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(54) **Means for packaging flowers**

(57) Means for packaging flowers, plants and other merchandise comprises a collar which is adapted to surround flowers, plants and other merchandise during transit. The collar comprises two substantially identical halves which are adapted to be assembled together to

form the collar. Each half comprises a substantially U-shaped section having a web (51) and two limbs (61) and (71). At least the web (51) of each section is provided with engagement means (58,59) adapted to engage with a wall of a crate (60) for containing flowers, plants and other merchandise.

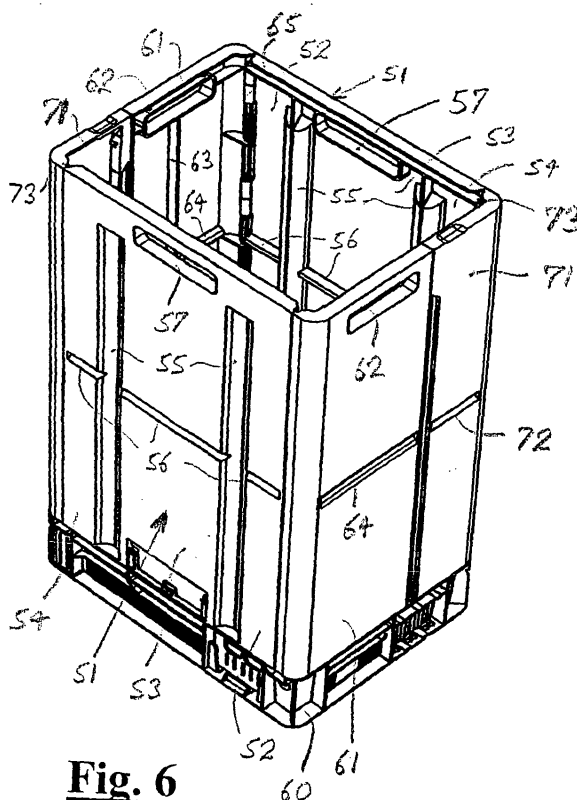


Fig. 6

Description

[0001] This invention relates to improvements in packaging for flowers, plants and the like.

[0002] It has previously been proposed to transport tall flowers in a crate with a protective tube extending upwardly from the crate to protect the upper parts of the flowers which project above the crate. Such an arrangement is disclosed in EP1075437A but this arrangement is rather complicated involving the use of an outer protective tube and an inner presentation collar.

[0003] The present invention seeks to provide a simpler arrangement which is more convenient to use.

[0004] According to the invention, there is provided means for packaging flowers, plants and other merchandise which comprises a collar which is adapted to surround flowers, plants or other merchandise during transit, said collar comprising two substantially identical halves which are adapted to be assembled together to form the collar and each half being adapted to engage with the walls of a crate for containing flowers, plants or other merchandise.

[0005] The crate may take the form of a plastics crate of the type normally used for carrying fruit, vegetables and other merchandise in the supermarket industry supply chain.

[0006] Each half of the collar should desirably be located on existing features present on the crate. When the two halves are assembled together they form a rigid protective collar that extends the effective height of the crate to protect the merchandise within.

[0007] Preferably, each half of the collar comprises a substantially U-shaped section. The limbs of each U-shaped section are desirably foldably connected to the web of the same section whereby the sections can be folded substantially flat when not in use. The combined width of the limbs of each section is desirably less than the width of the same section.

[0008] According to a preferred embodiment of the invention, the width of each of the limbs of each U-shaped section is less than half that of the width of the web of the said section. The limbs may be substantially equal in width or one limb of each section may be wider than the other limb of the same section.

[0009] Preferably, each substantially U-shaped section is provided with engagement means along the edges of the limbs which are intended to engage with the limbs of another like section. The engagement means desirably comprise a plurality of tongues at the edge of one limb and at least one socket in the edge of the other limb.

[0010] Preferably too, the web of each substantially U-shaped section is provided with at least one extension strip which is adapted, in use, to engage with a wall of a crate. Extension strips may also be provided on one or both limbs of each of the sections.

