(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 875 464 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
04.11.1998 Bulletin 1998/45

(51) Int Cl.[6]: **B65D 43/04**, B65D 25/30

(21) Application number: **98303233.5**

(22) Date of filing: **27.04.1998**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **29.04.1997 GB 9708741**

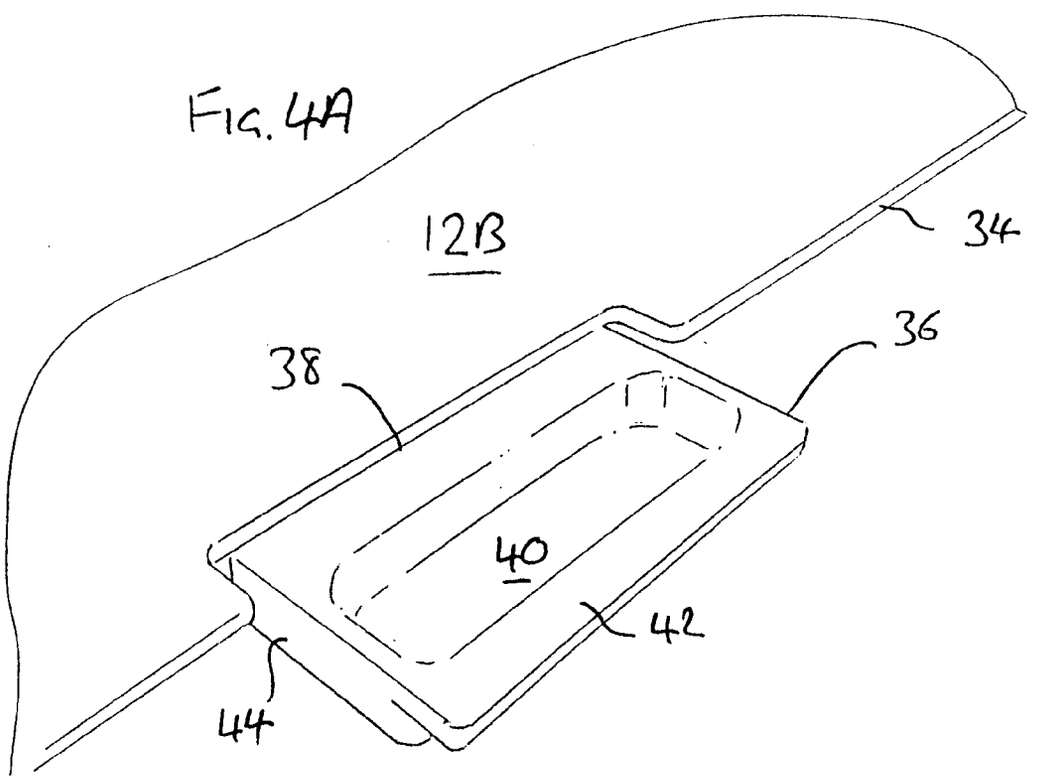
(71) Applicant: **McKechnie UK Limited**
Walsall, West Midlands WS9 8DS (GB)

(72) Inventor: **Cope, A.Ch.,**
c/o Paxton,Div. of McKechnie UK Ltd.
Walsall, West Midlands, WS2 7PB (GB)

(74) Representative: **Swindell & Pearson**
48 Friar Gate
Derby DE1 1GY (GB)

(54) Container and lid

(57) A container lid 12 has a security portion 36 attached at a hinge line 38 so that as the lid is closed, the portion 36 can hang down inside the container to obstruct an aperture in a wall of the container, thereby improving security. Flanges 44 abut the underside of the lid 12B to prevent the security portion 36 being pushed away from the aperture being obstructed. The lid is described as part of a container whose body can nest with a body of a like container, with the lid removed and housed within the container, when not in use.



