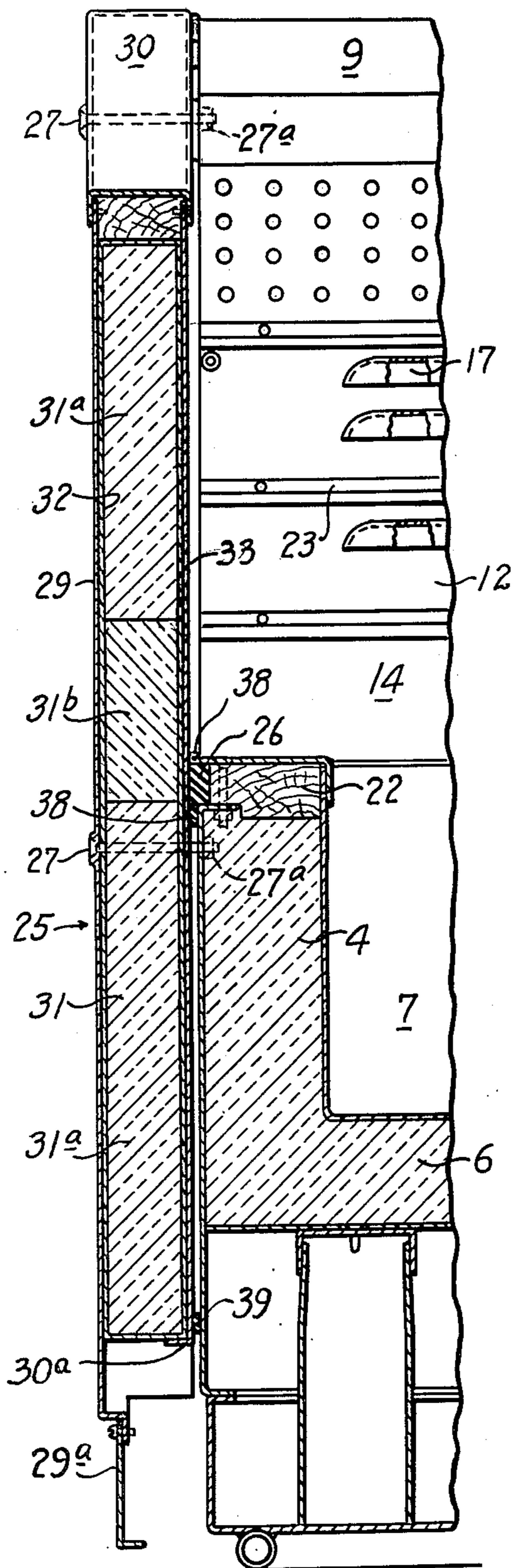


FIG. 4.

