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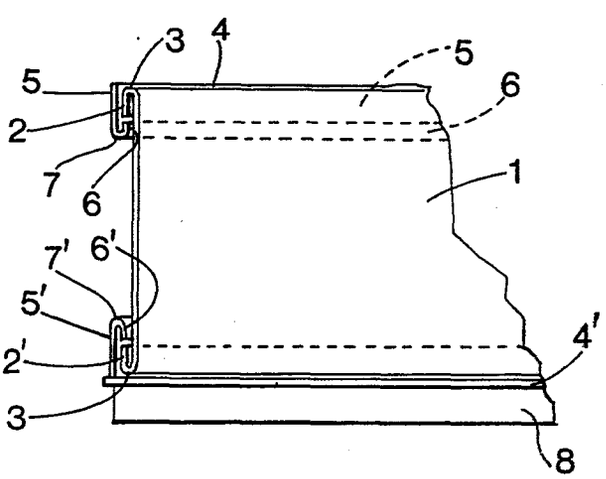
(54) Carton.

(57) A carton comprising a tubular wall-defining member (1) and a separately-constructed end-closure member (4; 8) therefor of tray-like shape having a base (4;4') and at least one upstanding wall (5; 5') extending peripherally of the base, the wall or walls on the end-closure member and the tubular wall-defining member respectively interfitting one within the other on assembly of the carton members together, at least part of the peripheral faces of the wall or walls (5; 5') and the tubular wall-defining member (1) which are adjacent on assembly, respectively having thereon peripherally- and axially-extending ledges (2, 2'; 6, 6') which project from the respective peripheral faces in opposite directions towards each other, said ledge or ledges (2, 2') on the tubular wall-defining member (1) closely fitting between said ledge or ledges (6, 6') on the wall or walls (5, 5') of the end-closure member and the base (4, 4') thereof on assembly, thereby to restrain the carton members from relative axial movement and thus to prevent their axial separation solely by an axially applied force.



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CARTON

The invention relates to cartons folded from blanks of sheet material which are either of plain card or of laminated plain card and corrugated card layers, or other stiff sheet material.

The invention is particularly concerned with the fitting of a base member or a lid or both to a tubular wall-defining member and has as its object a carton construction in which a base member or lid or both can quickly be assembled to close a tubular wall-defining member and which interfit to hold the base member or lid or both on the tubular wall-defining member.

According to the invention a carton comprises a tubular wall-defining member and a separately-constructed end-closure member therefor of tray-like shape having a base and at least one upstanding wall extending peripherally of the base, the wall or walls on the end-closure member and the tubular wall-defining member respectively interfitting one within the other on assembly of the carton members together, at least part of the peripheral faces of the wall or walls and the tubular wall-defining member, which are adjacent on assembly, respectively having thereon peripherally- and axially-extending ledges which project from the respective peripheral faces in opposite directions towards each other, said ledge or ledges on the tubular wall-defining member closely fitting between said ledge or ledges on the wall or walls of the end-closure member and the base thereof on assembly, thereby to restrain the carton members from relative axial movement and thus to prevent their axial separation solely by an axially applied force.

The end-closure member may either form the base or the lid of the carton or there may be an end-closure member, as aforesaid, at

each of the base and the top of the carton.

The ledge on the tubular wall-defining member may project from the outer face thereof anf, on assembly, be engaged between a ledge or ledges, projecting from the outer face of the end-closure member, and a portion of the base extending outside the upstanding wall or walls.

The end-closure member forming the base of the carton may be in the form of a tray foldable from a sheet of card or other foldable stiff sheet material which comprises, when erected, a flat base of rectangular or square shape, as viewed in plan, and four walls upstanding from the base, portions of each of the pair of adjacent walls defining each upright corner edge of the tray having a downward extension in the plane of said wall beyond the face of the base remote from the walls, thereby forming four feet of which each is in the shape of an externally-facing corner, with respect to the tray, each said foot being defined in transverse cross-section by a pair of limbs integral with each other and with the walls from which they extend adn extending mutually perpendicular to each other and to the base, the tray having on at least one opposite pair of the walls thereof ledges extending along the upper edges of said walls, referring to the erected tray, on the internal faces thereof, to provide along the edge of each said ledge nearer to the base, a locking abutment engageable with a similar ledge provided on the external face of a respective wall of said tubular wall-defining tray.

The tray may be of the kind in which the walls are formed by hinged flaps extending along respective edges of the base, each of one pair of opposed flaps defining, in the erected tray one pair of opposed walls thereof and also being co-operable with said other pair of opposed flaps to define said other pair of opposed walls and the upright corner edges of the tray, each foot having one of

its limbs formed by a portion cut from the adjacent corner of the base and forming an integral extension from one of said one pair of flaps and the other of its limbs formed by an integral extension from one of said other pair of flaps.

Alternatively the tubular wall-defining member may have on each wall thereof an integral flap hinged to the lower edge of said wall, referring to the carton when erected, said flaps being foldable perpendicularly to the respective wall and arranged to be overlapped one with another to form the base, each pair of adjacent walls defining each upright corner edge of the carton having a downward extension in the plane of said wall beyond the plane of the base formed by the flaps, when folded as aforesaid, to form four feet, of which each is in the shape of an externally-facing corner, with respect to the carton, each foot being defined in transverse cross-section by a pair of limbs integral with each other and with the walls from which they extend and extending mutually perpendicular to each other and to the base, each limb of a foot being formed by a portion cut from the adjacent corner of the flap on one of the walls adjacent the respective upright corner edge of the carton and the other of its limbs being formed by a portion cut from the adjacent corner of the flap on the other wall adjacent the respective upright corner edge of the carton, the carton having on at least one opposite pair of the walls thereof ledges extending along the upper edges of said walls, referring to the erected carton, on the external faces thereof, to provide along the downwardly-facing edge of each said ledge a locking abutment engageable with a similar ledge provided on an internal face of a respective wall of the lid of the carton, said lid being in the form of an inverted tray.

