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(54) **FURNITURE**

MÖBEL  
MEUBLE

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**Description**

[0001] This invention relates to adjustable furniture. For convenience only, the present invention will be described with reference to furniture such as beds for which the invention may be particularly applicable. However, it is to be understood that it is not to be limited as such. Moreover, because the invention may have other applications it is to be understood that the background art and possible embodiments of the invention as discussed below are given by way of example only.

**BACKGROUND ART**

[0002] Traditionally beds have been made to only a few specific sizes depending on requirements. For example, a cot for babies, a single bed for one person, or a double bed for two people, the double bed being either a large "king" size or a slightly smaller "queen" size.

[0003] Due to these set sizes, people are left with little choice of alternative sizes to suit their individual requirements. For example, it may be necessary to buy an adult size bed for a child's room where this size may not be required until several years later. Hence space in the room which may have more appropriate uses when the child is young, is unnecessarily taken up by the bed. Moreover, in designing a bedroom the architect may be constrained by the fixed size of the bed so that it is difficult to optimise the design.

[0004] Furthermore, in the case where a cot is provided for a child, this may only be suitable for a short period of childhood, after which a larger bed must be bought. Not only does this involve extra costs but also a child may be reluctant to part with their bed. Folding beds and modular type beds (ie. beds where a base may be slid under the bed) do address some aspects of the problem with fixed sized beds in that a double size bed can be folded or stowed away so as to only take up the space of a single size bed. However, the bed size is still limited to a standard length and width so that the size of the bed cannot always be optimised.

[0005] Similar problems with obtaining optimum sizing of furniture to suit a room or to suit changing requirements may also arise with various other types of furniture such as couches, tables, bookcases and the like. These too, as with beds, are of fixed dimensions once assembled thus putting a constraint on the design of a room, and may with time become too large or too small for requirements. Moreover, they may be no longer required for their initial function, and simply take up space.

[0006] Another problem with fixed sized furniture arises when installing the furniture in the room. Since the size is fixed it may be difficult or impossible to carry the furniture in its assembled form into the room due for example to narrow doorways, or staircases, thus making it difficult to install or rearrange such furniture.

[0007] Furthermore, items of furniture which are no longer required such as beds for occupants which have left take up space or must be stored. There is a need to be able to continue to use these items of furniture such as by converting them to other furniture, for example a bed could be converted into a dining table, a couch, a coffee table etc.

[0008] Previous proposals have been made for beds which are extendable both longitudinally and transversely by having both longitudinal and transverse telescopic members. An example of such a previous proposal is US-A-4,478,261 and US-A-402,129. However in this construction it is not possible to move any of the transverse members together, which severely limits the extent to which the bed can be contracted longitudinally.

**OBJECT**

[0009] It is a primary object of the present invention to improve upon the abovementioned and other prior art proposals in this field.

[0010] It is among the objects of the present invention to provide furniture constructed so that the size thereof can be easily varied, to give a wide range of sizes to suit varying requirements, and which can also be converted to other items of furniture.

**DISCLOSURE OF THE INVENTION**

[0011] According to the present invention there is provided an article of furniture comprising a substantially planar frame capable of supporting a mattress, the frame comprising telescopic outer longitudinal members, telescopic transverse end members at either end of the longitudinal members and intermediate telescopic transverse members extending between the longitudinal members inside the end members, each of said members comprising an inner component slideably received in an outer component, means being provided for the attachment of legs extending out of the plane of the frame in a first direction, wherein intermediate telescopic transverse members which extend between the outer components of the longitudinal members are fixed thereto in mutually spaced relation, wherein intermediate telescopic transverse members which extend between the inner components of the longitudinal members are slideable along the latter so that their mutual spacing can be adjusted and wherein sockets are provided at opposite ends of the longitudinal

members for the mounting of additional elements which will extend out of the plane of the frame in a second direction.

[0012] A flexible linkage may be connected to the transverse members which are slideable along the inner components of the longitudinal members to limit the maximum spacing between adjacent slideable transverse members.

[0013] Locking means may be provided adapted to lock inner and outer components of a telescopic member at a desired extension.

[0014] The invention may be applicable to a variety of furniture items where it is desirable to be able to change the dimensions. For example, the furniture item may be a book case and the dimension in one direction may be a width or a height of the book case. Alternatively the furniture item may be a bed, with the dimension being a length or width of the bed.

[0015] The adjustable connecting means may involve any device or devices whereby the members may be optionally located in a plurality of positions relative to each other. For example this may involve linkage means connected between members of the pair, the arrangement and construction being such that the members may be located relative to each other in a plurality of configurations.

[0016] A suitable linkage arrangement may involve linkages such as found with folding beds. In this case linkages may be arranged such that the width of the furniture item may be set to a range of widths, rather than the two widths provided by a conventional folding bed.

