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(54) **Washing basket**

Wäschekorb

Corbeille à linge

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(56) References cited:
**WO-A-98/52439 DE-A1- 2 206 039
US-A- 2 574 563 US-A- 4 781 300
US-A- 4 948 077 US-A- 5 472 107**

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Description

FIELD OF THE INVENTION

[0001] This invention relates to a washing basket, and in particular to a washing basket having additional utility.

[0002] Throughout this document, the articles with which the washing basket can be used will be referred to as "textile articles", to reflect the likelihood that the invention will achieve its greatest utility with such articles, for example clothing articles. However, the washing basket can be used with other articles if desired, and reference to "textile articles" is not to be regarded as a restriction upon the scope of protection for the invention.

[0003] Also, directional and orientational terms such as "top" "bottom" etc. refer to the orientation of the washing basket in normal use, as shown in Fig. 1 of the drawings for example.

DESCRIPTION OF THE PRIOR ART

[0004] Many different types of washing basket are known, and typically comprise an open-topped receptacle having a substantial volume into which can be loaded a number of textile articles during transportation, typically from a dirty linen bin to a washing machine, from a washing machine to the drier or washing line, and/or from the drier or washing line to an airing cupboard or storage cupboard. A typical washing basket will be made as a one-piece moulded plastic item with a substantially rigid base and a substantially rigid top, interconnected by sides comprising a grid of plastic material. The base can incorporate feet, and the top will ordinarily incorporate one or more carrying handles.

[0005] The sides are typically sufficiently rigid to substantially maintain the shape of the washing basket both when empty and when fully loaded. Accordingly, the washing basket occupies substantially the same volume when full and empty, and can therefore occupy a large volume of an airing or storage cupboard in which it is located when not in use.

[0006] A washing basket is not the only item many households will possess to assist with laundry, and many households will also have an airer upon which clothing articles and the like can be dried and/or aired. Many different types of airer are also known. One general type comprises a set of planar frames to which are connected a number of cross-members. The frames are connected together so that they can pivot relative to each other, the airer being able to open and close in a scissor-action. Thus, the frames can be moved relative to each other between a collapsed condition in which the frames substantially overlies one another and allow the airer to be stored whilst occupying a relatively small volume, and an expanded position in which textile articles can be hung over chosen parts of the frames and cross-members for drying and/or airing.

[0007] Prior art document US-A-4 781 300 discloses

a washing basket having the features of the preamble of Claim 1. Prior art documents US-A-4 948 077, US-2 574 563, DE 22 06 039 A and US-A-5 472 107 disclose similar washing baskets. Prior art document WO 98/52439 A discloses a sports bag suitable for storing various sporting articles.

SUMMARY OF THE INVENTION

[0008] The present invention seeks to provide a washing basket having additional utility. Specifically, the invention seeks to provide a washing basket which can be converted into a substantially flat platform for use in drying and/or airing textile articles, and which may therefore avoid the requirement for separate items for these purposes. When configured as a washing basket the device can be used to transport and store washing and other desired articles, and when configured as a platform the device can lie substantially flat and support textile articles as they are dried and/or aired.

[0009] According to the invention, there is provided a washing basket with the features of claim 1.

[0010] In the first position the panels define a volume therebetween, and this volume can be used as the receptacle for textile articles and the like.

[0011] Preferably, the washing basket also has a pair of opposed end panels, the side panels and end panels together providing the receptacle when the side panels are in their first position.

[0012] When the side panels are in their second position they provide a substantially flat platform, which can be used to allow one or more articles of clothing or the like to be laid substantially flat for drying or airing.

[0013] Preferably, the side panels are substantially rectangular in shape. Preferably also the end panels are substantially inverted triangular in shape (i.e. with the "apex" of the triangle being lowermost in use). The "apex" of the triangular end panels can be removed to provide a washing basket with a flattened base.

[0014] Desirably, the base includes a base panel. Desirably also the side panels are each connected at their respective bottom edge to the base panel.

[0015] Preferably, the end panels and/or the side panels incorporate fixing means which can be engaged to hold the side panels in their first positions (and hold the washing basket in its "receptacle" configuration), and disengaged to allow the side panels to move to their second positions (and allow the washing basket to move to its "platform" configuration).

[0016] Each side panel has a flexible panel member. Thus, the inventors have realised that it is not necessary for the side panels to have structural strength throughout, but instead the structural strength can be provided by a surrounding frame member to which the flexible panel members are connected. In addition, the provision of substantially rigid frame members usefully allows the movement of the side panels to be effected by hinging of the frame members.

[0017] Desirably, the foot members have detent means to define the first and second positions of the frame member.

[0018] Preferably, the side panels can be moved to a third position relative to one another, the side panels in their third position providing a receptacle having a reduced volume over the receptacle provided by the side panels in their first position. The side panels in their third position can usefully permit carrying of the washing basket with one hand for example, and can also provide a suitable storage configuration.

[0019] It is an additional advantage of the present invention that the washing basket occupies a substantially reduced volume when the side panels are in their second position (and also in their third position, if applicable) as compared to the volume when the side panels are in their first position. The second position can therefore be used during storage of the washing basket when not in use, and also for transportation of the washing basket prior to purchase.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] The invention will now be described in more detail, by way of example, with reference to the accompanying drawings, in which:

- Fig.1 shows a perspective view of the washing basket according to the invention configured as a receptacle, with the side panels in their first position;
- Fig.2 shows a perspective view of the washing basket of Fig.1 configured as a platform, with the side panels in their second position;
- Fig.3 shows a perspective view of the washing basket of Fig.1 configured as another receptacle, with the side panels in their third position;
- Fig.4 shows a schematic view of the connection between respective parts of a frame member and a foot member;
- Fig.5 shows a perspective view of another embodiment of washing basket according to the invention, with the side panels in their first position, mounted upon an airer; and
- Fig.6 shows a perspective view of the washing basket of Fig.5, with the side panels in their second position, mounted upon the airer.