[0011] The invention will now be described in detail, by way of example, with reference to the drawings, in

which: -

Fig. 1 is an end view of one embodiment of a collar according to the invention;

Fig. 2 is a side view of the collar shown in Fig. 1;

Fig. 3 is a plan view of the collar shown in Figs. 1 and 2;

Fig. 4 shows an alternative arrangement for interlocking the sections of the collar;

Fig. 5 is a side view of one section of a second embodiment of a collar according to the invention;

Fig. 6 is a perspective view of a third embodiment of a collar according to the invention shown fitted to a crate;

Fig. 7 is a perspective view of the inside of one of the halves of the collar shown in Fig. 6;

Fig. 8 is a perspective view of the half collar shown in Fig. 7 in a folded or collapsed condition;

Fig. 9 is a perspective view of the outside of the half collar shown in Fig. 7; and

Fig. 10 is a perspective view of one collar containing the halves of three other collars in a folded-in or collapsed condition.

[0012] In the drawings, like parts are denoted by like reference numerals.

[0013] Reference will first be made to Figs. 1 to 3 of the drawings in which a collar according to the invention comprises a pair of U-shaped sections each consisting of a web 11,21 and a pair of limbs 12,22 and 13,23. One limb 13,22 of each section is provided with a pair of lugs 14 and the other limb 12,23 of each section is provided with a pair of sockets 24 which are adapted to receive the lugs 14 whereby the sections can be assembled and held together to form the collar. The webs 11 and 21 of each section are substantially identical to each other as are the limbs 12 and 23 and the limbs 13 and 22.

[0014] The edges of the limbs 12,22 and 13,23 which are intended, in use, to be located at the lower end of the collar are provided with extension strips 15,25 which are intended, in use, to be received in a crate (not shown). The upper edges of two opposite walls of a rectangular crate may be provided with grooves or slots which are adapted to receive the extension strips 15 and 25 or the extension strips may be arranged to engage simply with the walls of a crate.

[0015] The edges of the webs 11 and 21 which are likewise intended, in use, to be located at the lower end of the collar are provided with extension strips 16 and

26 which are similar to the extension strips 15,25 and which are likewise intended, in use, to be received in the crate. Again, the upper edges of the other two walls of the crate may be provided with grooves or slots which are adapted to receive the extension strips 16 and 26 or, again, the extension strips may be arranged to engage simply with the walls of a crate. In this case, however, each extension strip 16,26 is provided with a projecting region 17,27, said regions being intended, in use, to engage in corresponding recesses in the walls of the crate (not shown). Each web 11,21 is preferably also provided with a hand-hold slot 18 to serve as a means for lifting the assembled crate and collar.

[0016] The collar may be made of any suitable sheet material although cardboard or plastics are preferred. Fold lines 19,29 are preferably provided at the junctions between the webs 11,21 and the limbs 12,22 and 13,23 of the U-shaped sections whereby the sections can be folded substantially flat when not in use by folding the limbs onto the webs as indicated by the curved arrows in Fig. 3. The width of the limbs 12,22 and 13,23 should be less than half that of the webs 11,21 so that, when folded, the sections take up the minimum amount of space for transit or storage.

[0017] Turning now to Fig. 4 of the drawings, the lugs 14 and the sockets 24 may be replaced or supplemented by interlocking wedges 31 and 32 on the limbs 12,22 and 13,23 respectively.

[0018] The embodiment shown in Fig. 5 of the drawings is similar to the embodiment shown in Figs. 1 to 3 of the drawings except that the web 33 of each U-shaped section is provided with a series of panels 34 which are separated by re-inforcing ribs 35 to provide structural strength while permitting the material thickness to be reduced to limit the weight of the collar. A hand-hold slot 36 is provided at the upper end of the centre panel. The limbs 37 and 38 of each section are connected to respective edges of the web 33 by hinges 39. The limb 38 of each section is provided with tapered lugs 41 which are engageable in sockets 42 formed in the other limb 37 of another like section. The limb 38 may further be provided with a hand-hold slot 43 and the limb 37 may be provided with a similar slot (not shown). The web 33 of each section has an extension strip 16 with a projecting region 17 and the limbs 37 and 38 may have similar extension strips (not shown).

[0019] Figs. 6 to 9 of the drawings show yet another embodiment in which each half of the collar comprises a web 51 and two limbs 61 and 71. The web 51 consists of three panels 52, 53 and 54 which are separated by vertical re-inforcing ribs 55. Horizontal reinforcing ribs 56 extend across each panel in a central region thereof. A hand hold slot 57 is provided adjacent to the top of the central panel 53. An extension strip 58 extends downwardly from the web 51 and a rib 59 extends outwardly from a central region of the strip 58 and perpendicular thereto.

