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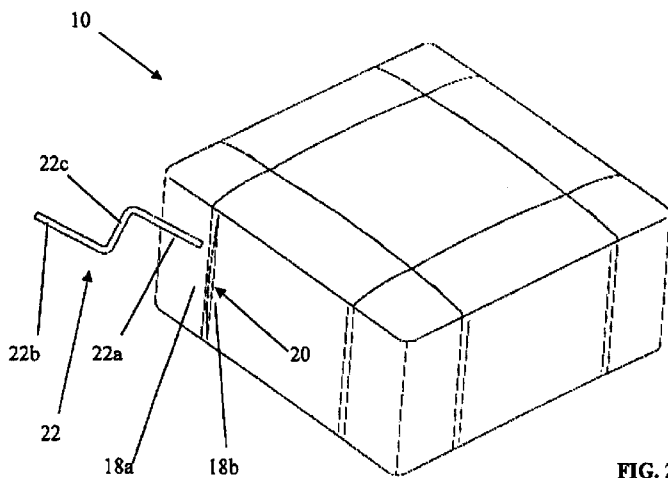


FIG. 2a

(57) Abstract: An article of furniture (10) comprises a seat portion (12) having a frame (14) and upholstery covering the frame (14). The upholstery includes cushioning and a covering (18a, 18b) overlying the cushioning. At least one opening (20) is defined in the covering of the upholstery. The at least one opening (20) is configured to receive a component of a connector arrangement (22) to attach a removable module to the frame (14). A disguising member disguises the at least one opening (20), the disguising member being configured as a feature of the upholstery.



"An article of furniture"**Cross-Reference to Related Applications**

The present application claims priority from Australian Provisional Patent Application No. 2010905640 filed 23 December 2010, the contents of which are
5 incorporated in this specification by reference in their entirety.

Field

The present disclosure relates to an article of furniture and, more particularly, to an article of convertible furniture. The term "convertible" is to be understood to mean
10 that the article of furniture can be converted to serve different purposes, including forming a module of modular furniture.

Background

Convertible furniture has many benefits, such as the ability to reconfigure the
15 furniture based on space constraints, to serve different purposes or for aesthetic reasons, along with the ability to separate units of the furniture to facilitate transport and storage. However, generally, whether applicable to modular furniture or not, each unit of furniture is typically restricted to a particular use. For example, a corner unit of a modular lounge suite is configured only for use as a corner unit; a chaise is
20 configured only for use as a chaise, and so on. These restrictions limit the ability to reconfigure a suite of furniture.

Any discussion of documents, acts, materials, devices, articles or the like which has been included in the present specification is solely for the purpose of providing a context for the present disclosure. It is not to be taken as an admission that any or all of
25 these matters form part of the prior art base or were common general knowledge in the field relevant to the present disclosure as it existed before the priority date of each claim of this application.

Throughout this specification the word "comprise", or variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated
30 element, integer or step, or group of elements, integers or steps, but not the exclusion of any other element, integer or step, or group of elements, integers or steps.

Summary

In an aspect, there is provided an article of furniture comprising:
35 a seat portion having a frame and upholstery covering the frame, the upholstery including cushioning and a covering overlying the cushioning;

at least one opening defined at least in the covering of the upholstery, the at least one opening being configured to receive a component of a connector arrangement to attach a removable module to the frame; and

5 a disguising member disguising the at least one opening, the disguising member being configured as a feature of the upholstery.

More particularly, the disguising member may be a feature of the covering of the upholstery. The disguising member may be selected from the group consisting of: a seam, a button and buttonhole, an eyelet, a belt loop, a zip and a strap.

10 Where the disguising member is a seam, the covering of the upholstery may define an overlapping portion having an outer layer and an inner layer so that, at least at a part of the overlapping portion, the outer layer is not stitched to the inner layer so that the opening is an aperture in the covering, the aperture being covered by the outer layer. The hidden aperture may communicate with a bore in the cushioning through which the component of the connector arrangement extends to attach the removable
15 module to the frame.

The outer layer and the inner layer may be biased towards each other to facilitate displacement of the outer layer over the inner layer to hide the aperture upon removal of the component of the connector arrangement. Biasing of the outer layer and the inner layer may be effected by use of an elasticized tab, a polymeric insert, a
20 resiliently flexible metal insert, or the like.

The article of furniture may include a retention arrangement carried by the covering for retaining the outer layer over the inner layer when the component of the connector arrangement is absent. The retention arrangement may be a hook-and-loop system, such as that known by the registered trade mark, Velcro, applied to the outer
25 layer and the inner layer.

The article of furniture may include at least one removable module and a connector arrangement associated with each removable module. The removable module may comprise an item selected from the group consisting of: a back module, a side module, an armrest module, a table module, a rack module, a corner module, a
30 back cushion module, an arm cushion module, or the like. The, or each, module may have a frame member associated with it.

The connector arrangement may comprise at least one component, in the form of a connector, for interconnecting the frame of the seat portion and the frame member of the relevant module. The connector arrangement may comprise at least two connectors
35 which, in use, are arranged in spaced relationship relative to each other.

The connector may be elongate, having a first arm, an opposed second arm and an intermediate, bridging portion between the first arm and the second arm. In an embodiment, the first arm and the second arm of the connector may extend longitudinally and substantially parallel to each other and the bridging portion of the connector may extend transversely with respect to the arms to form a cranked element. Accordingly, the first and second arms of the connector may be transversely offset with respect to each other. Moreover, in use, with one of the arms of the connector received in the frame, the other arm of the connector may be transversely offset outwardly of the frame, with the bridging portion of the connector extending through the opening in the covering of the upholstery.

The frame may be a box frame and may comprise frame elements extending generally parallel to a first plane, which, in use, is a substantially horizontal plane, and frame elements extending generally perpendicularly to the first plane. The frame elements of the frame may be tubular.

Similarly, the frame member of each module may be a tubular metal frame.

In an embodiment, the frame of the seat portion and the frame member of the module may contain socket defining members which define sockets for receiving the arms of the connector. In another embodiment, the frame of the seat portion and the frame member of the module define sockets for receiving the arms of the connector. It will be appreciated that both sockets in the frame and the frame member and the socket defining members may be provided together if desired or necessary. An inlet to each socket defining member may be flared or contain a flared collar to aid in insertion of the relevant arm into a socket of its associated socket defining member.

In an embodiment, the socket defining members may extend substantially perpendicularly to the first plane of the frame. Thus, with an arm of each connector received in its associated socket defining member, the arms of the connectors may extend substantially perpendicularly to the first plane and the bridging portions may extend substantially parallel to the first plane. The aperture in the covering and the bore in the cushioning of the upholstery may extend generally parallel to the first plane.

In an embodiment, the socket defining members may be arranged at an angle to the first plane of the frame. An outer periphery of the collar of each socket defining member may lie in a plane substantially perpendicular to a longitudinal axis of the socket. Instead, an outer periphery of the collar may lie in a plane substantially perpendicular to the first plane of the frame of the seat portion.

The collar may be flexible to deform when a force is applied to it. The collar may be of a synthetic plastics material and may be configured to have variable stiffness

characteristics to deform in a predetermined manner when the force is applied to it and to return to its undeformed configuration when the force is removed.

In an embodiment, each connector may comprise a first member, in the form of a pin, a second member, in the form of a tongue, and an intermediate, bridging portion
5 arranged between the first member and the second member. The bridging portion may comprise a contoured part, which may be a curved part, to follow a contour of a part of the seat portion. The part of the seat portion may be an upper part of the seat portion where a top of the seat portion meets a side of the seat portion.

The bridging portion may further include a substantially planar part from which
10 the pin extends. The pin may extend at a predetermined obtuse angle from the planar part of the bridging portion. In an embodiment, the pin may be mounted via a bracket on the planar part of the bridging portion. The bracket may be configured to fit in the opening of the covering such that distortion of the covering when the pin is inserted into the opening is minimised. In another embodiment, the pin may be fabricated to
15 have a head configured to accommodate a part of the covering of the article of furniture to inhibit distortion of the covering.

The pin of the connector may be shaped to inhibit rotation relative to the socket in which it is received. Thus, for example, a free end of the pin may be shaped to have a flat surface which bears against a correspondingly flat surface in the socket in which
20 it is received. In addition, or instead, the pin and the socket may have a transverse, cross-sectional shape which inhibits rotation, for example, an elliptical shape, a polygonal shape, or the like.

In another aspect, there is provided a component for an article of modular furniture, the component including

25 an elongate tubular element defining a socket in which a spigot is receivable;
and

a collar arranged at an entrance opening to the tubular member, the collar being flexible to deform in a predetermined manner when a force is applied to it.

The collar may be of a synthetic plastics material and is configured to have
30 variable stiffness characteristics to deform in a predetermined manner when the force is applied to it and to return to its undeformed configuration when the force is removed.

Brief Description of Drawings

Embodiment of an article of furniture will now be described, by way of example
35 only, with reference to the accompanying drawings, in which:

Fig. 1 shows a perspective view of a seat portion of an embodiment of an article of furniture;

Figs. 2a-2d show perspective views illustrating the process for attaching a connector to a frame of the seat portion of Fig. 1;

5 Figs. 3a-3d show perspective views of the seat portion of Fig. 1 and a removable back module, with upholstery removed to show the frames of the seat portion and the back module, illustrating the process for attaching the back module to the seat portion, with Fig. 3d being an enlarged view of the circled portion of Fig. 3c;

10 Fig 4. shows a perspective view of the article of furniture including a back module and a side module attached to the seat portion to form a corner unit;

Fig. 5 shows a perspective view of the article of furniture with only a back module attached to form a chair or the centre portion of a modular sofa;

Fig. 6 shows a perspective view of the article of furniture with a back module and two side modules attached to form an armchair;

15 Figs.7a-7b show perspective views of another embodiment of the article of furniture, more specifically a frame of a seat portion and a frame member of a module of the article of furniture with Fig. 7b showing an enlarged view of the circled portion of Fig. 7a;

20 Figs. 8a-8c show perspective views of the manner of attaching the module to the seat portion of the article of furniture;

Fig. 9 shows a rear view of the article of furniture illustrating the openings into which the connectors are inserted for attaching the module to the seat portion;

Fig. 10 shows a perspective view of the article of furniture in the form of a chair including a backrest module;

25 Fig. 11 shows a perspective view of the chair including a backrest module and a single armrest module;

Fig. 12 shows a perspective view of the chair including a backrest module and two armrest module;

30 Fig. 13 shows a perspective view of the article of furniture in the form of a sofa including two backrest modules and two armrest modules;

Fig. 14a shows a perspective view of a seat portion of a further embodiment of an article of furniture;

Fig. 14b shows, front view, on an enlarged scale, of the part of the article of furniture encircled by Circle 'A' in Fig. 14a of the drawings;

35 Figs. 15a-15b show perspective views of an embodiment of the article of furniture similar to the embodiment of Figs. 7a-7b;

Figs. 16a- 16c show perspective views of the manner of attaching the module to the seat portion of the article of furniture of the embodiment of Figs. 15a-15b;

Figs 16d and 16e show, on an enlarged scale, two alternative embodiments of the circled part of Fig. 16b;

5 Fig. 17a shows a perspective view of yet a further embodiment of an article of furniture;

Figs 17b and 17c show, respectively, a collar of a socket defining member of the article of furniture in an undisturbed, undeformed condition and how the collar is deformed, in use, by the application of a force;

10 Fig. 18 shows a perspective view of an embodiment of a connector for the embodiment of the article of furniture of Figs. 7a – 7b;

Fig. 19 shows a front view of the connector of Fig. 18;

Fig. 20 shows a bottom view of the connector of Fig. 18; and

Fig. 21 shows a side view of the connector of Fig. 18.

