

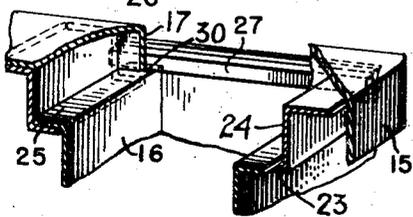
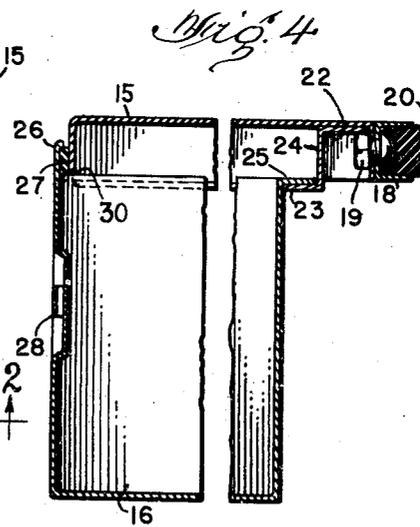
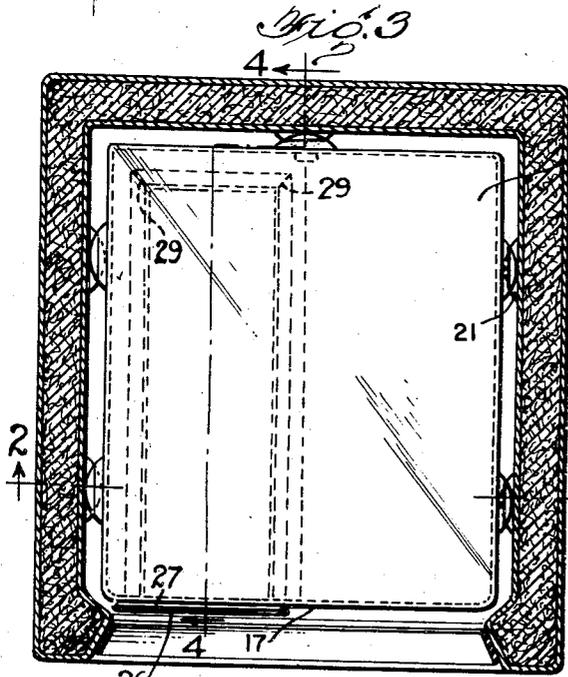
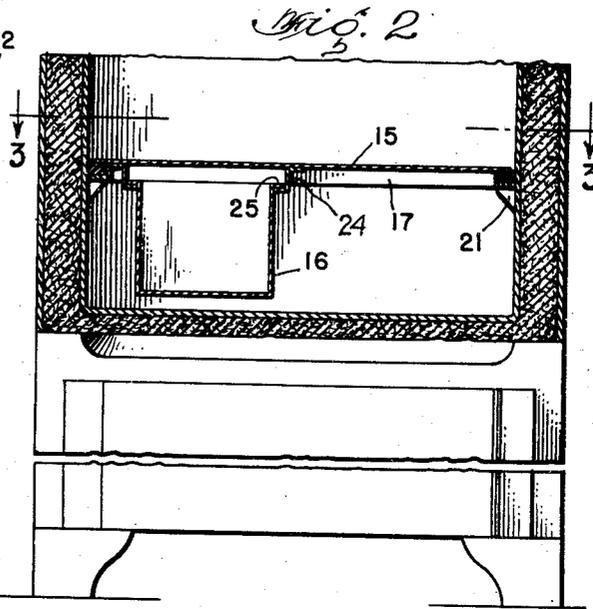
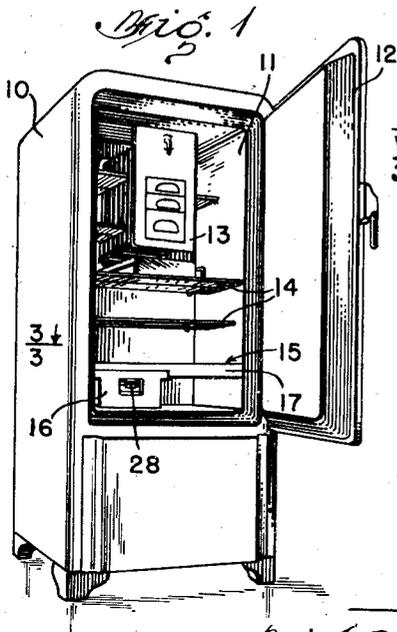
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W. T. HEDLUND

