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Lemoine

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[54] REFRIGERATOR DOOR LINERS

[75] Inventor: **Marcel Lemoine,** Montlignon, France

[73] Assignee: **General Motors Corporation,** Detroit, Mich.

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[52] **U.S. Cl.**.....**312/138 A,** 211/90, 312/214, 312/351

[51] **Int. Cl.**.....**A47f 3/04**

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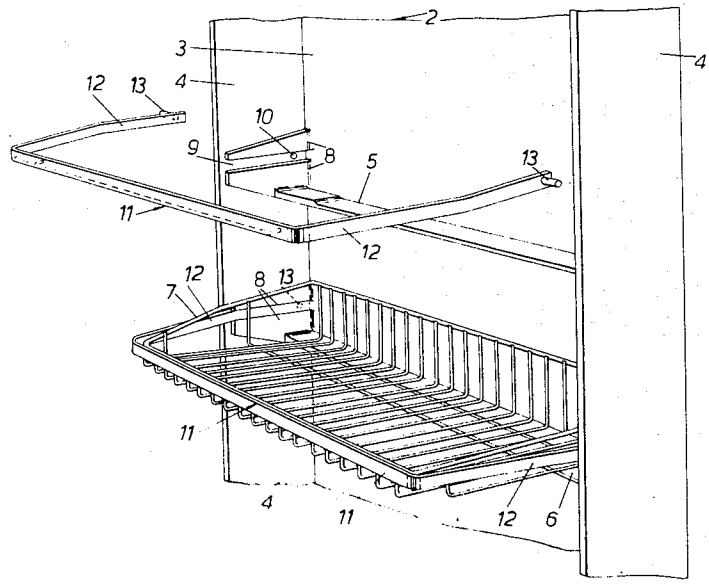
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Primary Examiner—James T. McCall
Attorney—W. S. Pettigrew and F. M. Ritchie

[57] **ABSTRACT**

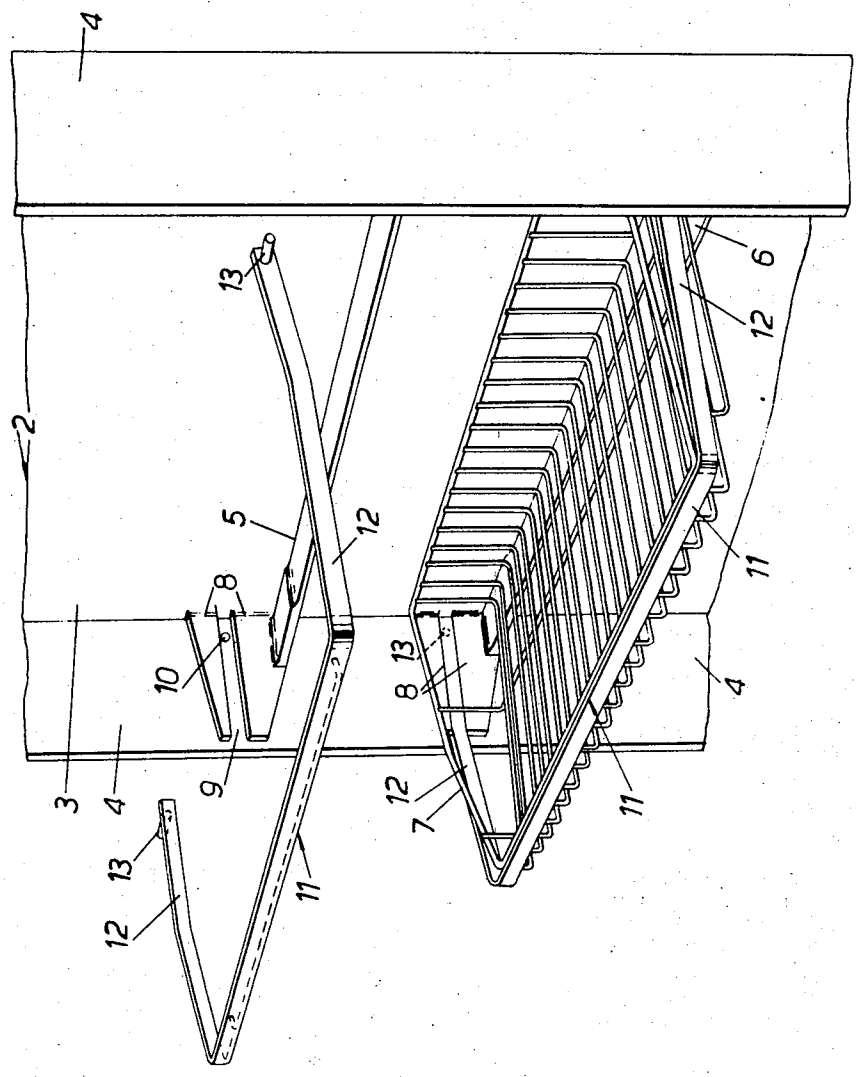
A refrigerator door liner has a mounting for a removable shelf in which the door liner has a projecting horizontal shelf support, a pair of opposite vertical flanges and a pair of ledges respectively formed on said vertical flanges. A detachable stirrup interfits with said ledges and is adapted to embrace a shelf resting on the horizontal support, the detachable stirrup engaging formations on the door liner when interfitting with the ledges.

