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(56) Documents Cited

US 4210271 A

US 4153196 A

US 3684157 A

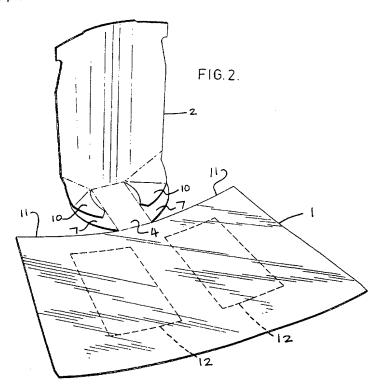
(58) Field of Search

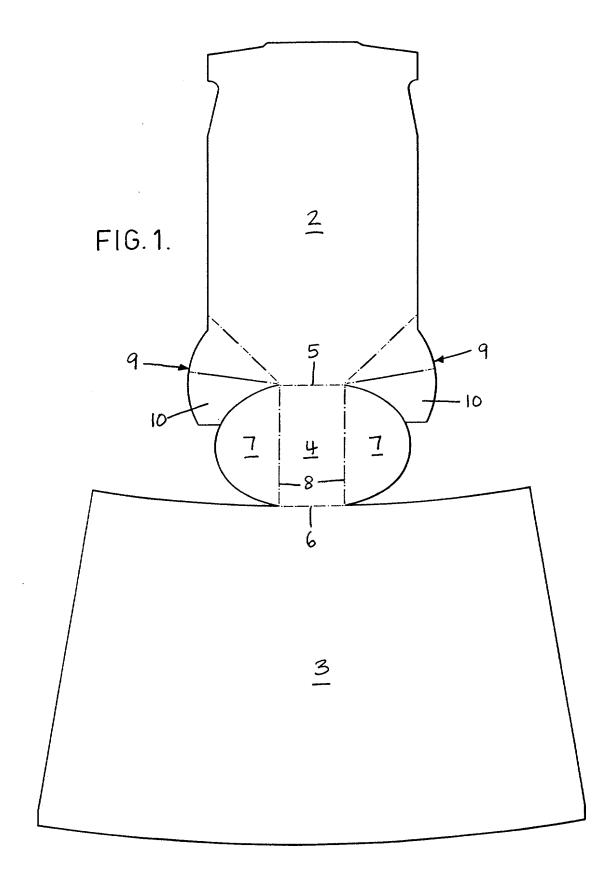
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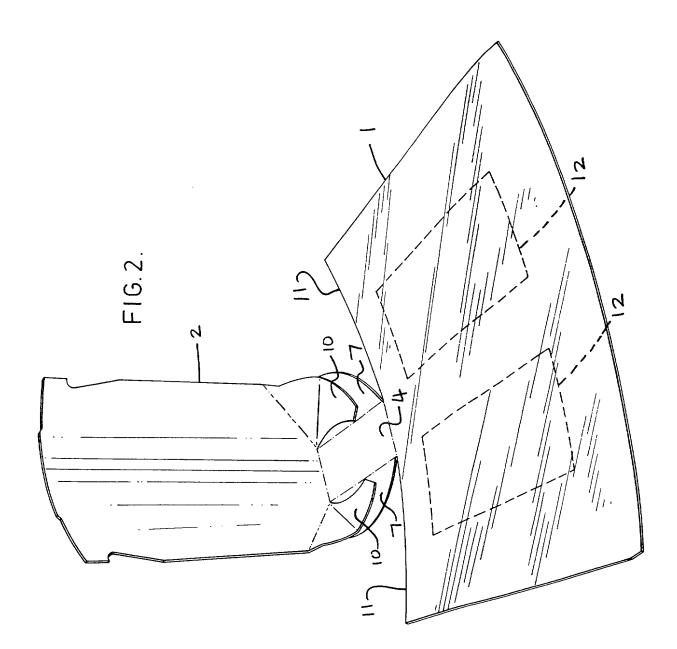
INT CL<sup>7</sup> B65D 3/06 3/10 3/20 5/18 5/20 5/28 5/36 ONLINE:WPI,EPODOC,JAPIO

