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REFRIGERATING APPARATUS

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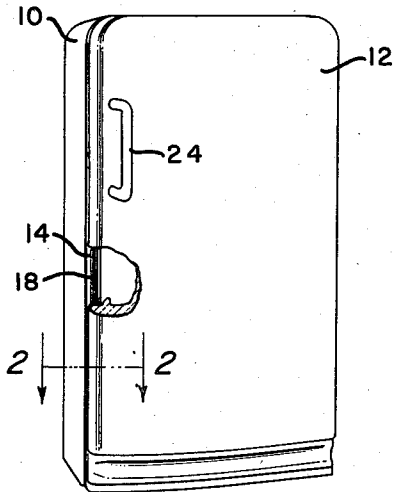


Fig. 1

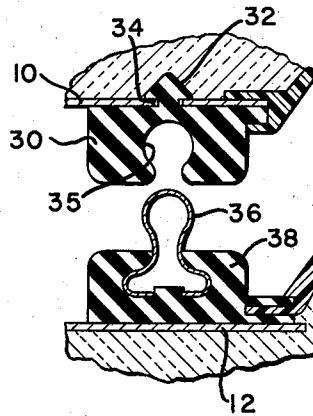


Fig. 3

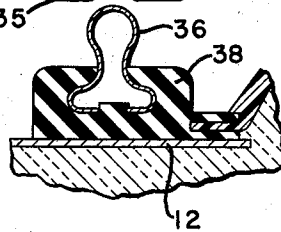


Fig. 4

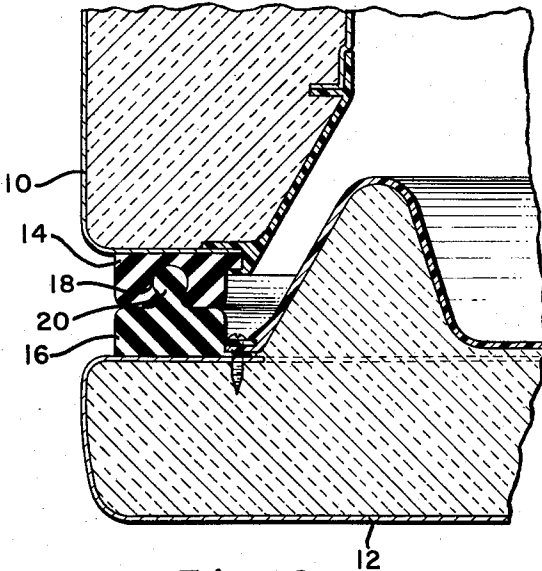


Fig. 2

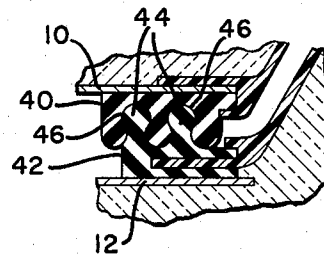


Fig. 5

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2,899,256

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1 Claim. (Cl. 312—296)

This invention relates to refrigerating apparatus and more particularly to an interlocking door seal which eliminates the need for the use of a latch.

It is an object of this invention to provide a door seal for a refrigerator or the like wherein a pair of interlocking seal strips are mounted on the cabinet and the door, respectively, and wherein the door is held closed by the interlocking action between the seal strips.

Another object of this invention is to provide an improved refrigerator door seal which prevents leakage of air into and out of the cabinet when the door is closed.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings, wherein a preferred form of the present invention is clearly shown.

In the drawings:

Figure 1 is a perspective view, with parts broken away, showing a refrigerator equipped with the invention;

Figure 2 is a fragmentary sectional view taken substantially on line 2—2 of Figure 1 showing a preferred embodiment of the invention;

Figures 3 and 4 are fragmentary sectional views of modified interlocking door seal elements; and

Figure 5 is a fragmentary sectional view showing still another modification of the interlocking door seal.

Referring now to the drawing, reference numeral 10 designates a conventional refrigerator cabinet having a door 12 for closing the access opening of the cabinet. As best shown in Fig. 2 of the drawing, a first sealing strip 14 is secured to the cabinet 10 adjacent the front opening and a second mating sealing strip 16 is secured to the door 12. The strip 14 is provided with a longitudinally extending circular shaped channel 18 which is adapted to receive a circular projection 20 formed integrally with the sealing strip 16. The sealing strips 14 and 16 are made of elastomeric material whereby the circular projection 20 is releasably held in the channel or groove 18 when the door is closed. One or both of the strips 14 and 16 may be made of sponge rubber material or any other elastomeric material capable of flexing when the door is opened or closed.

The strips 14 and 16 extend throughout the entire periphery of the door opening so as to provide not only a good seal but also so as to eliminate the need for a separate latch member for holding the door in the closed position. The construction is such that a pull on the door handle 24 will cause disengagement of the interlocking portions of the door seal when opening the refrigerator, whereas a push on the door will cause the seal strips to interlock with one another upon closing of the door. Insofar as certain aspects of the invention are concerned, the interlocking door seal would not need to extend throughout the entire periphery of the door

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opening but could extend for only a portion of the way, such as along the one edge of the door opening, and conventional seal means could be used the rest of the way.

In Figs. 3 and 4 of the drawing there is shown a modified door seal arrangement wherein a first seal strip 30 is held in place on the cabinet by means of spear-like projections 32 which pass through apertures 34 in the main cabinet 10. A series of these spear-like projections would preferably be provided at spaced points. The strip 30 is provided with a circular channel 35 which extends throughout the length of the strip 30 and which is adapted to receive a metallic spring-like projection 36 carried by a complementary sealing strip 38 which, in turn, is carried by the door 12. Thus, in the construction shown in Figs. 3 and 4 of the drawing the seal consists of a metallic spring element 36 which slides through the narrow opening to the channel 34 whereby the frictional engagement takes place between the elastomeric material of the strip 30 and the metal of the spring element 36. If desired, the element 36 could be formed as an integral part of the door itself so as to eliminate the need for the strip 38.

Fig. 5 of the drawing shows a modified door seal arrangement wherein sealing strips 40 and 42 are secured to the cabinet and door, respectively, and wherein the strip 42 is provided with a pair of projections 44 which resiliently engage within a pair of channels 46 provided in the strip 40. The arrangement shown in Fig. 5 serves to increase the length of the passage through which any air would be required to pass before it could leak past the sealing strip.

For purposes of illustration, that portion of the seal strip which is provided with the channel has been shown secured to the cabinet, whereas these could be interchanged.

While the form of embodiment of the invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, as may come within the scope of the claim which follows.

What is claimed is as follows:

In a refrigerator, a cabinet having an access opening, a door for closing said opening, means for sealing the junction between said door and said cabinet, said means including interlocking portions carried by said cabinet and said door respectively, one of said interlocking portions comprising an elastomeric element having a longitudinally extending groove which is narrowest at its inlet and the other of said portions comprising an elastomeric element having a longitudinally extending groove which is narrowest at its entrance and a substantially U-shaped metallic blade spring having the arms thereof curved and interlocked within said last named groove and having the bight portion thereof arranged to extend into said first named groove, said bight portion of the U-shaped spring being wider than the width of said first named groove at the entrance of the first named groove.

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