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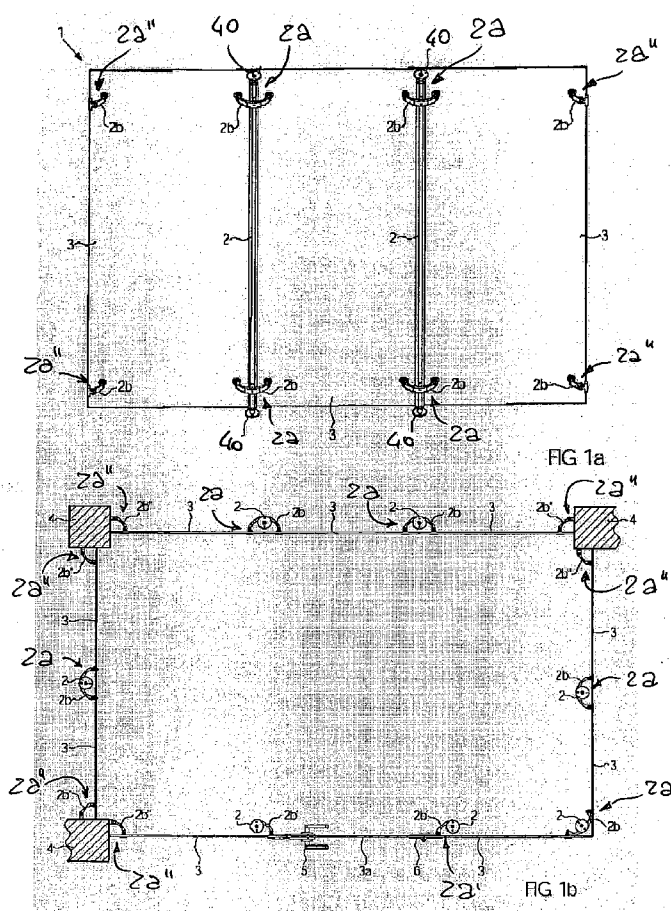
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(54) Title: PARTITION COORDINATED SYSTEM



(57) Abstract: A partition coordinated system (100) suitable to provide separate spaces, comprising at least one pane (3) anchored to at least one upright (2) by means of fastening members (2a) so as to make it possible to adjust the angle of at least one pane (3), as well as to adjust the position of these fastening members (2b) along the respective uprights (2) and to adjust the position of at least one pane (3) relative to the fastening members (2b).



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PARTITION COORDINATED SYSTEM

DESCRIPTION

The present invention can be effectively applied to
5 the sector of interior design and / or of the production of
separate spaces, in particular of separate internal spaces.

In more detail, the present invention relates to a
partition coordinated system suitable to produce separate
spaces through the use of a coordinated system comprising a
10 set of panels and / or panes, for example, although without
limitation, glass panes, as well as uprights and anchoring
means for anchoring these panels to these uprights, this
system being able to provide and / or delimit spaces, for
example internal spaces. Furthermore, the present invention
15 relates, in particular, to a partition coordinated system
comprising panels and / or panes, as well as uprights and
anchoring devices, the system being easy to produce, simple
and rapid to install, in order to allow the adjustment of
the reciprocal position of the panes or panels, as well as
20 of the position of the panes or panels relative to the
uprights during and following the installation without
difficulties.

BACKGROUND TO THE INVENTION

In the prior art, there are well known partition
25 coordinated systems used for defining and delimiting
separate internal spaces. For examples, the known systems
are frequently used for construction of internal spaces
inside the so-called open spaces or pavilions of great area,
usable for example for providing temporary offices or
30 exhibition stands and the like.

Also in the field of interior design it is well known
to use partition coordinated systems when other solutions,
such as masonry walls and the like, are not advisable, both

for practical and economical reasons and for architectonic or aesthetic reasons.

In the last years, numerous and various efforts have been made by the manufacturer, in order to improve the performances and functionality of the partition coordinated systems of the type described herein. In particular, various and great efforts have been made, in order to improve the ease of installation. Furthermore, efforts have been made for standardising the production of partition coordinated systems, with the aim of maintaining the total costs thereof within limits acceptable for the market.