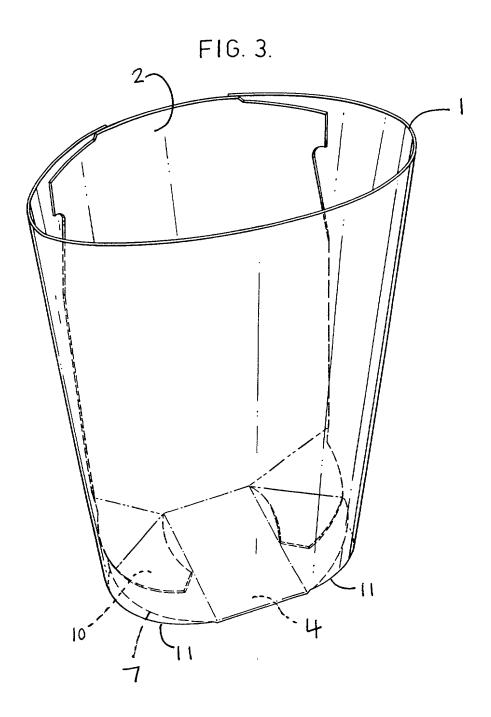
(54) Abstract Title Containers

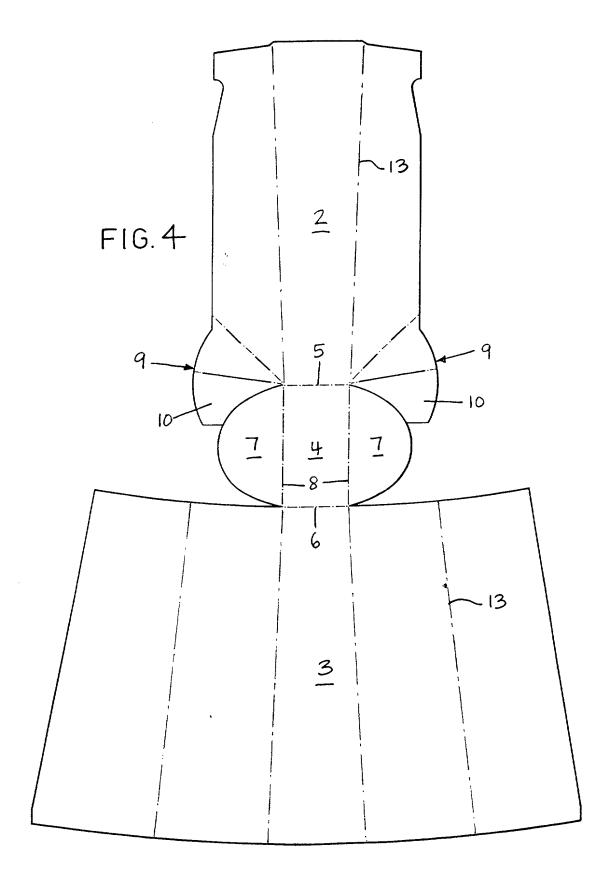
(57) A cardboard tub comprises a base (4, 7), a first side wall panel (2) hinged to the base and held upright by connecting flaps (10) glued to the base, and a second side wall panel also hinged to the base and with its sides glued to the sides of the first wall panel (2). Outer portions (7) of the base preferably incline upwardly and windows (12) may be provided.

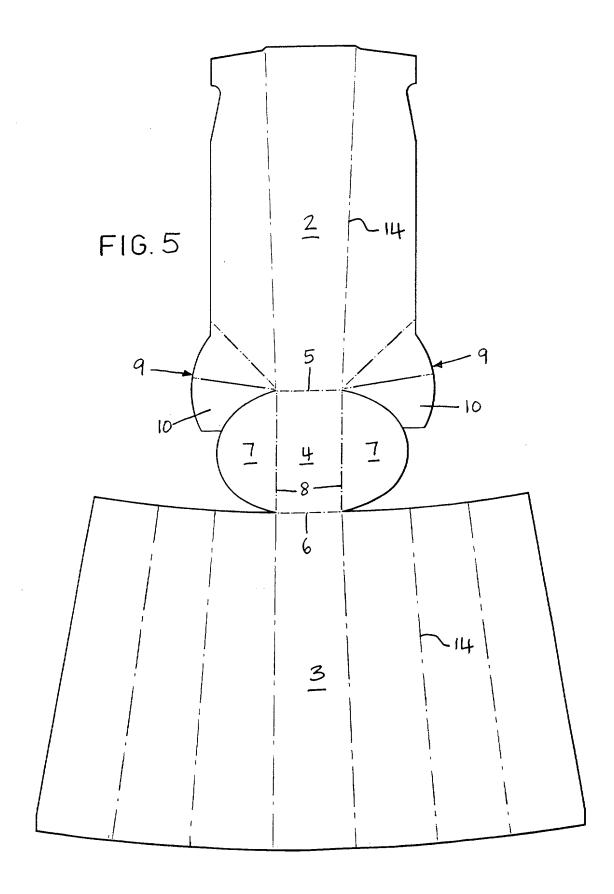












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### "Containers"

This invention relates to containers made of cardboard, paperboard or similar lightweight foldable sheet material and is particularly directed to the provision of an improved container in the form of a tub, made from a one piece blank.

According to the invention there is provided a container in the form of a tub, made from a one piece blank of cardboard, paperboard or similar lightweight foldable sheet material, comprising a base panel, a generally upright first side wall panel hinged to one edge of the said base panel and having connecting flaps at two opposite bottom corner regions which are secured to the base panel to hold the said first side wall panel upright, and a generally upright second side wall panel hinged to an opposite edge of the said base panel and having its opposite side regions overlapping the opposite side regions of the said first side wall panel and secured thereto.

By "generally upright" we mean that the side wall could be vertical or it could slope somewhat outwardly or, less preferably, somewhat inwardly.

The said side wall panels could be of substantially similar widths. Preferably however the second such panel is substantially wider than the first, to the extent that the second panel is wider than it is high while the first panel is higher than it is wide.

Preferably the said connecting flaps are glued to the top of the said base panel, and the said opposite side regions of the second side wall panel are glued to the outsides of the said opposite side regions of the first side wall panel.