DETAILED DESCRIPTION

[0021] The washing basket 10 shown in Figs. 1-4 comprises a base 12, a top 14, two side panels 16 and two

end panels 20. In this embodiment the side panels 16 each comprise a substantially rigid frame member 22 of inverted U-shape, and a fabric covering.

[0022] The fabric covering of each side panel 16 comprises a panel 24 of mesh fabric material, partially surrounded by a border 26 of solid (i.e. non-mesh) material. The embodiment of Figs. 1-4 has a flattened base 12, the base 12 including a fabric material, which in this preferred embodiment is also a mesh panel 30 (see Fig.2) which is joined to (or in other embodiments is a continuation of) the mesh panels 24 of the respective side panels 16.

[0023] Clearly, the choice of fabric materials for the panels 24, 30 and border 26, and the relative size of the border 26, is not directly relevant to the present invention, but it will be appreciated that when used as a platform as shown in Fig.2 the provision of large-area mesh panels 24 and 30 is preferred, so as to facilitate drying and airing of textile articles placed thereon.

[0024] A part of the border 26 is omitted at 32 to allow a part of the frame member 22 to be available for use as a handle 34 for each side panel 16.

[0025] The ends of the frame member 22 are each hingedly mounted upon a respective foot member 36, the frame member being connected to the foot member 36 by a respective pivot pin 40, which may be a concealed nut and bolt fixing, a split pin, a screw, a rivet or a conventional bolt for example. The foot member 36, which is most suitably a plastic moulded component, has a slot opening 42 in its top surface through which the frame member 22 can be inserted, and which slot opening 42 allows relative hinged or pivoting movement of the frame member 22 as described below.

[0026] In this embodiment the tops of the opposed frame members 16, including the handle portions 34 and the fabric covering 26 of the remainder thereof, together define the top 14 of the washing basket 10; the fabric panel 30 and the feet 36 together define the base 12 of the washing basket; and the two side panels 16 define two opposed side panels of the washing basket, the other two of the panels being defined by the end panels 20.

[0027] As with the side panels 16, the end panels 20 comprise a fabric which in this embodiment is a mesh 44 surrounded by a non-mesh border 46, but can be any suitable material or combination of materials. Importantly, the ends panels 20 do not require a frame member or any other independent structural support, though clearly such support can be provided if desired.

[0028] The border 46 is substantially permanently connected to the border 26 of the front (as viewed in Fig.1) side panel 16, but is releasably connected to the border 26 of the rear (as viewed in Fig.1) side panel 16 and the base panel 30 by a zip fastener 50. In this regard, a zip fastener is particularly useful but other releasable fasteners could be used, for example press-studs at selected locations upon the respective panels, or sections of hook and loop fastener such as "Velcro" (RTM).

[0029] When the side panels 16 are in their first position

as shown in Fig.1, the washing basket provides a receptacle in which the side panels 16, end panels 20 and base panel 30 together define a volume into which textile articles can be placed, transported and/or stored, i.e. similar to a typical washing basket.

[0030] Release of the zip 50 (and the corresponding fastener of the other end panel 20), allows the side panels 16 of the washing basket 10 to be pivoted outwardly from the first relative positions shown in Fig.1 to the second relative positions shown in Fig.2. In this second position, the side panels 16 are substantially co-planar, so that the side panels 16 and the base panel 30 together define a substantially flat surface which can be used as a platform for drying or airing textile articles.

[0031] In this embodiment the frame members 22 each carry a pair of corner mouldings 52. The purpose of the corner mouldings 52 is to allow the platform of Fig.2 to span the width of a typical bath, so that the platform can be used to allow textile articles to dry over the bath (in other embodiments the corner mouldings are not required and the side panels 16 are sufficiently wide to span a typical bath). In this application, it will be understood that the mesh panels 24 and 30 not only allow more air to engage the textile article to speed up the drying thereof, but also allow drops of water to fall from a wet textile article into the bath.

[0032] The end panels 20 are not shown in Fig.2, though it will be understood that they remain connected to the border 26 of one of the side panels 16. In practice, the end panels 20 could be tucked away underneath the platform, or they could be rolled up and retained by clips or other retainers provided for that purpose.

[0033] When it is desired to convert the platform of Fig. 2 back into the receptacle of Fig.1, the side panels 16 are hinged upwardly relative to the base panel 30, and the zip 50 is closed to reconnect each end panel 20 with its respective base panel 30 and other side panel 16.

[0034] As shown in Fig.3, in this embodiment the frame members 22 can be pivoted inwardly from their first relative positions to third relative positions. Thus, the handle portions 34 can be brought together to substantially enclose a small volume between the side panels 16 and (now loose) end panels 20. The washing basket 10 in this "reduced receptacle" form may be more easily carried by one hand, and this may be suitable when the washing basket is either empty or only partially full. In addition, the Fig.3 configuration may be used to store the washing basket in preference to the Fig.1 or Fig.2 configurations, and it will be understood that in this configuration the washing basket can occupy a significantly smaller volume than a typical prior art washing basket. (In this regard, it is to be noted that the washing basket may be transported from the manufacturer in the platform configuration of Fig.2, in which it occupies a relatively small volume, or it may be transported in "flat-packed" form for assembly by the customer).