The ledges may be formed by a peripherally- and axially-extending tubular sleeve or by peripherally- and axially-extending strips secured to the tubular wall-defining member and the upstanding wall or wall portions of the end-closure member respectively. The sleeve or strips may be secured by any convenient means, for example, by gluing, stitching or stapling.

Alternatively the ledges may be formed by integral flaps on the tubular wall-defining member and the upstanding wall or walls of the end-closure member respectively, which flaps are folded either inwardly or outwardly through 180° to lie against the appropriate peripheral face of the tubular wall-defining member or upstanding wall or walls of the end-closure member respectively. The folded over flaps may be secured in position by any convenient means, for example, by gluing, stitching or stapling or they may be unattached to the appropriate peripheral face, except at the fold itself.

The tubular wall-defining member and thus the end-closure member or members and the assembled carton, may be of any desired cross-section. For example the cross-sectional shape may be square, rectangular or circular. The tubular wall-defining member may be collapsible to a flat condition prior to fitting the end-closure member or members or after the end-closure member or members have been removed.

The carton construction as set out in any of the immedicately preceding seven paragraphs may be applied to a combined pallet and carton by forming the base of the end closure member, as aforesaid, by a flap or flaps on a pallet.

By way of example, three embodiments of a carton according to the invention are now described with reference to the accompanying drawings, in which:-

Figure 1 is a part vertical section through the first carton;

Figure 2 is a perspective view of the tubular wall-defining member of the first carton;

Figure 3 is a perspective view, partly broken away, of the first carton;

Figure 4 is a part vertical section through the second carton;

Figure 5 is a perspective view of the tubular wall-defining member of the second carton;

Figure 6 is a perspective view, partly exploded, of a pallet base and bottom end-closure member of the second carton;

Figure 7 is a blank from which an alternative base of the first carton can be erected;

Figure 8 is a perspective view, partly broken away, of the tubular wall-defining member shown in Figure 2 assembled in the carton base erected from the blank shown in Figure 7, and

Figure 9 is a perspective view, partly broken away, of the third carton which comprises a tubular wall-defining member similar to Figure 2 inverted and having integral feet and flaps forming the base of the carton and which also has a separate optional lid.

Referring to Figure 1, the first carton comprises a wall-defining member 1 of rectangular cross-section, as viewed in plan. This

is folded and secured as a tube in a known way from a blank of plain card or from a blank of laminated plain card and corrugated card sheets. Flaps 2, 2' at the top and bottom of the member 1 are folded outwardly through 180° to the illustrated positions to form outwardly-projecting ledges. The flaps 2, 2' may be free of the wall of the member 1 except at the folds 3, as illustrated, or they may be attached in any convenient way, e.g., by gluing, stitching or stapling.

Still referring to Figure 1, the member 1 is closed by a lid in the form of an inverted tray having a base 4 and upstanding (depending when inverted, as shown) peripheral walls 5. The walls 5 have flap extensions 6 which are folded over at 7 through 180° to form inwardly projecting ledges. When the lid is placed on the top of the member 1, as illustrated, the flaps 6 will be positioned beneath the flaps 2 in axial alignment one with the other. The length of the flaps 2 is substantially equal to the gap distance between the base 4 and the free edges of the flaps 6 and so the lid will be held by the co-operating ledges formed by the flaps 2 and 6 from axial removal. Except where the sheet material is very stiff, the lid may be removed by a combined lateral distortional movement of the lid and walls of the member 1 and an axially applied force.

The bottom end of the carton is closed by an end-closure member similar to the lid and indicated by like references 4', 5', 6', 7'. Optionally, as shown, the base 4' is attached to a pallet 8.

Where a separate lid is not required, the wall-defining member 1 may be provided with pairs of upper flaps 9, in known manner, as shown in Figure 2.

Figure 3 is a perspective view showing how the member 1 of Figure 2 is locked to the combined pallet and bottom end-closure member.

Instead of the integral folded flaps 2, 6 and 2', 6', equivalent ledges may be provided by attaching separate strips of plain or laminated plain and corrugated card to the respective wall-defining sheets or instead of the separate strips complete sleeves attached to the respective wall-defining sheets may be provided. The separate strips or sleeves may be attached in any convenient way, for example, by gluing, stitching or stapling.

Figure 4 shows the second carton which is similarly constructed to the first carton except that the flaps, strips or sleeves defining the ledges are formed on the outside of the walls of the end-closure member and on the inside of the wall-defining member. In Figure 4 the wall-defining member is indicated at 10 and has inwardly-folded flaps 11 at its lower end. The end-closure member at the bottom of the carton comprises a tray-like base 12 having upstanding walls 13 which have flaps 14 folded outwardly through 180°. In this construction, the base 12 is extended outwardly of the walls 13 around its whole periphery to form a peripheral platform 15. The axial length or height of the flaps 11 is substantially equal to the vertical distance between the lower end of the flaps 14 and the platform 15. Thus when the bottom end-closure member and the wall-defining member 10 are assembled together, the flaps 11 and 14 will form two axially aligned peripheral ledges which will co-operate to prevent separation of the end-closure member and the member 10 solely to an axially-applied force. As in the first embodiment the base 12 may be optionally attached to a pallet 16.