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Detailed Description of Exemplary Embodiments

In the drawings, reference numeral 10 generally designates an article of furniture in the form of a modular lounge unit 10. The lounge unit 10 includes a seat portion 12, which may be used as an ottoman, having a frame 14 (Fig. 3) and upholstery 16 covering the frame 14. The upholstery 16 comprises a cushioning layer and a covering 18. The covering 18 of the upholstery 16 defines openings 20 for receiving components, in the form of connectors 22, of a connector arrangement to attach removable modules, in the form of back modules 24 or side modules 26, to the frame 14. The lounge unit 10 includes a disguising member for disguising each opening 20 as a feature of the covering 16 of the upholstery 18 and, in the illustrated embodiment, the disguising member is defined by a portion 28 of a seam 21 in the covering 18.

Each seam 21 is defined by the overlapping portions 28 of material of the covering 18, the overlapping portions 28 being defined by an outer layer 18a and an inner layer 18b. In a part of the overlapping portions 28, the outer layer 18a of material is not stitched to the inner layer 18b so as to be displaceable from inner layer 18b to expose the opening 20. The properties of the material of the covering 18 and the structure of the seam 21 are such as to bias the layers 18a and 18b into overlapping relationship to disguise the presence of the opening 20 in the seam 21. It will be appreciated that, instead of the disguising member being in the form of the layers 18a

35

and 18b, the disguising member which disguises and/or conceals the opening 20 could be a button and buttonhole arrangement, an eyelet, a belt loop or buckle, or the like.

The portion 28 of the outer layer 18a forming the seam 21 may be biased by having a resiliently flexible element (not shown) contained in the portion 28. The resiliently flexible element is, for example, a strip of plastics material, a strip of metal
5 material, or the like. Instead, the material of the overlapping portion 28 of the outer layer could be resiliently flexible to adopt a position closing off the opening 20.

As shown in Figs. 14a and 14b, a retention arrangement 23 for retaining the overlapping portion 28 of the outer layer 18a in position over the inner layer 18b to
10 conceal and disguise the opening 20. In the illustrated embodiment, the retention arrangement 23 comprises complementary strips 25 of a hook-and-loop fastening system, such as, for example, that sold under the registered trade mark, Velcro.. One of the strips (not shown) is carried on an operatively inner surface of the overlapping portion 28 of the outer layer 18a with the other strip 25 being carried on an operatively
15 outer surface of the inner layer 18b. Hence, when the connector 22 has been removed from the opening 20 and the overlapping portions 28 overlap to conceal and disguise the opening 20, the strips of hook-and-loop fasteners engage to retain the overlapping portions 28 in overlapping relationship. It will be appreciated that other retention mechanisms could be used such as, for example, press studs, buttons and buttonholes,
20 or the like.

Each connector 22 is elongate having a first arm 22a, an opposed second arm 22b and an intermediate, bridging portion 22c between the first arm 22a and the second arm 22b. The first arm 22a and the second arm 22b of the connector 22 extend generally longitudinally and the intermediate portion 22c of the connector extends
25 generally transversely with respect to the arms 22a and 22b of the connector 22. Accordingly, the first arm 22a and the second arm 22b of the connector 22 are transversely offset with respect to each other. Moreover, in use, with the arm 22a of a connector received in the frame 14, the other arm 22b of the connector 22 is transversely offset outwardly of the frame 14 and stands proud of the frame 14. The
30 bridging portion 22c of the connector 22 extends through its associated opening 20 in the covering 18 of the upholstery 16.

Each connector 22 extends through one of the openings 20 to attach a module such as a back module 24 (Figs. 4-6) or a side module 26 (Figs. 4 and 6) to the frame 14 of the seat portion 12. Upon removal of the connector 22 from its associated
35 opening 20, the layers 18a and 18b revert to an overlapping relationship to conceal the presence of the opening 20 thereby improving the aesthetics of the seat portion 12.

Each of the back modules 24 and the side modules 26 includes an internal frame member 30. A pair of connectors 22 connects and secures the frame member 30 of the back module 24 or the side module 26, as the case may be, to the frame 14 of the seat portion 12.

5 The frame 14 comprises a lower set and an upper set of frame elements 14a, each set lying in a first planar configuration, which, in use, is a substantially horizontal plane, and frame elements 14b extending generally perpendicularly to the first plane. Each frame element 14b (apart from the corner frame elements 14b) is, or contains, a socket defining member which defines a socket in which the arm 22a of the relevant
10 connector 22 is receivable. The socket defining members have a flared opening defined by a collar 14c to aid guiding the arm 22a of the connector 22 into the socket of the socket defining member of the frame element 14b.

In use, with an arm 22a of a connector 22 received in its associated frame element 14b of the frame 14, the arms 22a, 22b of the connector 22 extend generally
15 perpendicularly to the first plane and the bridging portion 22c extends generally parallel to the first plane. Each opening 20 in the covering 18 and a passage (not shown) in the cushioning of the upholstery 16, the passage being in register with the opening 20 and through which the bridging portion 22c of the connector 22 extends, extend generally parallel to the first plane.

20 The frame 14 and the frame member 30 are tubular steel frames. Each frame member 30 also includes frame elements 30a. Each frame element 30a is tubular and defines a socket into which the arm 22b of one of the connectors 22 is insertable.

It will be appreciated that the illustrated lounge unit 10 has the advantage that it can be readily adapted for various uses by adding or removing back modules 24 or side
25 modules 26. For example, with one back module 24 and one side module 26 attached to adjoining sides of the seat portion 12, the lounge unit 10 is able to be used as a corner unit in a modular lounge suite, as shown in Fig. 4. With a single back module 24 attached, the lounge unit 10 is able to be used as an intermediate unit in a modular sofa or as an armless chair, as shown in Fig. 5. With two side modules 26 and one back
30 module 24 attached, the lounge unit 10 is able to be used as an armchair, as shown in Fig. 6.

It is to be noted in the illustrated embodiments that socket defining members are provided on only three sides of the frame 14 with the intention that one back module and one or two side modules could be employed in various configurations. However, it
35 will be appreciated that socket defining members could be provided on a greater or fewer number of sides of the frame 14. Thus, although not illustrated, socket defining

members could be provided on all four sides of the frame 14 and with two back modules 24 and two side modules 26 attached, the lounge unit 10 is able to be used as a crib for an infant.

Referring now to Figs. 7 and 8 of the drawings, another embodiment of the article of furniture in the form of a lounge unit 10 is described. With reference to the previous drawings, like reference numerals refer to like parts unless otherwise specified.

In this embodiment, each connector 22 comprises a first member in the form of a pin 34 (Fig. 8), a second member in the form of a tongue 36 and an intermediate, bridging portion 38 arranged between the pin 34 and the tongue 36. The bridging portion 38 has a contoured, curved part 40, to follow a contour of a part 42 (Fig. 9) of the seat portion 12. The part 42 of the seat portion is an upper part of the seat portion 12 where a top 44 of the seat portion 12 meets a side 46 of the seat portion 12.

The bridging portion 38 of the connector 22 includes a substantially planar part 48, formed integrally with, and at one end of the curved part 40 with the tongue 36 being arranged on the bridging portion 38 on an opposite end of the curved part 40 of the bridging portion 38. The tongue 36 is either formed integrally with the bridging portion as a one piece unit or, instead, the tongue 36 is a separate element secured, for example, by welding to the bridging portion 38 as shown in Figs. 18a – 18c of the drawings.

It will be appreciated that, because the tongue 36 is of a flat construction with the socket of the frame member 32a being correspondingly dimensioned, it inhibits rotation of the connector 22 relative to the seat portion and also provides greater load-bearing ability.

The pin 34 protrudes at an angle 'X' (Fig. 21) from the planar part 40 of the bridging part 38 of the connector 22. The angle is an obtuse angle and is typically about 100°-170°, more particularly, about 120°-160° and, optimally about 135°. Instead the angle could lie in one of the ranges from 100°-110°, 110°-120°, 130°-140°, 140°-150°, 150°-160°, 160°-170°. As shown in Fig. 19 of the drawings, the pin also projects at an acute angle 'Y' relative to a longitudinal axis 41 passing through the connector 22.

To accommodate the pin 34 of each connector 22, the frame 14 of the seat portion 12 includes frame elements 14d. Each frame element 14d is secured to one of the frame elements 14a at an angle complementary to the angle at which the pin 34 of the connector 22 projects from its associated bridging portion 38. Each frame element 14d is a socket defining member which defines a socket that is shaped to receive the

pin 38 snugly. An access opening of each frame element is, once again, surrounded by the flared collar 14c to assist in guiding the pin 38 into the socket.

The connector includes a bracket 43 (Figs. 18 – 21) via which the pin 34 is attached to the planar part 48 of the bridging portion 38 of the connector 22. The bracket 43 is an L-shaped bracket and defines a recess 45 in which the outer layer 18a of the covering 18 is received when the pin 34 is inserted into the opening 20 so as to minimise distortion of the covering 18, in use. It will be appreciated that, instead of the separate bracket 43, a head of the pin 34 could be fabricated, for example, by forging to have a shape substantially the same as that of the bracket 43.

This embodiment is particularly advantageous for attaching one or more backrest modules 50 (Fig. 10) and/or armrest modules 52 (Fig. 11) to the seating portion. It will, however, be appreciated that this embodiment could equally be used for attaching other modules such as side modules, table modules, rack modules, bookcase modules, or the like to the seating portion 12 of the article of furniture 10.

Fig. 10 shows an article of furniture 10 with a single backrest module 50 which can be used either as a chair or as a centre module in a modular sofa. Fig. 11 shows an article of furniture with a backrest module 50 and one armrest module 52 which is able to be used as a standalone chair or as an end module of a modular sofa. Fig. 12 shows an article of furniture with a backrest module 50 and two armrest modules 52 which is able to be used as an armchair. Fig. 13 shows an article of furniture having an oblong seating portion 12 with two backrest modules 50 and two armrest modules 52 to form a two seater sofa. It will be appreciated that it is also contemplated to provide a three seater sofa (not shown) having three backrest modules 50.

