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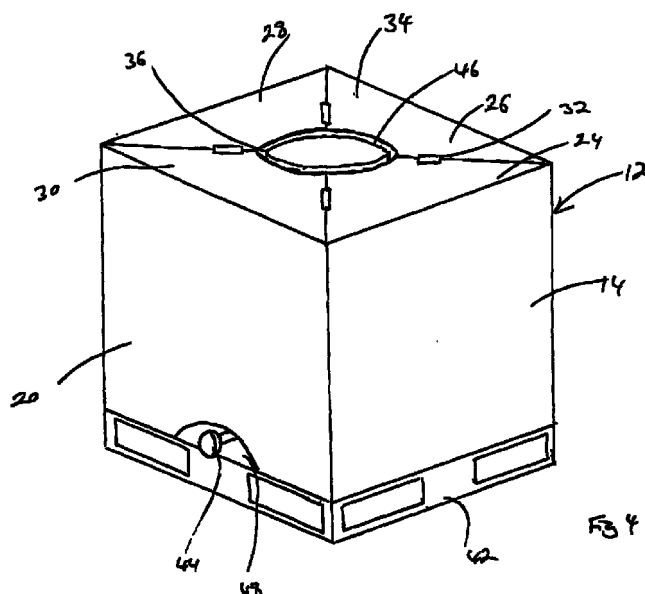
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(54) **Protector**

(57) A protector (12) for a container (38) is adapted to provide access to inlet/outlet openings (46/44) in projections from the container. The protector (12) comprises a plurality of side walls (14, 16, 18, 20) forming an enclosure, with each wall being attached at two opposite edges to two adjacent side walls. At least one foldable flap (24, 26, 28, 30) is provided towards one other edge of at least one side wall, the or each flap being adapted to be attached by attachment means to a side wall or to at least one adjacent flap at the edges thereof, to form a substantially flat end wall (34) of the protector (12).



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Description

[0001] The present invention relates to protectors for containers and particularly but not exclusively protectors for intermediate bulk containers (IBC) or drums.

[0002] Bulk containers such as those for containing liquid chemicals tend to be in the form of plastic bottles with an inlet and an outlet being provided therein. These containers are usually supported on pallets and enclosed within metal wire cages such that they may be stacked upon other such containers for storage purposes. However, the contents of these containers tend not to be protected from environmental factors such as frost. Sensitive products which require UV protection from light are usually contained within black polymer bulk containers. However these black polymer containers can only normally be used for one trip compared to around 50 trips for white other coloured or natural polymer type containers.

[0003] According to the present Invention there is provided a protector for a container, said protector being adapted to provide access to inlet/outlet openings in projections from the container, the protector comprising a plurality of side walls forming an enclosure with each wall being attached at two opposite edges to two adjacent walls, at least one foldable flap provided towards one other edge of at least one side wall, the or each flap being adapted to be attached by attachment means to a side wall or to at least one adjacent flap at the edges thereof thereby forming a substantially flat end wall of the protector.

[0004] Preferably, the flap or flaps are configured such that when attached together an aperture is provided in the end wall.

[0005] Preferably, at least one generally upwardly extending side wall is provided with an aperture substantially towards the opposite edge to the flap attached thereto.

[0006] The flap attachment means preferably comprises tie or tape means. Preferably means are provided for securing the cover to the container. The tie or tape means desirably provide the protector securing means.

[0007] The protector may be formed from a blank. The blank is desirably manufactured from an extruded fluted polypropylene sheet.

[0008] The protector is preferably in the form of an open ended rectangular box.

[0009] The flaps are desirably identical to one another and are preferably in the shape of truncated triangles. The truncation is desirably formed by an arc.

[0010] Preferably identification means may be provided on the protector. Said means desirably provide information relating to the product in the container.

[0011] The invention further provides one or more blanks formable into a protector according to any of the preceding paragraphs.