Although the tubular wall-defining member 10 is shown open at its upper end in Figure 4, it may have a lid fitted like that shown in Figure 1 or with ledges defined by respective flaps similar to flaps 11 and 14. Alternatively, the carton may have an upper end closable in known manner by pairs of flaps 17 as shown in Figure 5.

Figure 6 shows how the base 12 may be detachably fitted to the pallet 16. The latter is provided with a pair of integral flaps 18 and the tray-like base of Figure 4 is replaced by a pair of tray end portions 19 each folded from the sheet material to provide a base flap 20, upstanding walls 21 and outwardly-folded flaps 22, equivalent to flaps 14 but not extending around the whole periphery of the carton. The front and back walls 21 (as viewed in Figure 6) of each tray end portion 19 have integral foldable flaps 23 which are folded on assembly to lie between the pallet 16 and the respective flap 18. Thus the flaps 18 hold the tray end portions 19 in position. Desirably the tray end portions 19 are securely fixed to the flaps 18, for example by gluing all the overlapping flaps 20, 23 and 18, but they need not be fixed and may if sufficiently stiff merely be held in position by the wall-defining member 10 which is finally fitted around the walls 21 in a similar way to that shown in Figure 4. The pallet 16 projects beyond the walls 21 to form a platform similar to platform 15 in Figure 4.

As for Figures 1 - 3, instead of the folded flaps 11 and 14 in the carton of Figures 4 - 6 separate strips may be secured, as by gluing, stitching or stapling to the respective walls 10 or 21. Alternatively in place of the folded flaps 11 on the tubular wall-defining member 10, a complete sleeve may be attached to the inside of the member 10.

As will be clear from Figure 6, the ledges 2, 6; 2', 6'; 11, 14, 22 need not extend around the whole periphery of the carton.

The tubular wall-defining members 1 and 10 may be folded flat before assembly or when separated from the end-closure members, that is the lids and bases.

Although a carton which is rectangular in plan has been shown in the Figures, the carton, and thus the tubular wall-defining member 1, 10 and the end-closure members, may be of other shapes in plan. For example, they may be square, circular, elliptical, triangular or hexagonal.

Figure 7 shows the blank which is cut or stamped from a sheet of plain or laminated card or other foldable stiff sheet material, cuts being indicated by full lines and folds or creases being indicated by broken lines. The double broken lines indicate a wide fold enabling the sheet of blank to be folded on itself through 180° to form the aforesaid folded flaps providing peripheral or part-peripheral locking ledges.

The blank has a central square or rectangular portion 25 which after the tray has been erected will form the base of the tray. Opposite edges of the portion 25 carry integral flaps 26, 27 which are foldable through 90° to the plane of the base 25 to form the four walls of the tray. The fold-lines between the flaps 26 and the base 25 are indicated at 28 and the fold-lines between the flaps 27 and the base 25 are indicated at 29. Each of the flaps 27 has end extensions 30 foldable along lines 31 to positions outside the two upstanding flaps 26. Thus the fold-lines 31 become the four upright corner edges of the tray.

Each of the flap extensions 30 has tongue portions 32 which are insertable through slits 33 adjacent the fold-lines 28 between the base 25 and the flaps 26 by folding tongue portions 34 through 180° about fold-lines 35 and through 90° about fold-lines 36. After the tongue portions 32 have been inserted through the slits 33 they are locked in position by folding tongue portions 34 to lie in substantially the same plane as the respective tongue portion 32.

The flaps 27 and the flap extensions 30 each have respective integral portions 37 and 38. Adjacent portions 37 and 38 are integral with each other along fold-lines 39 which are concurrent with the fold-lines 31 and 28 in the flat blank. The portions 37 and 38 are cut from the base 25 and the respective flaps 26 by cuts 40 and 41 respectively. When the flaps 27 and 26 are folded to their upright positions relatively to the base 25 and the flap extensions 30 are folded to overlap outside the upstanding flaps 26, the internal portions 37 and 38 will remain in the same planes as the respective flaps 27 and flap extensions 30 and so will project downwardly beyond the base 25 to form four corner feet. Each foot will be in the shape of an externally-facing corner of right-angle shape as viewed in plan as the two integral portions 37 and 38 defining each foot will be folded perpendicularly to each other about the fold-lines 39 which now form downward extensions of the upright corner edges defined by the fold-lines 31. As the portions 37 are cut from the corners of the base 25, the base of the erected tray will have four corner cut-outs in the shape of a quadrant bounded by the corners of the tray and the cuts 40.

The flaps 27 and the end extensions 30 thereof, which in the erected tray form the walls thereof, have along their outer edges, which will be the upper edges when the tray has been erected, marginal portions indicated at 42 which are foldable through 180° about the wide fold-lines indicated by the double broken lines at 43 in Figure 7. These marginal portions when so folded, form the aforesaid locking ledges.

Referring to Figure 8, the tray erected from the blank is shown in place of the base 8 of the first carton shown in Figures 1 and 3. As shown in Figure 7, the tray erected from the blank shown in Figure 7 has at each corner integral feet 37, 38. These may be free-standing or they may be fitted around the corners of a pallet

or other separate base. The tray forming the base of the carton shown in Figure 8 has the upper marginal portions 42 of the flaps 27 and the end extensions 30 folded inwardly to form the aforesaid locking ledges similarly to the base 8 shown in Figures 1 and 3. The tubular wall-defining member 1 shown in Figure 2 and having the external ledge formed by the flaps 2 is then fitted into the tray and when it has been pushed fully down to rest on the base 25 of the tray, the upper edges of the flaps 2 will engage beneath and lock with the lower edges of the marginal portions 42 of the flaps 27 and the end extensions 30 which form the walls of the tray.

