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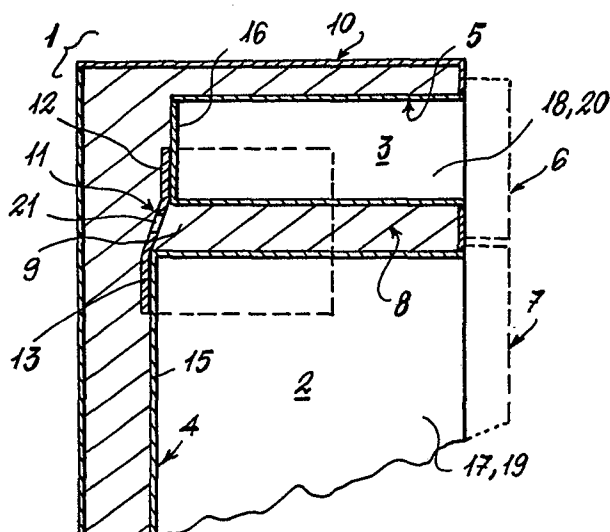
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54 **Cabinet for a refrigerator appliance with at least two preservation compartments and with insulation of foamed synthetic material.**

57 In a cabinet for a refrigerator appliance with two spaced-apart preservation compartments (2, 3), which are each formed from a front-open liner (4, 5), operate preferably at different temperatures and are disposed one above the other with an intermediate separation zone (8) therebetween and having insulation (9) in the form of synthetic material foamed in-situ to surround and penetrate between said liners to rigidly join them together, and further comprising an outer housing (10), a flexible element (11) is provided adhering to the two liners (4, 5) in order to selectively intercept access to said separation zone (8).



Cabinet for a refrigerator appliance with at least two preservation compartments and with insulation of foamed synthetic material.

This invention relates to a cabinet for a refrigerator appliance with two spaced-apart preservation compartments which are each formed from a front-open liner, operate at different temperature and are disposed one above the other with an intermediate separation zone therebetween and also having insulation in the form of synthetic material foamed in-situ to surround said box-shaped liners on the closed sides thereof and rigidly join said liners together, and further comprising an outer housing.

In the production of such cabinets, the reactive fluid components which react to form the foamed insulation material are injected when the two box-shaped liners, the outer housing and other parts not specified herein because they are not relevant to the present invention are mounted in a mould the purpose of which is to resist the thrusts deriving from the reaction between said fluid components. During their reaction, all the empty spaces between the outer housing and the box-shaped liners are occupied by the result foamed material.

Refrigerators with local deformation of the outer housing at the level of the separation zone between the two box-shaped liners have been found to occur frequently to the extent of negatively affecting production costs, a possible reason for this being that in this zone there is an excess of reactive components such that their reaction, which results in an increase in volume, continues even after removal from the thrust-resistant mould. Furthermore, the insulation thickness of the two preservation compartments of the cabinet are different in accordance with the different operating temperatures, and change precisely in this zone.

To obviate this drawback, the invention provides at least one flexible element cemented along its edges to the two liners, so that its intermediate portion partly closes access to the separation zone between the two liners.

Advantageously, the flexible element is self-adhesive at least along its edges, is of paper material and extends over part

of the three consecutive closed sides of the two liners.

Preferably, once applied, said flexible element is of U configuration, and its intermediate portion is provided with passage apertures.

5 The invention will be more apparent from the detailed description given hereinafter by way of example with reference to the accompanying drawing in which:

10 Fig. 1 is a diagrammatic perspective view showing the two vertically spaced-apart, front-open, box-shaped liners which define the two preservation compartments of a cabinet for a refrigerator appliance, and also showing the flexible element applied to said liners and partly intercepting access to the separation zone between the box-shaped liners;

15 Fig. 2 is a diagrammatic partial vertical section on the line II-II of fig. 1.

In the figures, the reference numeral 1 indicates overall a cabinet for a refrigerator appliance shown diagrammatically, and possessing two preservation compartments 2, 3 operating at different temperatures, each being closed by a door 6, 7 (not shown in Fig.1).

20 Each of the two compartments 2, 3 is defined by a front-open, box-shaped liner 4, 5.

The two liners 4,5 are vertically spaced apart by separation zone 8 occupied by the insulation 9 of foamed synthetic material which extends over all the sides of said liners with the exception of the open front side thereof. The insulation 9 (which is of different thickness for each of the preservation compartments 2, 3) is bounded outwardly by a conventional outer cabinet housing 10.

25 In traditional cabinets for refrigerator appliances, the spacing zone 8 is open towards the outer housing along three sides, namely one rear side and two lateral sides. Local deformation is frequently present on the outer housing 10 at the level of said zone, and this means that the cabinet has often to be rejected.

30 To obviate this eventuality, the invention proposes to apply over part of the open contour of said zone 8 a self-adhesive tape, preferably of paper material and indicated by 11, with its edges 12, 13 adhering to the box-shaped liners 4, 5 and its intermediate portion 14 subtending said open contour.

Once applied, the flexible element 11 is of U configuration, with its intermediate portion extending along the vertical rear walls 15, 16 of the two box-shaped liners, and its two lateral portions extending along the vertical side walls 17, 18 and 19, 20 of said liners.

5 The intermediate portion of the flexible element 11 comprises apertures 21 to allow selective flow of the reactive components of the foamed material towards the spacing zone 8, which said components also reach by way of the two lateral passages 22, 23 left free by the side portions of the flexible element 8 which, as can be seen from
10 the figures, extend only along part of the width of the walls 17,18,19 and 20.

It has been found that the selective flow of the reactive insulationforming components towards the spacing zone considerably prevents the defect of local deformation of the outer housing 10.

15 The flexible element can be of self-adhesive paper, but it can also be applied by means of an adhesive previously spread over the box-shaped liners and can be of material other than paper material, even if only on one of its faces.

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1. A cabinet for a refrigerator appliance with two spaced-apart preservation compartments, which are each formed from a front-open liner, operate preferably at different temperatures and are disposed one above the other with an intermediate separation zone therebetween
5 and also having insulation in the form of synthetic material foamed in-situ to surround and penetrate between said liners to rigidly join them together, and further comprising an outer housing, characterized by providing a flexible element (11) adhering along its edges (12, 13) to the two liners (4,5) so that its intermediate portion (14) partly closes
10 access to said intermediate zone (8) between said liners (4,5).
2. A cabinet as claimed in Claim 1, characterized in that the flexible element (11) is self-adhesive at least along its edges (12,13).
3. A cabinet as claimed in Claim 1, characterized in that the flexible element (11) is a tape which at least on one of its faces
15 is composed of paper material.
4. A cabinet as claimed in one or more of the preceding claims, characterized in that the flexible element (11) extends over part of the three consecutive sides (15-20) of the two liners (4,5).
5. A cabinet as claimed in one or more of the preceding claims,
20 characterized in that the flexible element (11) is of U configuration after being applied, and its intermediate portions is provided with apertures (21).
6. A method for preventing local deformation in refrigerators with foamed insulation and having two superposed preservation compart-
25 ments between which a spacing zone exists, characterized by selectively preventing access of the reactive insulation components to said zone.