[0020] The limb 61 is longer than the limb 71 and is

provided with a hand hold slot 62 adjacent to its top. The limb 61 also has a vertical reinforcing rib 63 and a horizontal reinforcing rib 64. The limb 61 is pivotally connected at one edge to the edge of the panel 52 of the web 51 by means of hinges 65. The opposite edge of the limb 61 is provided with a series of tongues 66 and a hook 67 is provided on the bottom of the limb 61 for engagement with a crate 60 when the collar is fitted thereto.

[0021] The shorter limb 71 has a single horizontal reinforcing rib 72 and is pivotally connected along one edge by hinges 73 to an edge of the panel 54 of the web 51. The opposite edge of the limb 71 is provided with a socket 74 which is adapted to receive the tongues 66 on the limb 61 of the other half of the collar.

[0022] In use, one half of the collar will normally be fitted to the crate 60 with the rib 59 engaging under a rib (not shown) provided on an inside wall of the crate. The hook 67 is engaged in a hand hold slot in an end wall of the crate. The other half of the collar can then be fitted with the tongues 66 on each half engaging in the sockets 74 of the other half and the rib 59 engaging with the crate 60.

[0023] When the collar is not required for use, the limbs 61 and 71 can be folded in onto the web 51 as shown in Fig. 8 of the drawings. The folded-in half collars can then be stacked inside an identical collar as shown in Fig. 10 of the drawings. The dimensions of the collars are such that one assembled collar can accommodate three folded-in or collapsed collars as shown in Fig. 10.

[0024] The invention is not restricted to the above-described embodiments but variations and modifications may be made without departing from the scope of the invention. For example, the extension strips 15, 16, 25, 26 and/or the limbs 12, 23 may be provided with projecting lugs which are engageable in corresponding sockets in a crate adapted to receive the collar of the present invention. Further, in the embodiment shown in Figs. 6 to 10 of the drawings, the hook 67 on each of the limbs 61 may be replaced by a substantially flat vertical tongue which acts as a stop as it engages the inside of the crate. A similar tongue may be provided on each of the shorter limbs 71. Moreover, the dimensions of the collars may be such that an assembled collar can accommodate more than three folded-in or collapsed collars.

[0025] This invention also extends to a crate having an extension for packaging flowers, plants and other merchandise, said extension taking the form of a collar consisting of two substantially identical U-shaped half sections which are detachably engageable with each other and with the crate when in use.

Claims

1. Means for packaging flowers, plants and other merchandise which comprises a collar which is adapted to surround flowers, plants or other merchandise

during transit, **characterized in that** the collar comprises two substantially identical halves (11,12,13; 21,22,23; 33,37,38; 51,61,71) which are adapted to be assembled together to form the collar and each half being adapted to engage with the walls of a crate (60) for containing flowers, plants or other merchandise.

2. Means according to claim 1, **characterized in that** each half of the collar comprises a substantially U-shaped section (11,12,13; 21,22,23; 33,37,38; 51,61,71).

3. Means according to claim 2, **characterized in that** the limbs of (12,13; 22,23; 37,38; 61,71) of each substantially U-shaped section are foldably connected to the web (11,21,31,51) of the same section whereby the sections can be folded substantially flat when not in use.

4. Means according to claim 3, **characterized in that** the combined width of the limbs (12,13; 22,23; 37,38; 61,71) of each substantially U-shaped section is less than the width of the web (11,21,33,51) of the same section.

5. Means according to claim 3, **characterized in that** the width of each of the limbs (12,13; 22,23; 37,38) of each substantially U-shaped section is less than half of the width of the web (11,21,33) of the same section.

6. Means according to any one of claims 3 to 5, **characterized in that** the dimensions of each substantially U-shaped section (51,61,71) are such that an erected collar can accommodate the folded-in halves of three or more like collars.

7. Means according to any one of claims 2 to 6, **characterized in that** the limbs (12,13; 22,23; 37,38) of each substantially U-shaped section are substantially equal in width.

8. Means according to any one of claims 2 to 6, **characterized in that** one limb (61) of each substantially U-shaped section is wider than the other limb (71) of the same section.

9. Means according to any one of claims 2 to 8, **characterized in that** each substantially U-shaped section is provided with engagement means (14,24; 31,32; 41,42; 66,74) along the edges of the limbs which are intended to engage with the limbs of another like section.

10. Means according to claim 9, **characterized in that** the engagement means comprise lugs (14,41) on one limb (13,22; 38) which are engageable in sock-

ets (24,42) provided in the other limb (12,23; 38) of a similar section.