[0017] Alternatively or in addition the adjustable connecting means may involve a sliding element fixedly connected relative to one of the members, and slidably engaged with an element fixedly connected relative to another of the members, the arrangement and construction being such that when the elements are slid relative to each other the members are constrained to move relative to each other along a substantially straight line.

[0018] In the case of such a sliding element fixedly connected relative to one of the members, this may be of any suitable section which may be engaged with a complementary surface formed on the other member. For example this may involve an angle or channel, which engages with a pin or pins on the other member, or a cylindrically shaped member which slides inside an aperture or tube formed on the other member.

[0019] The adjustable connecting means may also involve locking means for locking the elements or members relative to each other in a plurality of configurations. For example this may involve clamping means which depend on frictional forces between adjacent surfaces, or fastening devices which positively locate the elements or members relative to each other, or a combination of both.

[0020] The members may thus be fastened together at different relative locations to each other, enabling variation in the dimension or dimensions of the furniture item. The connecting means may also make use of other items in a room to provide location of the members relative to each other. For example, locational forces may be provided by frictional forces between item and the floor.

[0021] Various types of fastening and clamping devices are possible. For example these may involve the use of pins or bolts which fit into apertures provided at a plurality of locations on the elements. A possible arrangement may be similar to that used for telescopic tripods or tent poles where a pin provided inside one tubular member is resiliently biased so as to spring out and engage in an aperture in the telescoping member. The fastening and clamping device may also involve threaded members which may be tightened to clamp contacting surfaces of the elements together.

[0022] Friction members may also be provided to improve the locking effect. For example in the case of tubular members "O" rings may be used. In this case one possible arrangement may involve an "O" ring which is slidable along a tubular member which fits inside a larger diameter pipe having a flared inlet for accommodating the "O" ring, the arrangement being such that movement in one direction forces the "O" ring tight against the outer surface of the tubular member and the flared surface of the pipe thus preventing relative movement in that direction.

[0023] Alternatively a Crox nut type pipe coupling may be used with an "O" ring nipple, the "O" ring being clamped against the sliding surface with tightening of the coupling.

[0024] Members and elements of the furniture item may be made from a variety of materials as required or desired. In this respect the design and function of the adjustable connecting means may be chosen to suit the type of materials used. For example, in the case of a bed using metal or plastic tube for the frame, the connecting means may involve telescoping portions of the metal or plastic tube with metal or plastic tube type couplings. With a metal bed having for example angle or channel section structural members the connecting means may involve elongate slots formed in sections of the members, with threaded pins fixed to the mating members, and fitted with wing nuts which may be tightened to clamp the members together at optional relative positions. In the case of a bed with wooden slats for the mattress support, the adjustable connecting means may involve flexible bands such as "O" rings which resiliently hold portions of the slats together while allowing limited relative movement therebetween in a lengthwise direction of the slats.

[0025] In the case of a wooden book case, the connecting means may involve elongate slots formed in sections on one structural member of the book case and threaded pins fixed to the mating portions on another structural member of the book case, and fitted with wing nuts which may be tightened to clamp the members together at optional relative positions.

[0026] In the case of an adjustable bed, a mattress for the bed may be constructed so that the size thereof can be

changed to suit the adjusted size of the bed. Suitable materials for the mattress may involve foam, air, water and more traditional materials. The mattress design may involve a modular construction so that sections may be added or removed as required. In this case a mattress cover may be provided which can accommodate the largest anticipated size, and portions of the cover can be folded under the mattress when the mattress size is reduced.

5 [0027] Sections of the mattress may be connected by any suitable means. For example in the case of a foam type mattress this may involve interlocking sections formed on the edges of the mattress sections. A suitable type of interlocking may involve for example, protruding and recess portions such as found on bubble packaging or sound proofing foam. An adjustable thick cover (eg. padded calico or thick cotton) may also be used to cover any additional sections, preventing slippage and any unevenness, thus giving the overall appearance and feel of a traditional mattress

10 [0028] In the case of water mattresses, a standard sectional water mattress can be utilised with additional compartments being filled, as and when required. Similarly with air mattresses the size can be adjusted by inflating additional compartments.

[0029] As well as addressing the above problems encountered with fixed dimension type furniture, the present invention may also open up other aspects related to the uses of furniture which have not heretofore been considered. For example, 15 a bed of variable dimensions may be made in the form of a house which could be extended to make a mansion, a bed representing a fort could be transformed into a castle, a bed in the form of a mini car could be transformed into one in the form of a stretch limousine. Additional accessories may also be added accordingly; for example book cases, writing desks etc. A bed in the form of a fort could have a drawbridge which becomes a desk.