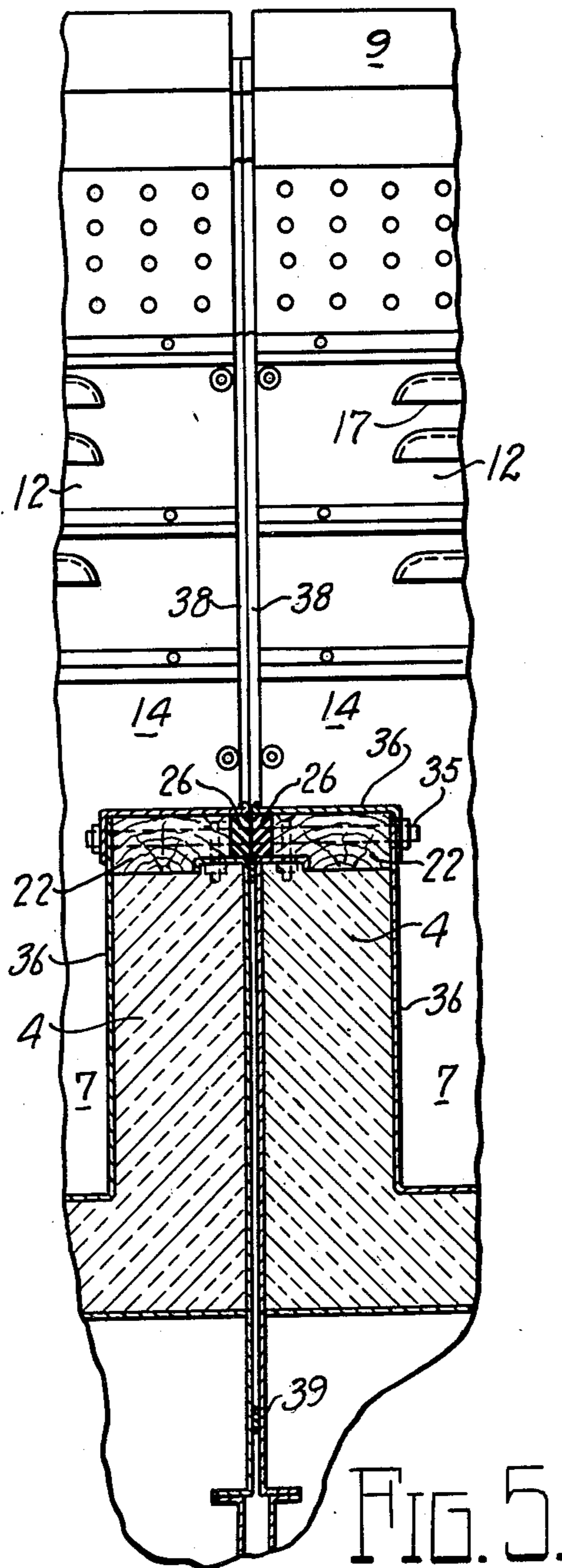


FIG. 5.

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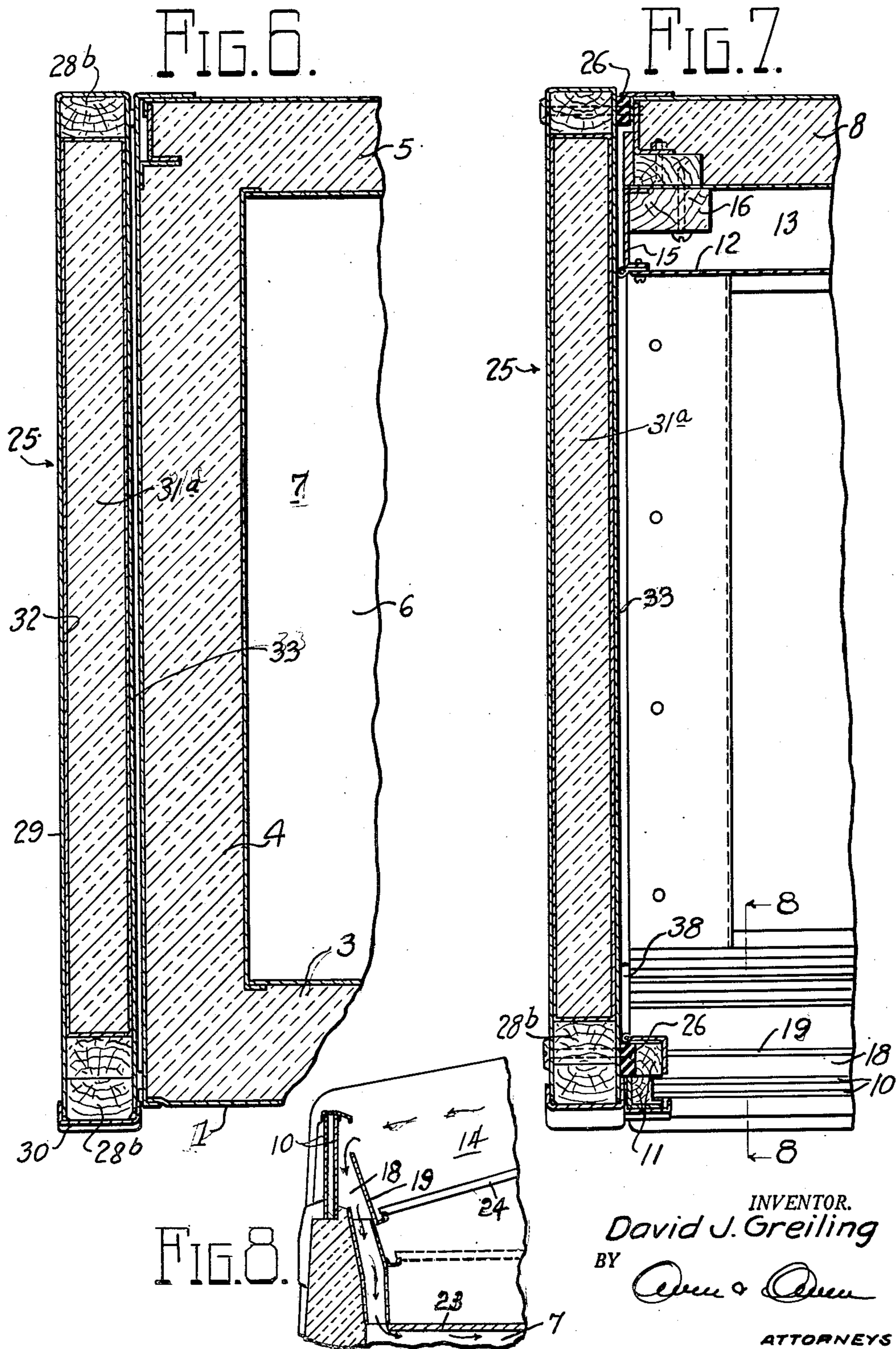
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4 Sheets-Sheet 4