EP 0 875 464 A1

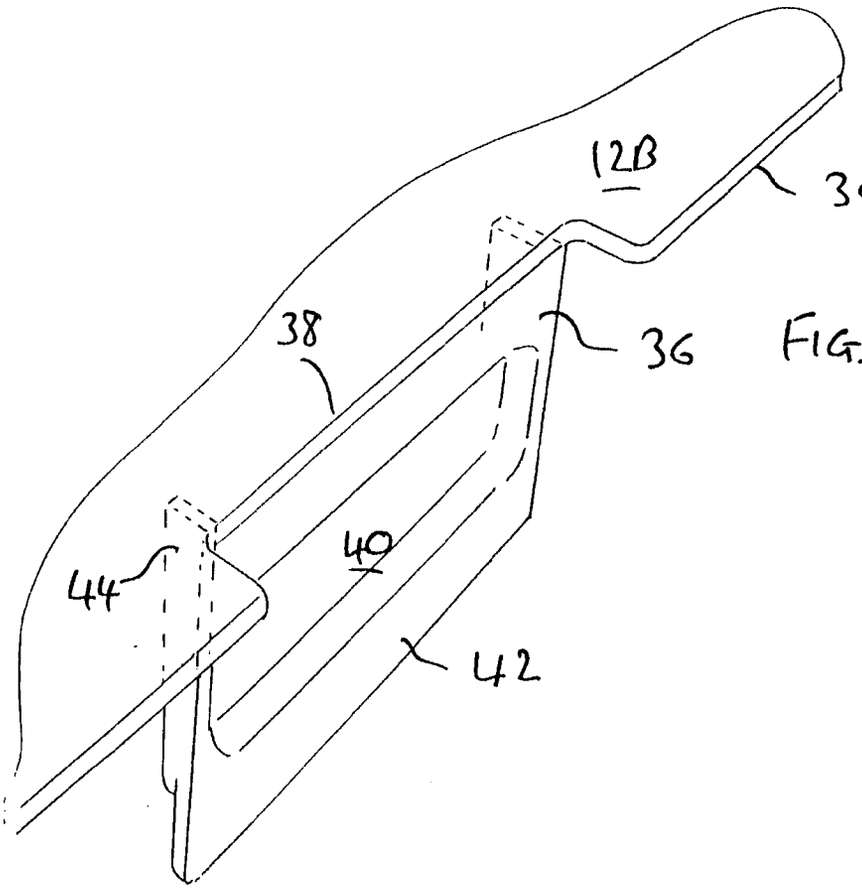


FIG. 4B

Description

The present invention relates to containers and particularly, but not exclusively, to stackable/nestable containers for delivery of goods to retail premises.

Containers for use in delivering goods to retail premises are required in some instances to be reasonably secure against pilfering, particularly if used for relatively small, high value goods, such as perfume.

The present invention provides a container lid comprising a main lid portion and security portion which, in use, obstructs an aperture in a wall of a container to which the lid is fitted.

Preferably the security portion substantially blocks the aperture. The security portion preferably hangs from the main lid portion, and preferably hangs inside the container. The security portion may be hingedly attached to the main lid portion for movement between an in use position and a stowed position substantially in the plane of the main lid portion.

Preferably abutment means are provided to prevent the security portion being pushed away from the aperture when in use.

The lid may comprise two main lid portions hingedly attached, both of which may carry a security portion as aforesaid.

The invention also provides a container having a container lid as aforesaid.

Preferably the container body is nestable and stackable with a like container body and preferably the lid is formed to be received within the container while another like container is nested therein.

The wall aperture may be a handle. The security portion may be formed to provide a finger grip through the aperture.

One embodiment of the present invention will now be described in more detail, by way of example only, and with reference to the accompanying drawings, in which:

Fig. 1 is a schematic perspective view of a container to which a lid according to the present invention is being fitted;

Fig. 2 shows the container and lid of Fig. 1, with the lid almost fully closed;

Fig. 3 shows the container of Figs. 1 and 2 with the lid fully closed and the container in condition for stacking;

Figs. 4A and 4B are enlarged perspective views of one edge of the lid, showing the security portion of the lid; and

Fig. 5 is a highly schematic vertical section, on a much reduced scale, through two containers stacked for return.