Lastly, particular attention has been paid to the development of partition coordinated systems which allow, during their installation, a fine, easy and fast adjustment of the reciprocal position of the panels or of the glass panes, as well as of their position relative to the support uprights.

It is easily understood, in fact, that the interest of the end users directly depends upon the purchase and installation total costs, which in turn depend upon the aesthetic and functional result, as well as upon the installation costs: however, the installation costs are clearly linked with the possibility of easily adjusting the system.

It should be specified that, despite the efforts made, the partition systems of the prior art have not always allowed the intended purposes to be achieved. In many cases, the possibility of adjusting the panels and / or the glass panes is still limited and / or dissatisfactory. These difficulties in adjustment badly affect the installation times as well as the final result, which is often unsatisfactory from an aesthetic point of view.

Furthermore, in many cases, manufacturing and producing these systems was complex and tricky, which led

to production costs that were often unacceptable for mass consumption.

SUMMARY OF THE PRESENT INVENTION

The present invention can be effectively applied to
5 the sector of interior design and / or exhibition stands.

In particular, the present invention relates to the technical field of production of separate spaces, in particular of separate internal spaces. In more detail, the present invention relates to a partition coordinated system
10 suitable to produce separate spaces. In greater detail, the present invention relates to a coordinated system comprising a set of panels and / or panes, for example, although without limitation, glass panes, as well as uprights and anchoring means for anchoring these panels to
15 these uprights, this system being able to provide and / or delimit spaces, for example internal spaces. Furthermore, the present invention relates, in particular, to a partition coordinated system comprising panels and / or panes, as well as uprights and anchoring means, the system
20 being easy to produce, simple and rapid to install, and able to allow the adjustment of the reciprocal position of the panes or panels, as well as of the position of the panes or panels relative to the uprights during and following the installation without difficulties.

25 An object of the present invention is to provide a partition coordinated system that allows to overcome or at least to limit the disadvantages and / or the problems of the prior art partition systems.

A further object of the present invention is to
30 provide a partition coordinated system which offers satisfactory results both in terms of functionality and aesthetics, in particular which allows to define or produce separate spaces characterised by a pleasing aesthetics and by a satisfactory separation or insulation degree, without

however giving the user a feeling of excessive isolation or the unpleasing feeling felt inside too closed, dark or too insulated spaces.

5 A further object of the present invention is to provide high possibility of adjusting the partition system, in particular a high degree of regulation of the reciprocal position of the panels or panes, as well as of the position of the panels or panes relative to the support uprights.

10 According to the present invention, it is possible to achieve the objects highlighted above by means of a partition coordinated system comprising one or more uprights and one or more panes or panels, these panes or panels being fastened to these uprights by means of adequate fastening means, this system further comprising
15 regulating means able to allow the adjustment of both the position of the fastening means along the uprights and the position of the panes relative to these fastening means.

In particular, the scopes and the objectives predetermined and highlighted above are achieved by means
20 of the embodiment of the present invention as claimed in at least one of the following claims.

Further scopes and objectives of the present invention are achieved through further embodiments of the present invention as specified and claimed in the dependant claims.

25 As it will be apparent from the description below, the general principle on which the present invention is based relates to the production of regulating means which allow a precise, simple and fast adjustment of the position of the panes. It will be also apparent that the principle on which
30 the present invention is based relates to the fact of making available for the installer during the installation, and subsequently for the end user, regulating means which are easy to be accessed, easy to be actuated by means of tools of common use, and which allow an accurate adjustment

both of the relative position of the panes or panels and of the respective position relative to the uprights supporting them.

In particular, the principle on which the present invention is based is that of making available for the installer and / or the user a reduced number of regulating means, which are anyway easy to be actuated and which allow a safe and accurate adjustment, and, thus, allow to avoid to give to the user a high number of regulating means, each of which must obviously be set and tuned with the others, with a lot of time and dedicated equipment.

BRIEF DESCRIPTION OF THE DRAWINGS

Below the description of some particular and / or preferred embodiments of the invention will be set forth, with reference to the accompanying drawings; however, it should be noted that the present invention is not limited to the described embodiments, but rather these embodiments relate to particular examples of the present invention, the scope thereof is described in the claims.

