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J. TELLER ET AL
REFRIGERATOR CONSTRUCTION

1,961,022

Filed March 24, 1932

2 Sheets-Sheet 1

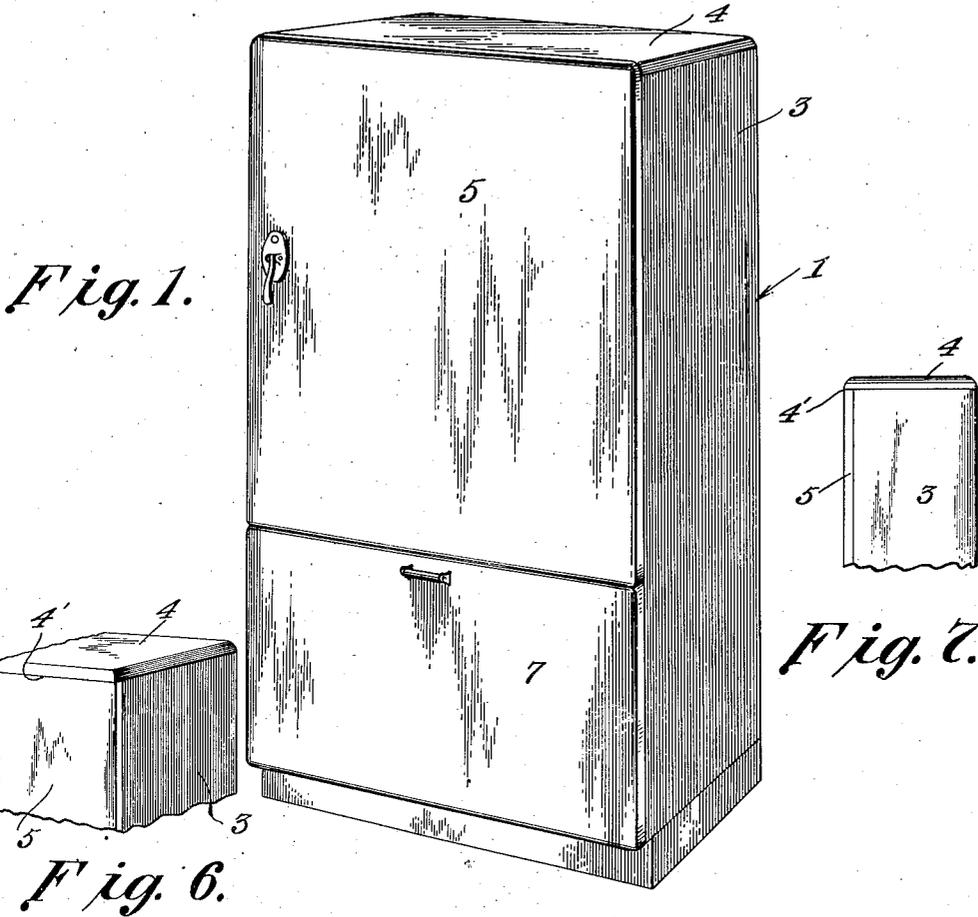
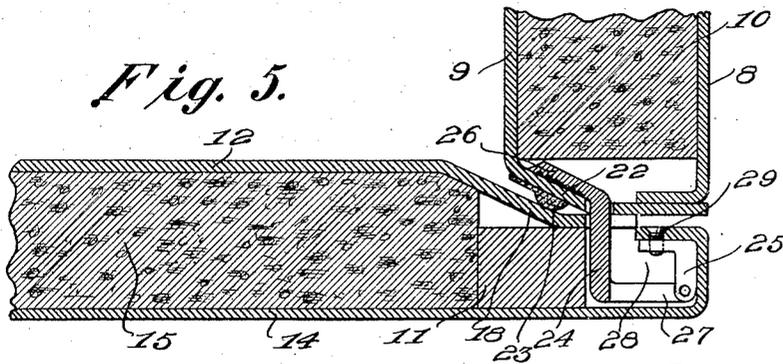


Fig. 5.