2,270,844

REFRIGERATOR

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By

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# UNITED STATES PATENT OFFICE

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## REFRIGERATOR

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of Delaware

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4 Claims. (Cl. 62-89)

My invention relates to refrigerators, and more particularly to a sliding food drawer or receptacle for use in a refrigerator storage compartment.

It is an object of my invention to provide an improvement for slidably supporting a food drawer on the underside of a solid refrigerator shelf. I accomplish this by slidably supporting an open top food drawer in such a manner that substantially an air-tight seal is effected between the underside of the solid shelf and food drawer when the latter is positioned in a refrigerator storage compartment. By providing such an airtight seal, air in the storage compartment is prevented from flowing into and out of the food drawer, whereby food products may be stored in the drawer with substantially no dehydration taking place.

The invention, together with the above and other objects and advantages thereof, will be more fully understood from the following description taken in conjunction with the accompanying drawing forming a part of this specification, and of which:

Fig. 1 is a perspective view of a refrigerator with the door thereof open to illustrate an embodiment of the invention;

Fig. 2 is a vertical sectional view taken on line 2-2 of Fig. 3 to illustrate more clearly the solid shelf and sliding food drawer shown in Fig. 1.

Fig. 3 is a horizontal sectional view taken on line 3-3 of Figs. 1 and 2.

Fig. 4 is an enlarged fragmentary sectional view taken on line 4-4 of Fig. 3; and

Fig. 5 is a fragmentary perspective view, partly broken away, to illustrate the manner in which the seal is effected at the front of the solid shelf and sliding food drawer.

Referring to Fig. 1, I have shown my invention in connection with a refrigerator comprising a cabinet 10 having a thermally insulated storage space 11 into which access may be had by a door 12. The storage space is cooled by a cooling element or evaporator 13 of suitable refrigeration apparatus. The storage space 11 is provided with a plurality of open shelves 14 and a solid shelf 15 for supporting food products to be preserved and kept at a low temperature.

The solid shelf 15 is provided with a downward extending flange 17 about its periphery, and is supported in any suitable manner in the lower part of storage space 11. As shown most clearly in Fig. 4, short U-shaped channel members 18 may be secured by bolts 19 to the flange 17 at the lateral and rear sides of the solid shelf. The

channels 18 are provided with resilient pads 20 which are formed of rubber or the like and engage the side and rear walls of the storage space. The lateral side and rear walls of the storage space are provided with shelf supports 21 upon which the short channels 18 rest. The solid shelf 15 is smaller in cross-sectional area than the storage space 11, so that air in the storage space will circulate and effect cooling in the small compartment formed between the solid shelf and bottom of the storage space.

In accordance with my invention, the solid shelf 15 is constructed and arranged to slidably support a food drawer 16 on the underside thereof in such a manner that an air-tight seal is effected between the shelf and the drawer. I accomplish this by securing to the underside of shelf 15 three Z-shaped angle members 24. Two of the angle members 24 extend from the front to the rear of the shelf and are parallel to the lateral sides thereof. The third angle member 24 extends across the rear of the shelf and connects the rear ends of the parallel angle members.

The rear ends of the parallel angle members and ends of the rear angle member are beveled, as indicated at 29 in Fig. 3, so that the lower flanges 23 of the angle members form a continuous ledge at the underside of the solid shelf. The upper flanges 22 of the angle members 24 are secured to the underside of the shelf in any suitable manner, as by welding or brazing, for example. The abutting ends of the angle members are also united at 29 by welding or brazing.

The angle members 24 are of such size that the lower horizontal flanges 23 are disposed in a plane below the lower edge of the flange 17 at the front of the solid shelf. This provides a small space 30, as shown most clearly in Fig. 5, for inserting the food drawer 16 into position on the underside of the shelf 15.