In the third carton in accordance with the invention, shown in Figure 9, the carton is formed from a blank defining four wall portions hinged to each other along their adjacent edges to form, when erected, an open-ended tube similar to that shown in Figure 2. The tube may be preformed by joining the two outer wall portions of a flat blank together along their outer edges, which in the erected carton will be upright. Alternatively the said outer edges may be arranged to be connected when the carton is erected. The forming of the blank into a tube may be effected by providing a tab along one of said outer edges to be connected together and by securing the tab to a marginal part of the wall portion to which it is to be connected by stitching, gluing, stapling or by using interlocking tongues and slits or by other convenient means.

The four wall portions 45 have flaps 46 hinged along the bottom edges thereof, referring to the upright erected carton, which are foldable inwardly of the wall portions to extend at 90° thereto and to overlap one with the other to define the base of the carton, in known manner. Each wall portion adjacent the bottom corners thereof has downward extensions 47, 48 which are hinged together and form four feet, which in the erected carton are of

similar shape to the feet 37, 38 in the tray shown in Figure 8. In this form of the carton the downward extensions 47, 48 are each cut from the adjacent respective flaps 46 which in the erected carton overlap to define the base. The cuts in the base-defining flaps 46 are similar to the cuts 40 in the base 25 and the cuts 41 in the flaps 26, as shown in Figure 7. When the base-defining flaps 46 have been folded to form the base of the carton the feet 47, 48 will extend downwardly below the base and there will be an aperture in each corner of the base produced by the overlapped cut-out regions in two adjacent flaps 46, each aperture being in the shape of the portion 37 shown in Figure 7. The carton has marginal portions 49 along the upper edges of its wall portions 45, which are folded outwardly through 180° to form ledges, similarly to the ledges 2 shown in Figure 2, but inverted. A lid 50 having internal ledges 51 may be fitted on to the top of the carton, the internal ledges 51 in the lid 50 fitting beneath and engaging the ledges formed by the marginal portions 49 on the wall portions 45. In this way the lid 50 will be locked to the carton.

The ledges may alternatively be strips or a sleeve of stiff card permanently attached to the respective wall of the carton or lid.

Where the ledges are formed by folding-over marginal portions of wall-defining flaps as in the cartons of Figures 8 or 9, they may be permanently secured in their folded positions.

In addition to the locking ledges in the cartons described herein being provided between a carton defining the walls thereof and a base, tray or pallet and between the carton body and a lid, they may be provided between two carton bodies, thereby to enable carton bodies to be stacked one on another and thereby be locked together.

Although in the foregoing examples, except for Figure 6, the interlocking ledges have been provided around the whole periphery of the carton, the interlocking ledges may be provided only along part of the periphery of the carton, as viewed in plan. For example interlocking ledges may be provided along only the edges of a pair of opposed walls of a carton.

Although the cartons described hereinbefore would usually be made from blanks of card or laminated card, other stiff sheet material may be used.

CLAIMS

1. A carton comprising a tubular wall-defining member (1; 10; 45) and a separately-constructed end-closure member (4;8;16;25;50) therefor of tray-like shape having a base (4;4'; 12;18) and at least one upstanding wall (5;5'; 13;21, 27, 30) extending peripherally of the base, the wall or walls on the end-closure member and the tubular wall-defining member respectively interfitting one within the other on assembly of the carton members together, characterised in that at least part of the peripheral faces of the wall or walls (5;5'; 13;21;27;30) and the tubular wall-defining member (1;10;45), which are adjacent on assembly, respectively have thereon peripherally- and axially-extending ledges (2,2'; 6,6'; 11,14; 22; 43; 49; 51) which project from the respective peripheral faces in opposite directions towards each other, said ledge or ledges (2,2'; 11) on the tubular wall-defining member (1; 10) closely fitting between said ledge or ledges (6,6'; 14; 22; 43) on the wall or walls (5,5'; 13; 27; 30) of the end-closure member and the base (4,4'; 12; 18) therof on assembly, thereby to restrain the carton members from relative axial movement and thus to prevent their axial separation solely by an axially applied force.

2. A carton as claimed in Claim 1 in which the end-closure member forms the base of the carton.

3. A carton as claimed in Claim 1 in which the end-closure member forms the lid of the carton.

4. A carton as claimed in Claim 1 in which there are two end-closure members forming respectively the base and the lid of the carton.

5. A carton as claimed in any preceding claim in which the ledge on the tubular wall-defining member projects from the outer face thereof and, on assembly, is engaged between a ledge or ledges projecting from the inner face of the or each end-closure member and the base thereof at positions therein which are inside the upstanding wall or walls thereof.

6. A carton as claimed in any one of Claims 1-4 in which the ledge on the tubular wall-defining member projects from the inner face thereof and, on assembly, is engaged between a ledge or ledges projecting from the outer face of the or each end-closure member and a portion of the base thereof outside the upstanding wall or walls.

7. A carton according to Claim 2 in which the end-closure member forming the base of the carton is in the form of a tray foldable from a sheet of card or other foldable stiff sheet material which comprises, when erected, a flat base (25) of rectangular or square shape, as viewed in plan, and four walls (26, 27,30) upstanding from the base (25), portions of each of the pair of adjacent walls (27, 30) defining each upright corner edge of the tray having a downward extension in the plane of said wall beyond the face of the base (25) remote from the walls, thereby forming four feet of which each is in the shape of an externally-facing corner, with respect to the tray, each said foot being defined in transverse cross-section by a pair of limbs (37, 38) integral with each other and with the walls (27, 30) from which they extend and extending mutually perpendicular to each other and to the base, the tray having on at least one opposite pair of the walls thereof ledges (42) extending along the upper edges of said walls, referring to the erected tray,

on the internal faces thereof, to provide along the edge of each said ledge nearer to the base, a locking abutment engageable with a similar ledge (2) provided on the external face of a respective wall of said tubular wall-defining tray (1).