In the embodiment illustrated in Figs. 7 and 8 above, a periphery of the flared collar 14c lies in a plane perpendicular to a longitudinal axis of the socket defining member or frame member 14d.

Another embodiment of the article of furniture is illustrated in Figs. 15a and 15b. With reference to previous drawings, like reference numerals refer to like parts unless otherwise specified. In this embodiment, the periphery of the flared collar 14c lies in a plane substantially perpendicular to the first plane. This may assist in inserting the pin 34 of the connector 22 into its associated socket in certain circumstances.

Figs. 16a-16e show yet a further embodiment of the article of furniture and, once again, with reference to the previous drawings like reference numerals refer to like parts unless otherwise specified.

In this embodiment, a free end of each pin 34 is machined to have a flat 60, two different embodiments of the flats 60 being shown in Figs. 16d and 16e of the

drawings. The benefit of the flat 60 is that it inhibits the pin 34 rotating when the pin 34 is inserted into its associated socket.

It will be appreciated that, instead of the flat 60, inhibiting rotation of the pin 34 could be achieved in other ways, for example, by making the pin elliptical or polygonal in transverse cross-sectional shape either with or without flats with the socket being correspondingly shaped.

Referring now to Figs. 17a-17c, yet a further embodiment of the article of furniture is illustrated. Yet again, with reference to previous drawings, like reference numerals refer to like parts unless otherwise specified.

In this embodiment, the periphery of the flared collar 14c, once again, lies in the first plane. In this embodiment, the flared collar 14c is of a resiliently flexible material of variable stiffness characteristics. As a result, when a force is applied in the direction of arrows 62 (Fig. 17c) the flared collar 14c deforms so that an operatively upper part, lies in a plane substantially parallel to the first plane. It will be appreciated that such a force would be generated by a person sitting on the seat portion 12. The flexibility of the collar 14c reduces the likelihood of the collar 14c digging in to the person.

To achieve the deformation of the collar 14c in the predetermined manner, the portion of the collar 14c above imaginary line 64 and a part of the collar 14c immediately connected to the frame element 14d is of a first stiffness. An intermediate part, in the region of transition 66 is of a second, lower stiffness. Thus, when the collar 14c deforms under the effect of the force, a substantially planar tab-like part 68 is formed which extends substantially parallel to the first plane as shown in Fig. 17c of the drawings. Removal of the force results in the collar 14c springing back to its undeformed state as shown in Fig. 17b of the drawings.

Yet another issue which the applicant has identified is that, in some cases, users do not insert the connectors 22 all the way into the sockets of the frame 14 of the seat base 12 and/or the frame member 30. To alleviate, this, a stop arrangement (not shown) is included which indicates that the pin 34 and/or the tongue 36 are inserted fully home into their associated sockets. Each stop arrangement may be in the form of a retention clip, such as a circlip or R-clip mounted on the relevant socket defining member to engage a peripheral groove in the pin 34 or tongue 36, as the case may be. Instead, the stop arrangement may be a stop point incorporated into the relevant socket and against which the pin 34 or tongue 36 strikes audibly so that a person assembling the article of furniture knows that the pin 34 or tongue 36 is fully home.

It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the above described embodiments without

departing from the broad general scope of the present disclosure. The above embodiments are, therefore, to be considered in all respects as illustrative and not restrictive. Examples of possible variations and/or modifications include, but are not limited to:

- 5 • disguising the opening as a buttonhole or eyelet in the upholstery;
- the removable module may be a table, rack, bookcase or armrest module.

CLAIMS:

1. An article of furniture comprising:
a seat portion having a frame and upholstery covering the frame, the upholstery including cushioning and a covering overlying the cushioning;
5 at least one opening defined at least in the covering of the upholstery, the at least one opening being configured to receive a component of a connector arrangement to attach a removable module to the frame; and
a disguising member disguising the at least one opening, the disguising member being configured as a feature of the upholstery.
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2. The article of furniture of claim 1 in which the disguising member is a feature of the covering of the upholstery.
3. The article of furniture of claim 1 or claim 2 in which the disguising member is
15 selected from the group consisting of: a seam, a button and buttonhole, an eyelet, a belt loop, a zip and a strap.
4. The article of furniture of claim 3, in which, where the disguising member is a seam, the covering of the upholstery defines an overlapping portion having an outer
20 layer and an inner layer so that, at least at a part of the overlapping portion, the outer layer is not stitched to the inner layer so that the opening is an aperture in the covering, the aperture being covered by the outer layer.
5. The article of furniture of claim 4 in which the outer layer and the inner layer
25 are biased towards each other to facilitate displacement of the outer layer over the inner layer to hide the aperture upon removal of the component of the connector arrangement.
6. The article of furniture of claim 5 which includes a retention arrangement
30 carried by the covering for retaining the outer layer over the inner layer when the component of the connector arrangement is absent.
7. The article of furniture of any one of the preceding claim which includes at least one removable module and a connector arrangement associated with each removable
35 module.

8. The article of furniture of claim 7 in which the, or each, module has a frame member associated with it.
9. The article of furniture of claim 8 in which the connector arrangement
5 comprises at least one component, in the form of a connector, for interconnecting the frame of the seat portion and the frame member of the relevant module.
10. The article of furniture of claim 9 in which the connector arrangement
10 comprises at least two connectors which, in use, are arranged in spaced relationship relative to each other.
11. The article of furniture of claim 9 or claim 10 in which the connector is elongate, having a first arm, an opposed second arm and an intermediate, bridging portion between the first arm and the second arm.
15
12. The article of furniture of claim 11 in which the first arm and the second arm of the connector extend longitudinally and substantially parallel to each other and the bridging portion of the connector extends transversely with respect to the arms to form a cranked element.
20
13. The article of furniture of any one of claims 8 to 12 in which the frame is a box frame and comprises frame elements extending generally parallel to a first plane, which, in use, is a substantially horizontal plane, and frame elements extending generally perpendicularly to the first plane.
25
14. The article of furniture of claim 13 in which the frame of the seat portion and the frame member of the module contain socket defining members which define sockets for receiving the arms of the connector.
- 30 15. The article of furniture of claim 13 or claim 14 in which the frame of the seat portion and the frame member of the module define sockets for receiving the arms of the connector.
- 35 16. The article of furniture of claim 14 or claim 15 in which an inlet to each socket defining member is flared or contain a flared collar to aid in insertion of the relevant arm into a socket of its associated socket defining member.

17. The article of furniture of any one of claims 13 to 16 in which the socket defining members extend substantially perpendicularly to the first plane of the frame.
- 5 18. The article of furniture of claim 16 in which the socket defining members are arranged at an angle to the first plane of the frame.
19. The article of furniture of claim 18 in which an outer periphery of the collar of each socket defining member lies in a plane substantially perpendicular to a
10 longitudinal axis of the socket.
20. The article of furniture of claim 18 in which an outer periphery of the collar lies in a plane substantially perpendicular to the first plane of the frame of the seat portion.
- 15 21. The article of furniture of any one of claims 18 to 20 in which the collar is flexible to deform when a force is applied to it.
22. The article of furniture of claim 21 in which the collar is of a synthetic plastics material and is configured to have variable stiffness characteristics to deform in a
20 predetermined manner when the force is applied to it and to return to its undeformed configuration when the force is removed.
23. The article of furniture of claim 9 or claim 10 in which each connector comprises a first member, in the form of a pin, a second member, in the form of a
25 tongue, and an intermediate, bridging portion arranged between the first member and the second member.
24. The article of furniture of claim 23 in which the bridging portion comprises a contoured part to follow a contour of a part of the seat portion.
30
25. The article of furniture of claim 23 or claim 24 in which the bridging portion further includes a substantially planar part from which the pin extends.
26. The article of furniture of claim 25 in which the pin extends at a predetermined
35 obtuse angle from the planar part of the bridging portion.

27. The article of furniture of claim 26 in which the pin is mounted via a bracket on the planar part of the bridging portion.
28. The article of furniture of claim 26 in which the pin is fabricated to have a head
5 configured to accommodate a part of the covering to inhibit distortion of the covering.
29. The article of furniture of any one of claims 23 to 28 in which the pin of the connector is shaped to inhibit rotation relative to the socket in which it is received.
- 10 30. A component for an article of modular furniture, the component including an elongate tubular element defining a socket in which a spigot is receivable; and
a collar arranged at an entrance opening to the tubular member, the collar being flexible to deform in a predetermined manner when a force is applied to it.
- 15 31. The component of claim 30 in which the collar is of a synthetic plastics material and is configured to have variable stiffness characteristics to deform in a predetermined manner when the force is applied to it and to return to its undeformed configuration when the force is removed.
- 20