[0030] According to a further aspect of the invention, there is provided a convertible furniture item including in combination, one or more tubular frame members adapted to be extensible in one or more directions, extensible post members adapted to be connected to and to support the frame members at various distances above floor level, the frame members further adapted to be connected to one or more conversion member adapted to convert one furniture item to a different furniture item, for example, a bed to a table, a dining table to a sofa or chair or a coffee table to a dining table.

20 [0031] Preferably the one or more frame members are adjustable by means of telescoping tubular members extensible to predetermined length intervals wherein they are held in position by one or more detent mechanisms.

[0032] Preferably the detent mechanisms are spring loaded pins located in an inner telescoping tube member adapted to engage a corresponding hole or slot in an outer telescoping tube member for holding the telescoping tubes at a predetermined length.

30 [0033] In the alternative, there are no detent mechanisms to hold the telescoping tubes in position but are held in position by the sheer weight of the frame member(s).

[0034] Preferably the conversion members include headboards, sideboards, interlocking slats or platform members adapted to convert one item of furniture into another.

[0035] Conveniently, the conversion members are also extensible adjustable to correspond to the extension adjustable to correspond to the extension of the frame member(s).

35 [0036] Preferably there are accessory fittings adapted to be detachably fitted to the frame members or conversion members, for example, a pivoting reading lamp, a writing table, a tray or a support for television set, video recorder or personal computer, etc.

**BRIEF DESCRIPTION OF THE DRAWINGS**

40 [0037] Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only and with reference to the accompanying drawings in which:

45 Figure 1: is a schematic plan diagram of an adjustable bed according to an embodiment of the present invention showing a plan view according to Example 1;

Figure 2: is a side view of the bed of Fig. 1;

Figures 3 and 3a: are enlarged views of a typical connecting device;

50 Figure 4: is a head end view of the bed of Fig 1; and

Figure 5: is a foot end view of the bed of Fig. 1.

55 Figures 6, 7, 8 and 9 are perspective view of the invention according to Example 2.

## PREFERRED EMBODIMENT

## Example 1

5 [0038] With reference to Figures 1 to 5, there is shown a furniture item according to Example 1 of the present invention in the form of a bed generally indicated by arrow 1. The bed 1 comprises a first pair of members defining a transverse direction, in the form of a bed head 2 and a bed foot 3. The bed head 2 and bed foot 3 are connected together by adjustable connecting devices generally indicated by arrow 4 provided on either side of the bed 1. As shown in detail in Fig. 3a, each of the connecting devices 4 comprises a portion of an outer tube 5 connected to the bed head 2 and a

10 portion of an inner tube 6 connected to the bed foot 3. The diameters of the portions of the tubes 5, 6 are such that the tube 6 can slide freely inside tube 5 while being constrained thereby so as to move along its longitudinal axes.  
[0039] The connecting devices 4 also comprise a locking coupling in the form of a Crox coupling generally indicated by arrow 7 having a nut portion 8 which is threaded onto a threaded portion 9 formed on the end of the tube 5, with an "O" ring 10 fitted inside the nut portion 8. The "O" ring 10 fits snugly around the tube 6 and is clamped tightly against the tube 6 when the nut 10 is tightened onto the thread 9, thereby locking the tube 6 relative to the tube 5.

15 [0040] With this arrangement the distance between the bed ends 2 and 3 may be adjusted to a required length, by sliding the pipe 6 inside the pipe 5. The bed ends 2, and 3 can then be locked in position relative to each other by tightening the coupling 7.

20 [0041] The bed is also provided with a number of cross members 11 and 12 to provide support for the mattress of the bed. The cross members 11 are fixedly connected at predetermined spacing to the pipe 5, while some or all of the cross members 12 may be slidably fitted to the pipe 6. This enables the spacing of the cross members 12 to be adjusted in a longitudinal direction to suit the length of the bed 1.

25 [0042] To ensure a desired spacing of the cross members 12 with different degrees of extension of the bed 1, a suitable location device may be used. For example this may involve protrusions on the pipe 6 which locate the ends of the cross members 12 at the required spacing. Alternatively a flexible member may be tied between the cross members 12 so that as the bed 1 is increased in length, the cross members 12 are separated from each other, while as the bed 1 is decreased in length the cross members 12 are able to lie closer to each other.

30 [0043] Although not shown in the drawings, additional leg supports may be provided if required at intermediate portions along the pipe member 5. These may be pivotally attached to the pipe member 5 and folded down to give additional support when the bed is in an extended condition.