Fig. 1 shows a container 10 having a lid 12 and main body 14. The container 10 has a base 16, side walls 18 and end walls 19, the walls being upstanding from the base 16 to define an upper container mouth 20. The walls 18,19 are inclined slightly in known manner to allow the main body 14 to nest within a like body located beneath, or to allow another like body to nest within from above. In addition, the body 14 is fitted with stacking bars 22 which can swing from the stowed position (Fig. 1) clear of the mouth 20, to a stacking position (Fig. 3) overlying the mouth, to provide support for the base of a container above. Channels are formed in the base of the body 14 (only the ends 24 of the channels being visible in Fig. 1). These channels sit on the bars 22 when containers are stacked. Apertures 26 are formed in walls 18 to provide handles for lifting the container 10.

The lid 12 has two main lid portions 12A,12B which are generally planar and hinged to each other at 28. Conveniently, the hinge 28 may be a live hinge if the lid 12 is formed from a synthetic plastics material, such as by injection moulding. The lid 12 also has rims 30 formed along its edges, to support the lid 12 on the upper edges of the walls 18,19.

The lid 12 can be fitted to the container 10 in the manner illustrated in the sequence of drawings Figs. 1, 2 and 3. Initially, with the lid portions 12A,12B hinged out of the plane of each other (Fig. 1) the lid 12 is offered to the container and rests on the walls 18 at the four corners 32 of the lid 12.

As the hinge 28 is lowered, the corners 32 slide along the walls 18 toward the corners of the mouth 20 and as they do so, the edges 34 of the lid 12 (the edges parallel to the hinge 28) move toward the end walls 19. Fig. 2 shows the lid almost fully closed. The mouth 20 is almost fully obstructed, the hinge 28 has been lowered almost to the level of the top of the walls 18 and the edges 34 are almost at the end walls 19.

Fig. 3 shows the fully closed position. The rims 30 are resting along the walls 18 along the whole length of the lid 12. The edges 34 have reached the end walls 19. The stacking bars 22 have moved to their stacking position overlying the mouth 20 of the container, and also overlying the lid 12, so that the weight of a container stacked above will be borne on the bars 22, not on the lid 12.

Security aspects of the lid arrangement just described can now be explained with reference to Figs. 4A and 4B.

Fig. 4A shows the edge 34 of one of the lid portions 12B. A security portion 36 is attached at a hinge line 38, allowing the portion 36 to swing between the position shown in Fig. 4A, in which the portion 36 is generally in or aligned with the plane of the lid portion 12B, and a second position (Fig. 4B) in which the portion 36 is generally perpendicular to the lid portion 12B. The hinge 38 may be a further live hinge.

The portion 36 is generally rectangular and may conveniently be deep enough to allow a depression 40

to be formed in the front face 42 of the portion 36. Flanges 44 are formed on the rear of the portion 36. The ends of the flanges 44 come into contact with the bottom face of the lid portion 12B when the portion 36 is hanging down from the lid portion, and prevent the portion 36 moving past the position shown in Fig. 4B.

It will be apparent that by virtue of the hinge 38, the portion 36 would not normally stay in the position of Fig. 4A unless supported; it would tend to hang down to a position intermediate that position and the position of Fig. 4B, according to the angle of the lid 12B to the horizontal.

Accordingly it can be understood from the above description that as the lid is placed onto the container and closed as described above, the portion 36 will initially hang down inside the container and move toward the end walls 19 as the lid is closed. The portion 36 is shaped to ensure that when the lid 12 reaches its fully closed position (Fig. 3) the portion 36 has moved behind the handle apertures 26, to obstruct those apertures. Preferably, the portions 36 are sufficiently large to fully close the apertures. It is for this reason that the depressions 40 are formed. This allows the container to be lifted by placing fingers into the depressions 40 through the apertures 26, to provide a handle function. However, access to the interior of the container, and its contents, is no longer possible through the apertures 26 because they are blocked by the portions 36. Consequently, although the apertures 26 remain available for use as handles, pilfering through them is substantially prevented. The portions 36 cannot be pushed into the container, clear of the apertures 26, because of the engagement of the flanges 44 with the lower face of the lid.