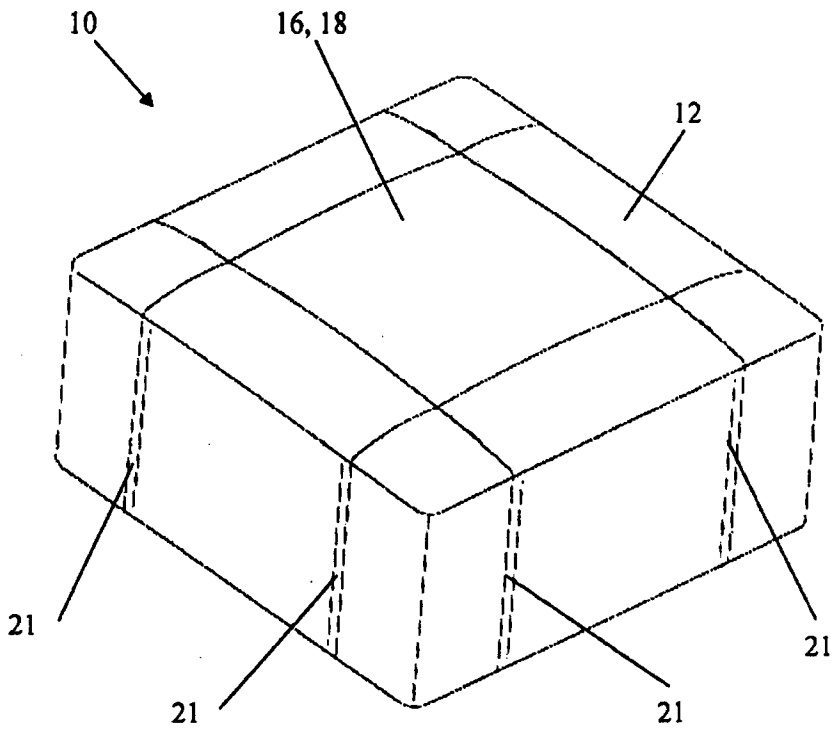


FIG. 1

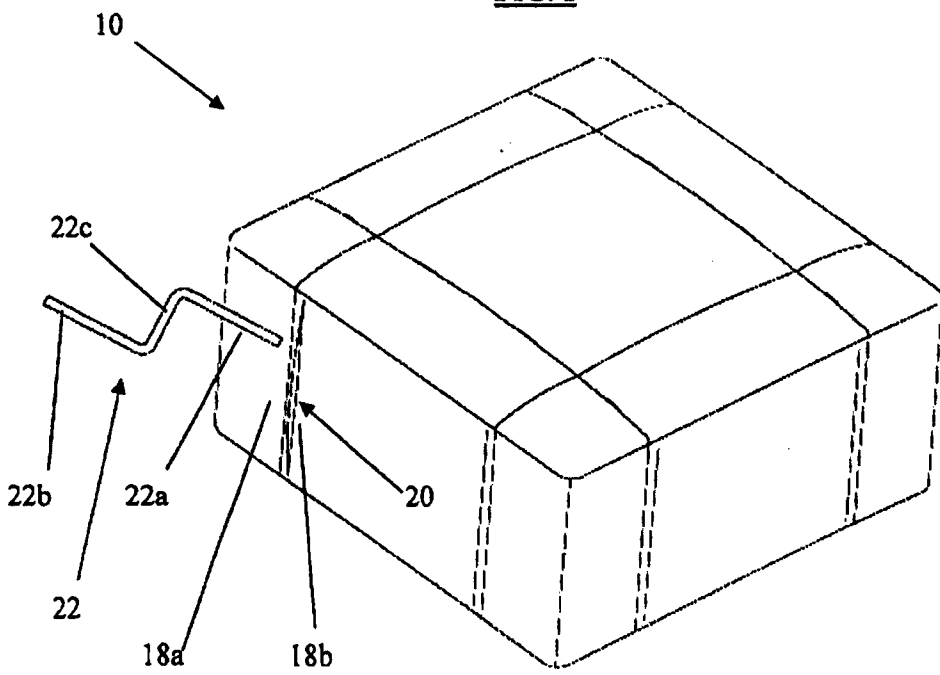


FIG. 2a

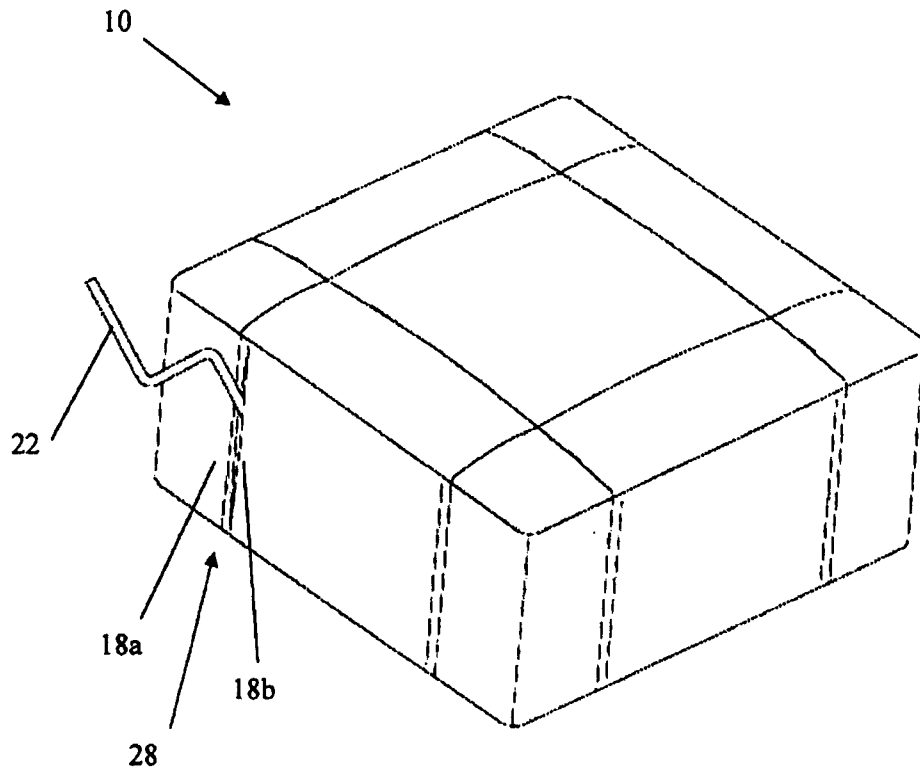


FIG. 2b

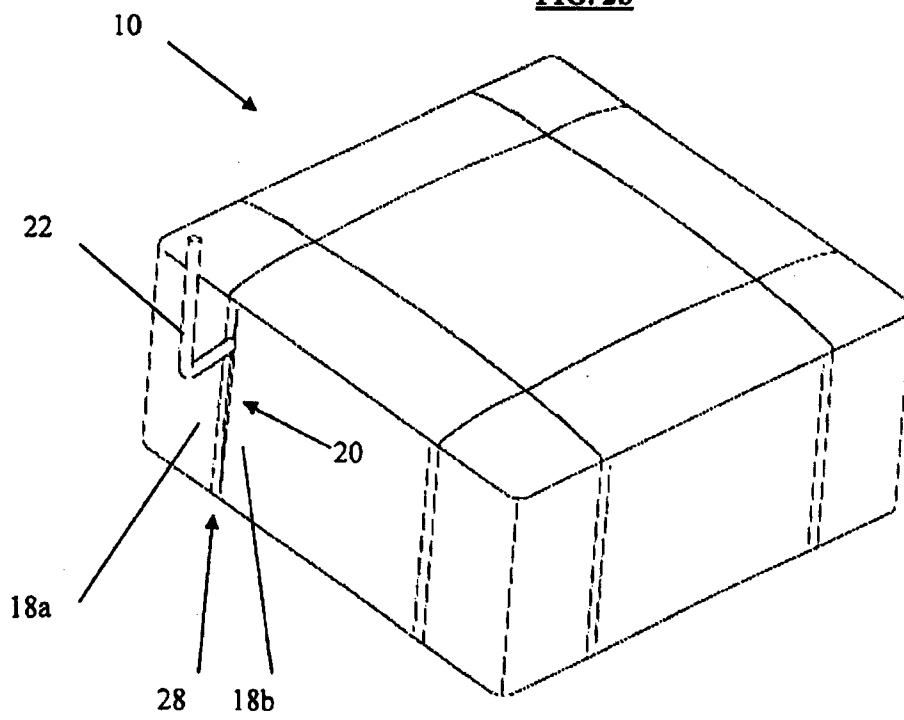