35 [0044] With the present embodiment the width of the bed 1 is also adjustable in a similar manner. As shown in Fig. 4 and Fig. 5, the bed head 2 and bed foot are each made up as two sections which are connected together by a second pair of adjustable connecting devices generally indicated by arrow 13 and 14. These connecting devices 13 and 14 are similar in design and function to the connecting devices 7 except that the dimensions of the telescoping pipe sections may be different depending on the design and strength requirements. Moreover, the cross members 11 and 12 are formed with telescoping tubular sections 15 which can telescope inside each other as the width of the bed 1 is changed.

[0045] With such an arrangement the width of the bed as well as the length can be adjusted to suit requirements.

[0046] For example the bed can be made smaller for transport or installation, and then expanded to a desired size once installed.

40 [0047] The bed can also be extended or widened to suit the size of children as they grow, or can be easily adjusted at any time as may be required by children when playing. Moreover, the size of the bed can be easily increased or decreased as required to suit individual requirements.

45 [0048] Various types of mattress design may be used with the bed. For example a foam mattress of modular construction may be used, and sections may be added or removed as required. The mattress for the bed may be made of a modular construction so that separate modules may be connected or removed as required to suit the different sizes of the bed.

## Example 2

50 [0049] Figures 6, 7, 8 and 9 show a preferred embodiment of the invention according to Example 1 in the form of a bed 20 which can be converted to other items of furniture. The bed preferably has a frame 22 of powder coated steel tube, however other tubing such as aluminium, copper or plastic tube may be used. The tubular frame is extensible lengthwise and breathwise with sliding cross members 23, 25 which are spaced by linkage means in the form of a chain (not shown) and is supported by extensible post members 24 which can be screwed to the frame. The extensible post members allow the bed to be converted to a dining table or a coffee table and are major conversion members. The post members in some models, may be covered by a cosmetic member 26 into which the post member is inserted. Also shown is an adjustable headboard 28 which can be extended to accommodate different widths of the bed. The headboard has a projections 30, 32 or stumps which are insertable into sockets 34 in the frame. The bed has wooden slats 36, 38 which have complementary fitting tongue and groove edges 40 so that as the bed is lengthened, additional slats can be

added end piece slats 36. The end piece slats have rubber plugs (not shown) which are insertable into sockets at the ends of the bed. The slats also provide the top of a dining or coffee table and can have a painted or polished finish surface. In the alternative to a slotted top, an integral top of metal or panel board or wood can be used (not shown). Accessory fittings in the form of pivoting support stands 42 for portable or television receivers or computer monitors can also be removably attached the frame.

## ADVANTAGES

[0050] We believe the advantages of our invention to be as follows, however it should be appreciated that all such advantages may not be realised on all embodiments of the invention, and the following list is therefore given by way of example only as being indicative of potential advantages of the present invention. Furthermore, it is not intended that the advantages of the present invention be restricted to those of the list which follows.

1. The sizes of furniture items can be easily adjusted to suit requirements, thus extending the range of application of a particular type of item.
2. In the case of a bed, this can be easily changed in size to suit requirements.
3. Items of furniture can easily be converted to other items of furniture according to changing needs.

[0051] Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the spirit or scope as herein set forth in the claims.

[0052] Throughout the description and claims of this specification the word "comprise" and variations of that word, such as "comprises" and "comprising", are not intended to exclude other additives, components, integers or steps.

## Claims

1. An article of furniture comprising a substantially planar frame (1) capable of supporting a mattress, the frame comprising telescopic outer longitudinal members (4), telescopic transverse end members (2,3) at either end of the longitudinal members (4) and intermediate telescopic transverse members (11,12) extending between the longitudinal members (4) inside the end members (2,3), each of said members (4,2,3,11,12) comprising an inner component (6) slideably received in an outer component (5), means being provided for the attachment of legs (26) extending out of the plane of the frame (1) in a first direction, **characterised in that** intermediate telescopic transverse members (11) which extend between the outer components (5) of the longitudinal members (4) are fixed thereto in mutually spaced relation, **in that** intermediate telescopic transverse members (12) which extend between the inner components (6) of the longitudinal members (4) are slideable along the latter so that their mutual spacing can be adjusted and **in that** sockets (34) are provided at opposite ends of the longitudinal members (4) for the mounting of additional elements (28,42) which will extend out of the plane of the frame (1) in a second direction.
2. An article of furniture as claimed in claim 1, **characterised in that** a flexible linkage is connected to the transverse members (12) which are slideable along the inner components (6) of the longitudinal members (4) to limit the maximum spacing between adjacent slideable transverse members (12).
3. An article of furniture as claimed in either of the preceding claims, **characterised in that** locking means (8,9,10) is provided adapted to lock inner (6) and outer (5) components of a telescopic member (4,11,12) at a desired extension.
4. An article of furniture as claimed in any one of the preceding claims, **characterised in that** it includes a mattress which is adjustable in size.
5. An article of furniture as claimed in claim 4, **characterised in that** the mattress is of modular construction such that sections of the mattress can be added or removed as required.
6. An article of furniture as claimed in claim 4 or claim 5, **characterised in that** a mattress cover is provided which can accommodate the largest anticipated size of the mattress and portions of the cover can be folded away when the size of the mattress is reduced.