In a preferred arrangement, appropriate apertures are formed at a convenient position in the lid and main body to allow security tags to be inserted to seal the lid to the body and thus show if a container has been tampered with. Other lock arrangements could be provided.

In some container designs, it may not be necessary for the security portions 36 to be hinged to the lid - they could be fixed in the position of Fig. 4B. However, the provision of hinges 38 allows the lid 12 to be folded more compactly when removed from the container, such as when the container is being returned after use. In this stage of use, it is common to nest containers within each other, for compactness. If the lid 12 is folded in half at the hinge 28, it is convenient for the portions 36 to hinge to the position of Fig. 4A, to lie generally within the plane of the corresponding lid portion 12A,12B so that the depth of the folded lid portion is not increased.

Two containers nested for return are illustrated in Fig. 5. An upper container 10A is nested in a lower container 10B to leave a space 46 between the bases 16A, 16B. The lid 12 of the lower container is folded in half and stowed in the space 46. It is expected that with a wide variety of stackable/nestable containers, there will be sufficient clearance to accommodate a folded lid in this manner, provided the security portions 36 will hinge as has been described. However, it may be that in some designs, the security portions will not be required to hinge. These variations within the scope of the invention can be made in accordance with the particular design of the container, affected by factors such as the size of the apertures 26, their depth from the mouth of the container, the thickness of the security portion 36, the depth of the space 46 and the like.

Many variations and modifications can be made to the apparatus described above, without departing from the scope of the present invention. In particular, the shape and form of the container and lid can be varied according to the requirements for the container. Many different materials can be used for the components, but it is envisaged that a container of the type described can readily be manufactured from synthetics plastics material, preferably by injection moulding. In one example, the container may be 400mm x 600mm in plan, or 400mm x 300mm in plan, with a height of about 200mm.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. A container lid comprising a main lid portion and a security portion which, in use, obstructs an aperture in a wall of a container to which the lid is fitted.

2. A lid according to claim 1, wherein the security portion substantially blocks the aperture.

3. A lid according to claim 1 or 2, wherein the security portion hangs from the main lid portion.

4. A lid according to claim 3, wherein the security portion hangs inside the container.

5. A lid according to any preceding claim, wherein the security portion is hingedly attached to the main lid portion for movement between an in use position and a stowed position substantially in the plane of the main lid portion.

6. A lid according to any preceding claim, wherein abutment means are provided to prevent the security portion being pushed away from the aperture when in use.

7. A lid according to any preceding claim, and comprising two main lid portions hingedly attached.

8. A lid according to claim 7, wherein both main lid portions carry a security portion as aforesaid.

9. A container having a container lid according to any preceding claim.

10. A container according to claim 9, wherein the container body is nestable and stackable with a like container body.

11. A container according to claim 10, wherein the lid is formed to be received within the container while another like container is nested therein.

12. A container according to any of claims 9 to 11, wherein the wall aperture is a handle.

13. A container according to any of claims 9 to 12, wherein the security portion is formed to provide a finger grip through the aperture.

14. A container according to any of claims 9 to 13 and further comprising lock means operable to lock the lid to the container while the security portion is obstructing the aperture.

15. A container lid substantially as described above, with reference to the accompanying drawings.

16. A container substantially as described above, with reference to the accompanying drawings.

17. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.