The food drawer 16 is provided with an outward extending flange 25 at the lateral side and rear walls thereof. When the food drawer 16 is slidably moved into position at the front of the solid shelf 15, the side flanges 25 are moved through the openings 30 between the lower edge of flange 17 and ledge formed by the lower flanges 23 of the angle members 24. By moving the food drawer 16 rearward until the rear flange 25 rests upon the lower flange of the rear angle member 24, as shown most clearly in Fig. 4, the food drawer is effectively sealed about the entire supporting ledge formed by the angle mem-

bers 24. The front 26 of the food drawer 16 extends above and overlaps the flange 17 at the forward edge of the shelf 15, whereby the drawer is effectively sealed on all sides at the underside of the shelf.

In order to improve the sealing effected at the front 26 of the food drawer, a resilient gasket 27 formed of soft rubber or the like may be secured to the inner surface of the front 26. The gasket 27 extends across the front of the food drawer and is of sufficient height at the ends, so that the spaces 30 are effectively sealed when the drawer 16 is moved rearward to its closed position.

The front 26 of the food drawer 16 is recessed and provided with a handle 28 which is flush with the front of the drawer. When the food drawer 16 is positioned on the underside of the shelf 15, the drawer is supported entirely by the shelf with the bottom of the drawer spaced from the bottom of the storage space 11, as shown most clearly in Fig. 2.

Although I have shown and described a particular embodiment of the invention, it will be apparent that changes and modifications may be made without departing from the spirit and scope of the invention, as pointed out in the following claims.

What is claimed is:

1. In a refrigerator having a thermally insulated storage compartment, means for causing circulation of refrigerated air in said compartment, a solid shelf adapted to be supported in said compartment, said shelf having a downward extending flange at the forward edge thereof, a food drawer, said drawer and shelf having cooperating means including structure to slidably support said food drawer on the underside of said shelf, said means cooperating so that air is prevented from flowing into and out of said drawer at its sides and rear when it is closed, and said drawer having a front adapted to overlap said flange when said drawer is in its closed position to seal the front of said drawer.

2. In a refrigerator having a storage compartment, means for causing circulation of refrigerated air in said compartment, a solid shelf adapted to be supported in said compartment, said shelf having a downward extending flange at the forward edge thereof, a food drawer, said drawer and shelf having cooperating means including structure to slidably support said food drawer on the underside of said shelf, said means cooperating so that air is prevented from flowing into and out of the sides and rear of said drawer

when closed, said drawer having a front overlapping said flange, and a gasket to seal the front of said drawer when it is in its closed position on the underside of said shelf.

3. A refrigerator having walls defining a food storage space, refrigeration apparatus for cooling the circulating air in said food storage space, and wall members dividing said food storage space into three compartments, two of which have only restricted communication and the third being completely sealed to the other two, said wall members including a solid shelf forming a wall common to all three compartments and supported in said food storage space with the edges of the shelf slightly spaced from the sides of the food storage space, said wall members also including an open top container, means for supporting said container beneath said shelf in a manner that the shelf forms a cover for the container to complete said third completely sealed compartment, said container supporting means comprising cooperating portions on the shelf and the container consisting of outwardly extending portions on the container and inwardly extending portions of the shelf, said cooperating portions having a relatively broad area of contact around the major portion of the open top of the container, the area of contact itself providing a natural seal against air circulation, the construction permitting complete removal of the container from the food storage space.

4. A refrigerator having walls defining a food storage space, refrigeration apparatus for cooling the circulating air in said space, and wall members dividing said space into three compartments, two of which have restricted communication and the third being completely sealed by the other two, said wall members including a solid shelf forming a wall common to all three compartments and supported in said space with the edges of the shelf slightly spaced from the sides of the food storage space, said wall members also including an open top container, means for supporting said container beneath said shelf in a manner that the shelf forms a cover for the container to form said third completely sealed compartment, said container supporting means comprising cooperating portions including outwardly turned flanges on opposite sides of the container and rearwardly turned flanges on the rear of the container, the container and shelf having overlapping portions at the front for completing the seal.

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