7. An article of furniture as claimed in any one of claims 4 to 6 **characterised in that** the mattress is a foam type mattress having interlocking sections on the edges of the mattress sections.
8. An article of furniture as claimed in any one of claims 4 to 6 **characterised in that** the mattress is a water mattress with compartments which can be filled as required to increase the size of the mattress.
9. An article of furniture as claimed in any one of claims 4 to 6 **characterised in that** the mattress is an air mattress the size of which can be adjusted by inflating additional compartments.
10. An article of furniture as claimed in any one of the preceding claims, **characterised in that** said additional elements (28,42) which will extend out of the plane of the frame (1) in a second direction are selected from a group including headboards, sideboards, interlocking slats and platform members, said additional elements (28,42) being adapted to convert the article of furniture from one item of furniture into another.

#### Patentansprüche

1. Möbelstück, das aus einem im Wesentlichen ebenen Rahmen (1) besteht, welcher in der Lage ist, eine Matratze zu tragen und welcher aus teleskopischen äußeren Längsgliedern (4), teleskopischen Querabschlussgliedern (2, 3) an beiden Enden der Längsglieder (4) und teleskopischen Querschwergliedern (11, 12) besteht, welche zwischen den Längsgliedern (4) innerhalb der Abschlussglieder (2, 3) verlaufen, wobei jedes der besagten Bauglieder (4, 2, 3, 11, 12) einen inneren Bestandteil (6) enthält, der in einem äußeren Bestandteil (5) enthalten und verschiebbar ist, wobei eine Vorrichtung zur Befestigung von Beinen (26) vorgesehen ist, die sich in einer ersten Richtung aus der Rahmenebene (1) erstrecken, **dadurch gekennzeichnet, dass** teleskopische Querschwerglieder (11), die sich zwischen den äußeren Bestandteilen (5) der Längsglieder (4) erstrecken, daran in gegenseitigem Abstand befestigt sind, sowie **dadurch**, dass teleskopische Querschwerglieder (12), die sich zwischen den inneren Bestandteilen (6) der Längsglieder (4) erstrecken, entlang diesen verschiebbar sind, so dass die Abstände dazwischen verstellt werden können, sowie **dadurch**, dass an den gegenüber liegenden Enden der Längsglieder (4) Fassungen (34) zur Befestigung von zusätzlichen Elementen (28, 42) vorgesehen sind, die sich aus der Rahmenebene (1) in eine zweite Richtung erstrecken werden.
2. Möbelstück nach Anspruch 1, **dadurch gekennzeichnet, dass** eine flexible Verknüpfung an den Quergliedern (12) befestigt ist, die an den inneren Bestandteilen (6) der Längsglieder (4) verschiebbar sind, um die Höchstabstände zwischen benachbarten verschiebbaren Quergliedern (12) zu begrenzen.
3. Möbelstück nach einem der beiden vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** eine Sperrvorrichtung (8, 9, 10) vorgesehen ist, um die inneren (6) und äußeren (5) Bestandteile eines Teleskopglieds (4, 11, 12) auf einer gewünschten Ausdehnung zu fixieren.
4. Möbelstück nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** es eine größenverstellbare Matratze einschließt.
5. Möbelstück nach Anspruch 4, **dadurch gekennzeichnet, dass** die Matratze in Modulbauweise zusammengesetzt ist, so dass nach Bedarf Abschnitte der Matratze hinzugefügt oder entfernt werden können.
6. Möbelstück nach Anspruch 4 oder Anspruch 5, **dadurch gekennzeichnet, dass** ein Matratzenbezug vorgesehen ist, der die größtmögliche Größe der Matratze aufnehmen kann und bei dem die bei verkleinerter Matratze nicht benötigten Teile untergefaltet werden können.
7. Möbelstück nach einem der Ansprüche 4 bis 6, **dadurch gekennzeichnet, dass** die Matratze eine Schaumstoffmatratze mit ineinandergreifenden Abschnitten an den Rändern der Matratzenabschnitte ist.
8. Möbelstück nach einem der Ansprüche 4 bis 6, **dadurch gekennzeichnet, dass** die Matratze eine Wassermatratze mit Fächern ist, die nach Bedarf gefüllt werden können, um die Matratze zu vergrößern.
9. Möbelstück nach einem der Ansprüche 4 bis 6, **dadurch gekennzeichnet, dass** die Matratze eine mit Luft gefüllte Matratze ist, die durch Aufblasen weiterer Fächer vergrößert werden kann

10. Möbelstück nach einem beliebigen der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die genannten zusätzlichen Elemente (28, 42), die sich aus der Ebene des Rahmens (1) in eine zweite Richtung erstrecken, aus einer Gruppe ausgewählt werden, welche Kopfteile, Seitenteile, ineinandergreifende Latten und Plattformteile umfasst, wobei diese zusätzlichen Elemente (28, 42) so nutzbar sind, dass das Möbelstück zu einem anderen Möbelstück umgebaut werden kann.