[0035] The configuration of part of each foot member 36 is shown schematically in Fig.4, in which a frame mem-

ber 22 is shown without the fabric covering for clarity. Within the foot member 36, and substantially equi-distant from the hinge pin 40, are located three projections 52, 54 and 56, which serve to provide detent positions for the frame member 22. Specifically, when the frame member is located between the projections 52 and 54 (see the frame member numbered 22a in Fig.4) the frame member is held in its first position, i.e. the position of Fig. 1. When the frame member is located between the projections 54 and 56 (see the frame member numbered 22c in Fig.4) the frame member is held in its third position, i.e. the position of Fig.3. Finally, when the frame member is located in the position shown for the frame member numbered 22b, the frame member is held in its second position, i.e. the position of Fig.2, with the projection 52 resisting movement of the frame member back towards the first position, and the end 60 of the slot opening 42 preventing further outwards (anti-clockwise as drawn) pivoting movement.

[0036] It will be understood that the slot 42 may terminate adjacent to the frame member 22c shown in Fig.4 so that the end of the slot member prevents further inwards (clockwise as drawn) movement. However, it is preferred to provide a detent projection 56, since the frames 22 of each of the side panels 16 will engage in that position and will each additionally prevent further inwards movement of the other frame member.

[0037] The frame member 22 is preferably made from metal tubing of substantially circular cross-section (ideally approximately 10 mm diameter tube). The circular shape of the frame member 22, and the plastic material from which the foot member 36 is made, allow the frame member 22 to be forced past the projections 52, 54, 56 as desired, whilst the resilience of the foot member 36 acts to hold the frame member in a chosen position absent appropriate force by the user.

[0038] The fact that the frame member 22 engages the end 60 of the slot opening 42 in its second position allows the washing basket when configured as a platform as in Fig.2 to be lifted up by way of the foot members 36, and the platform will remain flat even if it is supporting heavy textile articles. However, it is not necessary that the platform retain its flat form if the user seeks to lift one or other of the handles 34 when the platform is loaded, i.e. in those circumstances the frame member 22 is likely to be forced past the projection 52 towards its first position. It may be desired, however, that the detent provided by the projection 52 be sufficiently great to maintain the washing basket in its platform configuration when unloaded, whether or not the platform is lifted by the handles 34 or one or both of the foot members 36. Alternatively stated, the detent provided by the projection 52 can retain the washing basket in its platform configuration during (unloaded) movement and storage, facilitating ease of handling in that configuration.

[0039] Figs. 5 and 6 show another, similar, washing basket 110 in use with an airer 62. The airer 62 is of conventional form comprising a number of frames 64,

each with a set of cross-members 66. As is typical of such airers, the frames 64 can pivot relative to one another to move the airer from its erected or extended position as shown, to its collapsed condition in which all of the frames substantially overlies one another. It will be noted that the present washing basket 110 (and similarly the washing basket 10) can be dimensioned to interconnect with the airer 62, both in the receptacle and platform configurations.

[0040] In particular, the corner mouldings 52 have their lowermost surfaces configured to cooperate with the corner mouldings 70 of the airer. In this way, when in the receptacle position as shown in Fig.5, the washing basket can be supported by the uppermost frames 64 of the airer, with the cooperating corner mouldings 52 and 70 substantially preventing lateral movement of the washing basket (both front to back and side to side) relative to the airer 62.

[0041] Also, when in the platform configuration as shown in Fig.6, the mouldings 72 which are carried by the frame members 22 (and which are also present on the washing basket 10 as shown in Figs. 1-4) cooperate with the corner mouldings 70 of the airer to substantially prevent lateral movement of the platform (both front to back and side to side) relative to the airer 62.

[0042] It will be understood that in the embodiment shown the end panels 20 serve firstly to retain the side panels 16 in their first position (in addition to the detent provided by the projections 52 and 54), i.e. the end panels 20 serve to limit the outwards movement of the side panels 16, in particular when the washing basket is loaded with textile articles. Also, the end panels 20 serve secondly to prevent textile articles from falling out of the washing basket when configured as a receptacle as in Fig.1 or Fig.3. In other embodiments the end panels could be replaced by cross-straps or the like. Only a single cross-strap would be required to fulfil the first-stated purpose, and provided that the cross-strap was large enough (or separate cross-straps were close enough together) to prevent textile articles falling out of the washing basket they would also fulfil the second-stated purpose. Alternatively stated, there is no requirement for the "end panels" completely to fill the area between the side panels in the receptacle configuration.

[0043] As indicated above the side panels 16 comprise a frame member 22 providing the structural strength and a fabric panel 24, 26. Ideally, the border 26 of the fabric panel includes an envelope within which much of the frame member 22 is located. In other embodiments a side member could be provided by a (perhaps one-piece) sheet of moulded plastic for example, the sheet having sufficient structural rigidity to fulfil the required purpose and yet incorporating a grid or mesh to allow the clothes to be effectively dried and aired when in the platform configuration.

Claims

1. A washing basket (10) having two opposed side panels (16), each side panel comprising a flexible panel member (24, 26), the opposed side panels being movable relative to one another between a first position in which they define a volume therebetween, and a second position in which they are substantially coplanar, **characterised in that** each side panel (16) comprises a substantially rigid frame member (22) of inverted U-shape, and **in that** the ends of each frame member are pivotably mounted in respective foot members (36) to allow the side panels (16) to be pivoted outwardly from the first position to the second position.
2. A washing basket (10) according to Claim 1 in which the opposed side panels (16) lie at an acute angle relative to one another in their first position.
3. A washing basket (10) according to Claim 1 or Claim 2 in which the washing basket also has a pair of opposed end panels (20), the side panels (16) and end panels together defining a volume when the side panels are in their first position.
4. A washing basket (10) according to any one of Claims 1-3 in which the side panels (16) are substantially rectangular in shape.
5. A washing basket (10) according to Claim 3 or Claim 4 in which the end panels (20) are substantially inverted triangular in shape.
6. A washing basket (10) according to Claim 5 in which the apex of the substantially triangular end panels (20) is removed to provide a washing basket with a flattened base (12).
7. A washing basket (10) according to any one of Claims 3-6 in which the side panels (16) and/or the end panels (20) incorporate fixing means (50) which can be engaged to hold the side panels in their first positions, and disengaged to allow the side panels to move to their second positions.
8. A washing basket (10) according to any one of Claims 1-7 in which the foot members (36) each have detent means (53, 54, 56) to define the first and second positions of the frame member (22).
9. A washing basket (10) according to any one of Claims 1-8 in which the opposed side panels (16) can be moved to a third position relative to one another, the volume defined between the opposed side panels in their third position being less than the volume defined between the opposed side panels in their first position.