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2,624,649

SECTIONAL REFRIGERATED DISPLAY CASE

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Application April 13, 1950, Serial No. 155,735

3 Claims. (Cl. 312-107)

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This invention relates to refrigerated display cases of the sectional extensible type wherein two or more cases with closed ends may be individually used or may have end closing members thereof, or some of them, removed and the cases then joined together in close abutting insulatingly sealed end to end relation with the adjacent ends of the adjoining display compartments thereof in open register with each other.

The primary object of the invention is the provision of a simple, novel and efficient end construction for refrigerated display cases preferably of the open top type which can be easily and quickly removed from a case to permit the adjacent ends of two aligned cases to be joined together in a simple manner to make the top display compartments of the cases substantially continuous with an efficient sealed and heat insulated joint therebetween.

Other objects and advantages of the invention will be apparent from the following detailed description and from the accompanying drawings, illustrating one embodiment thereof, in which—

Fig. 1 is a perspective view of an end portion of a display case embodying the invention and showing the end closure elements thereof in separated relation; Fig. 2 is a similar view with the end closure member in assembled relation with a case; Fig. 3 is a perspective view of the adjacent ends of two endwise joined case sections, with the adjacent end closure members thereof removed; Fig. 4 is an enlarged vertical section on the line 4-4 in Fig. 2; Fig. 5 is an enlarged vertical section on the line 5-5 in Fig. 3; Fig. 6 is an enlarged cross-section on the line 6-6 in Fig. 2; Fig. 7 is an enlarged cross-section on the line 7-7 in Fig. 2, and Fig. 8 is a fragmentary section on the line 8-8 in Fig. 7.

Referring to the drawings, 1 designates the base or bottom portion and 2 the top or superstructure of a case embodying the invention. The base portion 1 has front, end, rear and bottom walls 3, 4, 5 and 6, respectively, of heat insulated construction to form, in the present instance, a chamber 7 which may serve for the storage of produce and also forming a part of the air circulating system for the case.

The superstructure 2, in the present instance, is of the open top produce display type and includes a back wall 8 with an overhanging top 9 extending forward a short distance therefrom, and a front wall 10 preferably of glass. The rear and front walls 8 and 10 form upward extensions of the rear and front walls 5 and 3, respectively, of the base, and the front wall 10 at its ends is

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formed by a pillar construction 11 rising from the front corners of the base section. The front wall 10 is preferably lower than the top part 9 and is spaced forwardly therefrom, as is customary in open top refrigerated display cases of this type.