[0012] A further form of the invention provides a protector for a drum or a group of drums carried on a

pallet, the protector comprising a top member adapted to overlie the top of the drum or group of drums and a skip member depending downwardly from the top member and reaching down to the pallet such that in combination with the pallet, the projector encloses the drum or group of drums.

[0013] An embodiment of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:-

Fig 1 is a plan view of a blank formable into a protector,

Fig 2 is a diagrammatic perspective view of a protector,

Fig 3 is a diagrammatic perspective view of a bulk container to be covered by the protector, and

Fig 4 is a diagrammatic perspective view of a protector when attached to a bulk container.

[0014] Fig. 1 shows a blank 10 formable into a protective cover 12 as shown in fig. 2. The blank comprises walls 14, 16, 18, 20. An attachment tab 22 is provided on the free edge of wall 20 and can be attached to the respective edge of wall 14 by glue or similar to form the side walls of the cover. The blank is manufactured from a sheet of extruded fluted polypropylene.

[0015] Flaps 24, 26, 28, 30 are provided respectively on the upper edges of the walls 14, 16, 18 and 20. The flaps, when folded inwards, are attached to two adjacent flaps at the edges thereof. Therefore flap 24 is attached to flaps 26 and 30, flap 26 is attached to flaps 24 and 28, flap 28 is attached to flaps 26 and 30, and flap 30 is attached to flaps 28 and 24. The flaps are attached to each other by ties 32 which can be affixed to the flaps when required. The flaps are shaped such that when folded and attached together they form an end wall 34 to the cover 12 with an aperture 36 provided in the centre thereof. The fully assembled cover 12 is as shown in fig. 2.

[0016] A bulk container 38 to be covered is shown in fig. 3. The container 38 is provided within a metal wire cage 40 and is placed on a pallet 42. The cage enables the containers to be stacked upon one another. An outlet pipe 44 and also an inlet with a screw top 46 are provided on the bulk container 38. The outlet pipe 44 extends through a gap provided in the wire cage 40. A further gap is provided in the cage 40 to enable access to the container through the inlet 46.

[0017] In use, the cover 12 is partially assembled and then placed over the wire cage 40 in which the bulk carrier 38 is enclosed as shown in fig. 4. The aperture 36 in the end wall 34 of the cover 12 enables access to the container through the inlet 46. An aperture 48 is also provided on the lower edge of the side wall 20 to enable the outlet pipe 44 to pass through. The ties 32 may also

be attached to the wire cage 40 thereby fixing the cover in place. Alternatively the cover 12 may be assembled when placing around the wire cage 40 if required.

[0018] There is thus described a cover for a bulk container. The cover protects the container from damage and also dust and dirt. The cover will also insulate thermo-sensitive products such as adhesives from frost. The cover may also provide UV protection for light sensitive products thereby alleviating the need to use black polymer bulk carriers which tend to only be used once. The cover can be reused as required.

[0019] The cover is designed such that it may be flat packed for storage when it is no longer required. The side walls of the cover provide means for providing information relating to the product contained in the container. This information may be for identification purposes. Advertising may also be placed onto the covers.

[0020] Different shaped covers may be provided if required, for example for containers that are hexagonal in cross section. Alternative attachment means such as hook and fleece fasteners may be provided for attaching the flaps to each other and securing the cover to the metal cage. The side walls of the cover may each be provided separately and be attached to other walls when assembling the cover, in this case further flaps would be provided for attaching to the other side walls.

[0021] In a further modification the protective cover described above with reference to the drawings can be modified for use in protecting a drum or group of drums arranged on a pallet.

[0022] This modified protective cover embodies the features described above but has a modified shape, for example when it is used to cover a single drum, It has a circular top member and a skirt depending downwardly therefrom and so shaped to engage with the edges of the pallet on which the drum is carried. A modified protective cover can be manufactured for use with pallet or groups of drums, for example two, three or four drums. In this arrangement the top member corresponds to the combined shape of the top of the group.