FIG. 2c

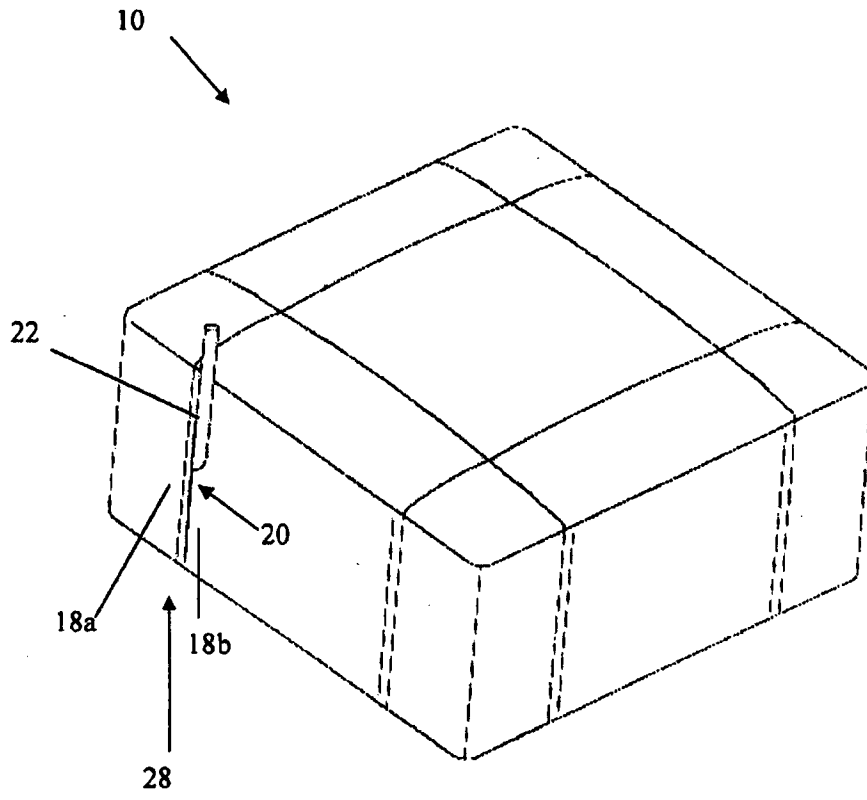


FIG. 2d

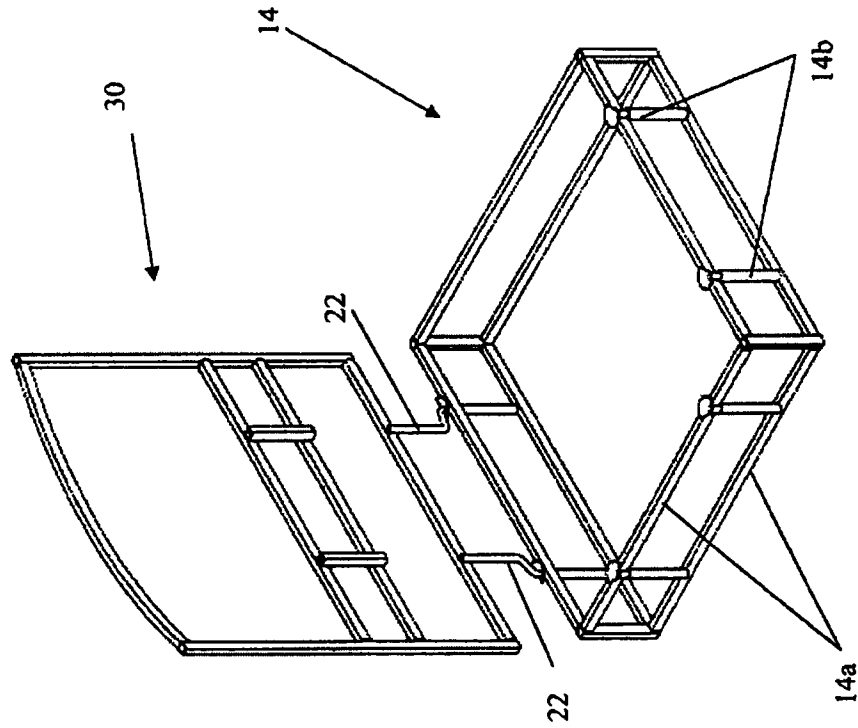


FIG. 3b

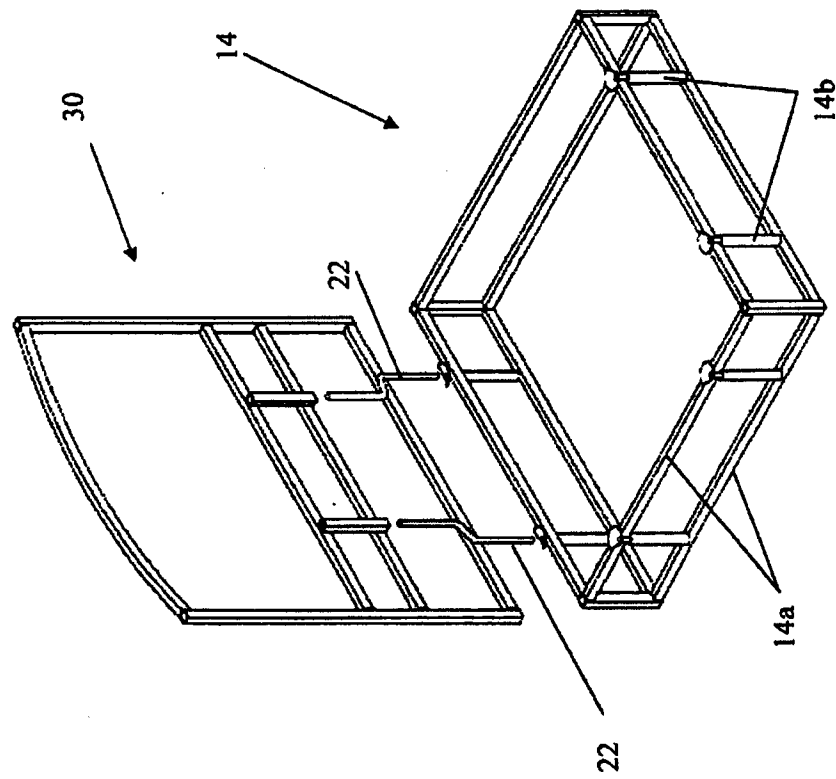
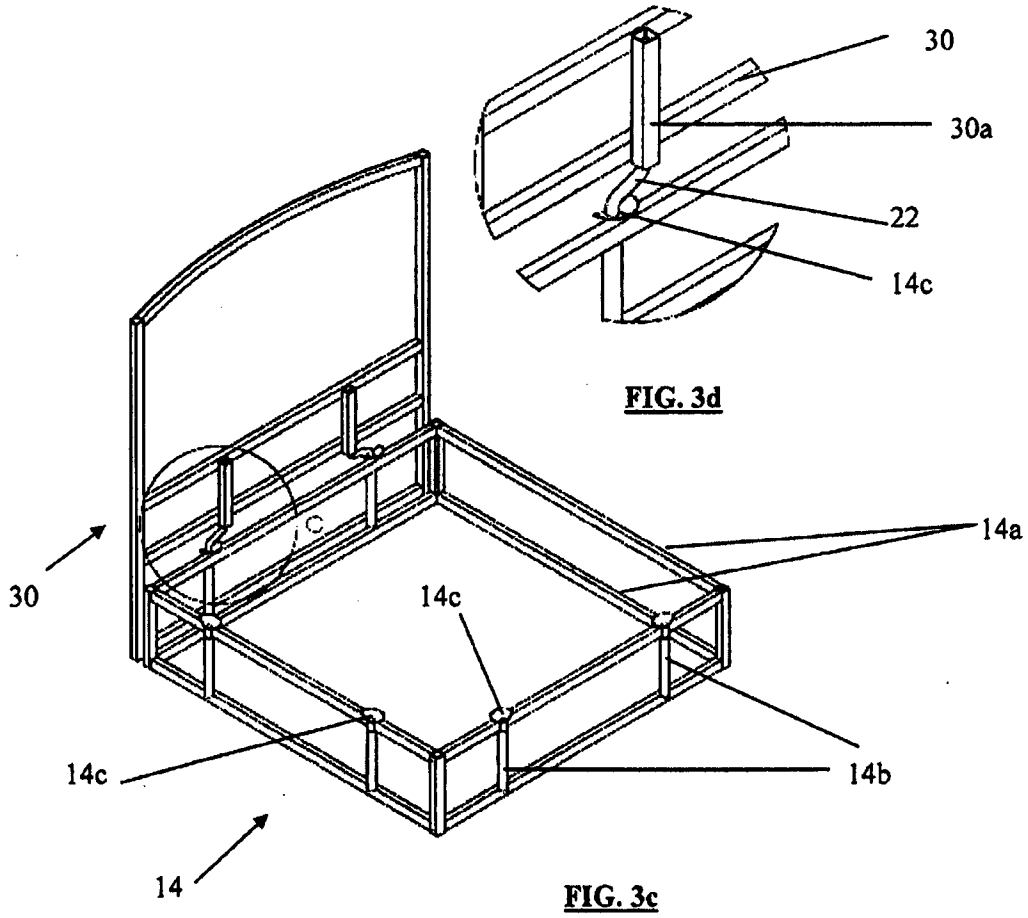


