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(54) Improved refrigerator seal

(57) The refrigerator door includes a circumscribing seal (9), with an outside portion that may be tube-shaped (5) to house a magnet inside it.

The seal (9) has another inside portion or section (4) that carries out the hermetic sealing of the insulating material injected between the door (8) and the inner covering (7) of the refrigerator.

The outside portion of the seal (9) is separable when it becomes worn, it being replaced by a substitute seal (11) that essentially has the same shape as the removed portion, and includes a means of fastening to the support surface (13) of the inner covering (7), defined by a flat adhesive strip provided with a withdrawable protection film.

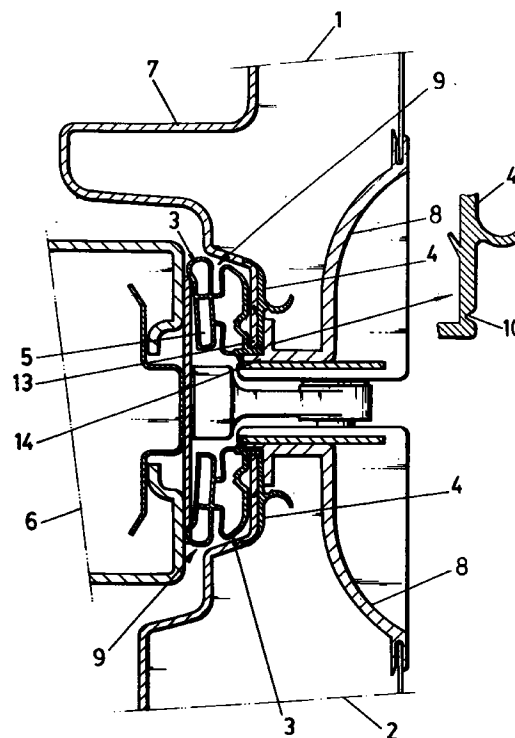


FIG.1

EP 0 713 067 A2

Description

OBJECT OF THE INVENTION

According to the title of this specification, the present invention refers to improved refrigerator seal and as such it has a series of relevant and advantageous characteristics with regard to the seals presently used for this purpose and of this type.

This type of seal is that which has a tube-shaped portion with elastic features and that includes a housing for a magnet that follows the contour of the door, carrying out the hermetic sealing upon being attracted by the metal sheet of the frame of the refrigerator.

A seal that is easily replaceable when it is worn and no longer effectively carries out its sealing function, then being substituted by a new one without having to change the door, is proposed.

BACKGROUND OF THE INVENTION

The applicant firm itself is owner of Utility Model no. 278,606 which dealt with a refrigerator door structure whose inner covering or inside panel of the same, had a trapezoidal recess for fastening the end that ends in a similar fashion as the seal and whose other end with regard to the cross-section, also tube-shaped, was housed behind an angular flange, thus the seal remains well secured. In this way easy substitution of the same when it was worn was made possible.

Sealing of the door to carry out the injection of the insulating material in the chamber that is formed between the door and the inner covering in perfect conditions, is done nonetheless as it was normally done by means of an independent seal inserted between the circumscribing overlapped edges of the panels comprising doors. The closed space for injection of the insulating material is made hermetic by means of the pressure of a mold.

DESCRIPTION OF THE INVENTION

In broad outline, the improved refrigerator seal that comprises the object of the invention allows the operation of substitution of the seal of a refrigerator to be carried out simply and economically, aside from having been already used in the manufacturing process of the door itself in the phase of injection of the insulating material of the same, due to one part of the same being used to replace the above cited seal inserted between the edges.

This seal that is proposed includes a tube-shaped portion for elastic adjustment against the frame that it encloses, with various compartments in one of which the magnet is housed; and another sheetlike one that performs the function of airtightness in the formation of the door, as if it were conventional sealing for the injection of the insulating material.

The initial part of this sheetlike portion has a recess in its section to define a longitudinal frangible line that

allows for the separation of the outside portion of the seal from that which remains trapped inside the door.

When due to use the seal becomes worn, the same can be cut along said frangible line and a new one provided for this purpose and whose geometric shape is similar to that of the outside or tube-shaped portion of the previous one, can be put in place.

The seal used as a substitute is provided with a layer of adhesive with a piece of protection paper that, once removed, allows for perfect fastening of the seal so that the same effectively carries out its sealing functions.

To provide a better understanding of the features of the invention and forming an integral part of this specification, some sheets of drawings in whose figures the following has been represented in an illustrative and non-restrictive manner, are attached hereto.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a partial sectioned raised view of the hinging area of the two doors of a refrigerator, showing the seal object of the invention.

Figure 2 is a sectioned view of the new seal that has been installed when the worn one needs to be replaced.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Making reference to the numbering used in the figures, we can see that the seal that is placed in the doors (1) and (2) of the refrigerator, includes an outside tube-shaped portion (3) and another inside portion (4), with regard to the door.

The tube-shaped portion (3) has in one of its housings (5) the magnet for sealing upon being applied against the frame (6) of the refrigerator.

Portion (4) is the element that carries out the sealing of the inside (7) and outside (8) panels that form the door, which we will refer to as inner covering (7) and panel (8) itself of the door, hereinafter. This seal is generally referred to as number (9).

In the enlarged detailed view of figure 1, we can see that the initial flat part of the sheetlike portion (4) or inside portion of the seal (9) is provided with a notch (10) to facilitate the release of the outside or tube-shaped portion (3) of said seal (9), when it is worn. When this tube-shaped portion (3) has been removed, the user can then put the seal (11) shown in figure 2 and whose outside shape is very similar to that of the removed portion (3) in place. The new seal is acquired by the user for this purpose.

Reference (12) designates the layer of adhesive covered by a protection strip that is removed when it is applied on the corresponding strip (13) of the inner covering (7). The free edge of the inner covering (7), once the tube-shaped part (3) of the seal (9) has been released, may not end up abutting with the circumscribing flange (14) of the door panel (8) precisely due to the thickness of the wall of the seal (9) in this area, an opening remaining due to the fact that the notch (10) where

the seal breaks remains rather distant from the surface of the inner covering. This formed groove allows that the flange (15) of the substitute seal (11) enters into it, marking the correct assembly position.

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Claims

1. Refrigerator with a door, at which door a circumscribing magnetic seal is held, which abuts the frame of the refrigerator when the door is closed and which comprises a seal portion and a fastening portion fixed to said seal portion, the seal portion being separable from said fastening portion along a frangible line in case of damage and replaceable by a substitute seal portion, characterized in that
 the substitute seal portion (11) has essentially the same shape as the removed portion (9) and is provided with an angularly shaped fastening base, of which the shorter wing (15) with its outer wing surface abuts a butt surface of the door (1,2), which converts into a circumferential slot serving for maximally close-fitting reception of the shorter wing (15), whereas the longer wing is fastened to the door (1,2) by means of a fastening means (12).

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2. Refrigerator according to claim 1, characterized in that the door (1,2) at its inner covering (7) is equipped with a support surface (13) for fastening of the longer wing.

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3. Refrigerator according to claim 1 or 2, characterized in that the longer wing of the substitute seal portion (11) is fitted to the support surface (13) of the inner covering (7) by means of a flat adhesive strip (12) serving as fastening means.

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4. Refrigerator according to claim 3, characterized in that one side of the adhesive strip (12) is prefastened to the longer wing of the substitute seal portion (11), whereas the other side of the adhesive strip (12) is covered by a withdrawable protection film.

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5. Refrigerator according to any of claims 1-3, characterized in that the inner covering (7) is disposed with its free ends at a distance from the outer covering (8) of the door in order to form the circumferential slot.