Spaced forwardly from the rear wall 8 is a vertical partition 12 cooperating with said wall to form a rear vertical flue 13 (Fig. 7) and with the front wall 10 to form an open top produce display chamber 14. The ends of the flue 13 are closed by end plates 15 (Figs. 1 and 7) attached at their front edges to the partition ends and at their rear edges to the vertical frame pillar 16 on the inner marginal end edge portions of the rear wall 8. The partition 12 is disposed under the top 9 rearwardly of its front edge and preferably has its upper edge portion inclined rearwardly to meet the top near the wall 8 and is of screen or perforated form to permit cold air to be discharged from the top portion of the flue 13 under the top 9 and forwardly across and down into the compartment 14, as well understood in the art. Cold air from the flue 13 may also be discharged forwardly into the compartment through louvered openings 17.

A vertical down flue 18 (Figs. 7 and 8) is provided at the front of the compartment 14 immediately at the rear of the front wall 10 and its upper end communicates with the compartment 14 below the top of said front wall while its lower end opens into the bottom chamber 7 of the base. The flue 18 is provided between the front wall plates 10 and rearwardly spaced partition 19, and this partition has engagement at its ends against portions of the corner pillars 11, as shown in Fig. 7. The end walls 4 of the case bottom 1 are provided with top facing-strips 22 preferably of wood.

The chambers 7 and 14 are vertically separated, in the present instance, by a partition plate 23 (Fig. 8). Trays 24 may be provided in the compartment 14 in horizontal or inclined position.

Cases of this type are old, and inasmuch as the invention does not reside in the case construction apart from the open ends of the refrigerated display chamber 14, it is considered that further description of the case construction and its operation is unnecessary to an understanding of the novel features.

The display case when individually used is provided at each end with a removable end closure member 25 of suitable construction to be attached to the respective case end to give it a finished ap-

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pearance and to insulatingly close the adjoining open end of the display chamber 14.

The end member 25 at each end of the case is releasably attached thereto and drawn closely to a gasket 26 on the case end by bolts 27 or other suitable means and serves to close the open end of the display chamber 14. In the present instance, the gasket 26 at each end of the case is fixed along the outer face of the strip 22 on the top of the base end wall 4, thence up the exposed end faces of the corner structure 11 at the front and up the rear wall 8 at the rear and across the end edge of the top 9, as shown in Figs. 1, 4, 5 and 7.

The member 25 includes an inverted U-shaped frame 28 preferably of wood and comprising the top cross member 28^a and the front and rear vertical members 28^b. The top member 28^a, in the present instance, is horizontal for a short distance forwardly from its rear end to correspond to the end contour of the case top 9 and then extends downwardly and forwardly on an incline to substantially the top level of the front wall 10, as indicated in Fig. 2, where it joins the front frame member 28^b. The frame is closed at its outer side by a metal panel 29 that is secured at its top and side edges to the outer sides of the respective frame members and this panel, in the present instance, terminates at its lower edge in a foot section 29^a. A finishing strip 30 of channel form is fitted over the top and front frame members 28^a and 28^b with its front flange overlapping the respective edges of the panel 29.

A batt 31 of suitable heat insulating material is mounted within the frame 28 against the front panel 29 and is of a size and shape to substantially fill the frame from its top strip down at least to a point below the level of the gasket 26 when the end member 25 is attached to the case end. The batt 31, in the present instance, extends to near the bottom of the member 25 and comprises upper and lower sections of comparatively soft insulating material 31^a, such for instance as glass wool, and an intermediate section of relatively hard board-type insulation 31^b. The intermediate section 31^b is positioned to oppose the thrust of the cross base portion of the gasket 26.

To facilitate handling and assembly of the batt with the frame member, the sections are preferably contained in a single wrapper 32 of sealing paper or the like. The inner side of the end frame, after positioning the batt 31 therein, is closed by an inner panel plate 33 that is secured to the top and side frame members 28^a and 28^b by screws (not shown) and also by the bolts 27 when the parts are assembled. The top edge of the plate is shown in Fig. 4 as being lapped by the inner flange of the channel strip 30. The lower edge of this panel plate is inwardly flanged at 30^a to extend under the lower inner edge of the batt. The shanks of the bolts 27 that attach the end members 25 to the case end extend from the outer side of the member through the frame uprights 23^b and engage nuts 27^a anchored in registering position within the end walls 4 and the ends of the rear wall 8 of the base and superstructure of the case.