Patentansprüche

1. Wäschekorb (10) mit zwei einander gegenüberliegenden Seitenteilen (16), wobei jedes Seitenteil ein flexibles Teilfeld (24, 26) umfasst, wobei die einander gegenüberliegenden Seitenteile relativ zueinander zwischen einer ersten Position, in welcher sie zwischen sich ein Volumen definieren, und einer zweiten Position, in welcher sie im Wesentlichen komplanar sind, bewegt werden können, **dadurch gekennzeichnet, dass** jedes Seitenteil (16) ein im Wesentlichen umgekehrt U-förmiges starres Rahmenelement (22) umfasst, und dass die Enden jedes Rahmenelements in jeweiligen Fußelementen (36) schwenkbar montiert sind, so dass die Seitenteile (16) aus der ersten Position nach außen auf die zweite Position geschwenkt werden können. 5
2. Wäschekorb (10) nach Anspruch 1, bei dem die einander gegenüberliegenden Seitenteile (16) in ihrer ersten Position in einem spitzen Winkel im Verhältnis zueinander liegen. 10
3. Wäschekorb (10) nach Anspruch 1 oder Anspruch 2, wobei der Wäschekorb auch ein Paar einander gegenüberliegender Endteile (20) hat, wobei die Seitenteile (16) und die Endteile miteinander ein Volumen definieren, wenn die Seitenteile in ihrer ersten Position sind. 15
4. Wäschekorb (10) nach einem der Ansprüche 1 bis 3, bei dem die Seitenteile (16) eine im Wesentlichen rechteckige Form haben. 20
5. Wäschekorb (10) nach Anspruch 3 oder Anspruch 4, bei dem die Endteile (20) eine im Wesentlichen umgekehrt dreieckige Form haben. 25
6. Wäschekorb (10) nach Anspruch 5, bei dem die Spitze der im Wesentlichen dreieckigen Endteile (20) entfernt ist, um einen Wäschekorb mit einem abgeflachten Boden (12) bereitzustellen. 30
7. Wäschekorb (10) nach einem der Ansprüche 3 bis 6, bei dem die Seitenteile (16) und/oder die Endteile (20) Befestigungsmittel (50) aufweisen, die in Eingriff gebracht werden können, um die Seitenteile in ihrer ersten Position zu halten, und außer Eingriff gebracht werden können, so dass die Seitenteile auf ihre zweite Position bewegt werden können. 35
8. Wäschekorb (10) nach einem der Ansprüche 1 bis 7, bei dem die Fußelemente (36) jeweils ein Rastmittel (53, 54, 56) zum Definieren der ersten und der zweiten Position des Rahmenelements (22) haben. 40
9. Wäschekorb (10) nach einem der Ansprüche 1 bis 8, bei dem die einander gegenüberliegenden Sei- 45

terteile (16) auf eine dritte Position relativ zueinander bewegt werden können, wobei das zwischen den einander gegenüberliegenden Seitenteilen in ihrer dritten Position definierte Volumen kleiner ist als das zwischen den einander gegenüberliegenden Seitenteilen in ihrer ersten Position definierte Volumen. 50

Revendications

1. Panier à linge (10) ayant deux panneaux latéraux opposés (16), chaque panneau latéral comportant un organe de type panneau flexible (24, 26), les panneaux latéraux opposés étant mobiles l'un par rapport à l'autre entre une première position dans laquelle ils définissent un volume entre eux, et une deuxième position dans laquelle ils sont dans une large mesure coplanaires, **caractérisé en ce que** chaque panneau latéral (16) comporte un organe de type cadre dans une large mesure rigide (22) en forme de U inversé, et **en ce que** les extrémités de chaque organe de type cadre sont montées de manière pivotante dans des organes de type pied respectifs (36), pour permettre aux panneaux latéraux (16) d'être pivotés vers l'extérieur de la première position à la deuxième position. 5
2. Panier à linge (10) selon la revendication 1, dans lequel les panneaux latéraux opposés (16) reposent à angle aigu l'un par rapport à l'autre dans leur première position. 10
3. Panier à linge (10) selon la revendication 1 ou la revendication 2, dans lequel le panier à linge a également une paire de panneaux d'extrémité opposés (20), les panneaux latéraux (16) et les panneaux d'extrémité définissant ensemble un volume quand les panneaux latéraux sont dans leur première position. 15
4. Panier à linge (10) selon l'une quelconque des revendications 1 à 3, dans lequel les panneaux latéraux (16) sont dans une large mesure de forme rectangulaire. 20
5. Panier à linge (10) selon la revendication 3 ou la revendication 4, dans lequel les panneaux d'extrémité (20) sont dans une large mesure de forme triangulaire inversée. 25
6. Panier à linge (10) selon la revendication 5, dans lequel le sommet des panneaux d'extrémité dans une large mesure triangulaires (20) est éliminé pour mettre en oeuvre un panier à linge ayant une base aplatie (12). 30
7. Panier à linge (10) selon l'une quelconque des revendications 3 à 6, dans lequel les panneaux laté- 35

raux (16) et/ou les panneaux d'extrémité (20) incorporent des moyens de fixation (50) qui peuvent être enclenchés pour tenir les panneaux latéraux dans leurs premières positions, et désenclenchés pour permettre aux panneaux latéraux de se déplacer jusqu'à leurs deuxième positions. 5