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Fig. 2.

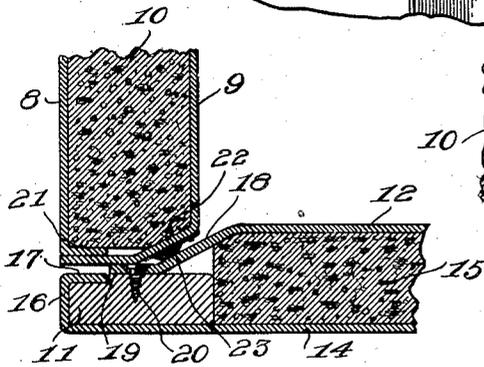
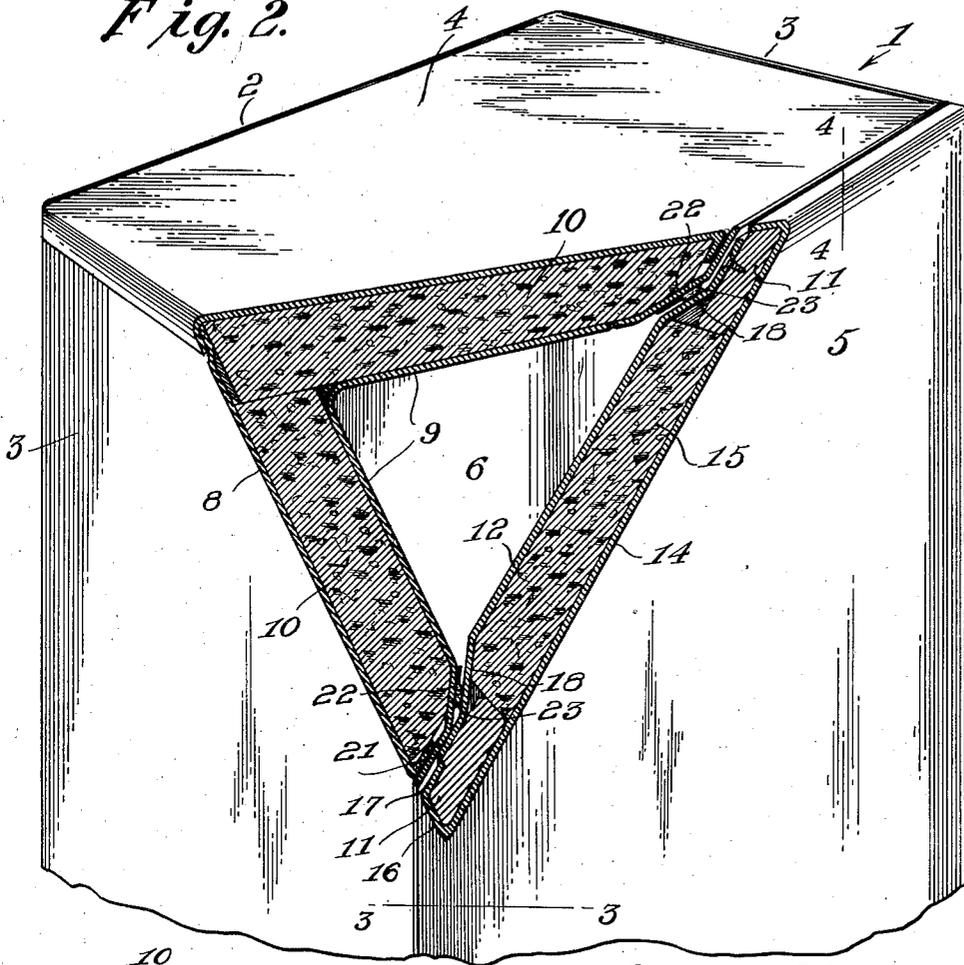


Fig. 3.