8. A carton according to Claim 7 in which the tray is of the kind in which the walls are formed by hinged flaps (27, 30) extending along respective edges of the base, each of one pair of opposed flaps defining, in the erected tray one pair of opposed walls thereof and also being co-operable with said other pair of opposed flaps to define said other pair of opposed walls and the upright corner edges of the tray, each foot having one of its limbs (37) formed by a portion cut from the adjacent corner of the base (25) and forming an integral extension from one of said one pair of flaps (27) and the other of its limbs (38) formed by an integral extension from one of said other pair of flaps (30).

9. A carton according to Claim 3 in which the tubular wall-defining member has on each wall (45) thereof an integral flap (46) hinged to the lower edge of said wall, referring to the carton when erected, said flaps (46) being foldable perpendicularly to the respective wall and arranged to be overlapped one with another to form the base, each pair of adjacent walls (45) defining each upright corner edge of the carton having a downward extension in the plane of said wall beyond the plane of the base formed by the flaps (46), when folded as aforesaid, to form four feet, of which each is in the shape of an externally-facing corner, with respect to the carton, each foot being defined in transverse cross-section by a pair of limbs (47, 48) integral with each other and with the walls (45) from which they extend and

extending mutually perpendicular to each other and to the base, each limb of a foot being formed by a portion cut from the adjacent corner of the flap (46) on one of the walls (45) adjacent the respective upright corner edge of the carton and the other of its limbs being formed by a portion cut from the adjacent corner of the flap (46) on the other wall (45) adjacent the respective upright corner edge of the carton, the carton having on at least one opposite pair of the walls thereof ledges (49) extending along the upper edges of said walls, referring to the erected carton, on the external faces thereof, to provide along the dowardly-facing edge of each said ledge (49) a locking abutment engageable with a similar ledge (51) provided on an internal face of a respective wall of the lid (50) of the carton, said lid being in the form of an inverted tray.

10. A carton as claimed in any preceding claim in which the ledges are formed by a peripherally- and axially-extending tubular sleeve or by peripherally- and axially-extending strips secured to the tubular wall-defining member and the upstanding wall or walls of the or each end-closure member respectively.

11. A carton as claimed in any preceding claim in which the ledges are formed by integral flaps on the tubular wall-defining member and the upstanding wall or walls of the or each end-closure member respectively, which flaps are folded either inwardly or outwardly through 180° to abut against the appropriate peripheral face of the tubular wall-defining member or upstanding wall or walls of the or each end-closure member respectively.

12. A carton as claimed in Claim 11 in which the flaps are secured in their folded-over positions.

13. A carton as claimed in any preceding claim in which the tubular wall-defining member is collapsible to a flat condition prior to fitting the end-closure member or members or after the end-closure member or members have been removed.

14. A carton as claimed in Claim 2 in which the end-closure member has a base mounted on a pallet or formed from a foldable flap or flaps attached to a pallet.