8. Panier à linge (10) selon l'une quelconque des revendications 1 à 7, dans lequel les organes de type pied (36) ont chacun des moyens d'encliquetage (53, 54, 56) pour définir la première position et la deuxième position de l'organe de type cadre (22). 10

9. Panier à linge (10) selon l'une quelconque des revendications 1 à 8, dans lequel les panneaux latéraux opposés (16) peuvent être déplacés jusqu'à une troisième position l'un par rapport à l'autre, le volume défini entre les panneaux latéraux opposés dans leur troisième position étant inférieur au volume défini entre les panneaux latéraux opposés dans leur première position. 15 20

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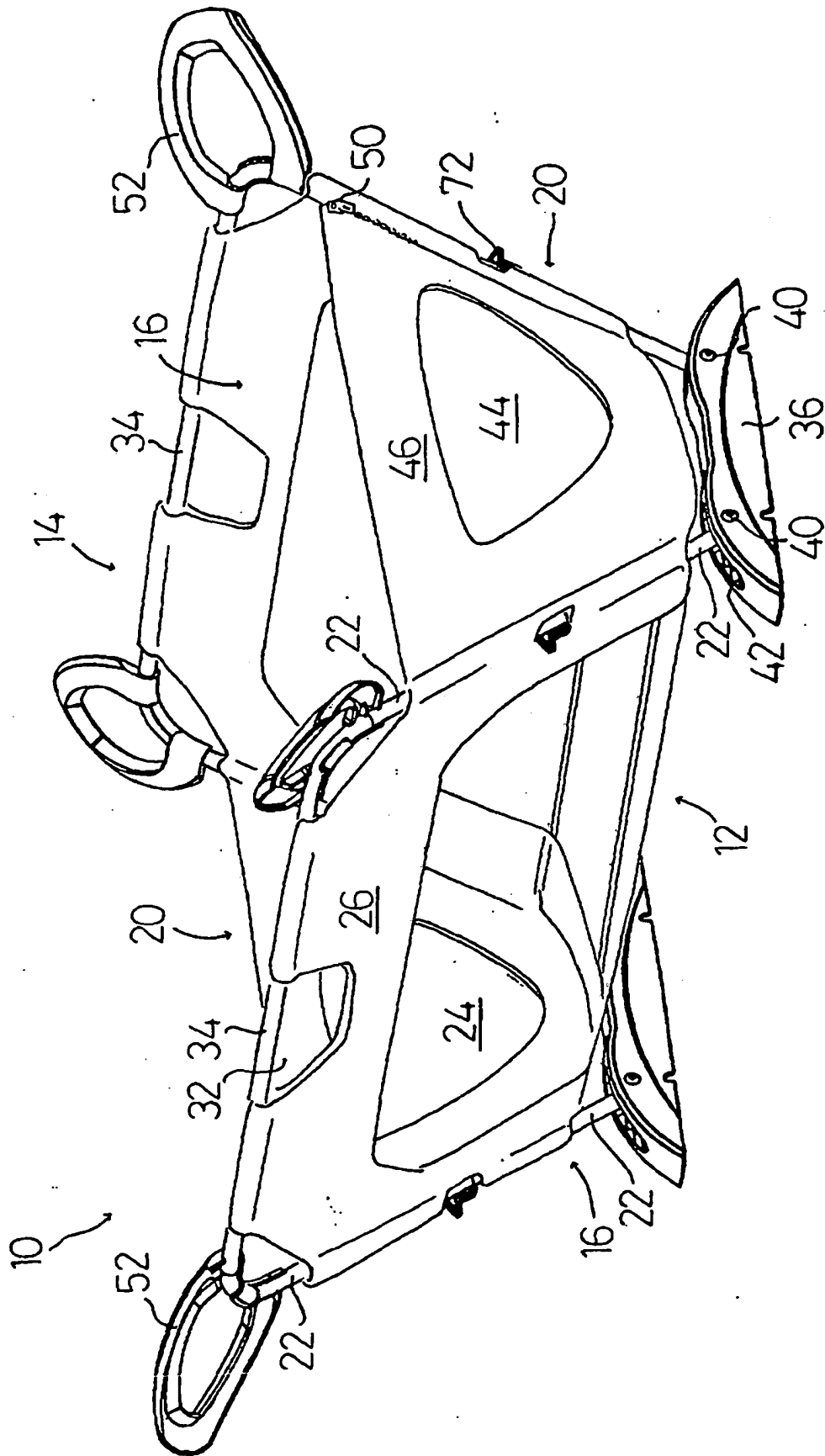