[0023] Whilst endeavouring in the foregoing specification to draw attention to the 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 protector (12) for a container (38), said protector (12) being adapted to provide access to inlet/outlet openings in projections from the container, the protector (12) comprising a plurality of side walls (14, 16, 18, 20) forming an enclosure with each wall being attached at two opposite edges to two adja-

cent walls, at least one foldable flap (24, 26, 28, 30) provided towards one other edge of at least one side wall, the or each flap being adapted to be attached by attachment means to a side wall or to at least one adjacent flap at the edges thereof thereby forming a substantially flat end wall (34) of the protector (12).

2. A protector (12) according to claim 1 wherein the flap or flaps (24, 26, 28, 30) are configured such that when attached together an aperture is provided in the end wall.
3. A protector (12) according to claim 1 or claim 2 wherein at least one generally upwardly extending side wall (14, 16, 18, 20) is provided with an aperture (48) substantially towards the opposite edge to the flap (30) attached thereto.
4. A protector (12) according to any preceding claim wherein the flap attachment means comprises tie or tape means (32).
5. A protector (12) according to any preceding claim wherein means are provided for securing the cover to the container.
6. A protector (12) according to claim 5 when appended to claim 4 wherein the tie or tape means (32) provide the protector securing means.
7. A protector (12) according to any preceding claim wherein the protector is formed from a blank.
8. A protector (12) according to claim 7 wherein the blank is manufactured from an extruded fluted polypropylene sheet.
9. A protector (12) according to any preceding claim wherein the protector is in the form of an open ended rectangular box.
10. A protector (12) according to any preceding claim wherein the flaps (24, 26, 28, 30) are identical to one another and are in the shape of truncated triangles.
11. A protector (12) according to claim 10 wherein the truncation is formed by an arc.
12. A protector (12) according to any preceding claim wherein identification means are provided on the protector.
13. A blank formable into a protector according to any preceding claim.
14. A protector for a drum or a group of drums carried

on a pallet, the protector comprising a top member adapted to overlie the top of the drum or group of drums and a skip member depending downwardly from the top member and reaching down to the pallet such that in combination with the pallet, the projector encloses the drum or group of drums. 5