## Revendications

1. Une pièce de mobilier comprenant un cadre substantiellement planaire (1) pouvant supporter un matelas, le cadre comprenant des membres longitudinaux extérieurs télescopiques (4), des membres d'extrémité transversaux télescopiques (2, 3) à chaque extrémité des membres longitudinaux (4), et des membres transversaux télescopiques intermédiaires (11, 12) s'étendant entre les membres longitudinaux (4) à l'intérieur des membres d'extrémité (2, 3), chacun desdits membres (4, 2, 3, 11, 12) comprenant un composant interne (6) reçu par glissement dans un composant externe (5), un moyen prévu pour la fixation des pieds (26) sortant du plan du cadre (1) dans une première direction, **caractérisée en ce que** les membres transversaux télescopiques intermédiaires (11) qui s'étendent entre les composants externes (5) des membres longitudinaux (4) sont fixés à ceux-ci selon un positionnement à écartement réciproque, **en ce que** les membres transversaux télescopiques intermédiaires (12) qui s'étendent entre les composants internes (6) des membres longitudinaux (4) peuvent se glisser le long de ce dernier de manière à ce que l'écartement réciproque puisse être ajusté, et **en ce que** des manchons (34) sont prévus aux extrémités opposées des membres longitudinaux (4) pour le montage d'éléments supplémentaires (28, 42) qui sortiront du plan du cadre (1) dans une deuxième direction.
2. Une pièce de mobilier selon la revendication 1, **caractérisée en ce qu'**un élément de liaison flexible est raccordé aux membres transversaux (12) lesquels peuvent se glisser le long des composants internes (6) des membres longitudinaux (4) pour limiter l'écartement maximum entre les membres transversaux glissables adjacents (12).
3. Une pièce de mobilier selon l'une ou l'autre des précédentes revendications, **caractérisée en ce qu'**il est prévu un moyen de verrouillage (8, 9, 10) adapté pour verrouiller les composants internes (6) et externes (5) d'un membre télescopique (4, 11, 12) à une extension désirée.
4. Une pièce de mobilier selon une quelconque des précédentes revendications, **caractérisée en ce qu'**elle comprend un matelas dont les dimensions peuvent être ajustées.
5. Une pièce de mobilier selon la revendication 4, **caractérisée en ce que** le matelas est d'une construction modulaire, de sorte que des sections du matelas peuvent être ajoutées ou retirées selon les besoins.
6. Une pièce de mobilier selon la revendication 4 ou 5, **caractérisée en ce qu'**une housse de matelas est fournie, laquelle peut s'adapter aux dimensions prévisibles les plus grandes du matelas et des portions de la housse peuvent être repliées lorsque le matelas est de dimensions inférieures.
7. Une pièce de mobilier selon une quelconque des revendications 4 à 6, **caractérisée en ce que** le matelas est un matelas de type matelas mousse ayant des sections à emboîtement sur les bords des sections du matelas.
8. Une pièce de mobilier selon une quelconque des revendications 4 à 6, **caractérisée en ce que** le matelas est un matelas à eau avec des compartiments pouvant être remplis selon les besoins pour augmenter les dimensions du matelas.
9. Une pièce de mobilier selon une quelconque des revendications 4 à 6, **caractérisée en ce que** le matelas est un matelas pneumatique dont les dimensions peuvent être ajustées en gonflant des compartiments supplémentaires.
10. Une pièce de mobilier selon une quelconque des précédentes revendications, **caractérisée en ce que** lesdits éléments supplémentaires (28, 42) qui sortiront du plan du cadre (1) dans une deuxième direction sont sélectionnés à partir d'un groupe comprenant des têtes de lit, des côtés de lit, des lattes à emboîtement et des membres de plateforme, lesdits éléments supplémentaires (28, 42) étant adaptés pour convertir la pièce de mobilier d'un meuble à un autre meuble.