FIG. 3a



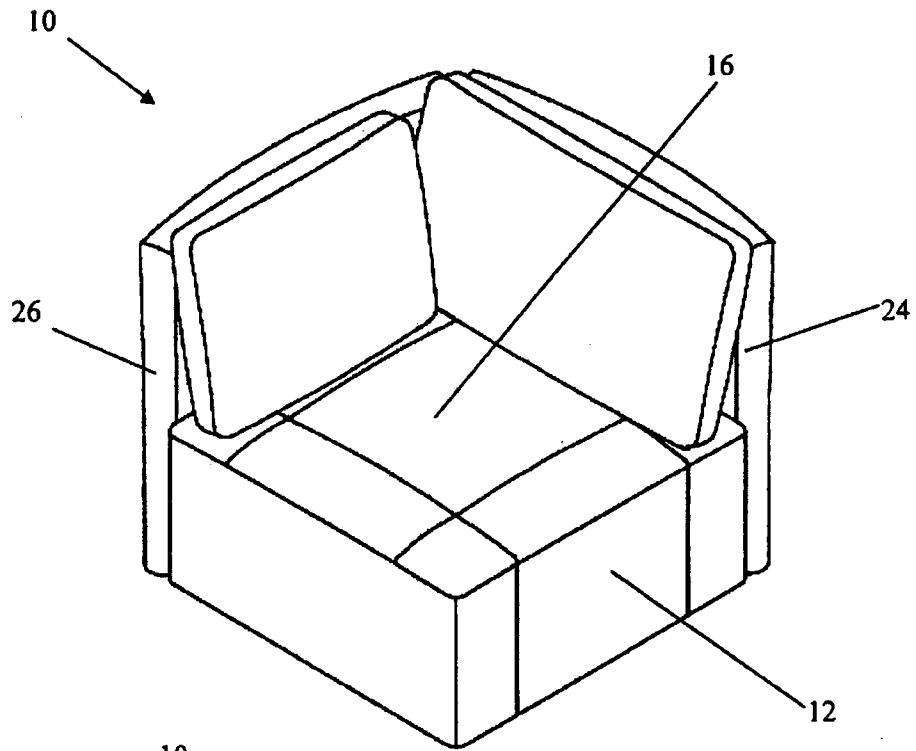


FIG. 4

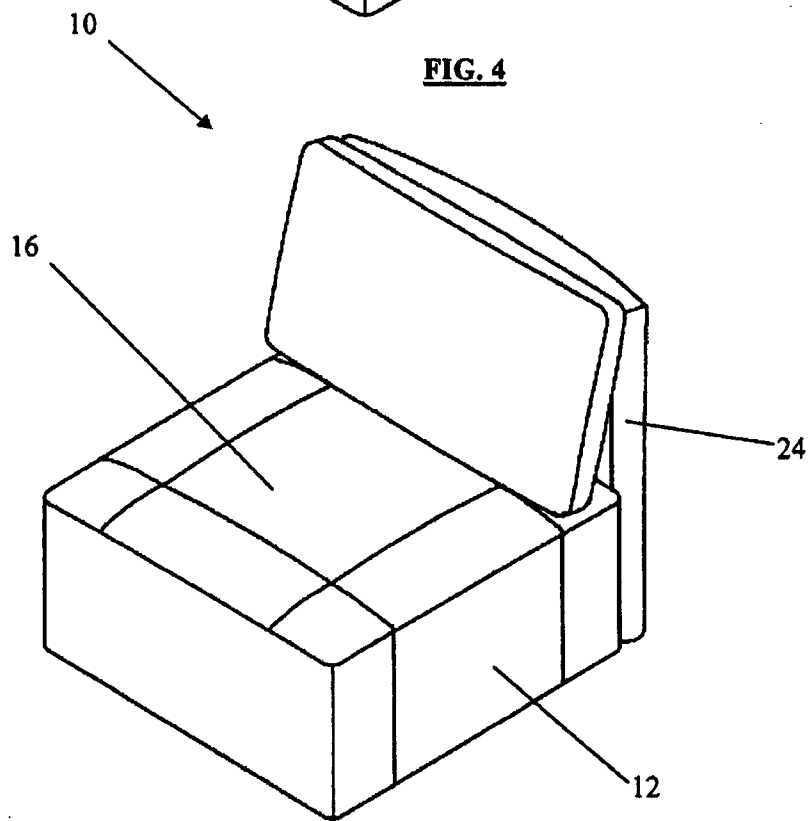


FIG. 5

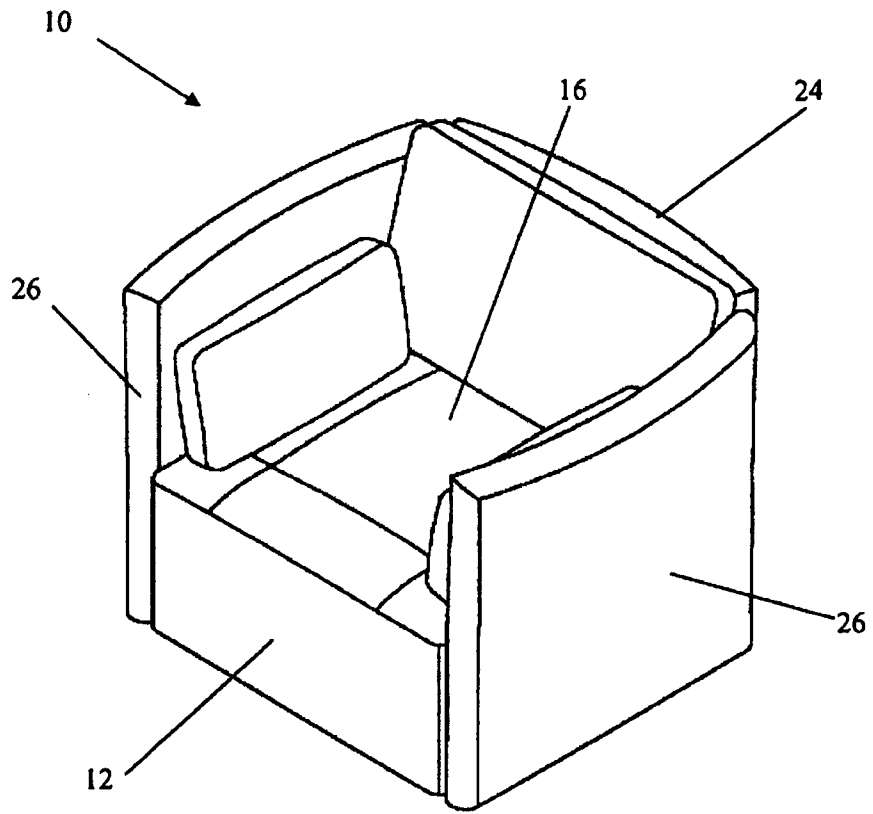
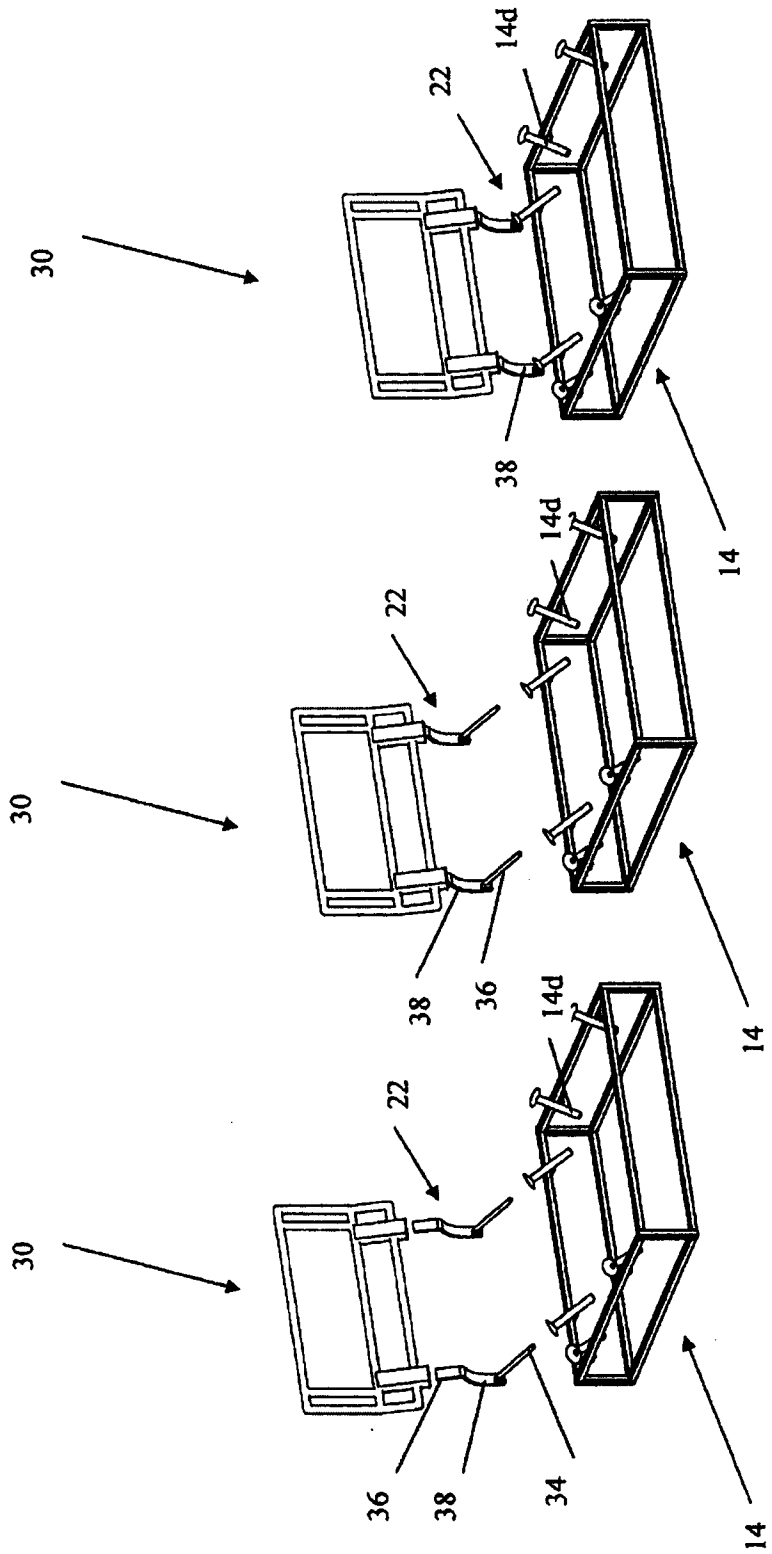
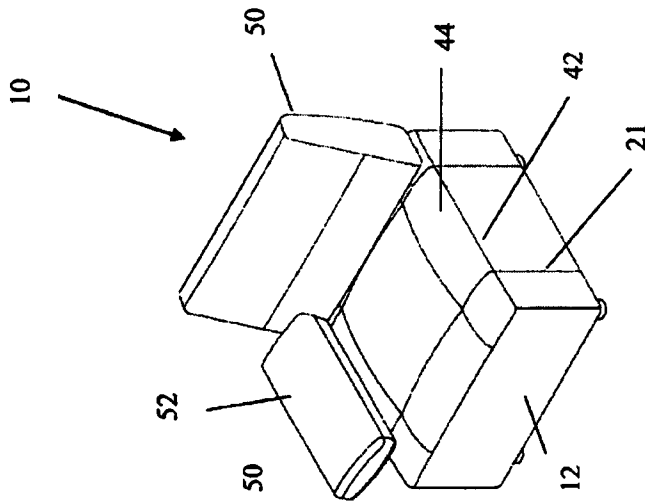
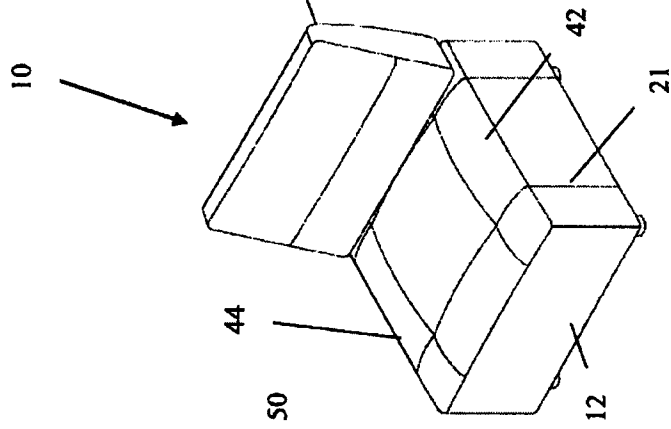
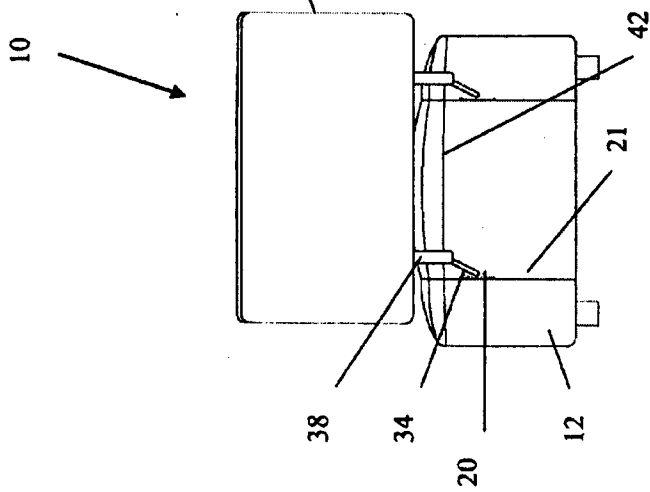