In particular:

- figure 1a shows a perspective schematic view of a partition wall which can be obtained by means of the partition coordinated system according to the present invention;
- figure 1b shows a top view of a rectangular structure comprising four partition walls constructed by means of the partition coordinated system according to the present invention;
- figure 1c shows a top view of two partition walls arranged at right angles and produced by means of the partition coordinated system according to the present invention;
- figure 2a shows a perspective and partially cross sectional view of a support upright used in the partition

coordinated system according to the present invention;

- figure 2b shows a perspective view of fastening means used in the partition coordinated system according to the present invention to fasten panes to the respective support uprights;

- figure 2c shows a perspective view of a detail of the fastening means;

- figure 2e shows a perspective view of a further detail of the fastening means used in the partition coordinated system according to the present invention;

- figure 2f is an enlarged view of an upper portion of figure 2e, with some parts removed for the sake of clarity;

- figure 2h shows a perspective view of particular fastening means used in the partition coordinated system according to the present invention;

- figure 3a is a three-dimensional schematic view in enlarged scale of a first detail extracted from figure 1b;

- figure 3b is a three-dimensional schematic view in enlarged scale of a second detail extracted from figure 1b;

- figure 4a is a three-dimensional schematic view in enlarged scale of a variant of figure 3b;

- figure 4b shows a partially sectional perspective view in enlarged scale of a first detail extracted from figure 4;

- figure 4c shows a partially sectional perspective view in enlarged scale of a second detail extracted from figure 4a;

- figure 4d is a side view in enlarged scale of a third detail extracted from figure 4a;

- figure 4e shows a front view in enlarged scale of a portion of figure 4a, with some parts removed for the

sake of clarity and comprising the detail of figure 4d.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

Below a description of some embodiments of a partition coordinated system 100 according to the present invention, as well as of some components of this partition coordinated system 100, will be set forth, with particular reference to the accompanying drawings.

However, it should be noted that, although the following description relates to some embodiments of the system 100 and to some particular uses or methods of use thereof, the possible methods of use and installation of the system 100 are not limited to those described hereunder with reference to the accompanying drawings; it should rather be noted that the following description shall be intended as comprising all embodiments of the system 100 and all the possible methods of use thereof, even if not explicitly mentioned in the description below.

In figure 1a, number 1 indicates a portion of partition wall produced by means of the partition coordinated system 100 according to a particular embodiment of the present invention. Therefore, this portion of partition wall comprises one or more panes (for example, glass panes), or one or more panels 3, as well as support uprights 2. Hereinafter, the terms "panes" and "panels" will be considered as equivalent, because of a common planar rectangular shape, even if it is readily apparent that the use of panes which present a curved conformation, provided that they are delimited by a rectangular contour, also falls within the scope of protection of the present invention. It should be noted that the support uprights 2 preferably extend between the floor (at the bottom in figure 1a) and the ceiling (at the top in figure 1a) of the space to be delimited or subdivided; in the particular case of figure 1a, the uprights 2 are fastened to the floor and

to the ceiling by means of feet 40, shown only in figure 1a, even if it should be noted that the particular solution of fastening to the floor and / or the ceiling lies outside the scope of the present invention and, therefore, it will
5 not be described in detail.

The panes 3 are fastened to the uprights 2 by means of hooking devices. In particular, hooking devices 2a comprise one first fastening unit 2b provided with at least one two-arm, or two-way, spider 2b suitable to fasten two adjacent
10 panes 3 to the upright 2 interposed between them.

Alternatively, hooking devices 2a' may also be provided, which comprise a variant of the first fastening unit 2b provided with one simple one-arm spider 2b' suitable to fasten one single pane 3 for example to an
15 upright 2 or also to a fixed part, such as a wall, a pillar and the like, as it will be better described hereunder with particular references to figures 2b, . 2c, 2d, 2e, 2f and 2h.

In the example shown in figure 1b (in which components already described with reference to figure 1a are
20 identified by the same reference numbers), the partition walls are positioned in such a way as to delimit a space of substantially rectangular shape. In particular, this space is delimited by using panes or panels 3 supported by uprights 2, whereto the panes 3 are fastened through
25 hooking devices of different type indicated above.