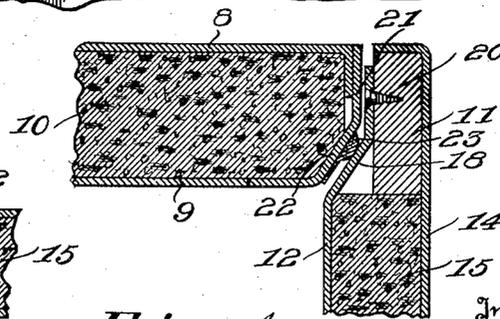


Fig. 4.

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REFRIGERATOR CONSTRUCTION

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Application March 24, 1932, Serial No. 601,024

2 Claims. (Cl. 20—35)

This invention relates to refrigerator construction, and particularly to the door mounting and arrangement whereby said doors which close the compartment openings, have their adjacent edges in substantially abutting relation, and form a smooth unbroken front co-extensive in outline with that of the refrigerator front, as defined by the marginal edges of the body portion of said structure, and completely covering and concealing the front framework and the entrances defined thereby.

In addition to the advantages to be derived from the construction as just set forth, the invention further contemplates a hinge construction, arranged with respect to the parts with which it is associated, such that the elements thereof are entirely concealed when the door or doors are closed, and at the same time permit the side marginal edges thereof to extend to the extreme outer side edges of the refrigerator body.

A further feature resides in the particular construction of the door, including its framing and association with the sheet metal plates forming the inner and outer faces thereof, and the means whereby the hinge may be secured thereto without connecting the leaf member carried thereby to any normally exposed portion thereof.

The above and other features and advantages will appear to those familiar with refrigerator construction.

In the accompanying drawings:

Figure 1 is a front perspective view of the upper part of the refrigerator, with parts broken away to illustrate details of structure;

Fig. 2 is a front perspective view of the refrigerator showing the manner in which the doors completely cover the entire front thereof;

Fig. 3 is a detail sectional view through one of the side walls of the refrigerator and through one of the side framing portions of the door;

Figure 4 is a similar view through the upper wall and through the upper framing member of the door; and

Figure 5 is a detail sectional view through one corner of the refrigerator wall and door, and illustrating one form of hinge which has been found adaptable to our structure.

Figure 6 is a top perspective view of one corner of the refrigerator, showing another embodiment of our invention; and

Figure 7 is a side elevation of the upper portion of the refrigerator showing said embodiment.

Referring to the drawings by numerals of reference, 1 designates a refrigerator cabinet having the back 2, sides 3, top 4 and a front covering by

an upper door 5 through which access may be had to the refrigerating compartment 6 and a lower door 7 which may cover the compartment housing, the operating mechanism for the electric, gas or other automatic refrigerating mechanism, said lower door being usually in the form of a panel which may either be mounted on hinges at its lower edge, or may be of the type which can be bodily removed, usually by swinging it outwardly on suitable securing means on its lower edge cooperating with complementary parts on the front frame of the compartment, and lifting it from its support.

The construction of the body of the refrigerator cabinet, insofar as the wall structure is concerned, may be generally similar to that conventional type with which the trade is already familiar, said walls being formed of enameled sheet metal plates 8 and 9 spaced apart, and having the space filled with a suitable insulating material 10.

The upper door 5 which forms the closure member for the refrigerating compartment 6, and which only need be insulated, may, but not necessarily, take the form of construction shown more particularly in Figures 2, 3 and 4, which has been found well adapted for the present arrangement, said door comprising a rectangular frame 11 which may be of wood or other suitable material, said frame supporting a pair of enameled sheet metal plates 12 and 14, forming respectively the inner and outer faces of the door, said plates being spaced apart and provided with a filling of any suitable insulating material 15.