FIG. 6





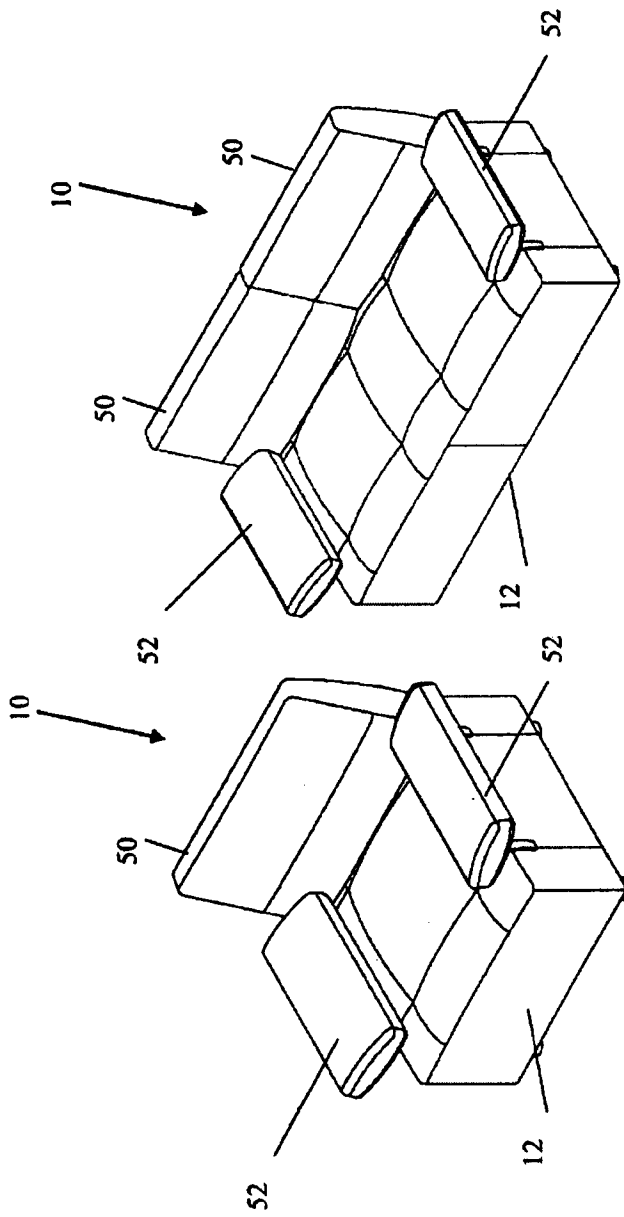


FIG. 13

FIG. 12

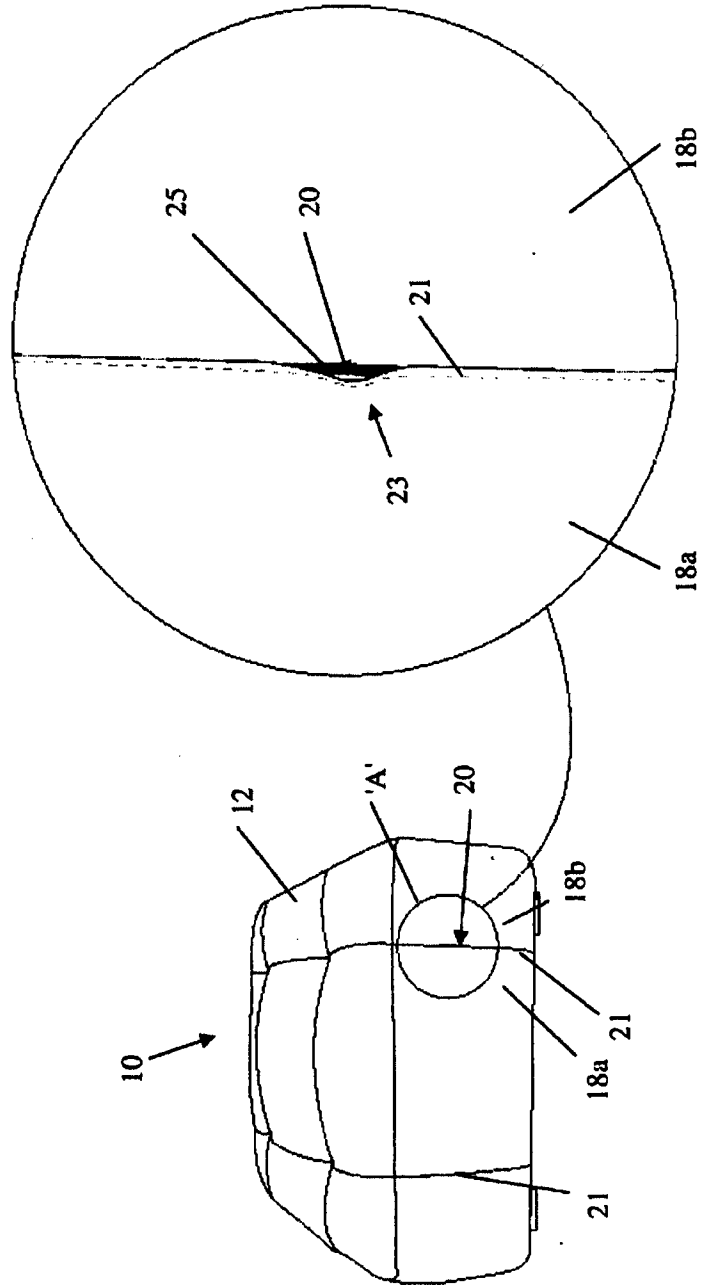


FIG. 14b

FIG. 14a

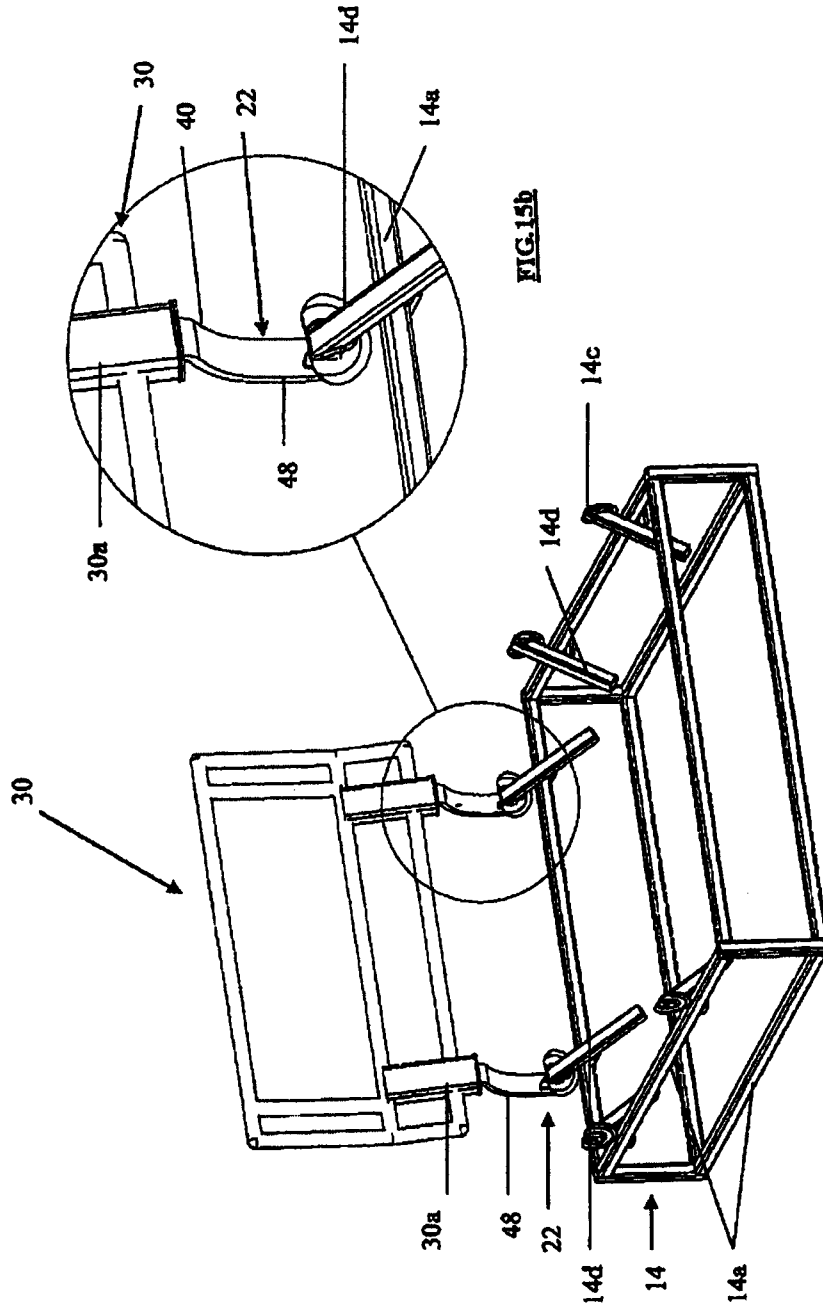


FIG. 15a

FIG. 15b

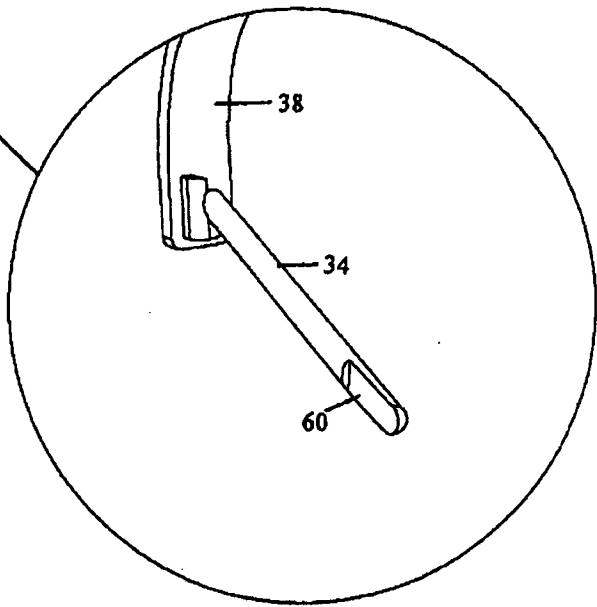
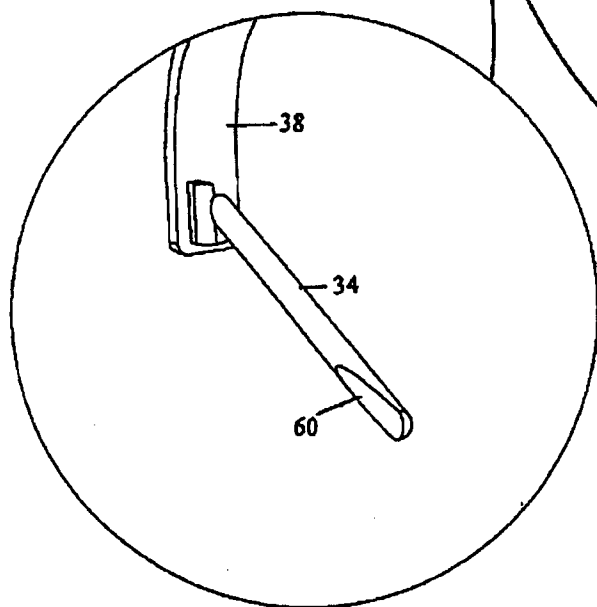
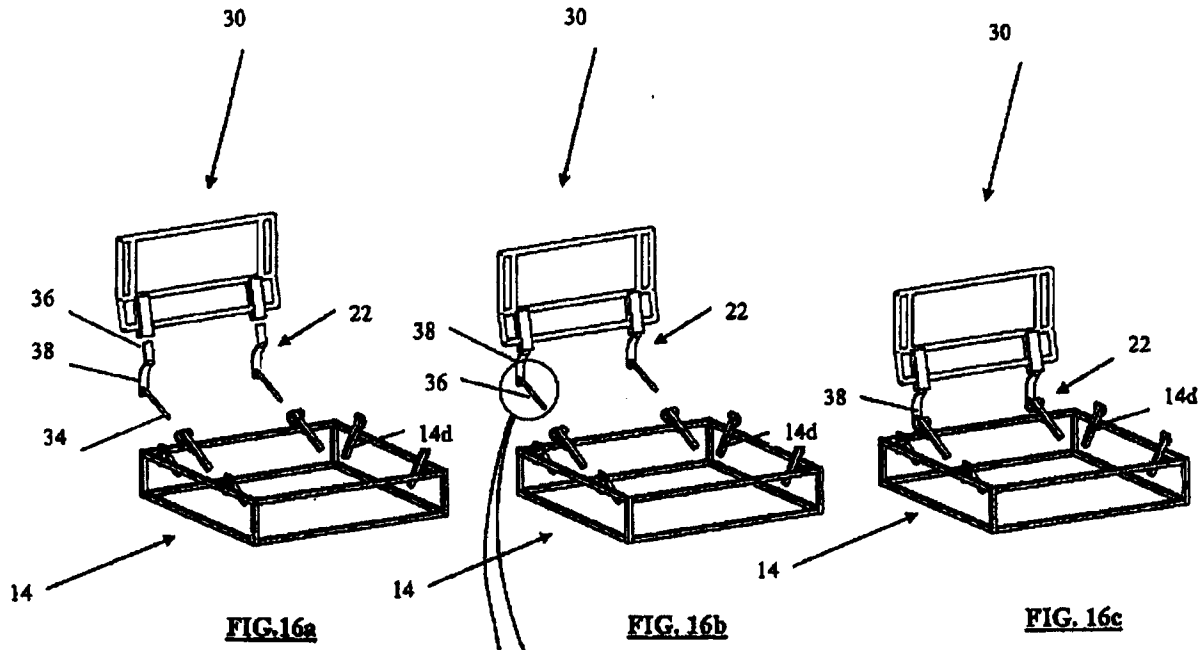