Preferably the said base panel has a central portion to opposite edges of which the said side wall panels are hinged, and two opposite outer portions to

which the said connecting flaps are secured, the said outer portions being hinged to the said central portion.

Some embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

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Figure 1 is a plan view of a blank for making a first embodiment of a container according to the invention;

Figure 2 is a perspective view of the container made from the blank of Figure 1, partly erected;

Figure 3 is a perspective view of the container fully erected; and

Figures 4 and 5 are plan views of blanks for making two modified embodiments.

Referring first to Figure 1, a cardboard blank for making a container in the form of a tub with a rounded side wall comprises a base panel 1, a first side wall panel 2, and a second side wall panel 3. The base panel is of oval configuration and comprises a central portion 4 to whose opposite edges the first and second side wall panels are connected by way of hinge lines 5 and 6, and two outer portions 7 connected to the central portion by hinge lines 8. The first side wall panel 2 carries two hingedly subdivided connecting flaps 9 for connecting it to the base panel 1.

Referring now to Figures 2 and 3, to erect the tub the first side wall panel 2 is folded up about the hinge line 5 and the distal portions 10 of its subdivided connecting flaps 9 are glued to the tops of the outer portions 7 of the base panel. The second side wall panel 3 is then folded up about the hinge line 6, is made into a curved configuration, and its opposite side regions are glued to the outsides of the opposite side regions of the first side wall panel 1, as shown in Figure 3. It will be noted that the configuration of various panels and the connecting flaps results in the outer portions 7 of the base panel 1 being upwardly

inclined relative to the central portion thereof in the erected tub, so that the tub stands on the central portion 4 of the base panel and the bottom edges 11 of the second side wall panel.

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The embodiment of the invention shown in Figures 1 to 3 is an open topped tub of generally oval shape in horizontal section, with an outwardly inclined wall. Figure 4 shows a blank for making another form of the invention in which the wall of the tub is faceted rather than rounded, with six sides defined by fold lines 13. Figure 5 shows another blank for making an eight-sided tub, with sides defined by fold lines 14.

Tubs according to the invention may be provided with a top closure of any convenient form, for example in the form of a plug made of plastics, cardboard, polystyrene or a pulp material. The second side wall panel may be provided with one or more windows made of transparent plastics, as indicated by way of example at 12 in Figure 2.

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## Claims:

1. A container in the form of a tub, made from a one piece blank of cardboard, paperboard or similar

- lightweight foldable sheet material, comprising a base panel, a generally upright first side wall panel hinged to one edge of the said base panel and having connecting flaps at two opposite bottom corner regions which are secured to the base panel to hold the said first side
- wall panel upright, and a generally upright second side wall panel hinged to an opposite edge of the said base panel and having its opposite side regions overlapping the opposite side regions of the said first side wall panel and secured thereto.

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- 2. A container as claimed in claim 1, wherein the said second side wall panel is wider than it is high and the first side wall panel is higher than it is wide.
- 20 3. A container as claimed in claim 1 or 2, wherein the said connecting flaps are glued to the top of the said base panel.
  - 4. A container as claimed in any of claims 1 to 3, wherein the said opposite side regions of the second side wall panel are glued to the outsides of the said opposite side regions of the first side wall panel.
- 5. A container as claimed in any preceding claim,
  wherein the said base panel has a central portion to
  opposite edges of which the said side wall panels are
  hinged, and two opposite outer portions to which the
  said connecting flaps are secured, the said outer
  portions being hinged to the said central portion.

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6. A container as claimed in claim 5, wherein the said outer portions are upwardly inclined relative to the

said central portion, about the hinge lines therebetween.

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- 7. A container as claimed in any preceding claim,

  wherein the said second side wall panel is formed with
  at least one window.
  - 8. Containers as claimed in claim 1, substantially as hereinbefore described with reference to the accompanying drawings.
    - 9. A one piece blank for making a container as claimed in any of claims 1 to 8.







**Application No:** Claims searched:

GB 0007674.5

1 to 9

Examiner:
Date of search:

Mike Henderson 30 June 2000

## Patents Act 1977 Search Report under Section 17

## **Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.R): B8P (PC2D PC2X PB2 PB3 PB4 PE3 PK3 PK13)

Int Cl (Ed.7): B65D 3/06 3/10 3/20 5/18 5/20 5/28 5/36

Other: ONLINE:WPI,EPODOC,JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	US 4210271	(DUTCHER) (Fig.7 and col.4 lines 39 - 49 particularly relevant)	1,3,4 & 9
X	US 4153196	(DUTCHER) (Whole disclosure relevant)	1,3 to 5 & 9
X	US 3684157	(MENDEZ) (Figs 1 - 5 & corresponding description particularly relevant)	1 to 4 & 9

& Member of the same patent family

- A Document indicating technological background and/or state of the art.
- P Document published on or after the declared priority date but before the filing date of this invention.
- E Patent document published on or after, but with priority date earlier than, the filing date of this application.

X Document indicating lack of novelty or inventive step

Y Document indicating lack of inventive step if combined with one or more other documents of same category.