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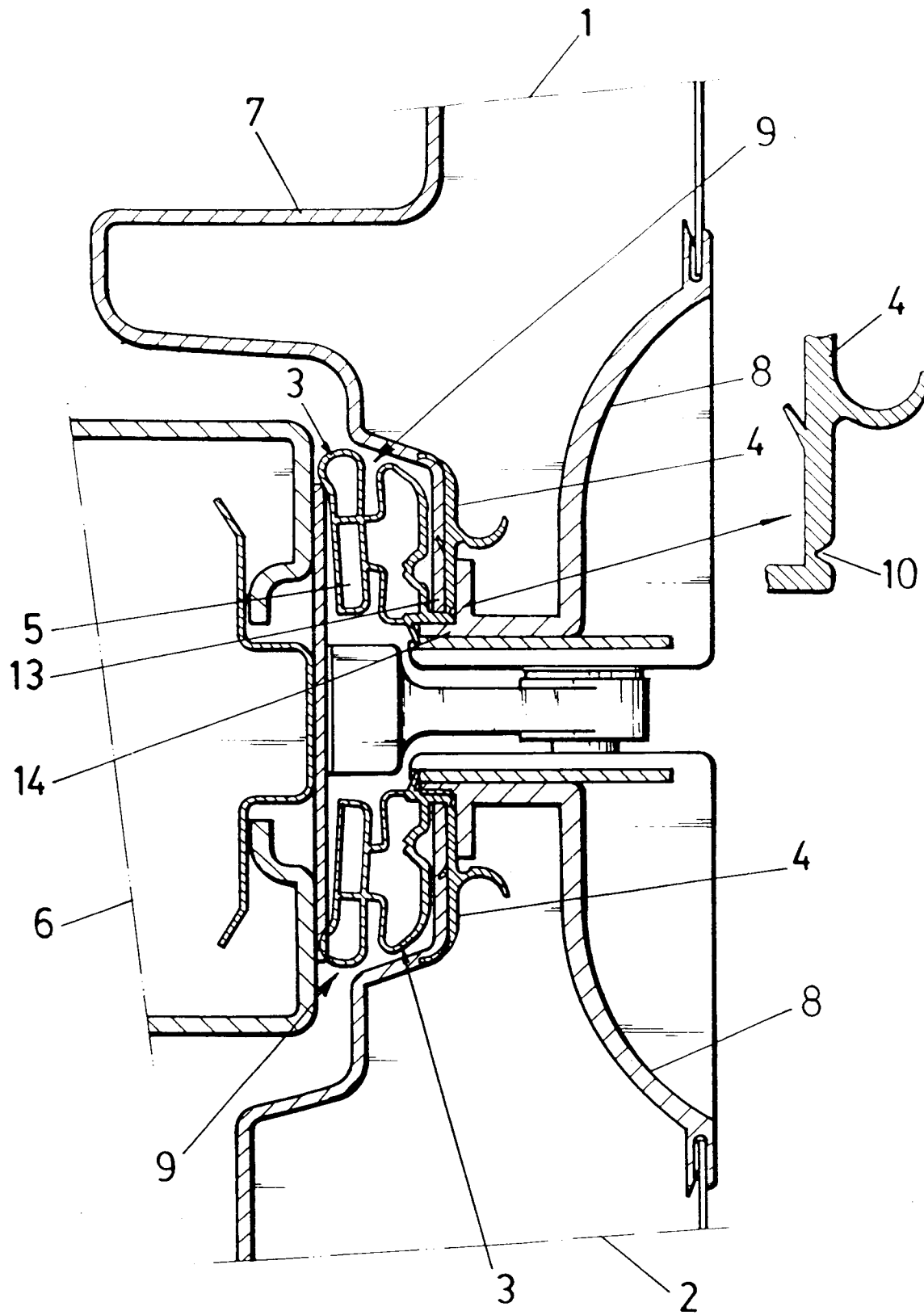


FIG. 1

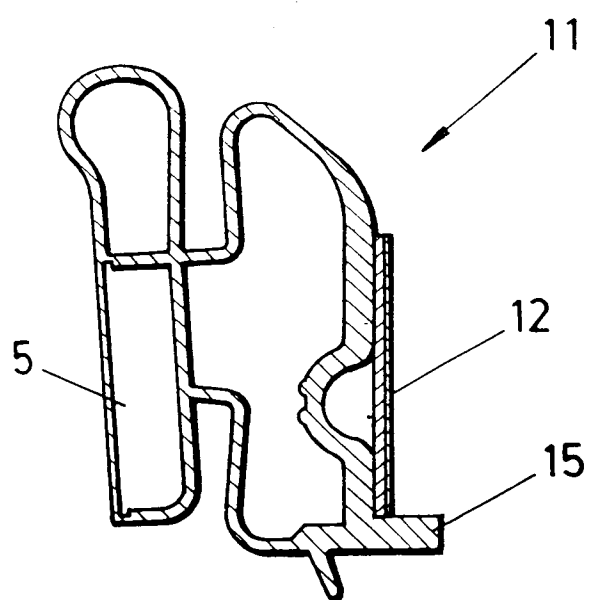


FIG. 2