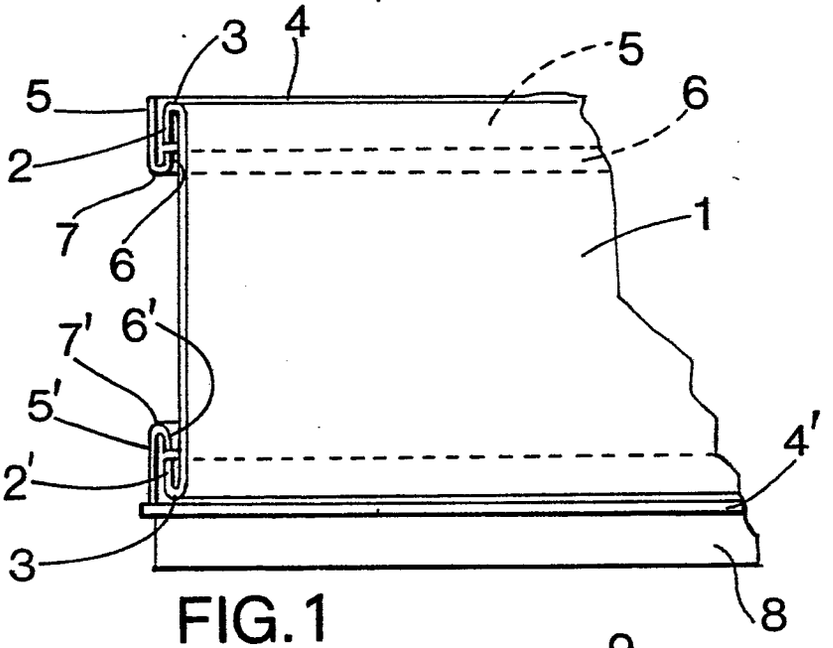

FIG.1

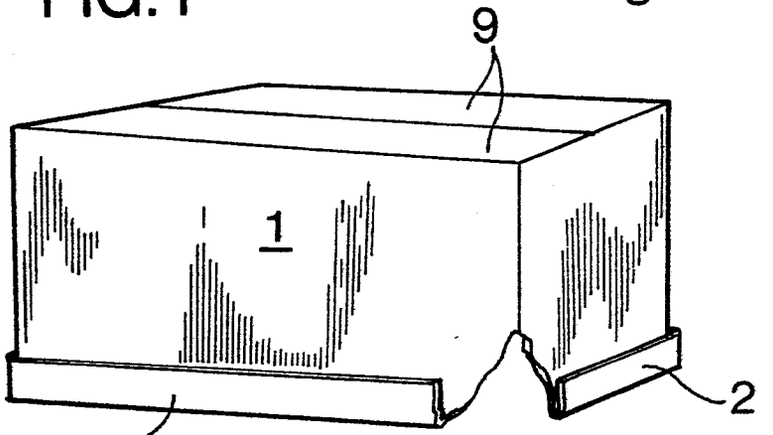

FIG.2

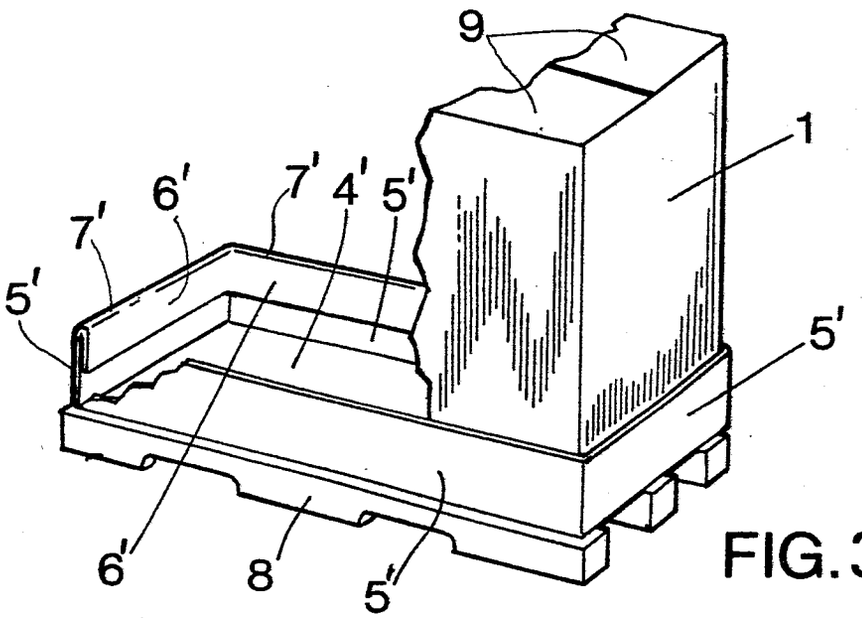

FIG.3

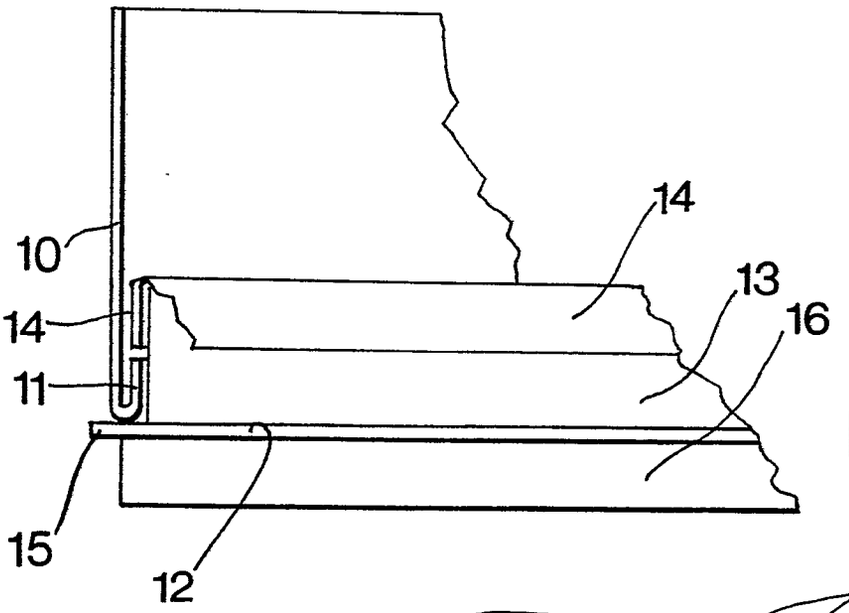

FIG.4