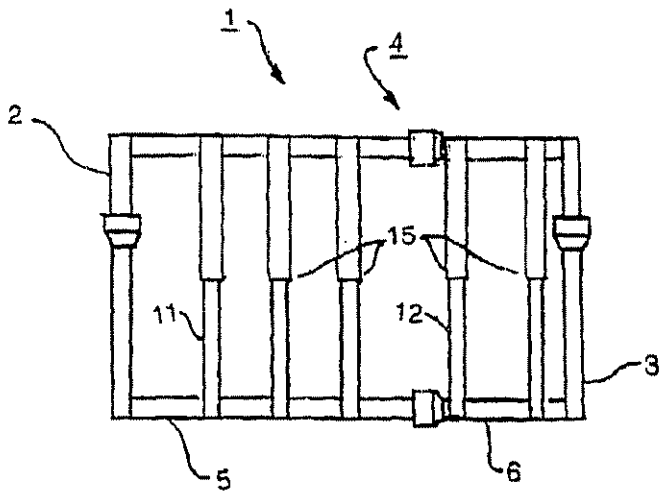


FIG. 1

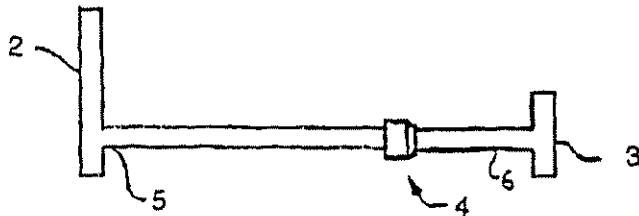


FIG. 2

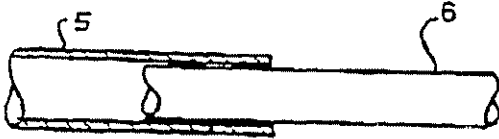


FIG. 3

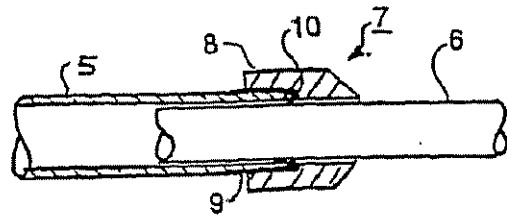


FIG. 3a