FIG 1

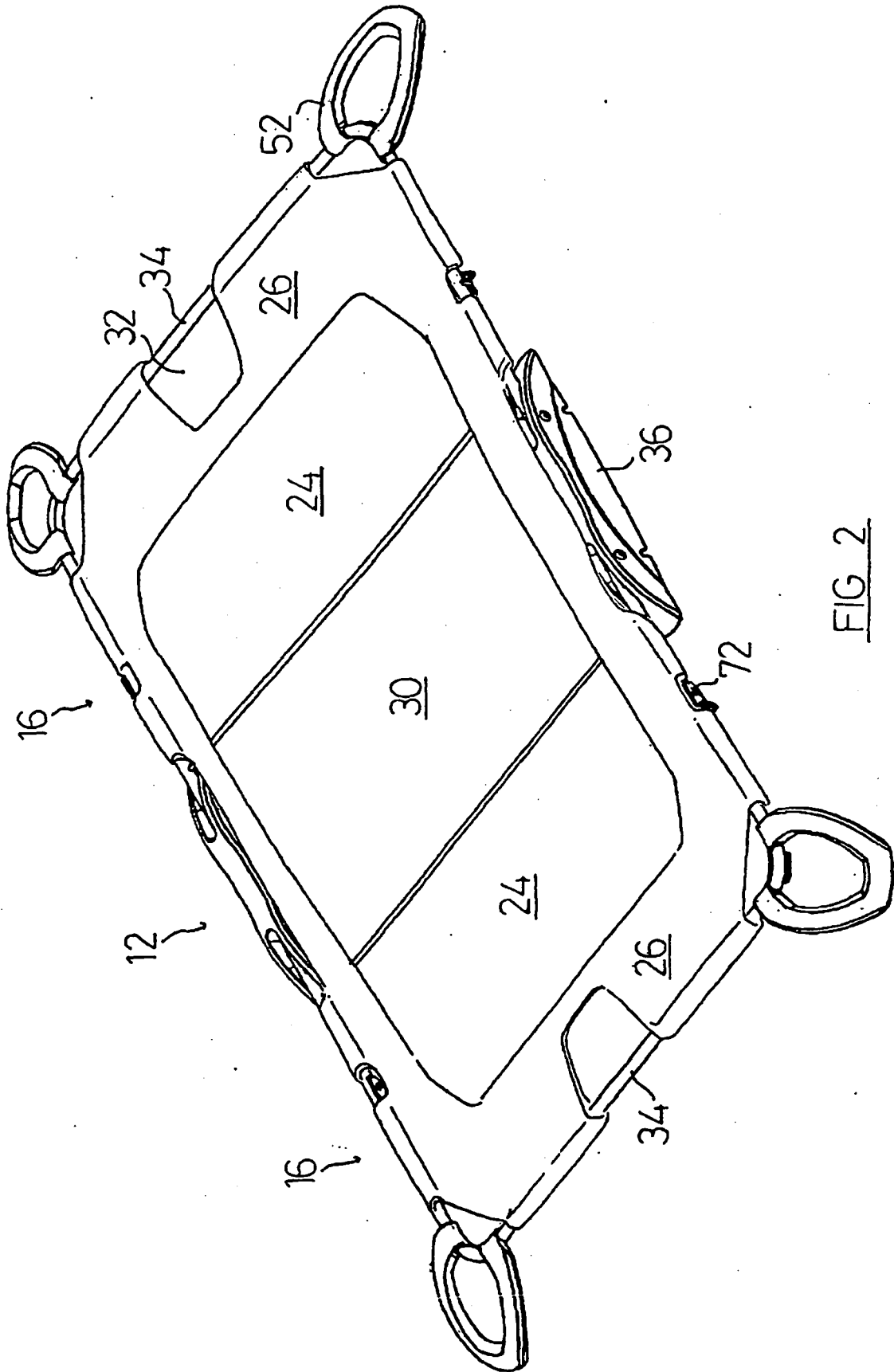
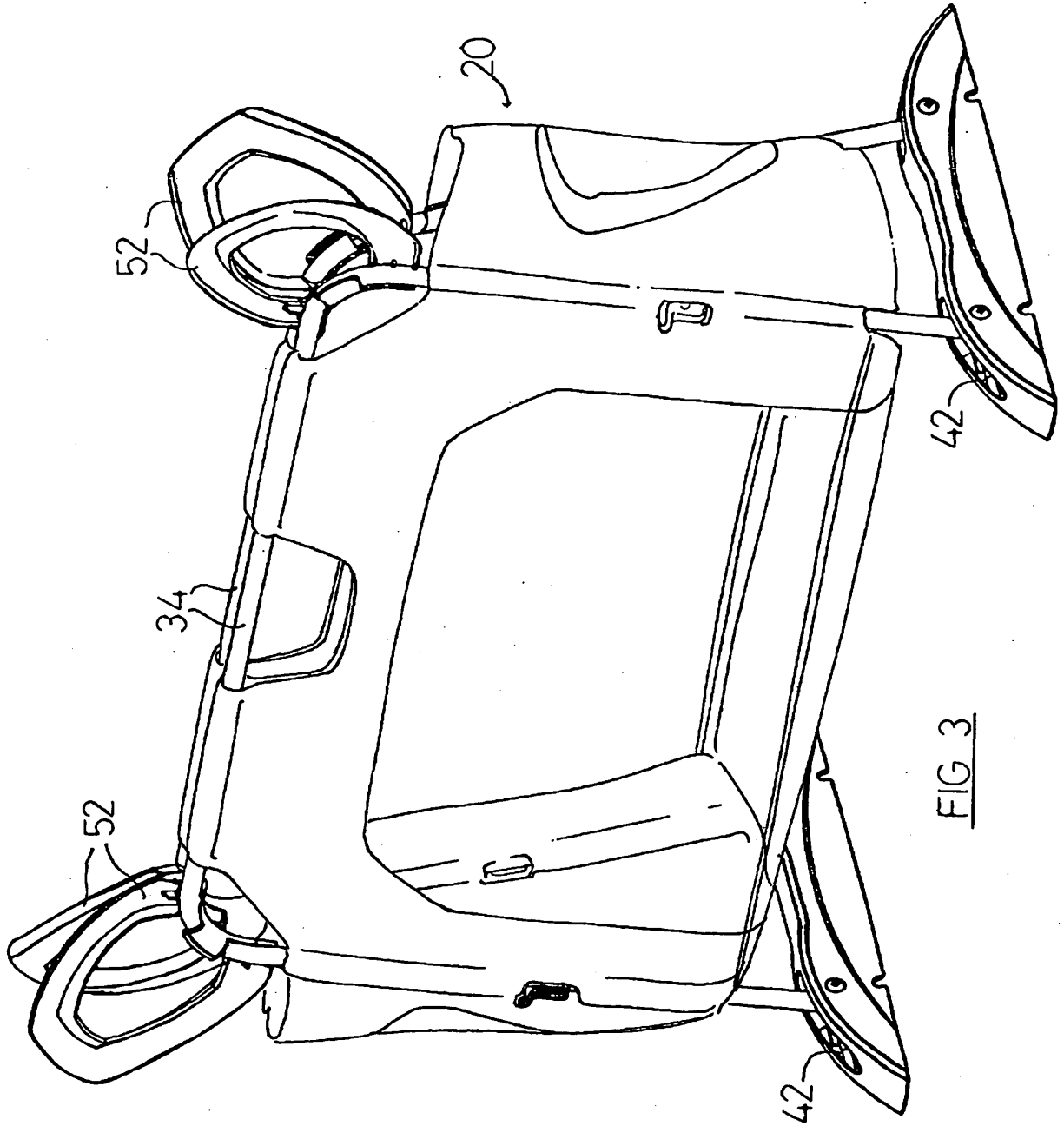
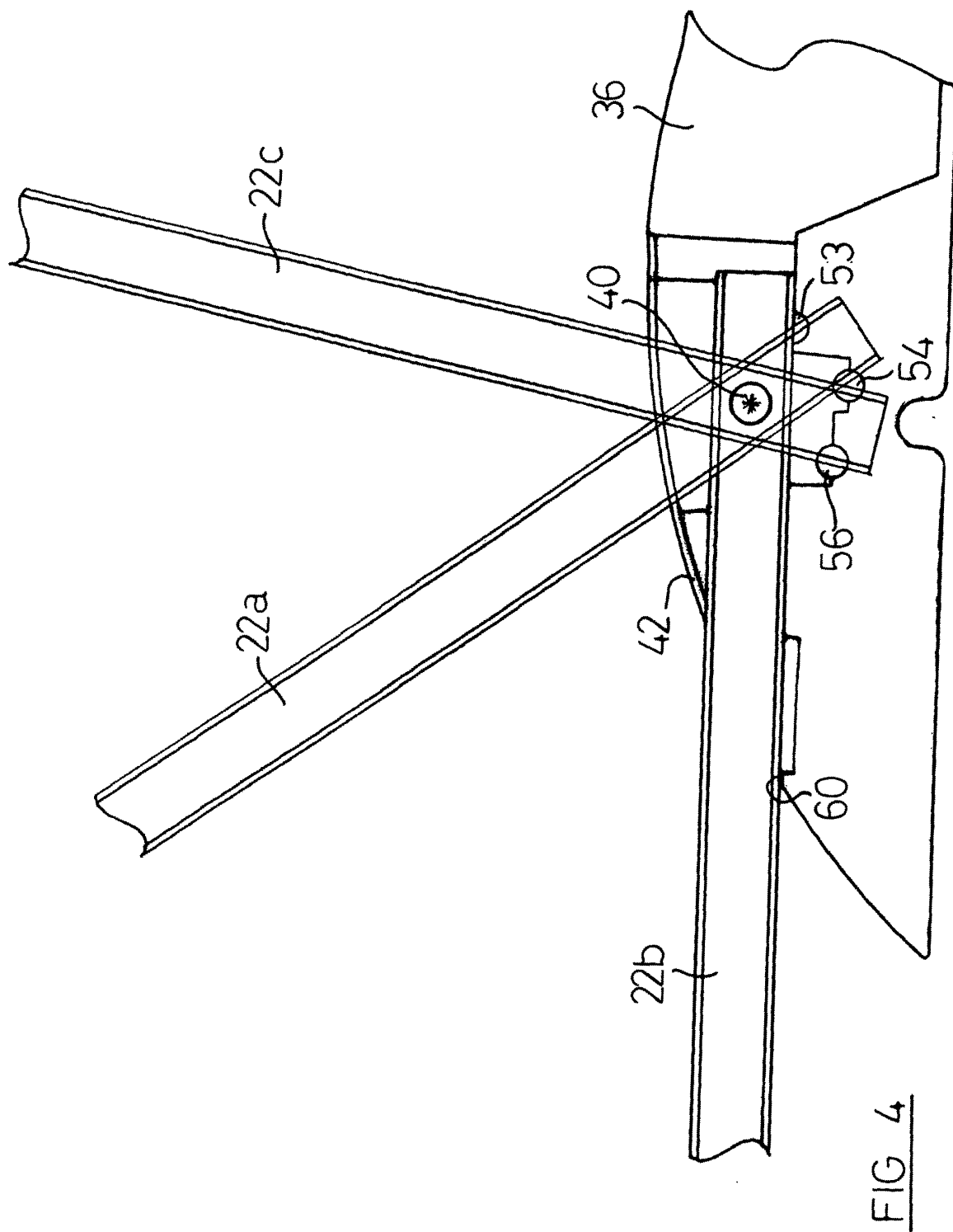