11. Means according to claim 9, **characterized in that** the engagement means comprise a plurality of tongues (66) at the edge of one limb (61) and at least one socket (74) in the edge of the other limb (71).

12. Means according to any one of claims 2 to 11, **characterized in that** the web (11,21,33,51) of each substantially U-shaped section is provided with at least one extension strip (16,58) which is adapted, in use, to engage with a wall of a crate.

13. Means according to claim 12, **characterized in that** the or each extension strip (58) is provided with a projecting rib (59).

14. Means according to claim 12 or claim 13, **characterized in that** an extension strip (15,25) is provided on at least one of the limbs (12,13; 22,23) of each substantially U-shaped section.

15. A crate (60) having an extension for packaging flowers, plants and other merchandise, **characterized in that** said extension takes the form of a collar consisting of two substantially identical U-shaped half sections which are detachably engageable with each other and with the crate when in use and **in that** the extension comprises the means claimed in any one of the preceding claims.

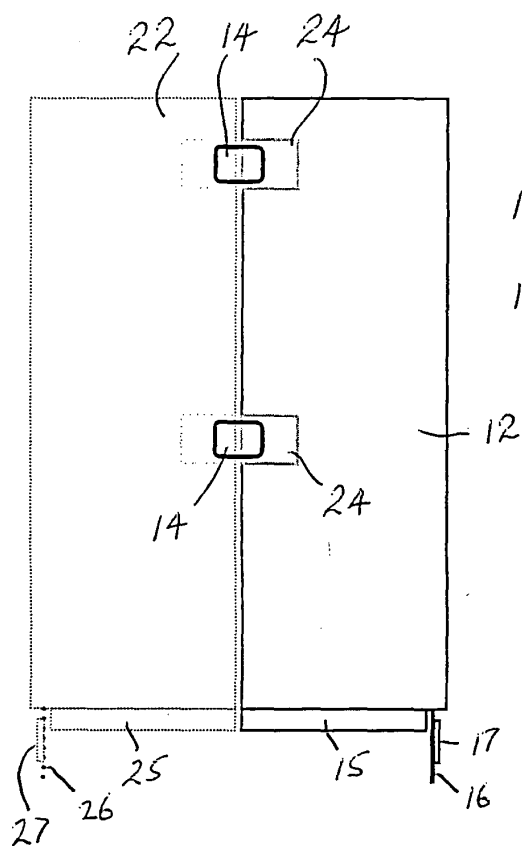