When the end member 25 has been attached to a case end, it closes the respective end of the display compartment 14 and gives a finished pleasing appearance to such end. If two cases are to be placed in end abutting relation with the display compartment 14 continuing from one to the other, the end members 25 at such ends are removed and the two cases placed with the gaskets

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26 of the adjoining ends in abutment, as shown in Fig. 5, so as to seal the joint between the cases. This sealed relation is maintained by bolts 35 projected through the strips 22, gaskets 26 and metal lining parts 36 in the base portions of the two cases. A sealing strip 38 is provided around the interior of the compartment 14 at its ends, and when the ends of the two cases are joined together the strips 38 at such ends abut to seal the joint therebetween at the compartment sides of the gaskets 26, as shown in Fig. 5. The space between the inner side of an end member 25 and the end wall 4 of the base portion of a case below the gasket 26 may be closed by one or more mastic sealing strips 39 (Fig. 4). Such sealing strips may also be placed between the adjacent end walls of abutting cases (Fig. 5).

It is apparent that I have provided a simple and efficient end structure for refrigerated display cases that is capable of being attached to a case end to insulatingly close the adjacent end of the display compartment thereof or it may be removed therefrom to permit the open ends of two cases to be attached together in sealed relation with the adjacent ends of the display compartments thereof in unobstructed communication.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of numerous modifications and changes without departing from the spirit of the claims.

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

1. A refrigerated display case having an upper display compartment open at least at one end of the case, and an end member for attaching to the open end of the case to close the open end of said compartment, said member comprising a frame of a shape corresponding to the end shape of the case, a panel plate closing the outer side of said frame, an insulation batt disposed within the frame and against the inner side of said panel and comprising upper, lower and intermediate sections of insulation material with the intermediate member of hard board-like material and positioned to extend across the lower marginal edge wall portion of the display compartment open end, a closure plate attached to the frame at its inner side and retaining said batt in position therein, means for releasably attaching the end member to the case end in closing relation to the display compartment end, and means for insulatingly sealing said closure plate at its exposed side relative to the end member against the case end marginally of the open compartment end and having a portion opposed to said intermediate batt section.

2. A refrigerated display case having a lower compartment insulatingly closed at its ends, and an upper open top display compartment open at at least one end thereof, and an end member attachable to an end of the case at the outer side of the closed base end and closing the open end of said display compartment, said member having a frame with top and side elements forming an insulation batt-receiving space therein, an outer end panel attached to the outer side of said frame and closing the outer side of said space, a channel edge strip fitting over the top and front side member of said frame and lapping the respective edges of said front plate, an insulating batt disposed within said space and comprising upper and lower loose insulating fiber sections and an intermediate hard member sec-

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tion, a wrapper enclosing said sections to constitute a single insulating unit, a plate removably attached to the inner side of said frame and closing the inner side of said space to confine the batt unit therein, means for releasably attaching the end member to the case end, and gasket means on the end of said case marginally around the open end of its display compartment and cooperating with the inner plate of said end member and said intermediate hard batt section to provide a sealed joint with the case end.

3. A refrigerated display case having a lower compartment closed at its ends, an upper open-top display compartment open at at least one end thereof, and an end member attachable to an end of the case at the outer side of the closed base end and closing the open end of said display compartment, said member having a frame with top and opposing side elements forming an insulation receiving space therein from top to bottom of the frame, an outer panel attached to the outer side of said frame and closing the outer side of said space, insulation means disposed within said space and extending substantially

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from top to bottom thereof, a plate attached to and closing the inner side of said frame from top to bottom and abutting the adjacent side of said insulating means, means for releasably attaching the end member to the case end with the insulating means therein opposing both the closed end of said lower compartment and the upper open end of said upper compartment, and gasket means between said case end and said end member marginally around the open end of the display compartment and cooperating with the inner plate of the end member and the plate abutting action of said insulating means to provide a close sealed joint with the case end.

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The following references are of record in the file of this patent:

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