The outer plate 14, at its edges, is provided with a flange 16 and a re-entrant flange 17, which embraces the frame 11. The rear plate 12 has its major portion parallel with the front plate, but adjacent its edges, is turned forwardly to provide a peripherally bevelled flange 18 terminating in a marginal flange 19, through the medium of which it may be secured as by screws 20 or similar fastening means to the rectangular frame 11.

The front edges of the refrigerating compartment walls which define the compartment opening, and thus constitute a frame 21 therefor, have their inner corners bevelled at 22 to cooperate with the bevelled flange 18 of the inner door plate, a suitable packing strip 23 being secured to the face of said bevelled portion 21 throughout the four sides, to effectually seal the joint between the door 5 and frame 21, when the door is closed.

It will thus be observed that the greater area of the rear face of the door 5, when closed, is to

the rear of the front plane of the compartment opening, while that portion of the door, defined by the frame, extends substantially to the extreme top, and side marginal edges of the compartment opening frame 21, and thus concealing substantially the entire frame.

It will be noted therefore, that the structure includes a compartment having a front entrance, defined by a frame, and in which the door is so constructed, and of such area, that it covers substantially the entire front of that portion of the refrigerator with which it cooperates.

The lower door 7, which need not be insulated, since it merely covers the lower compartment for the refrigerating machine, or for storage, has an outer metal plate enameled, said door 7 extending from side to side of the lower portion of the cabinet and entirely concealing the frame of the opening for said lower compartment. It is thus observed that the structure includes a front framework which defines openings for a plurality of contiguous compartments, with separate doors for said compartments, the upper and lower doors 5 and 7 having their adjacent edges in abutting relation as clearly shown in Fig. 1 and having their front surfaces in the same plane, and thereby presenting a smooth, unbroken, front, coextensive in area with the outline of the refrigerator cabinet front, as defined by the marginal edges of the body portion of the structure, and thus completely, or substantially so, covering and concealing the front frame work and the entrances defined thereby.

While several forms of hinge for the upper door 5 may be employed in the present structure, the embodiment shown in Fig. 4 will be found practical for our construction, said hinge comprising a pair of leaves 24 and 25, the former being generally of Z-shape, one end 26 of which extends through an opening in the edge of one of the wall plates, and to which it is secured as by spot welding, the other extremity 27 lying within a recess 28 in the frame. The other leaf 25 of the hinge also lies within the said recess and is secured by a bolt or other fastening means 29 to the reentrant flange of the outer door plate, the leaves of the hinge having their pivotal point

disposed toward the outer corner of said recess, whereby the door may swing outwardly, and its rear marginal corner clear the body framework. While the hinge construction shown will be found to operate practically and effectively, it is to be understood that other arrangements functioning in a similar manner may be employed, and therefore, we do not wish to be limited to the specific form illustrated.

In the embodiment of our invention shown in Figures 6 and 7, the doors extend from side to side of the cabinet frame, completely covering the same, as in the other form, but in the present instance, the top 4 extends forwardly of the front plane of the cabinet as at 4' and overhangs the door 5. However, the front face of the door is flush with the forward edge of the overhanging portion 4', so that there are no protuberances or extensions, and the cabinet front presents a plain surface throughout.

What we claim as new and desire to protect by Letters Patent is:—

1. A refrigerator structure comprising a body having a plurality of compartments in superposed relation, and having a front surface frame surrounding each of said compartments, a door for each of said compartments, said doors being in substantially abutting relation at their adjacent edges, and together extending to the side marginal edges of the refrigerator body, and overlying and completely covering said front surface frame.

2. A refrigerator structure comprising a body having a front surface with openings having front frames defining entrances to a plurality of adjacent compartments, and separate doors for said compartments, said doors each having a main body portion which extends within a compartment and their adjacent interior edges in abutting relation and their external marginal edges extending entirely over the front frames and having their outer edges substantially flush with the side walls of the refrigerator body, and thus completely covering and concealing said front and the entrances defined thereby.

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