Fig. 1

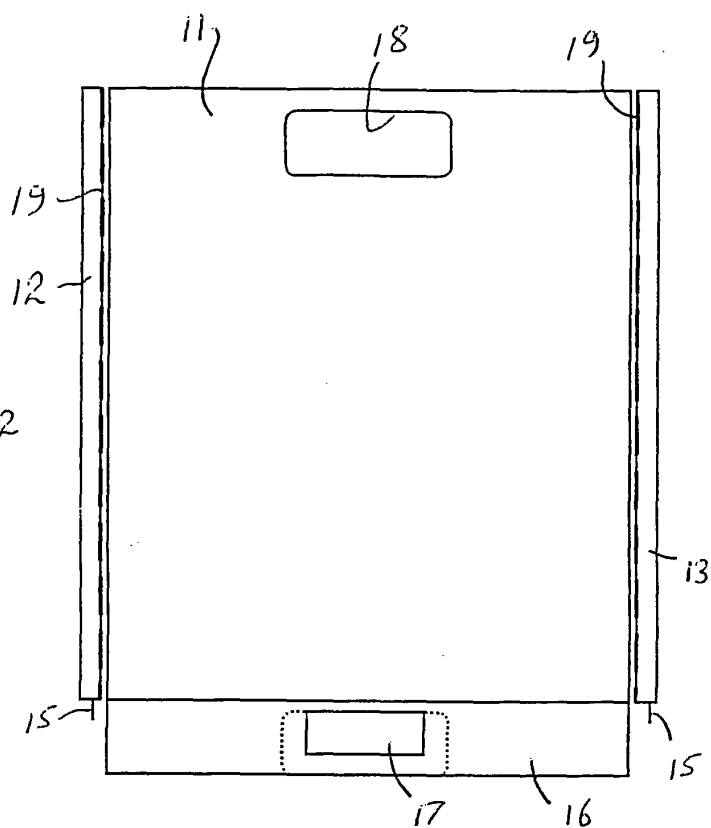


Fig. 2

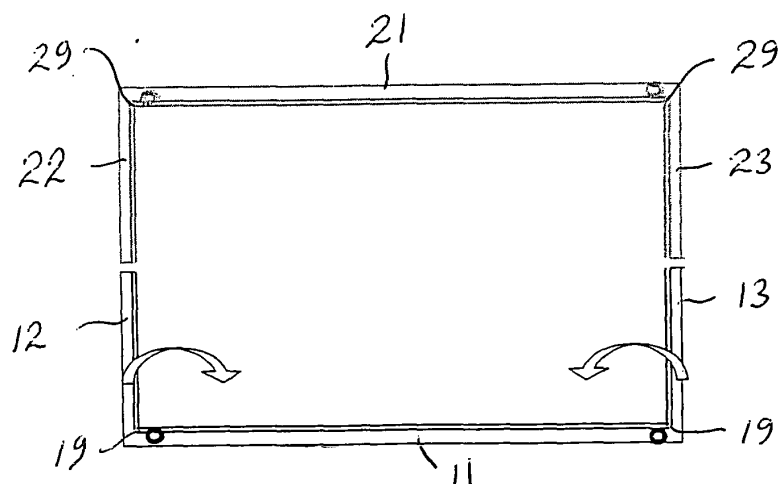


Fig. 3

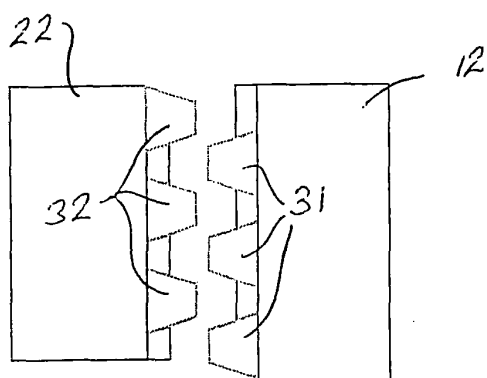


Fig. 4

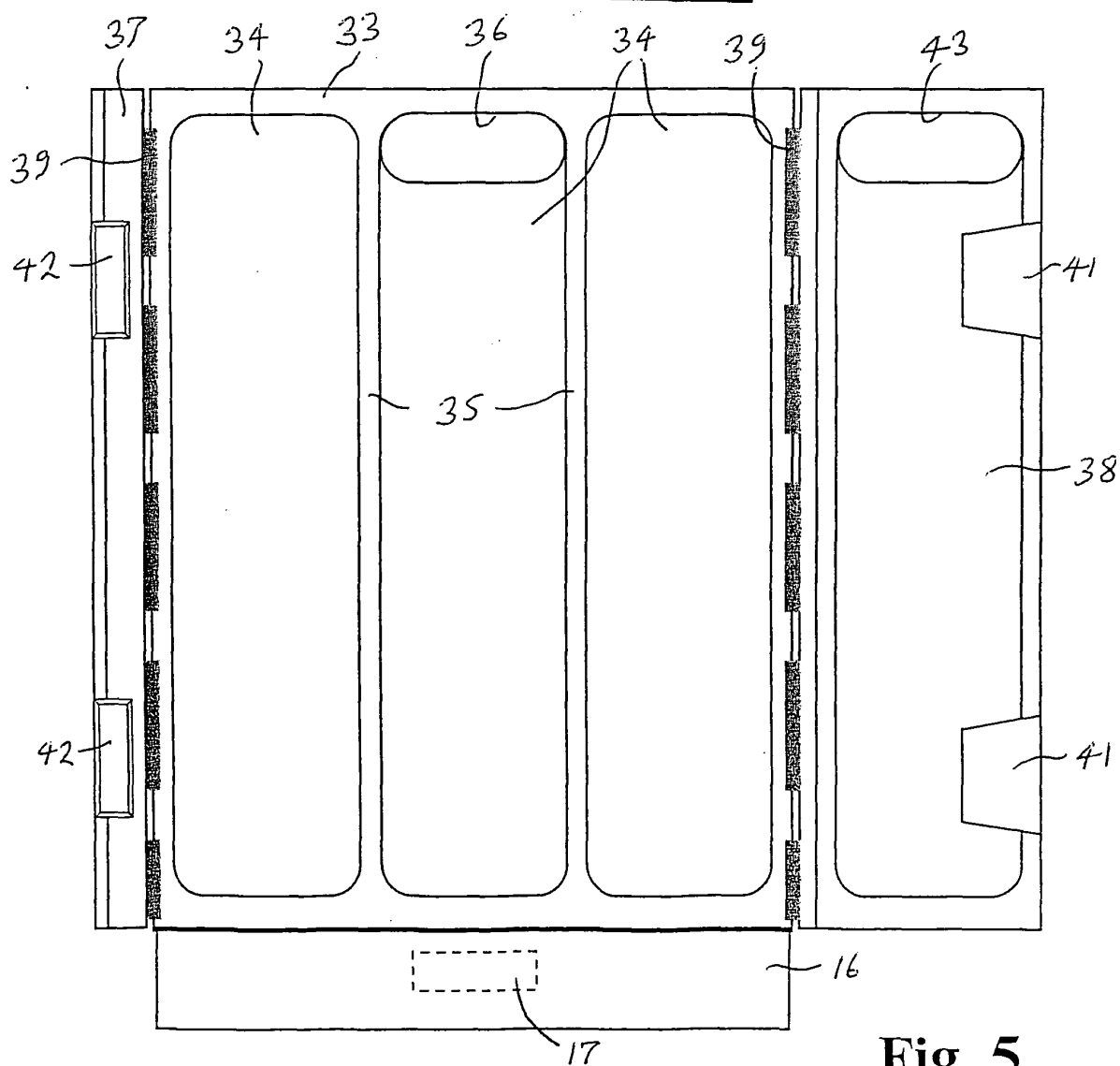


Fig. 5

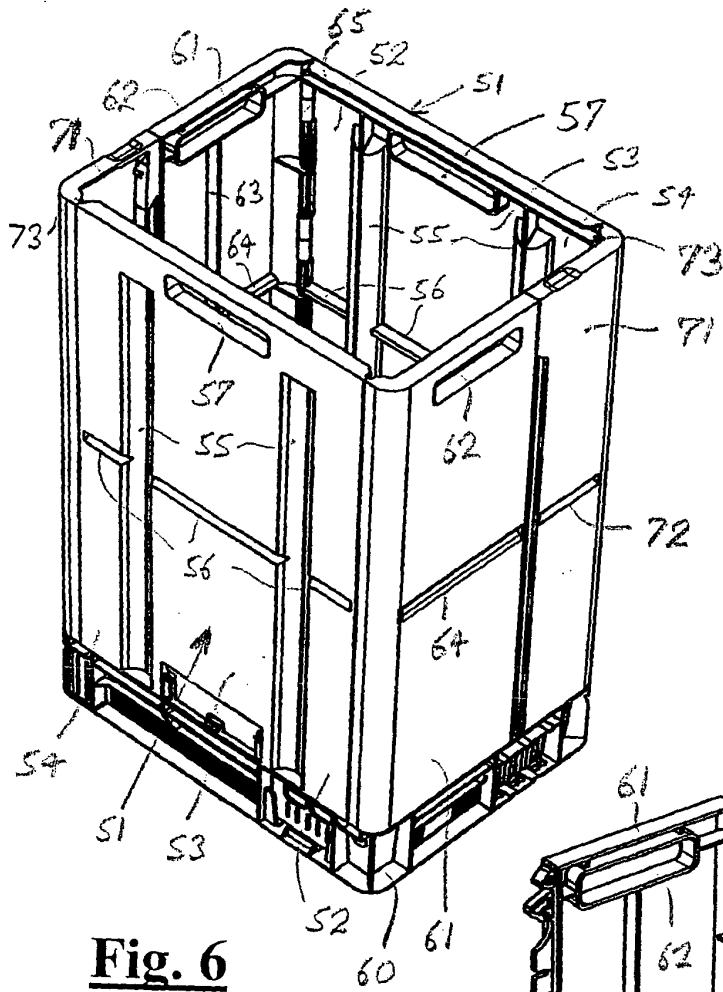


Fig. 6

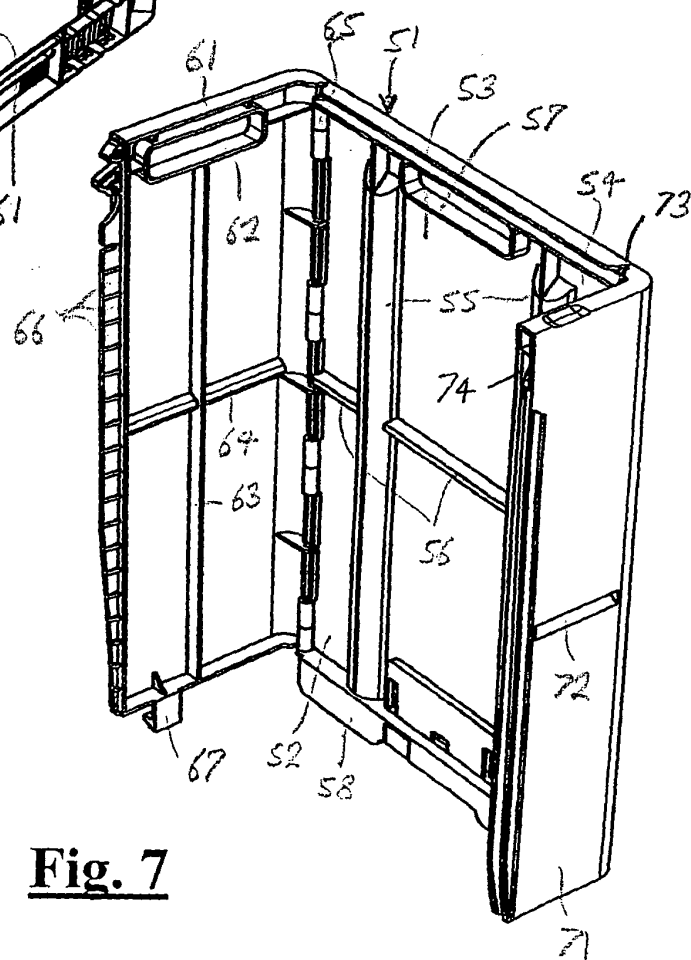


Fig. 7

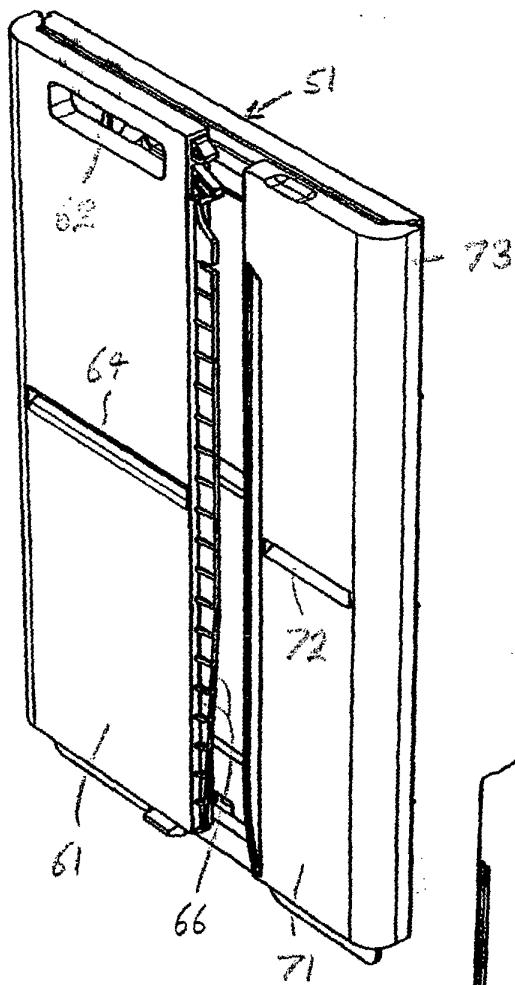


Fig. 8

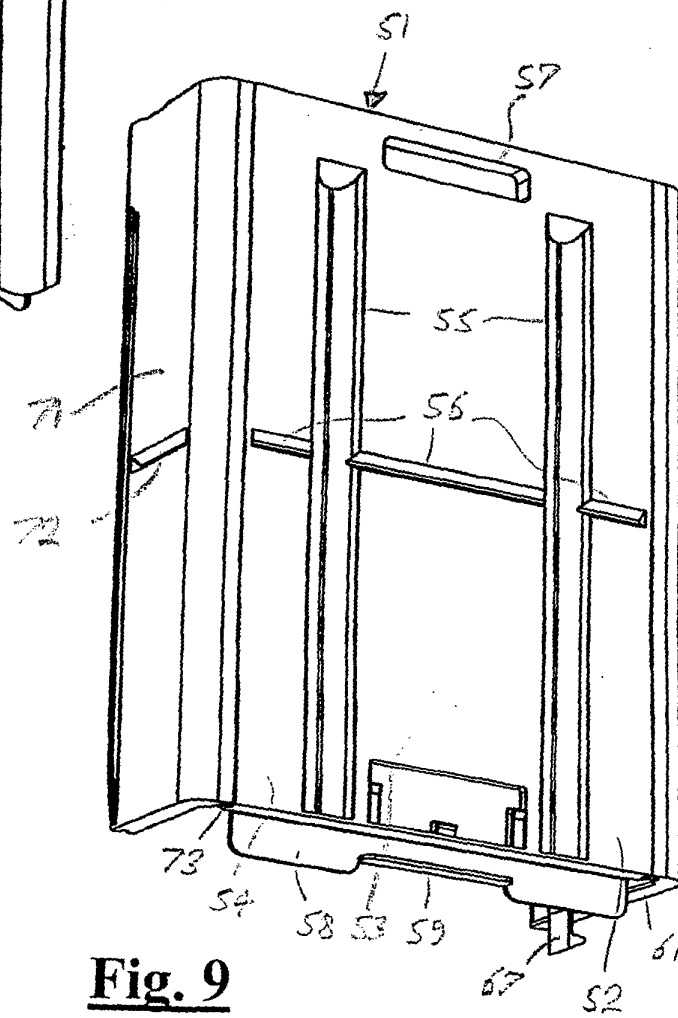


Fig. 9