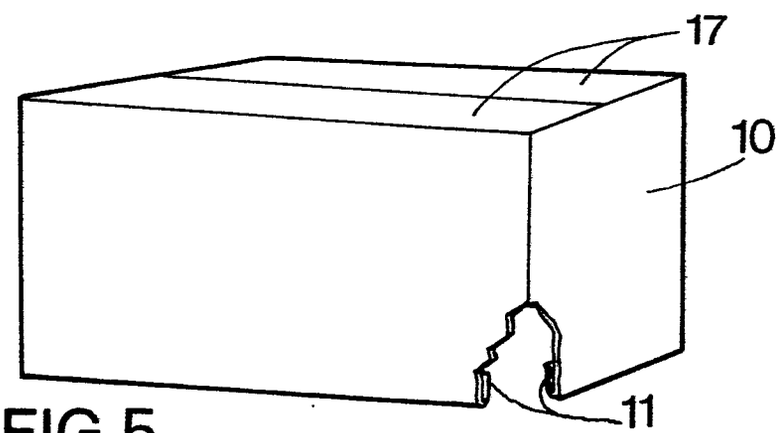

FIG.5

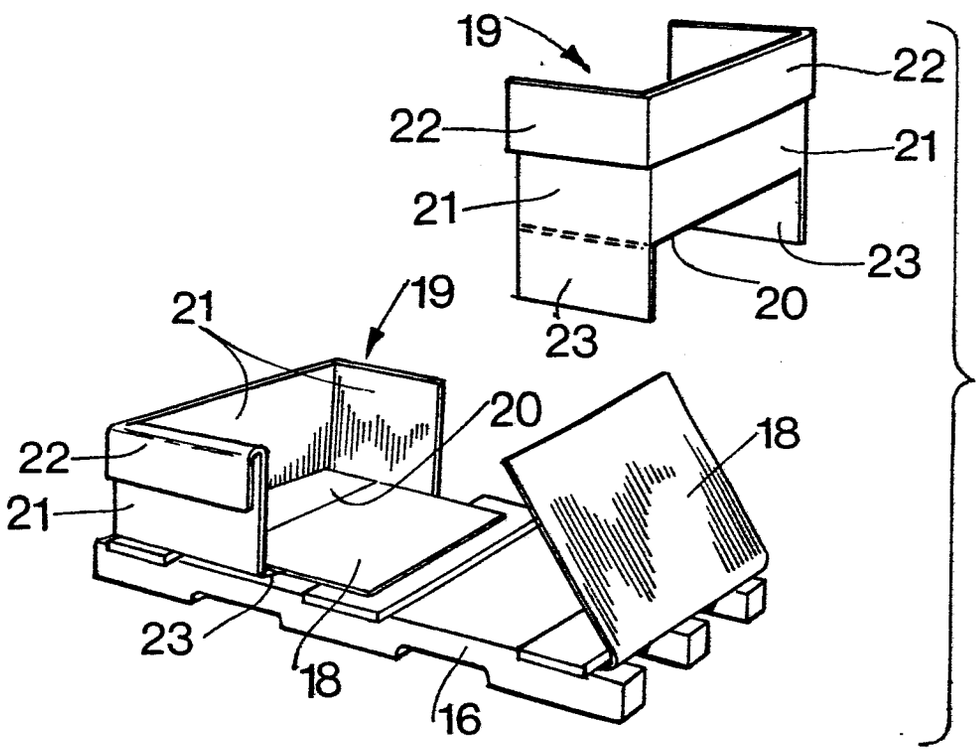

FIG.6

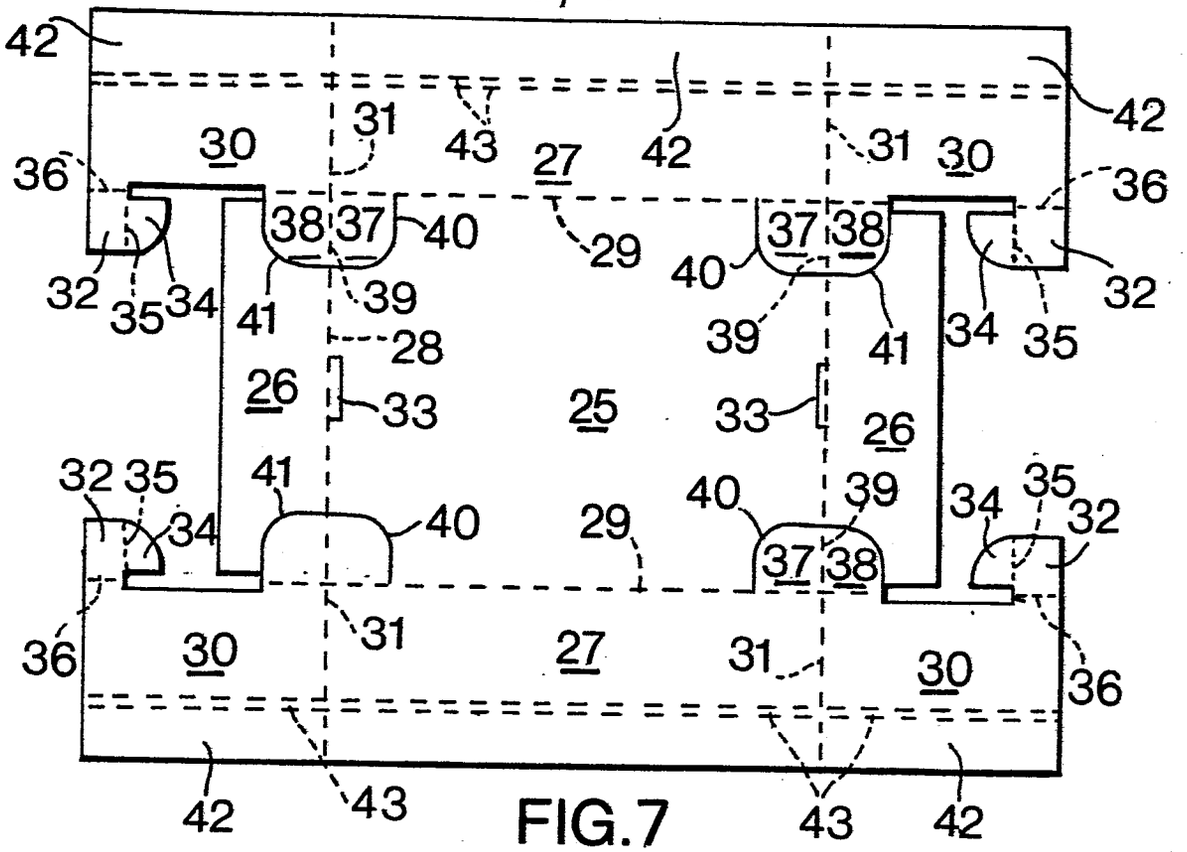
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FIG.7