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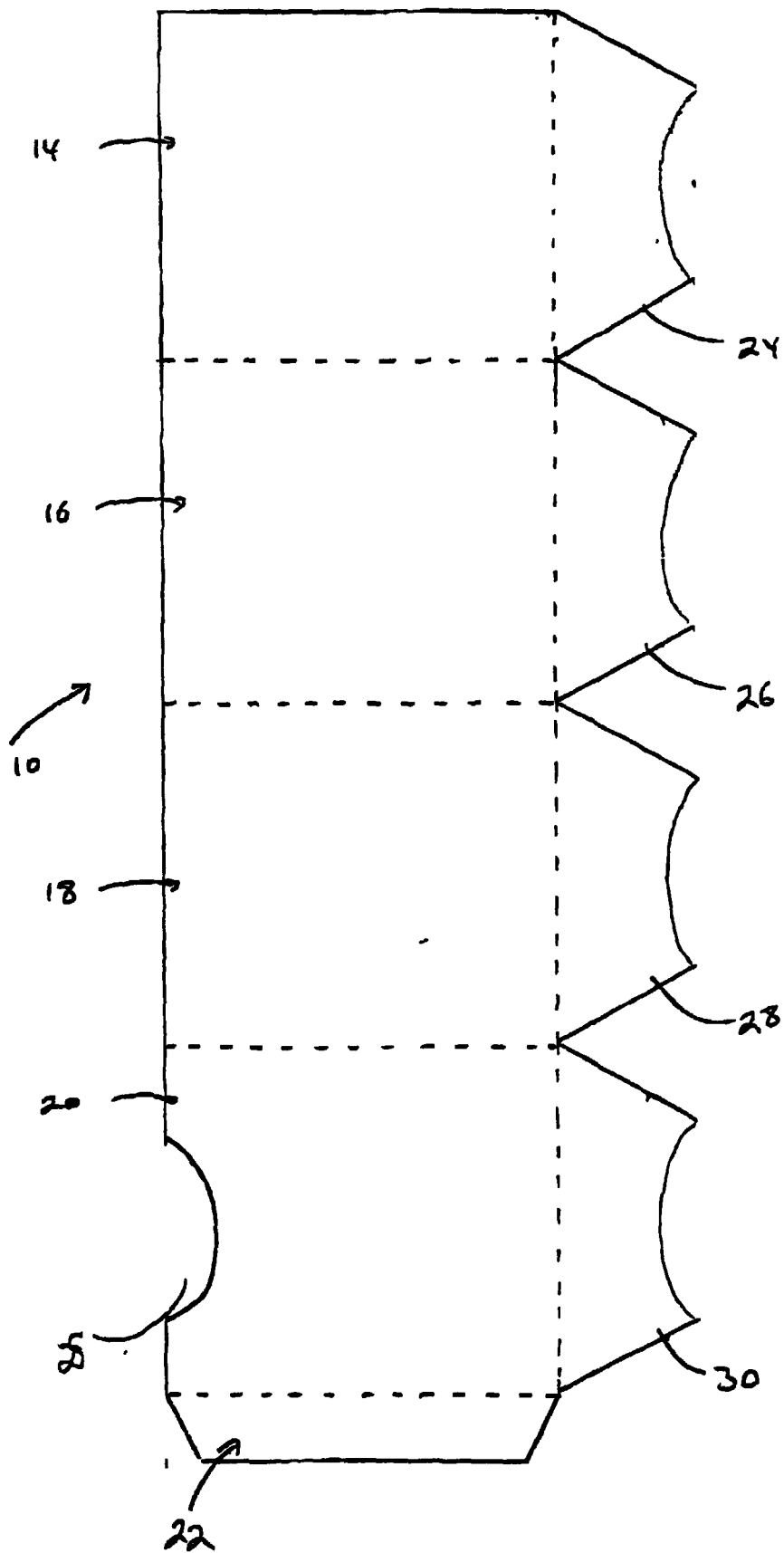
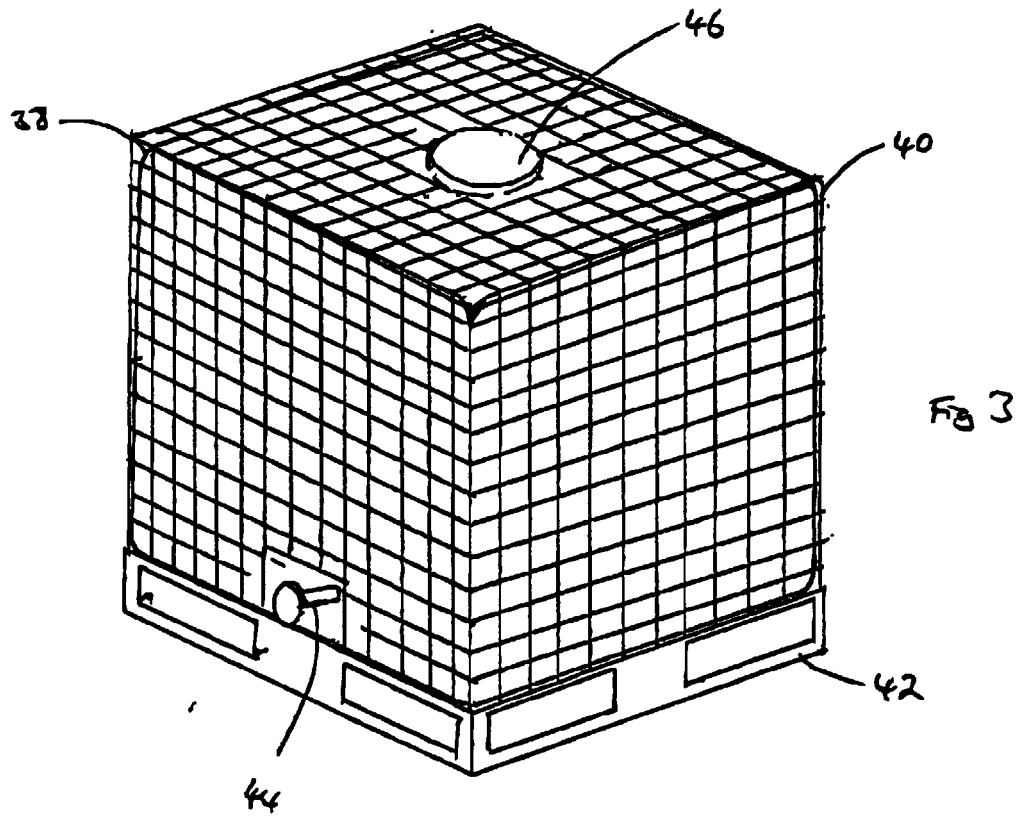
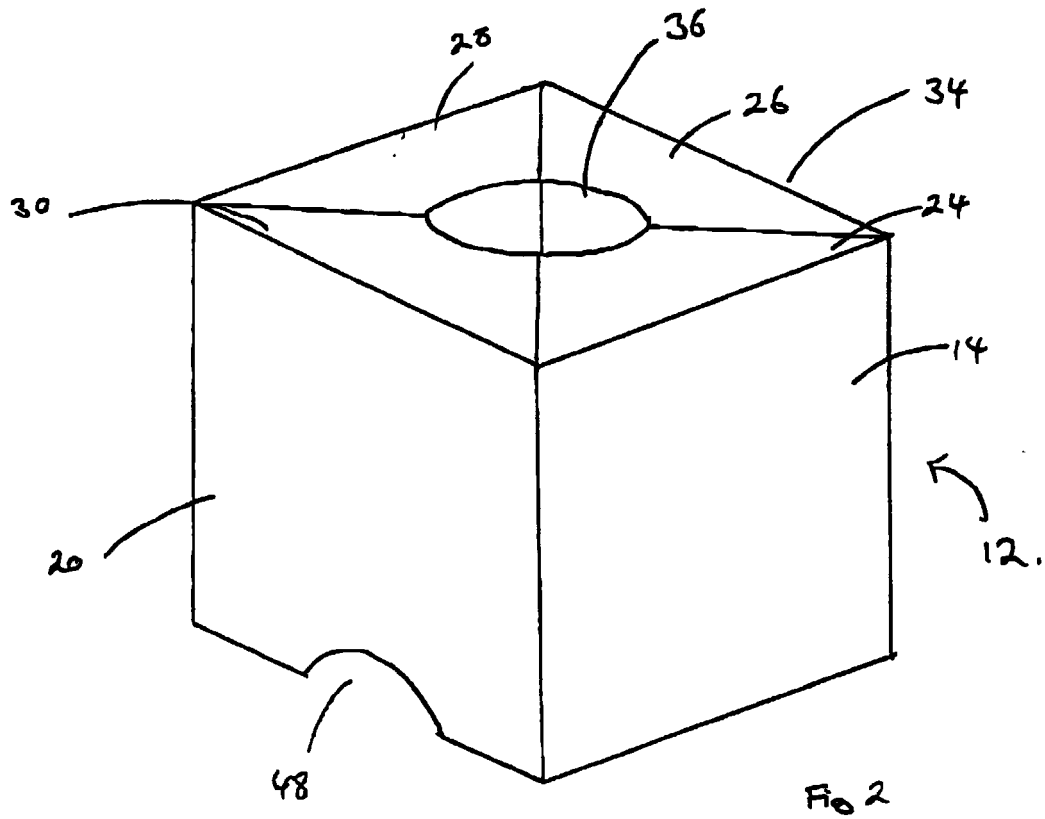
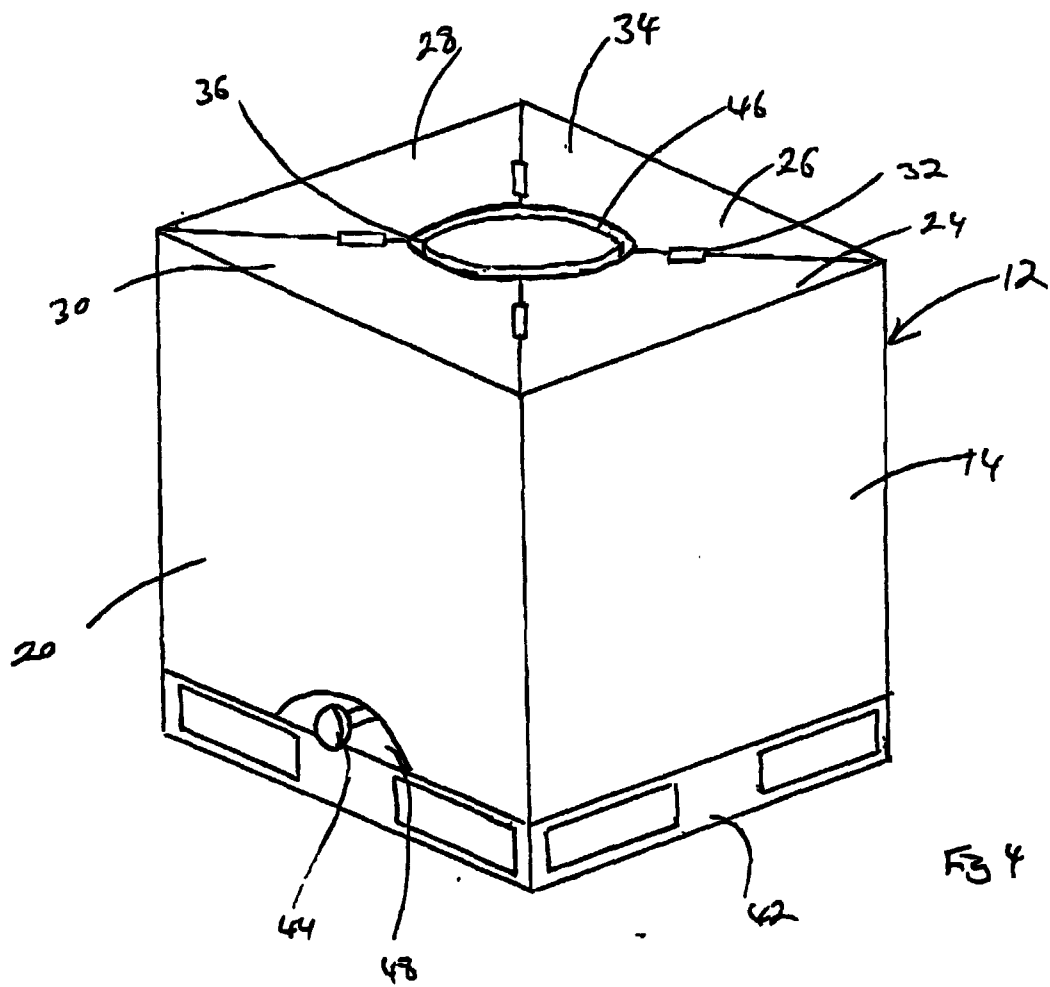


Fig 1 .







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EUROPEAN SEARCH REPORT

Application Number
EP 00 30 1302

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 8 May 2000	Examiner Spettel, J
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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The members are as contained in the European Patent Office EDP file on
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