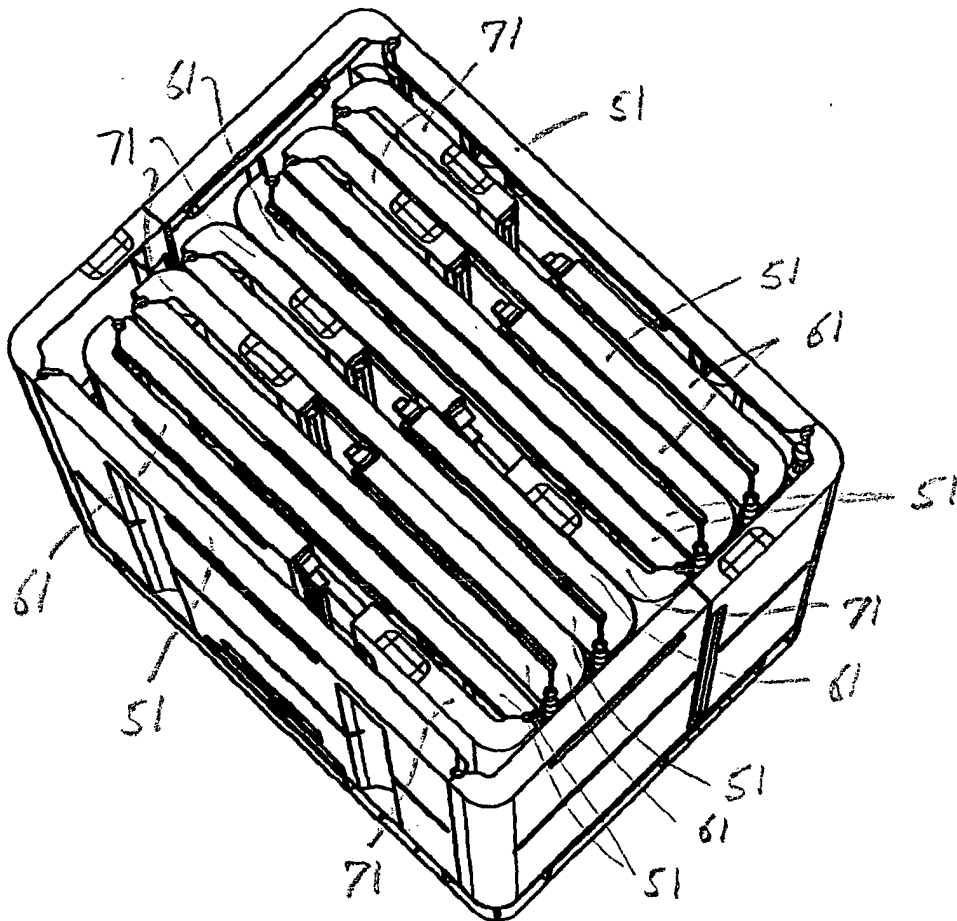


Fig. 10



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Application Number
EP 05 25 1446

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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		8 June 2005	Vesterholm, M
CATEGORY OF CITED DOCUMENTS 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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