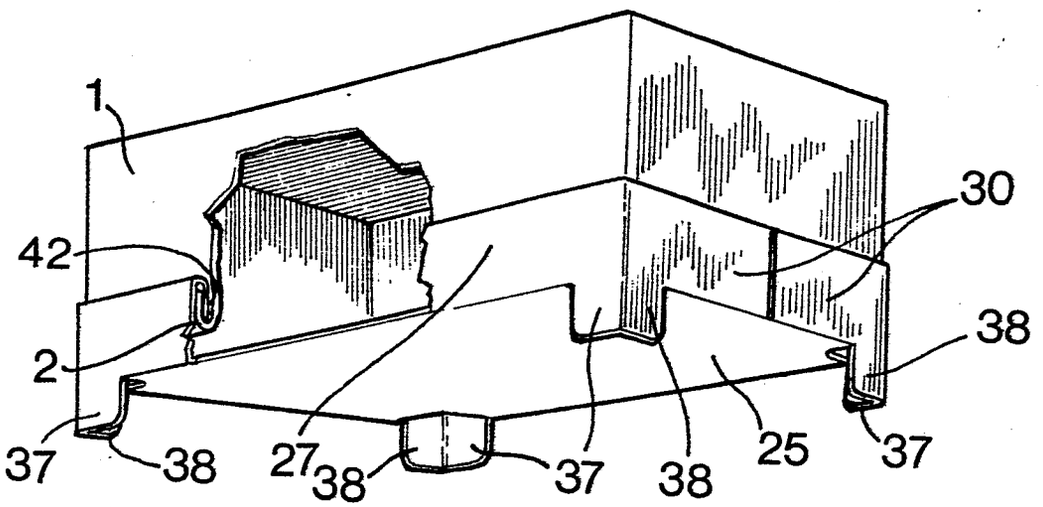
1
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FIG.8

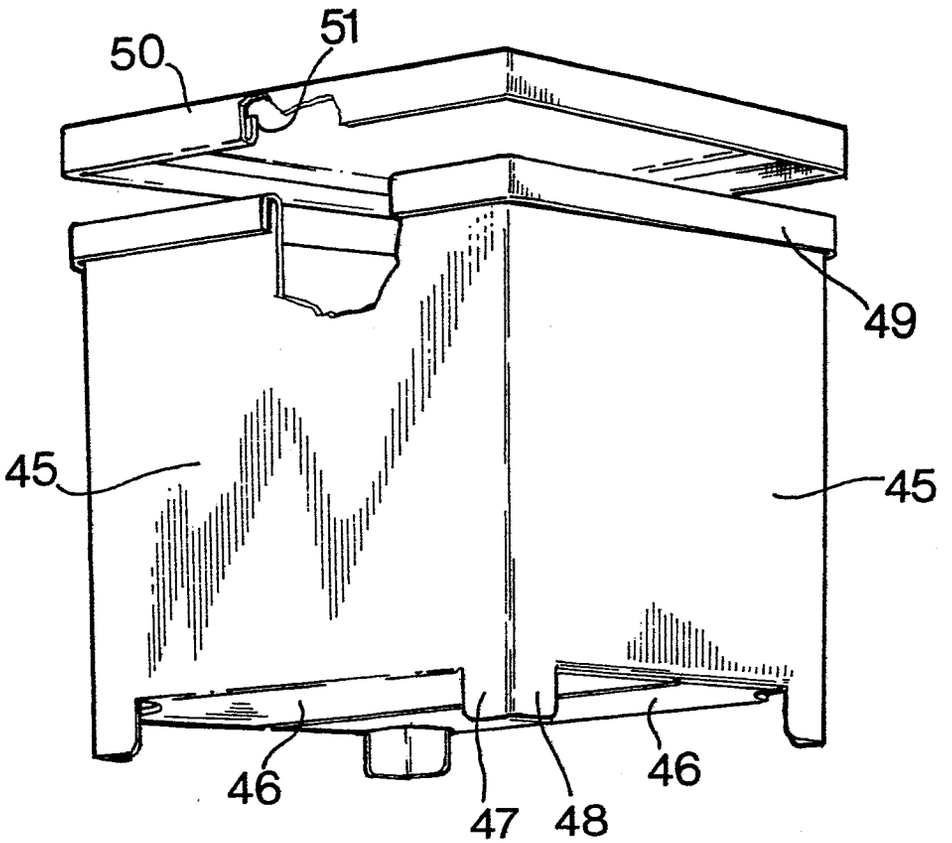

FIG. 9

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Application number
0112411
EP 82 30 6752

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. ³)
X	US-A-2 902 202 (FALLERT) * Column 3, line 47 - column 4, line 37; figures 1-12 *	1-5,10-12	B 65 D 19/20 B 65 D 5/12 B 65 D 5/42
Y		7-9	
Y	GB-A- 810 663 (REED CORRUGATED CASES LTD.) * Page 1, line 82 - page 2, line 36; figures 1-4 *	7,8	
Y	US-A-3 072 314 (KEENE) * Column 2, lines 24-62; figures 1,2 *	9	
X	FR-A- 490 694 (HUYE) * Whole document *	1,2,5,10-13	TECHNICAL FIELDS SEARCHED (Int. Cl. ³) B 65 D
X	FR-A-1 356 373 (HABERMACHER) * Whole document *	1-5,10-12,14	
X	US-A-4 251 021 (SWAN) * Column 8, line 33 - column 10, line 30; figures 9-14 *	1,3,6	

-/-

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18-08-1983	MARTENS L.G.R.

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A	GB-A- 678 586 (ADDISON-SEMMES) * Page 2, lines 21-99; figures 1-4 *	1,4,14	
A	GB-A- 755 743 (THOMPSON & NORRIS MANUFACTURING CY.) * Figure 4 *	6	
			TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18-08-1983	MARTENS L.G.R.

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