

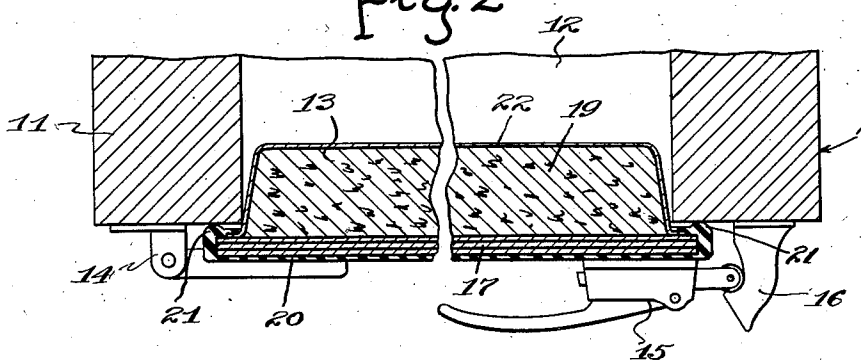
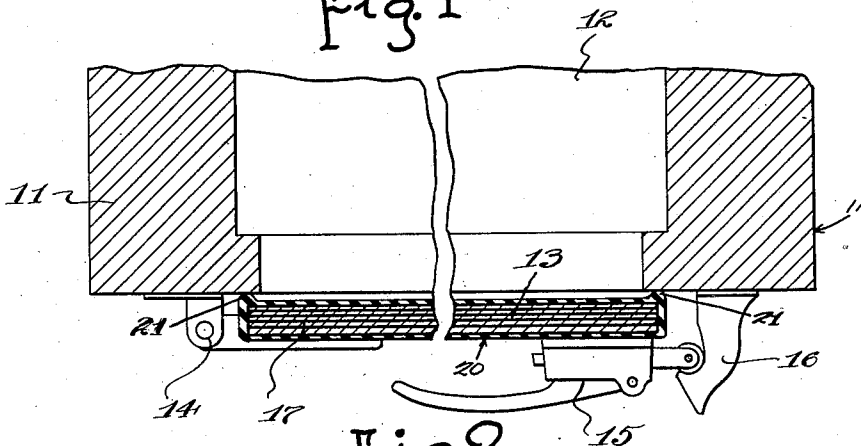
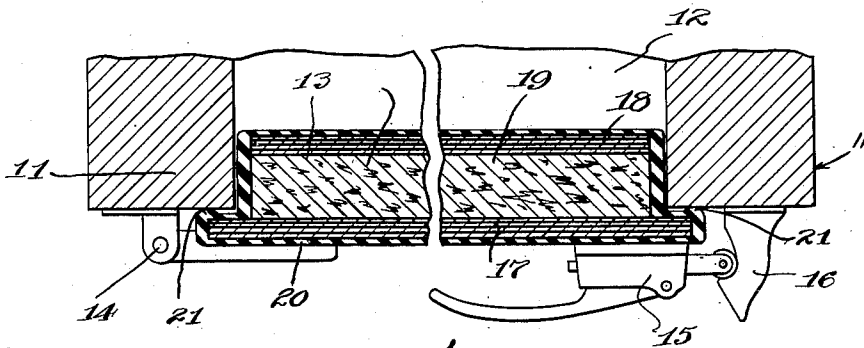
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C. C. SPREEN

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REFRIGERATOR DOOR

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REFRIGERATOR DOOR

Application filed June 8, 1927. Serial No. 197,248.

My invention relates to refrigerators and it has particular relation to a novel type of door construction adapted to be employed thereon.

5 Heretofore it has been customary to construct refrigerator doors of a plurality of layers of plywood glued together and in some instances a layer of heat insulating material about the edges of which are secured, by
10 means of nails and glue, additional strips of wood which are intended to secure the various portions together and prevent the admission thereto of moisture from the atmosphere and from other sources, such as water accident-
15 ally spilled thereon, water resulting from precipitation of the moisture in the atmosphere on adjacent parts of the refrigerator which may run over the door, etc.

The side strips, however, being composed
20 of wood, absorb moisture themselves and swell, thus breaking any seal of glue between the side strips and the remainder of the door. Also such glue seals are frequently originally defective, and, in addition, the moisture ab-
25 sorbed by the side strips is frequently transmitted directly to the interior portions of the door. The admission of moisture to the interior of the door causes swelling thereof which results in the separation of the various por-
30 tions thereof, the cracking and breaking of the wooden portions, and the deformation of the door which prevents its properly closing the opening in the refrigerator affording ac-
35 cess to the storage compartments thereof, thus reducing the efficiency of the refrigerator. By my invention I have eliminated these difficulties by providing a door for refrigerators which is permanently sealed against the ad-
40 mission of moisture to the interior portions thereof.