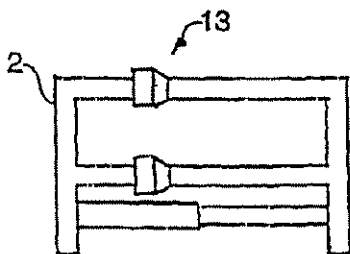


FIG. 4

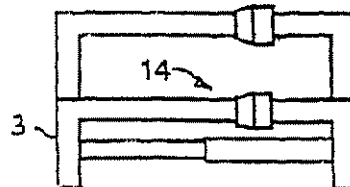


FIG. 5

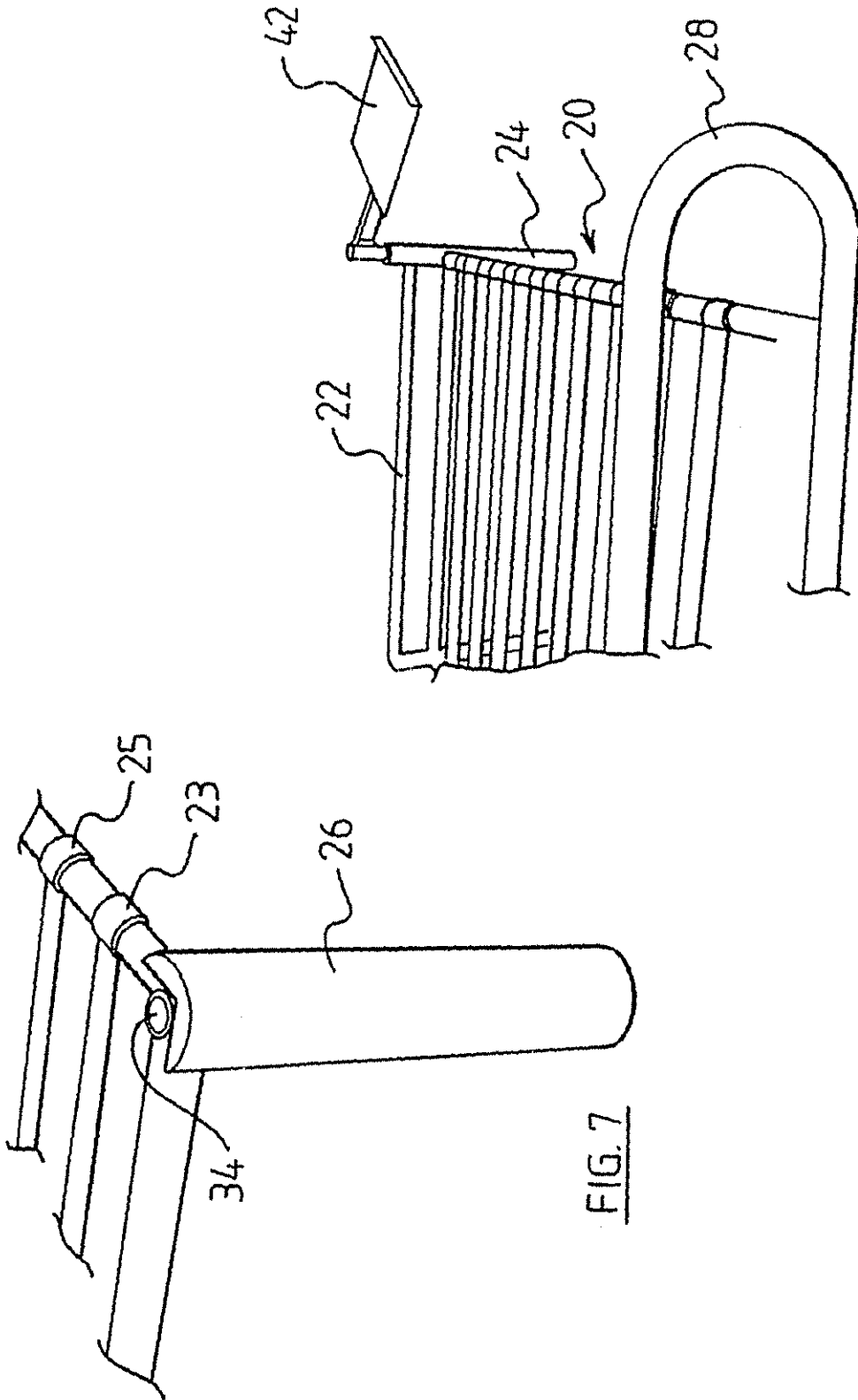


FIG. 6

FIG. 7

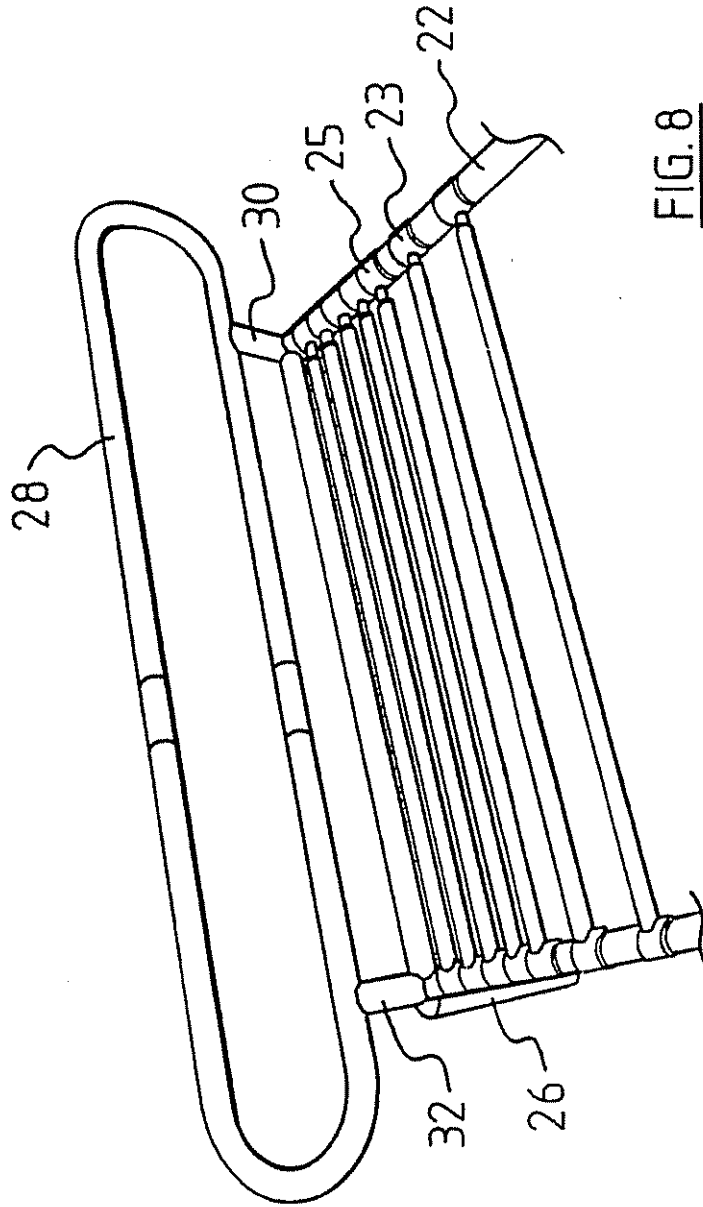


FIG. 8