In particular, in figure 1b are show hooking devices 2a, each of which comprises one two-way spider 2b, hooking devices 2a', each of which comprises one one-way spider 2b' with a semi-curved single arm, suitable to fasten a wall to
30 an upright 2, as well as hooking devices 2a'', each of which comprises one one-way spider 2b'' with a simple curved arm, suitable to fasten a side of a pane 3 to a fixed part, such as for example a pillar or a wall 4.

Figure 1b also shows a pane 3a serving as a door and, for this purpose, fastened in a rotatable manner to a fixed pane 3 by means of one or more hinges 6 (described in more detail below; on the opposite side to the door or rotatable pane 3a relative to the hinge 6 a lock 5 is provided, suitable to lock the rotatable pane or door 3a to the fixed pane 3.

Figure 1c (in which, as usual, components already described with reference to other drawings are identified by the same reference numbers) shows a further use of the coordinated system 100; in particular, in the case illustrated in figure 1c, this partition system 100 is used to produce two partition walls arranged at right angles. Fixed or movable panes 3, two-way spiders 2b (at the top on the right in figure 1c), and one-way spiders 2b' (at the bottom on the left in figure 1c) are used again.

In figure 1c, the particular arrangement of each two-way spider 2b used in the case of the angle upright 2 (at the bottom on the right) should be noted.

As a result, the curvature of each two-way spider 2b, of each one-way spider 2b' and 2b'' can be chosen at will based on the particular conditions and / or requirements of positioning of the panes 3 relative to the upright 2.

Also in the case of figure 1c, the reference number 6 identifies a hinge suitable to connect each rotatable pane (not shown in figure 1c) to a fixed pane 3 supported between two consecutive uprights 2.

Figure 2a shows in detail some particular aspects of the uprights 2 used in the coordinated system 100. It is therefore clearly apparent from figure 2a that each upright 2 comprises a substantially cylindrical main body, from which longitudinal reinforcements 2e extend inward, which comprise two opposite tines in such a way as to give an open shape to these longitudinal reinforcements. Each

upright 2 further comprises a cylindrical central body 2f connected to the external shell 2d through a rib 2g.

Furthermore, the external shell 2d is interrupted in such a way as to define two mutually opposite abutments 2ca, from which two ribs 2cc extend inwards in the shell or main body 2d, these ribs being connected to each other by means of a further rib 2cb. The rib 2cb, together with the two ribs 2cc and to the opposite abutments 2ca, defines a seat 2c which extends longitudinally along the entire length of the upright and has substantially rectangular shape closed on three sides and open on the fourth side (i.e. the most external of the long sides of the rectangle).

Each spider 2b and 2b' comprises a first head 2bp shaped conjugated to the longitudinal seat 2c in order to engage it in a freely longitudinally sliding manner. For this reason, each head 2bp is substantially hammer shaped.

The uprights 2 usable in the system 100 can be produced through an extrusion process chosen among those known in the prior art. Different materials can be used in this process, such as for example plastic materials, PVC or metals, in particular aluminium.

However, it should also be noted that the uprights 2 usable in the system 100 can be produced by using different processes, such as for example milling and the like. It should also be noted that, although the aluminium gives the most satisfactory performances, so that in the present invention reference is often made to uprights made of aluminium, uprights of different materials perfectly fall within the scope of the present invention.

Again with reference to figure 1a, it is clearly apparent that each upright 2 supports two two-arm, or two-way, spiders 2b, or two one-arm, or one-way, spiders 2b'.

It is also provided for the centre-to-centre line between the upper and the lower spiders 2b/2b' of each

upright 2 to be substantially fixed. In particular, this is possible thanks to the particular regulating means used in the system 100 according to the present invention, regulating means which will be described in more detail hereunder.

However, it can already be noted that the fixed centre-to-centre distance between homologous spiders 2b/2b'/2b'' allows the standardized production of the panes 3. In fact, each of these panes 3 will be provided with adequate housings, normally holes arranged near longitudinal edges of the pane 3 at a distance which is fixed both in transverse and in longitudinal direction.

With reference to figure 2b, two adjacent panes 3 are illustrated, between which a support upright 2 is positioned. In the case illustrated in figure 2b, a further support element 2i is also provided, which is equipped with a second head 2ip substantially identical to a head 2bp to engage the seat 2c of a respective upright 2, whereon the spider 2b rests.