FIG. 16d

FIG. 16e

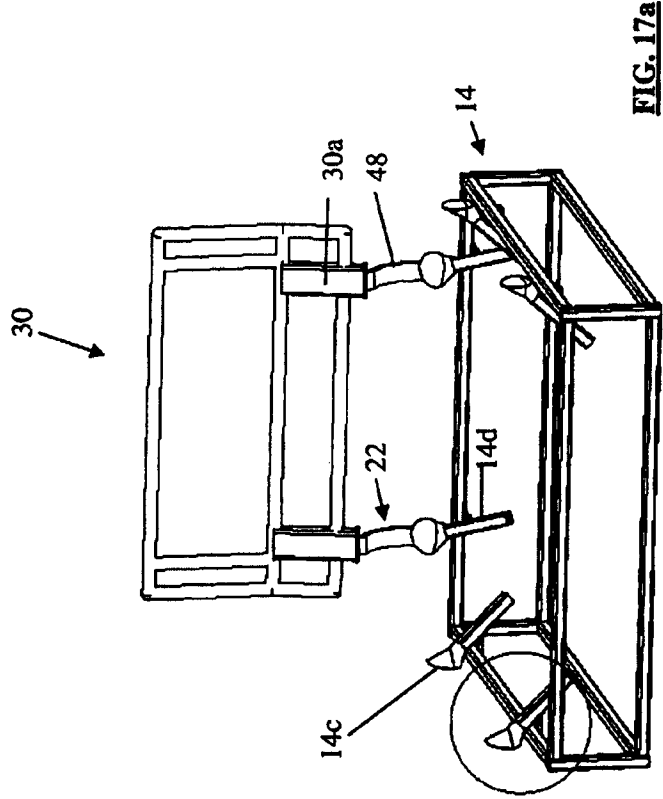


FIG. 17a

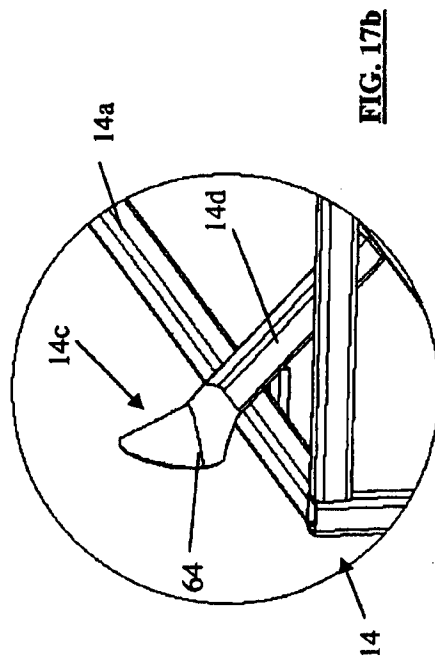


FIG. 17b

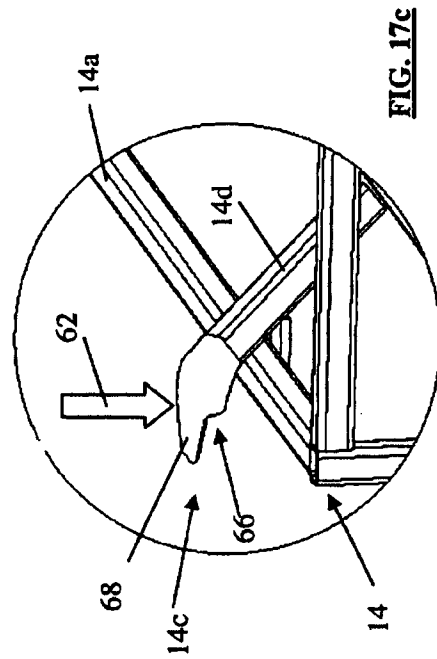


FIG. 17c

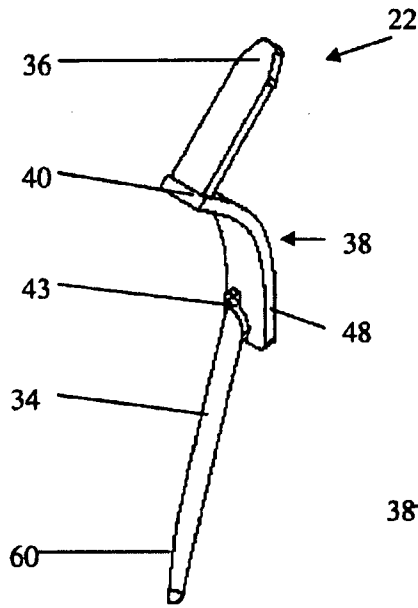


FIG. 18

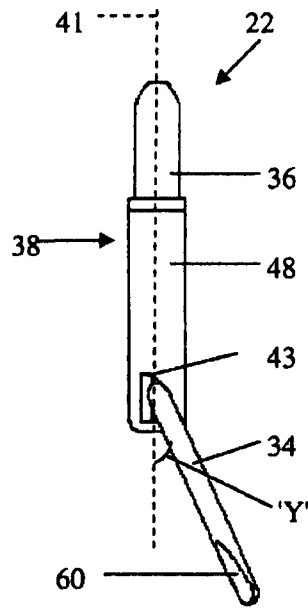


FIG. 19

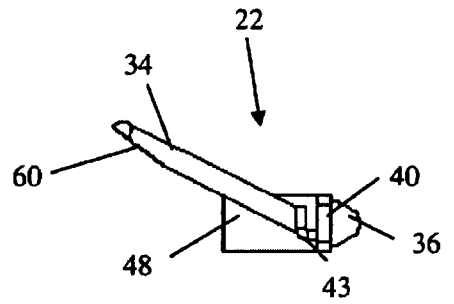


FIG. 20

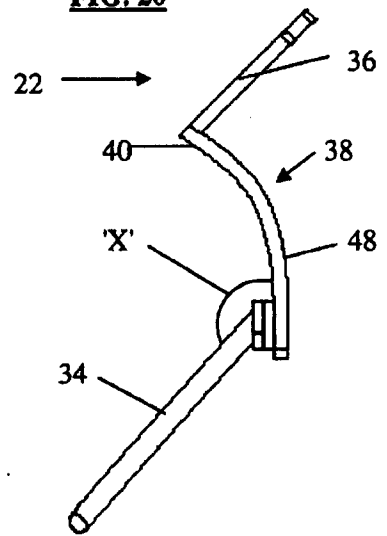


FIG. 21

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2011/001623

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl.		
<i>A47C 7/00</i> (2006.01)	<i>A47B 97/00</i> (2006.01)	
<i>A47B 87/00</i> (2006.01)	<i>A47C 13/00</i> (2006.01)	
<i>A47C 17/00</i> (2006.01)	<i>F16B 12/00</i> (2006.01)	
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPODOC & WPO: /IC /EC A47C, A47B 87/-, A47B 97/-, F16B 12/- AND KEYWORDS (CHAIR, MODULAR, OPENING, DISGUISE, COLLAR, FLEXIBLE, SOCKET, RÉCEIVE, SPIGOT AND LIKE TERMS)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 6796614 B1 (PAUL) 28 September 2004 See abstract, lines 31-36 of column 4 and figures 1, 3 & 4	1-13,15,23-29 14, 16-22
Y	US 6105913 A (COUTURE) 22 August 2000 See abstract and figure 1	14, 16-22
X	EP 2071980 A1 (CASSINA S.P.A.) 24 June 2009 See abstract, paragraph [0010] and figures 1 & 3	30, 31
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C		<input checked="" type="checkbox"/> See patent family annex
* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 15 January 2012 12 March 2012	Date of mailing of the international search report 16 March 2012	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. +61 2 6283 7999	Authorized officer PARMINDER SINGH AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No : +61 2 6225 6135	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2011/001623

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2028118 A (ROTATE CHAIRS LIMITED) 5 March 1980 See abstract, lines 28-50 of page 2 and figures 1 and 2a-2c	30, 31

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

[See Supplemental Box]

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to IV is not sufficient)

Continuation of Box No: BOX NO. III

This International Application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept.

This Authority has found that there are different inventions based on the following features that separate the claims into distinct groups:

- Claims 1-29 are directed to an article of furniture comprising a seat portion having a frame and upholstery covering the frame, the upholstery including cushioning and a covering overlying the cushioning; at least one opening defined at least in the covering of the upholstery, the at least one opening being configured to receive a component of a connector arrangement to attach a removable module to the frame; and a disguising member disguising the at least one opening, the disguising member being configured as a feature of the upholstery. The feature of at least one opening being configured to receive a component of a connector arrangement to attach a removable module to the frame; and a disguising member disguising the at least one opening, the disguising member being configured as a feature of the upholstery is specific to this group of claims.
- Claims 30 and 31 are directed to a component for an article of modular furniture, the component including an elongate tubular element defining a socket in which a spigot is receivable; and a collar arranged at an entrance opening to the tubular member, the collar being flexible to deform in a predetermined manner when a force is applied to it. The feature of the collar being flexible to deform in a predetermined manner when a force is applied to it is specific to this group of claims.

PCT Rule 13.2, first sentence, states that unity of invention is only fulfilled when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. PCT Rule 13.2, second sentence, defines a special technical feature as a feature which makes a contribution over the prior art.

When there is no special technical feature common to all the claimed inventions there is no unity of invention.

In the above groups of claims, the identified features may have the potential to make a contribution over the prior art but are not common to all the claimed inventions and therefore cannot provide the required technical relationship. The only feature common to all of the claimed inventions and which provides a technical relationship among them is modular furniture. However this feature does not make a contribution over the prior art because it is disclosed in (refer abstract):

D1: US 6796614 B1 (PAUL) 28 September 2004

Therefore in the light of this document this common feature cannot be a special technical feature. Therefore there is no special technical feature common to all the claimed inventions and the requirements for unity of invention are consequently not satisfied *a posteriori*.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2011/001623

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
US 6796614	CA 2424626
US 6105913	NONE
EP 2071980	NONE
GB 2028118	NONE

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX