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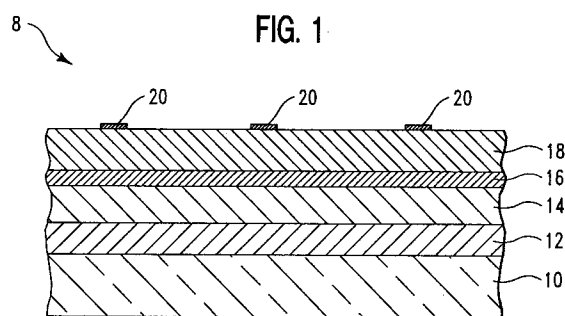
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**I-21025 Comerio (Varese) (IT)**(54) **Arrangement for temporarily immobilizing the internal accessories of domestic cooking appliances, such as cookers, ovens and the like.**

(57) An arrangement for temporarily immobilizing the internal accessories of domestic cooking appliances, such as cookers, ovens and the like, incorporating at least one door-closable compartment in which said accessories can be housed, comprises a paper-material structure (1) provided with a base (2, 102) and surrounding flaps (4, 5, 5A, 6, 7; 104. 105. 106. 107) rotatably joined to said base so as to be able to be raised to form mutually counteracting (at P, Q, R and S) side walls bounding said base, at least one of said flaps (the flap 6 and the flaps 104, 106) comprising an elongate aperture (14, 114) in a direction parallel to the base (2, 102).

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This invention relates to an arrangement for temporarily immobilizing the internal accessories of domestic cooking appliances, such as cookers, ovens and the like, such immobilization being temporarily required during the handling of the appliances.

Both electrically and gas operated domestic cooking appliances comprise a series of accessories which are placed in the cooking compartment of the appliance after being grouped together into a flat bundle which is covered with thermoshrinkable material and then with protective materials (such as foamed plastics or air-chamber plastics) to form a protected pack, self-adhesive tape then being used to close the pack and to fix it to the walls of the cooking compartment (ie immobilize it).

The reason for this is that during the various handling operations to which the appliance is subjected before reaching the user, any accessories (grids, spits, shelves and guides) not immobilized could move and be damaged, or cause damage to the walls of the compartment housing them, and in particular to the glass door which closes the access to the compartment.

This known method has a series of drawbacks, including the evident time and material wasted in forming the pack and fixing it inside the compartment, the use of relatively costly materials, a certain disorder on unpacking the accessories, and finally an insufficient guarantee against damage occurring should the adhesive tape which fixes the pack to the compartment walls become detached, as not infrequently happens.

The main object of the present invention is to provide a protective arrangement for temporarily immobilizing the accessories placed inside domestic cooking appliances, the arrangement resulting in a series of substantial advantages over the know art, including: a) being formed in its essential protective part by a single material rather than by several materials of different type; b) being able to be used on different appliance models; c) requiring very little storage and transport space; d) requiring only little material; e) being of simple and immediate application; f) allowing instructions or information to be applied; g) providing reliable and effective protection both to the accessories and to the compartment containing them.

This and further objects which will be more apparent from the ensuing detailed description are attained by the arrangement according to the invention, which is characterised essentially by comprising a paper-material structure comprising a base and surrounding flaps joined to said base so as to be able to be raised to form mutually counteracting side walls bounding said base, at least one of said flaps comprising a longitudinal elongate

aperture.

The invention will be more apparent from the detailed description of two preferred embodiments thereof given hereinafter by way of non-limiting example and illustrated on the accompanying drawing, in which:

Figure 1 is a perspective view of a first embodiment of the structure involved in the arrangement;

Figure 1A is a schematic top view of the structure of Figure 1 according to the present invention, with its flaps erect;

Figure 2 is a perspective view showing the initial stage of insertion of the structure of Figure 1 into the compartment of a domestic electric oven;

Figure 3 is a perspective view showing the insertion of the internal oven accessories into the structure;

Figure 4 shows a different oven version with the structure of Figure 1 inserted into the compartment and with other accessories positioned in said structure;

Figure 5 shows the insertion of a further pack of accessories into the structure in the oven version of Figure 4;

Figure 6 shows the structure within the compartment with the apertured front closure flap raised;

Figure 7 shows the oven after closing the relative windowed door, through which the accessories content can be checked even with the structure present;

Figure 8 shows a different embodiment of the structure suitable for domestic cooking appliances with only a small number of internal accessories.

With reference to Figures 1-7, the structure constituting the essential part of the arrangement for immobilizing the internal accessories of a domestic cooking appliance provided with a compartment in which said accessories can be housed during the handling of the appliance is indicated by 1, it being constructed of paper material of good rigidity such as corrugated cardboard, and comprising a rectangular or square base 2, to each side of which a flap indicated respectively by 4, 5, 5A, 6 and 7 is joined via creasing lines 3.

It should be noted that the width "K" of the flap 7 across the outside of the undercuts 8 is greater than the width of the corresponding side 3 of the base 2. The same applies to the two adjacent half-flaps 5 and 5A on the opposite side of the base 2, due to the fact that undercuts 9 are also used here.

The two remaining flaps (ie 4 and 6) have a width equal to the width of the side 3 to which they are joined. Because of this dimensioning, when the flaps are erect and the structure is assembled in situ, ie in the compartment which is to receive the

appliance accessories, the flaps 4 and 6 become interposed between the other flaps (7, 5, 5A), as shown schematically in Figure 1A in which the structure is shown in plan view with the flaps erect at 90° to the base 2, the resultant counteraction points between adjacent flaps being indicated by P, Q, R and S.

The flap 4 has a height Z greater than the opposite flap 6 and comprises at least one pair of creasing lines 10, 11 parallel to the corresponding creasing line 3 to enable this flap, with its parts divided in this manner, to assume different angles as shown for example in Figure 4.

The flaps 5 and 5A divide the same side 3 of the base 2, the flap 5 comprising at least one pair of creasing lines 12, 13 parallel to the side 3 to enable those regions into which said creasing lines divide the flap to assume different angles.

The flap 6 comprises an aperture parallel to the corresponding side 3 of the base 2, on one side of this aperture there being a tab 15 foldable about a creasing line 16.

The fourth and last flap, ie that indicated by 7, comprises a large aperture 17, from the lower edge 18 of which there extends a tab 19 extending along only a fraction of said edge and joined to the flap 7 via a creasing line.

The tab 19 also comprises at least one pair of creasing lines 20, 21 parallel to the edge 18 to enable the regions of this tab to assume different inclinations.

The dimensions and shape of the flap 17 are suitably chosen so that it fits tightly into the mouth of the compartment V of the appliance A in which the relative accessories are placed after the structure 1 has been inserted into the compartment.

The dimensions of the base 2 are chosen to correspond to the cross-section of the compartment.

The structure 1 is inserted into the compartment V (Figure 2) so that the half-flaps 5, 5A rest against the inner end wall D of the compartment V, with the base 2 resting on the lower wall of the compartment. If the side walls of the compartment V comprise non-removable projecting guides 30 for the grids or shelves forming part of the appliance accessories, the side flap 6 is mounted over these guides via the aperture 14 provided in it. The tab 15 then remains bent at an angle towards the compartment V. If instead of fixed guides the compartment V comprises removable guides 40 which when removed also form part of the internal accessories, the flap 6 simply rests against the wall of the compartment V as shown in Figure 4, in which these guides are shown contained within the structure 1 and retained by the folded half-flap 5 on one side and by the folded tab 19.

In either case the pack W in the form of a thermo-shrinkable plastics envelope containing the other accessories is now inserted (see Figures 3 and 5) to assume an inclined position. At this point a piece of self-adhesive tape 31 is applied between the flap 4 and the pack W (then raising the tab 19 in the case of the fixed guides so as to in both cases achieve the configuration of Figure 5). Finally the correspondingly shaped and dimensioned flap 7 is lightly forced into the mouth of the compartment V, and the door Q of the compartment is closed so that it possibly rests against the flap 7 (by suitably dimensioning the structure 1. The door Q comprises a conventional window F through which the accessories contained in the compartment V can be checked, the aperture 17 in the flap 7 being positioned to at least partly coincide with the transparent glass of the door window as shown in Figure 7.

The embodiment shown in Figure 8, in which equal or corresponding parts carry the same reference numerals plus 100, comprises on opposing sides two flaps 104 and 106 both identical to the previously described flap 6. The two remaining sides 105 and 107 are identical to each other, with their equal widths K being greater than the width of the side to which they are joined, in order to achieve the counteracting effect visible in Figure 1A.

## Claims

1. An arrangement for temporarily immobilizing the internal accessories of domestic cooking appliances, such as cookers, ovens and the like, incorporating at least one door-closable compartment in which said accessories can be housed, characterised by comprising a paper-material structure (1) provided with a base (2, 102) and surrounding flaps (4, 5, 5A, 6, 7; 104, 105, 106, 107) rotatably joined to said base so as to be able to be raised to form mutually counteracting (at P, Q, R and S) side walls bounding said base, at least one of said flaps (the flap 6 and the flaps 104, 106) comprising an elongate aperture (14, 114) in a direction parallel to the base (2, 102).
2. An arrangement as claimed in claim 1, characterised in that at least one of the flaps (for example the flap 4; creasing lines 10, 11) comprises mutually inclinable regions.
3. An arrangement as claimed in claim 1, characterised in that a bendable tab (15, 115) is provided on one side of the elongate aperture (14, 114).

4. An arrangement as claimed in the preceding claims, characterised in that two opposing flaps (5, 7; 105, 107) have a width (K) greater than that side (3, 103) of the base (2, 102) to which they are joined. 5
5. An arrangement as claimed in the preceding claims, characterised in that one of the flaps (the flap 7) is shaped and dimensioned so that when in the compartment (V) it is encountered by the side of the compartment door. 10
6. An arrangement as claimed in the preceding claims, characterised in that the flap (7) comprises an aperture (17) which is positioned to at least partly coincide with the door window, and also comprises a tab (19) with mutually inclinable regions (creasing lines 20, 21). 15
7. An arrangement as claimed in the preceding claims, characterised in that one of the flaps (the flap 5, 5A) is divided into two half-flaps of different height, one of which (the flap 5) being divided into mutually inclinable regions (creasing lines 12, 13). 20  
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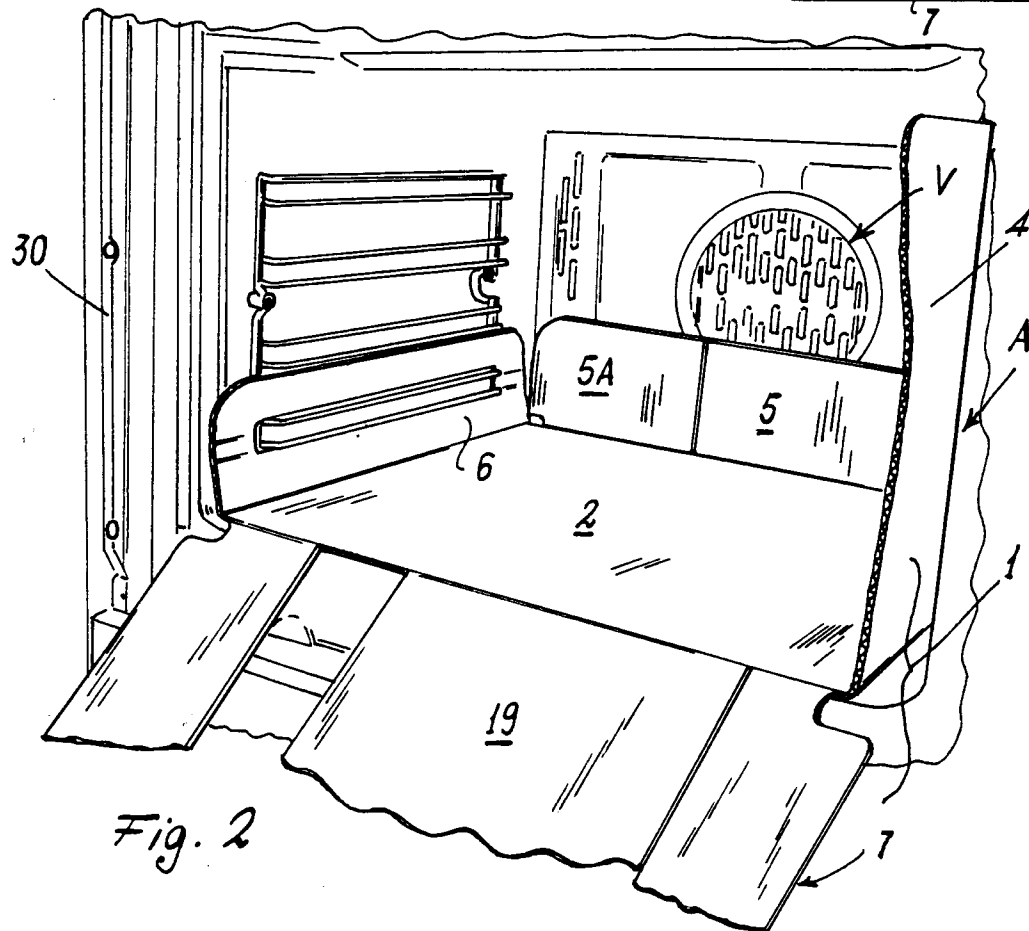
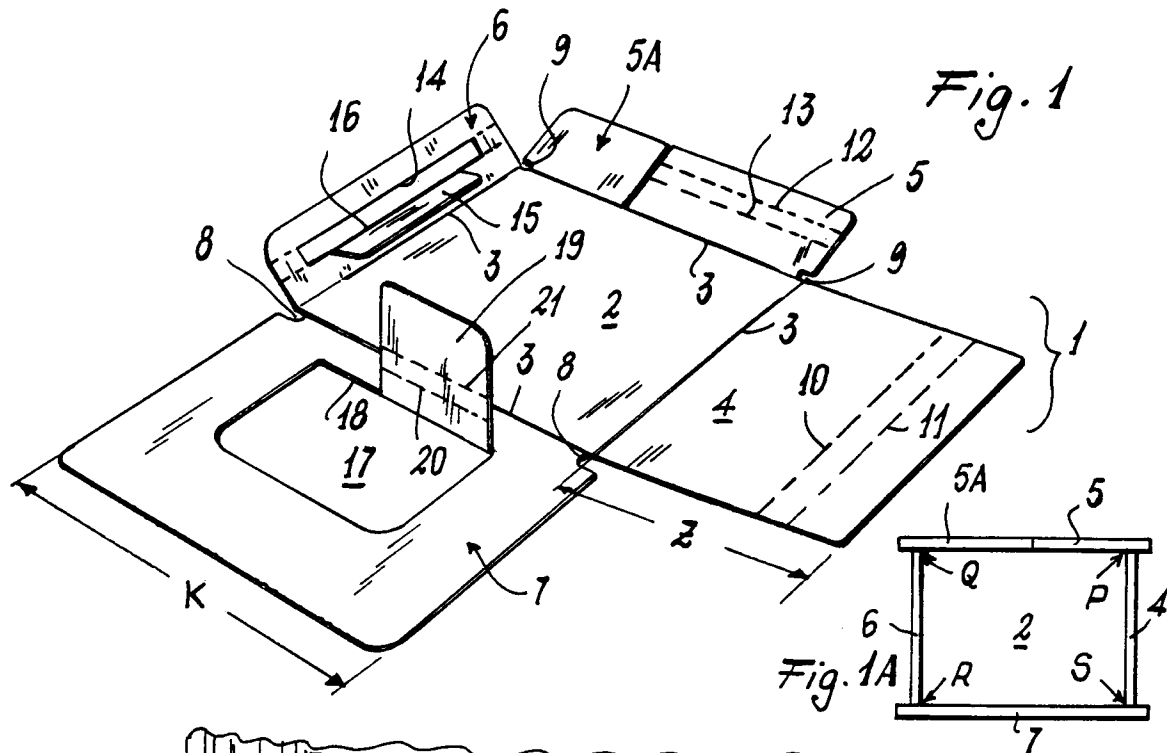
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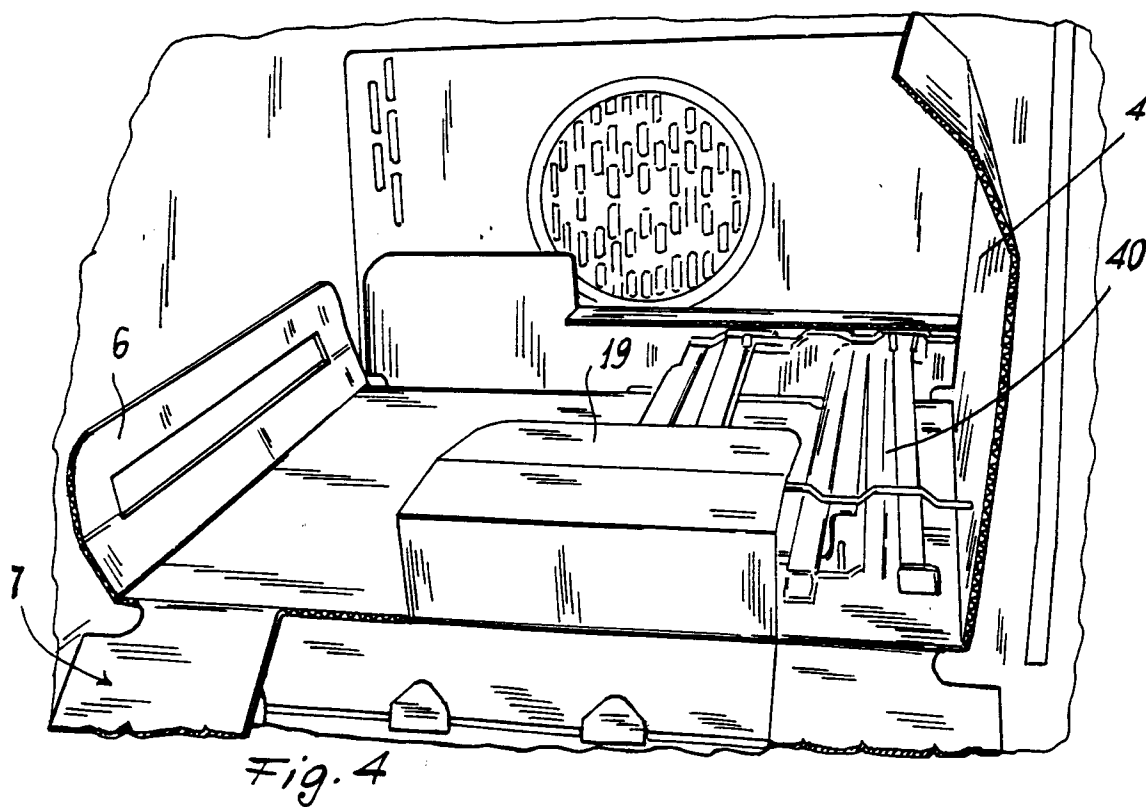
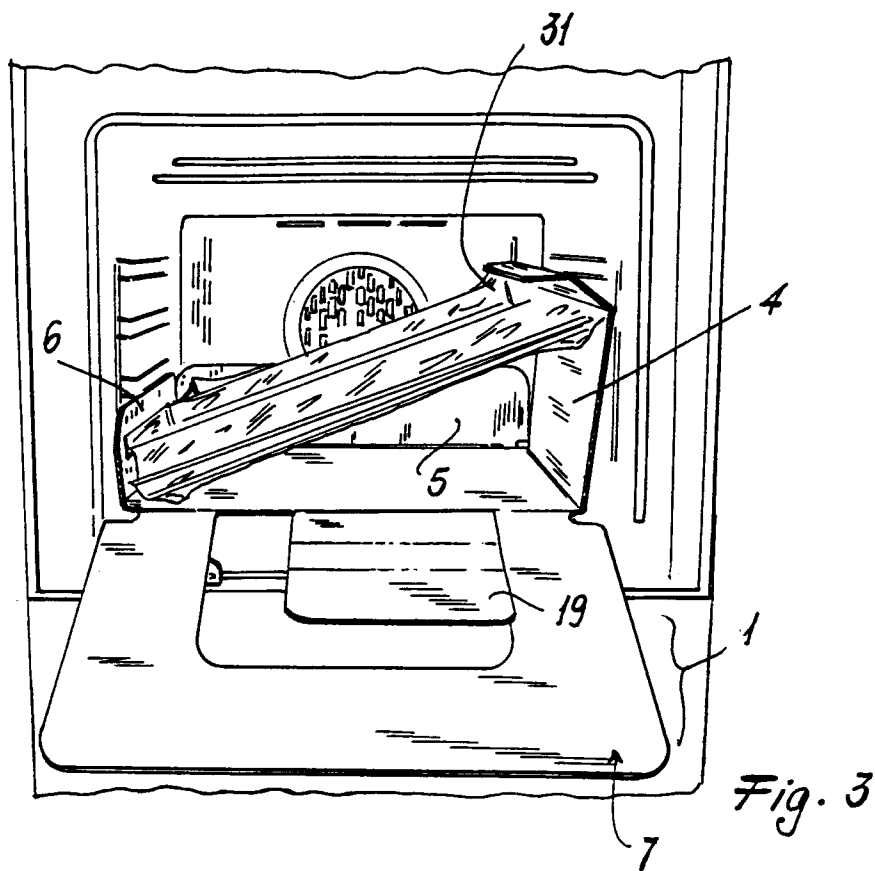
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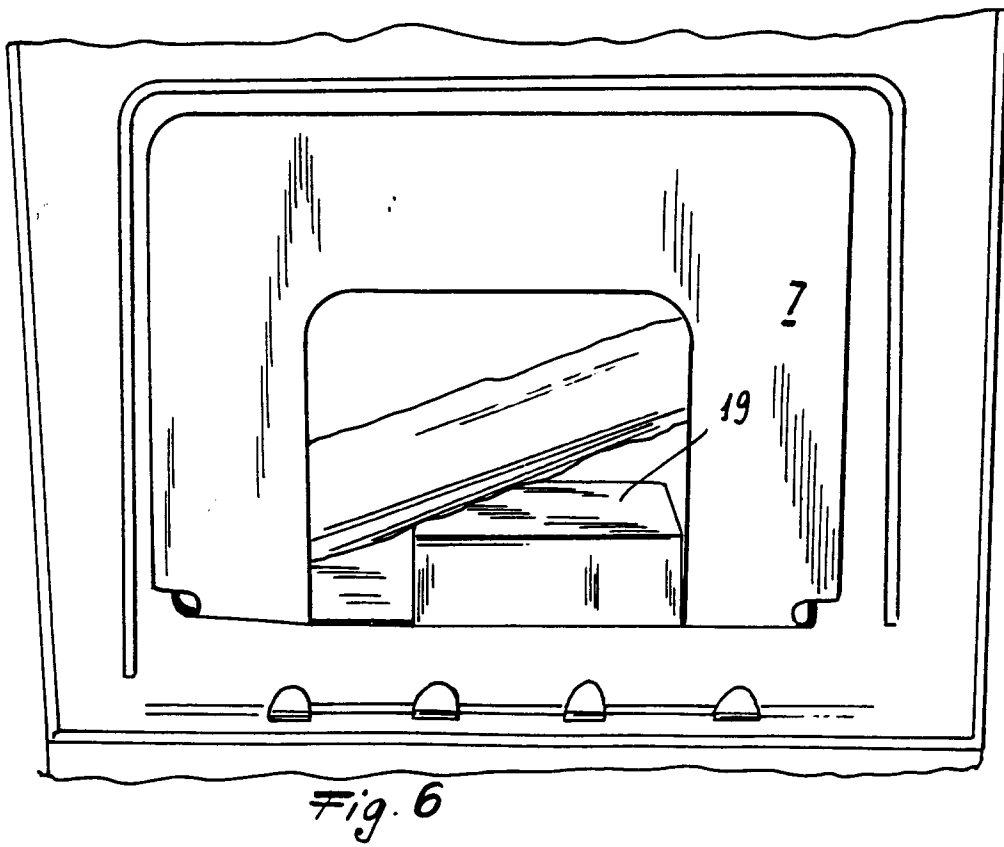
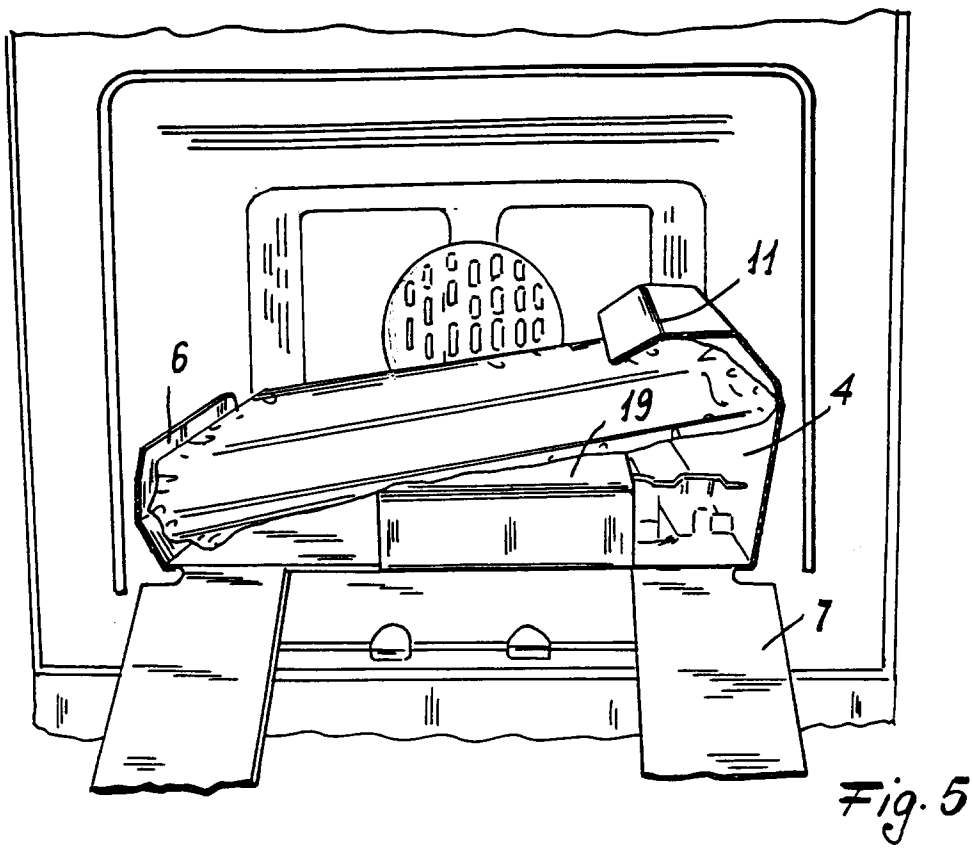
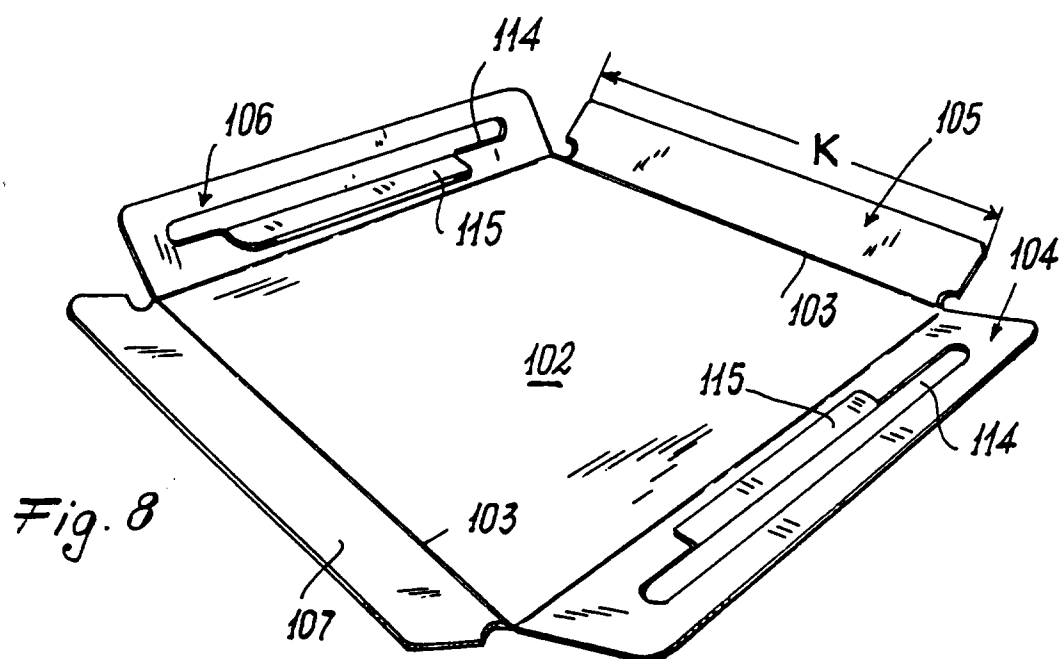
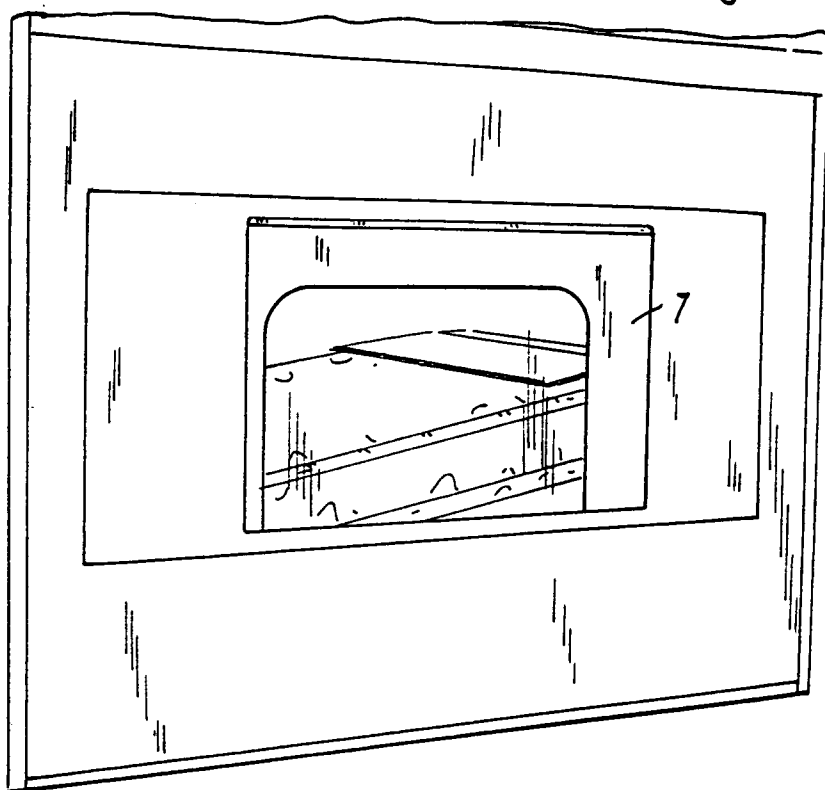


Fig. 7







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## EUROPEAN SEARCH REPORT

Application Number  
EP 93 11 8973

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	FR-A-2 300 710 (CHABANNE S.A.) * the whole document * -----	1-7	B65D5/20 F24C15/00 ✓
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			B65D F24C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 March 1994	Examiner Jensen, K
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document			