One object of my invention consists in providing a refrigerator door which is completely sealed against the admission of moisture to the interior portions thereof.

45 Another object of my invention is to provide a door on which the necessity of separate sealing gasket is eliminated.

A further object of my invention is to provide a novel type of refrigerator door which
50 is simple and inexpensive to construct, which

presents an attractive appearance, and which has sufficient resiliency to withstand blows and strains without damage thereto.

For a better understanding of my invention reference may now be had to the accom- 55
panying drawings, of which:

Fig. 1 is a cross-sectional view of a portion of a refrigerator provided with a door constructed in accordance with my invention; and

60 Fig. 2 is a similar cross-sectional view of a portion of a refrigerator provided with a door constructed in accordance with another form of my invention; and

Fig. 3 is another view, similar to Figs. 1 65
and 2 illustrating a third embodiment of my invention.

Referring more specifically to the drawings, I have shown in Fig. 1 two side walls 11 of a refrigerator, the opening 12 between 70
which serves to afford access to the interior of the refrigerator, when a door 13 is opened. The door 13 is mounted upon the one side wall 11 by means of hinges 14 and is adapted to be held in a tightly closed position by 75
means of a catch or hasp 15 which engages a suitable cooperating member 16 secured to the opposite side wall 11.

The door 13 consists of an outer layer of plywood 17, which is of greater width than 80
the opening 12, an inner layer of plywood 18 which is of lesser width than the opening 12, and an intermediate layer of heat insulating material 19, composed of ground cork, or the like. The members 17 and 18 85
are composed of piles of wood rather than a single piece of wood as such plies are stronger, less likely to crack, and are better insulators of heat. Molded about the mem-
bers 17, 18 and 19 and completely enclosing 90
them is a covering of rubber 20 which not only prevents the admission of moisture thereto but also serves to aid in holding the members together. The cover 20 is provided with an integral raised bead member 21 which 95
extends about the periphery of the member 17 on the inner side thereof and is adapted to engage the adjacent surfaces of the side walls 11 when the door is closed, and forms a seal-
ing contact therewith. 100

The cover 20 is composed of relatively soft rubber in order that it may be sufficiently resilient to withstand blows without cracking or being marked and also, in order that the bead 21 may provide an effective airtight seal between the door and the door frame.

From this description it will be apparent that, as the interior portions of the door are completely enclosed within the rubber cover 20 that no moisture of any kind will have access thereto. Also it will be apparent that the rib or bead 21 eliminates the necessity of a separate door gasket.

The structure illustrated in Fig. 2 is quite similar to that shown in Fig. 1 except that the inner layer of plywood and intermediate layer of heat insulating material have been dispensed with. The reference numerals employed in connection with Fig. 1 are therefore employed on Fig. 2 to designate corresponding elements.

In the door illustrated in Fig. 3 I have shown the outer layer of plywood 17 and the layer 19 of heat insulating material. The layer 19 is, however, secured to the member 17 and enclosed by a dished sheet metal member 22 which constitutes the interior wall of the door. The rubber cover 20 in this instance completely covers the member 17 and overlaps the edges of the member 22, thereby preventing the admission of moisture to the interior of the door at the edge of the member 22. The cover 20 is, of course, provided with the integral bead or edge 21 as described in connection with Fig. 1.

Although I have illustrated several forms which my invention may assume and have described in detail one application thereof, it will be apparent to those skilled in the art that it is not so limited, but that various modifications and changes may be made therein without departing from the spirit of my invention or from the scope of the appended claims.

What I claim is:

1. A refrigerator door comprising a plurality of layers of plywood, a layer of heat insulating material interposed between certain of said layers, and a layer of relatively soft rubber completely enclosing said plywood and insulating material, said layer of rubber being provided with an integral raised bead member adapted to serve as a door gasket.

2. A refrigerator door comprising a plurality of layers of plywood, a layer of heat insulating material interposed between certain of said layers, and a layer of relatively soft rubber completely enclosing said plywood and insulating material, said layer of rubber being provided with an integral raised bead member extending about the periphery of the door on the inner side thereof adapted to serve as a door gasket.

3. A refrigerator door comprising a closure member composed of heat insulating material, and a rubber cover for a surface of said closure member, said rubber cover being provided with a gasket portion for engaging the surface of a refrigerator adjacent a door opening formed therein, to prevent the flow of fluid between said closure member and said refrigerator.

In testimony whereof I hereunto affix my signature.

CHARLES C. SPREEN.