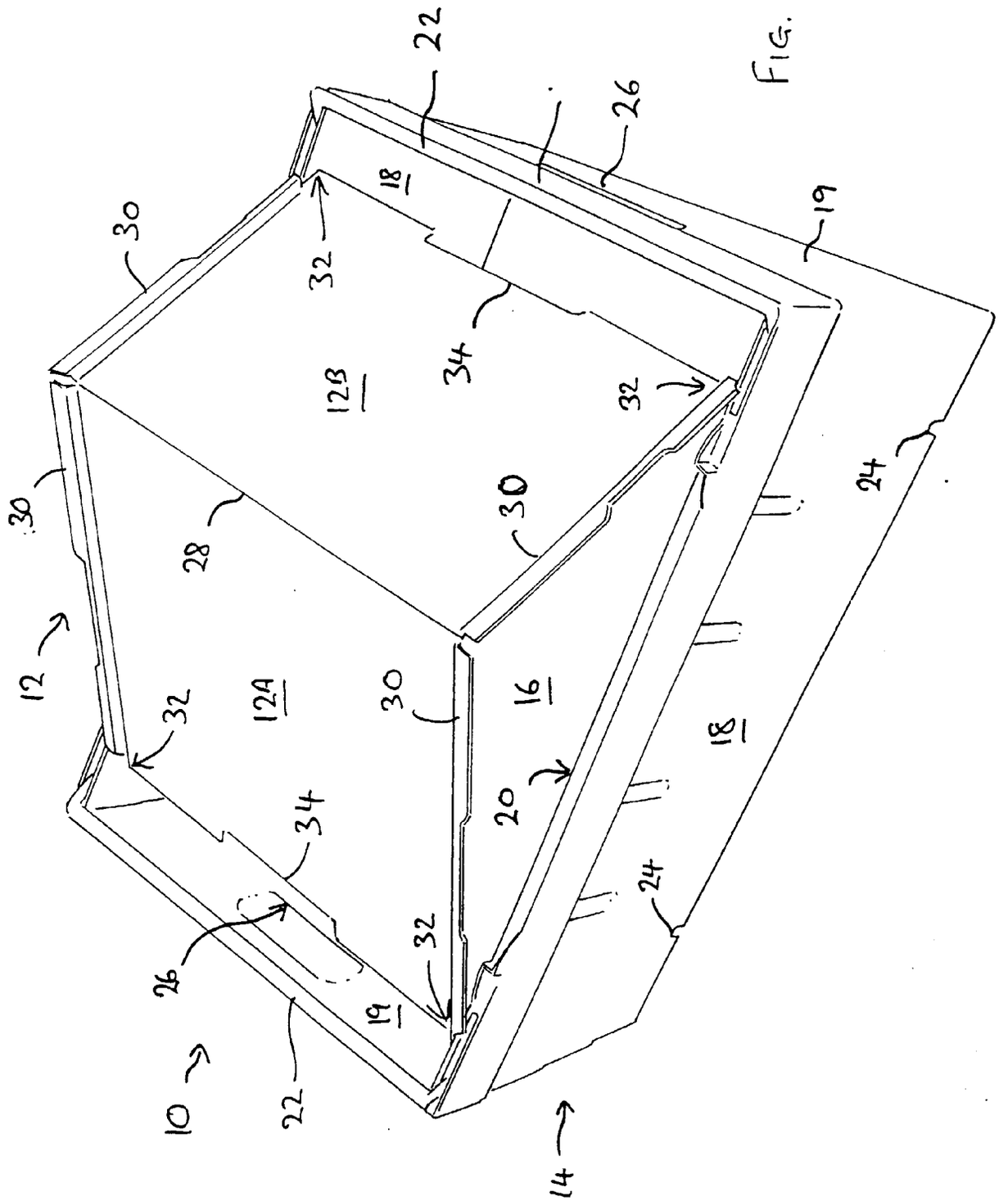

22
26
18
19
30
32
34
123
32
30
28
30
24
12
32
124
30
16
18
20
34
24
26
32
19
10
22
14