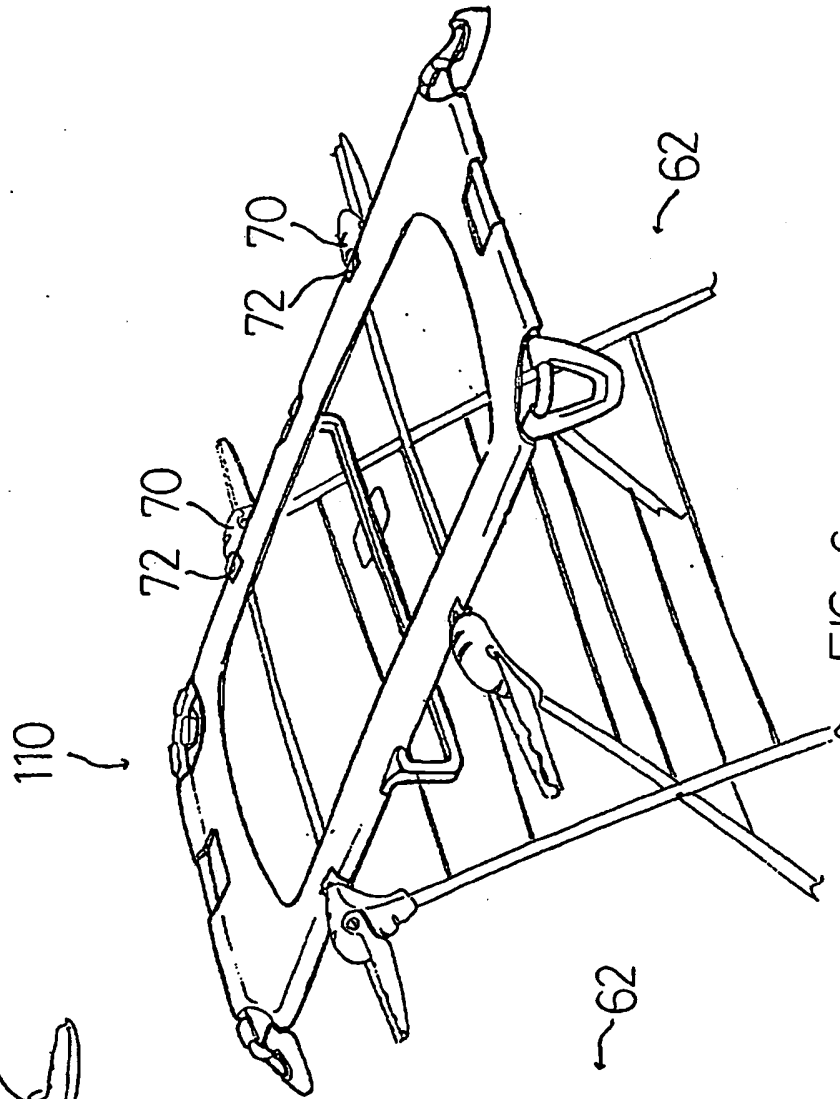
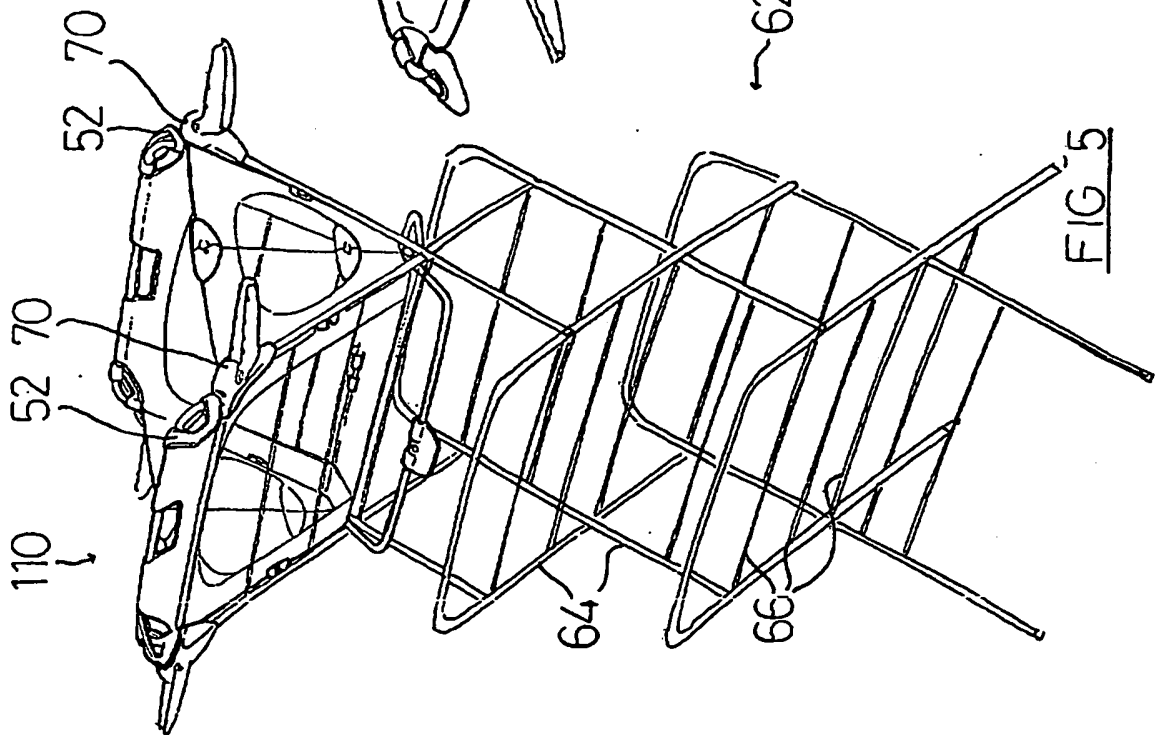


FIG 2







REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4781300 A [0007]
- US 4948077 A [0007]
- US 2574563 A [0007]
- DE 2206039 A [0007]
- US 5472107 A [0007]
- WO 9852439 A [0007]