1 Claim, 1 Drawing Figure



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Inventor

Marcel Lemoine

BY

Frederick M. Ritchie

Attorney

REFRIGERATOR DOOR LINERS

The invention relates to refrigerator door liners having mountings for removable shelves.

The principal object of the invention is to provide a refrigerator door liner with a removable shelf which is embraced by a detachable stirrup which engages firmly on the door to retain the shelf in position.

The nature of the invention and the object thereof will be clear to those skilled in the art from the succeeding detailed description of the preferred embodiment of the invention and the accompanying drawing thereof which is a front perspective view of a refrigerator door liner with a lower shelf attached, and with a mounting for an upper shelf.

A refrigerator door liner **2** of moulded plastics material comprises a center panel **3** formed with a pair of vertical opposite side flanges **4** which reinforce the door liner **2** and support, (as conventional), and the hermetic sealing material of the refrigerator cabinet (not shown). A horizontal flange **5** is integrally formed on the liner **2** between the side flanges **4** and is arranged to support a removable wire grid **7** or other shelf which, when the refrigerator door is in a closed position, projects into the refrigerator cabinet. A lower support flange **6**, similar in formation to the flange **5**, is shown and may be formed on the panel **3** of the liner, so that two removable shelves may be fitted. Obviously, the liner could be fitted for more than two shelves. The lower shelf is shown in position; the upper shelf is not shown.

A pair of ledges **8** are formed adjacent each end of the support shelves **5**, **6**, integrally with the respective vertical flanges **4**; each pair of ledges forms a horizontal groove **9** which is open at the end intended to face the interior of the refrigerator cabinet. A suitable formation such as a retainer socket **10** which may be a simple aperture formed in the back of the vertical flange **4** within the groove **9** is adapted to secure a stirrup **11** formed of metal or plastics material which retains the shelf **7**, as described below. In the drawing, the parts **8**, **9**, **10**, are visible only on the left hand flange **4**. It is to be understood that similar parts are also provided on the right hand flange **4**.

The stirrup is substantially U-shaped in plan and has side arms **12** to embrace the side walls of the shelf **7** to retain it securely on the horizontal support flange **5** or **6**. The side arms **12** of the stirrup **11** are resilient and each has an outer projecting peg **13**, the pegs being inserted in the apertures **10** forming the retainer socket. Each said arm **12** of the stirrup **11** is of such a width as

to fit into the groove **9** between the sides of the ledges **8**, **9**, **10** so as to effect a firm support at each side of the stirrup.

Thus by inserting the side arms of the stirrup into the grooves **9**, and pushing them along the groove the pegs **13** are urged into the complementary apertures of the sockets **10**; the stirrup **11**, together with the grid **7** which it retains, is then firmly held in position on the door liner.

The mounting described firmly supports the removable tray and prevents any accidental tilting thereof.

The detailed description of the preferred embodiment of the invention is for the purpose of explaining the principles thereof and is not considered to be limiting or restricting the invention, since many modifications may be made by the exercise of skill in the art.

I claim:

1. The combination of a refrigerator door liner with a removable shelf, said combination comprising: opposite vertical side flanges on the liner, each flange having a pair of ledges with sides forming a substantially horizontal groove having a groove dimension in the horizontal direction greater than its dimension in the vertical direction, said groove being open at one end thereof and having a retainer socket at the other end thereof, a horizontal flange on said liner between said vertical flanges and below the horizontal grooves, a removable shelf in a support position on said liner having an inner end resting on said horizontal flange and an outer end, and a detachable stirrup having in said support position a resilient side arm at each side thereof sufficiently wide to fit snugly between the sides of its respective pair of ledges to effect a firm support at each side arm of the stirrup, each side arm being provided with a peg initially receivable into its respective groove through the open end thereof and slidably movable along the groove to said support position wherein the peg in response to the resilience of its respective side arm projects detachably into the retainer socket of the groove thereby providing interfitting formations which hold the stirrup side arms against withdrawal from the grooves, the stirrup embracing said removable shelf at the outer end thereof for supporting said shelf in said support position when the inner end thereof is resting on said horizontal flange, the stirrup embracing said removable shelf at the sides thereof in said support position and limiting the movement of each side arm in a direction tending to detach said peg from said retainer socket, thereby to retain said shelf securely on said horizontal flange.

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