FIG. 1

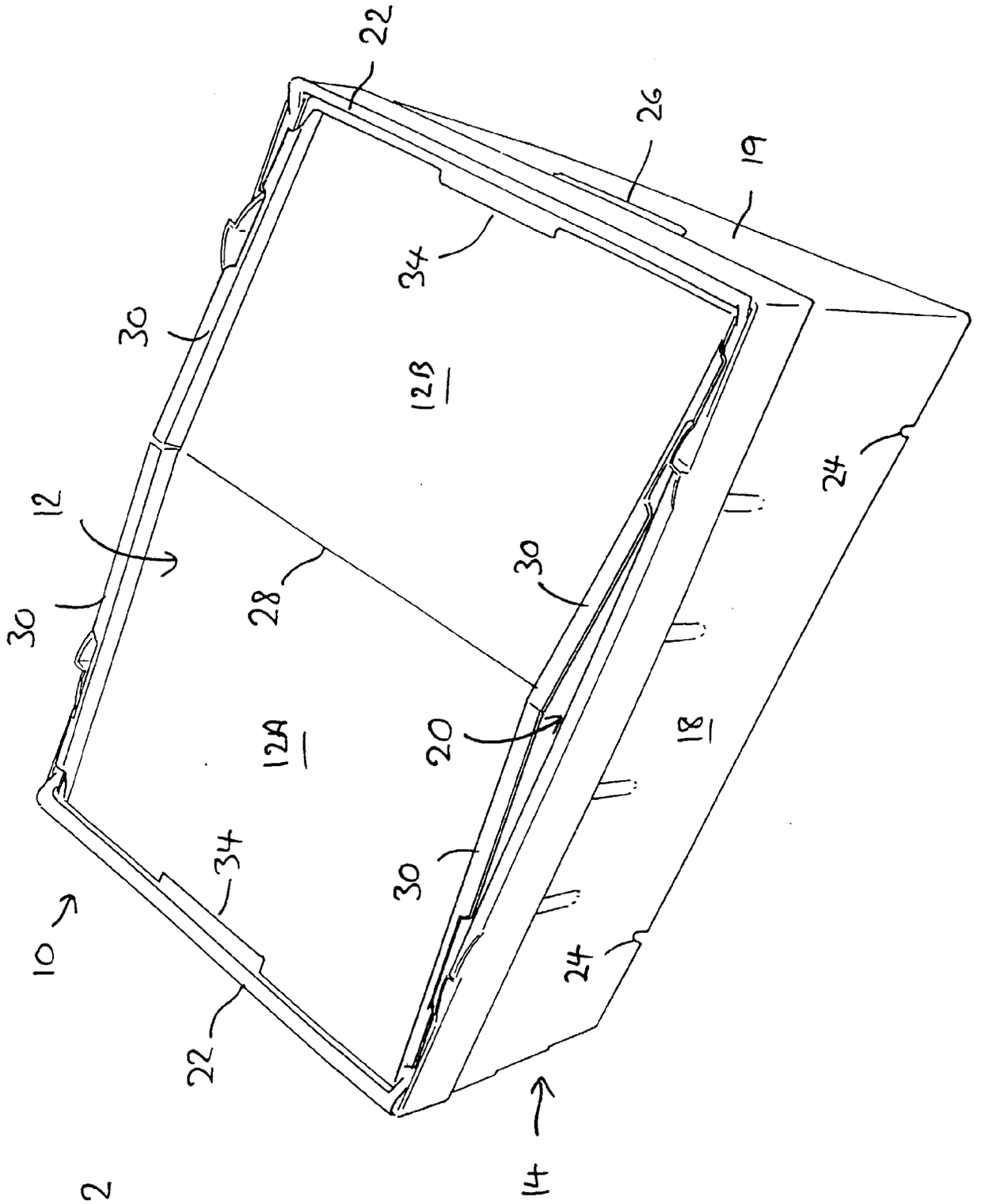


FIG 2

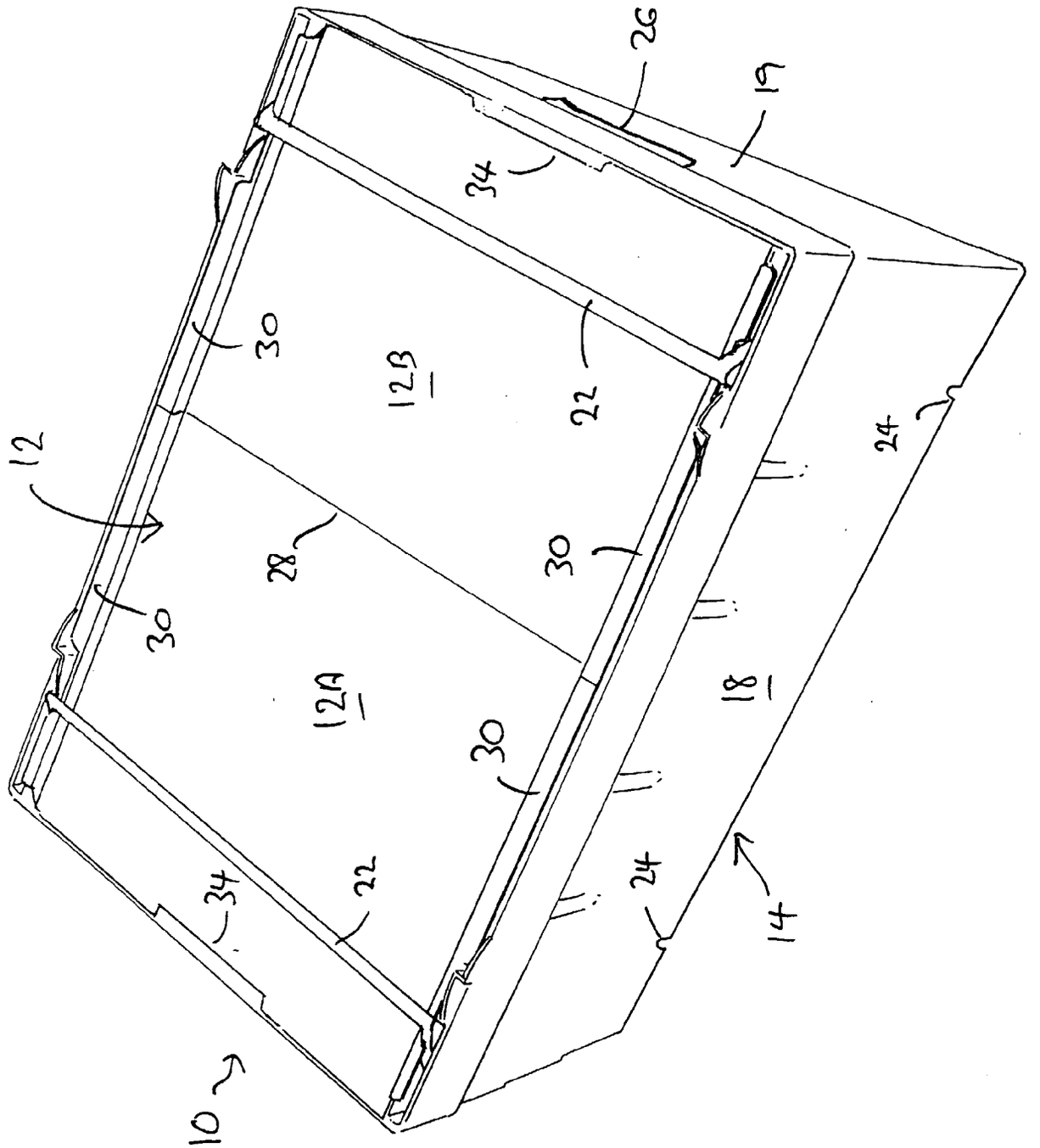


Fig. 3

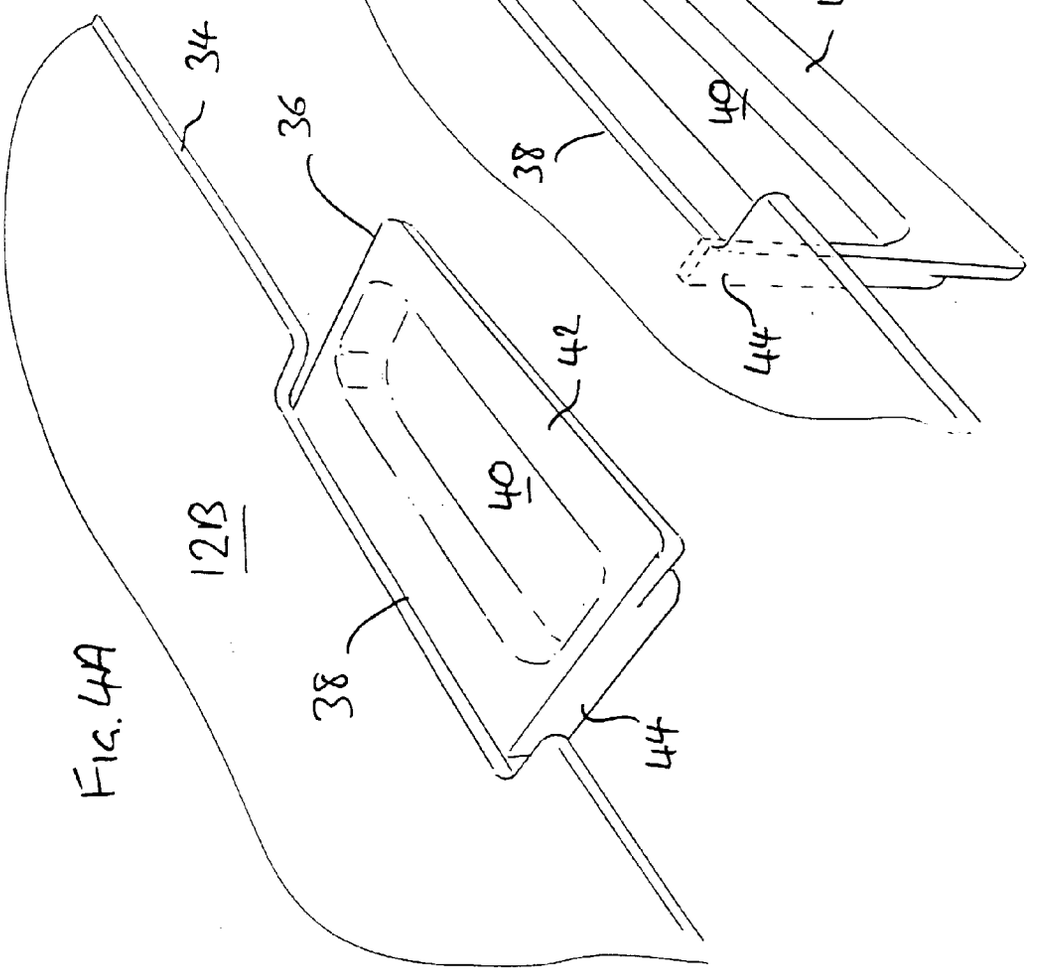


Fig. 4A

Fig. 4B

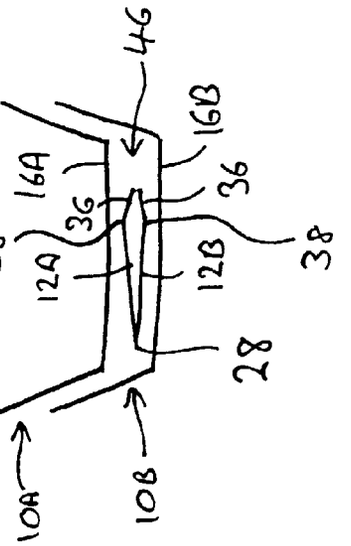


Fig. 5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 30 3233

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.6)
X	DE 12 01 751 B (GENTHOD) * the whole document *	1-4,9, 10,12-14	B65D43/04 B65D25/30
Y		7,8,11	
X	FR 2 185 546 A (ALLIBERT) 4 January 1974 * the whole document *	1-4,9, 10,12,13	
Y		7,8,11	
X	DE 35 17 089 A (SCHÄFER) 5 December 1985 * abstract; figures *	1-4,9, 10,12,13	
Y	DE 90 02 331 U (UTZ AG) 27 June 1991 * page 1, paragraph 4 - page 2, paragraph 1; figures *	7,8,11	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	22 July 1998	Gino, C

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

EPO FORM 1503 03.82 (P04C01)