Each spider 2b or 2b' is provided with a transverse threaded hole 2ba suitable to receive a dowel able to engage the rear wall 2cb of the seat 2c in such a way as to cut engage the spider 2b/2b' to the respective upright 2 by friction, once the preferred position thereof along the upright 2 has been defined. The contrast action of the dowel received in the transverse threaded hole 2ba against the wall 2cb allows the spider 2b (or 2b') to be fastened along the upright 2.

In the free part of the seat 2c a profile 2h is inserted (shown only in figure 2b), which has substantially C-shaped cross section to couple with the seat 2c and to cover the free portions of the seat 2c, in such a way as to "close" the cylindrical external surface of the upright 2,

thus giving it and the partition system 100 an improved aesthetics.

From figure 2c (in which, as usual, parts already described with reference to other figures are identified by the same reference numbers), it is apparent that the support element 2i is provided with a transverse threaded hole 2ib suitable to receive a corresponding threading dowel, known and therefore not shown, this dowel being able to engage against the rear wall 2cb (see figure 2a) of the seat 2c in such a way as to fasten the support element 2i to the respective upright 2 by friction once a preferred position thereof along the upright 2 is defined.

On each support element 2i rests a corresponding first fastening unit 2b/2b', and thus the respective spider 2b or 2b') of the partition system 100.

Therefore, it is well understood that each spider 2b, each spider 2b', and each support element 2i can be made to slide along the respective upright 2 until they achieve the adequate position; once the adequate position is achieved, they can be fastened to the upright by acting on the dowels housed in the respective transverse holes 2ba and 2ib. It should also be noted that the support element 2i is used to assure the stability of the longitudinal position of the spiders 2b, 2b' along the upright, in particular to prevent them from sliding downward because of the weight of the panes 3 supported by them. Furthermore, it is also possible to avoid the use of the support element 2i in all that cases in which this element is not deemed necessary, for example in the case of panes 3 or panels particularly light.

With reference to figure 2c, the support element 2i comprises a further vertical threaded hole 2ia, in which a corresponding dowel 2ia' is housed. It is therefore understood that the action of the dowel 2ia is exerted from the bottom against the corresponding spider 2b and

therefore allows to vary in vertical direction the reciprocal distance between the spider 2b and the support element 2i. Naturally, this also applies in the case of a one-arm spider 2b'.

5 In the case illustrated in figure 2c, it is then possible to proceed with fastening the support element 2i in the adequate position, then allowing the fastening means 2b, 2b' to slide along the groove, until they rest on the support element 2i. By acting on the dowel 2ia', it is
10 therefore possible precisely to vary the position in height of the fastening means 2b, 2b'; once the desired position, defined by the distance between the holes of the panes 3, is achieved, it is possible to fasten the spiders 2b, 2b' along the respective upright 2 by acting on the dowel 2ba'
15 housed in the threaded transverse hole 2ba.

Each hooking device 2a/2a'/2a'' comprises a second fastening unit 2l, anchored in a rotatable manner to the ends of the respective spider 2b/2b'/2b'' and suitable to be fastened to the panes 3 as it will be described in more
20 detail hereunder. From figure 2e it is easily understood that the second fastening device 2l comprises an anchoring member 2l provided with a head 2la interfacing a corresponding pane 3 and a portion 2lb suitable to be coupled to the corresponding spider 2b/2b'/2b'' in a
25 rotatable manner by means of an axial symmetric member which comprises, in the embodiment illustrated in figure 2f, a screw 2bc. Each spider 2b, 2b' and 2b'' presents at least one respective free end provided with a fork 20 comprising end portions 2bx and 2by overlapped in figure 2e and
30 substantially identical to house a second fastening device 2l. It should be noted that each head 2la presents a substantially parallelepipedal shape and presents internally a longitudinal through cavity / seat 2ld (from the top to the bottom in figure 2e) which houses in a

longitudinally slidable manner a substantially parallelepipedal plate 2m' and a screw member 2le. This latter comprises a dowel 2le suitable to support the plate 2m' in order to vary at will a position of this plate 2m' inside the cavity 2ld parallel to the upright 2. In particular, from figure 2f it is clear that each anchoring member 2l presents a slot 2lm of elongated shape obtained in the corresponding head 2la transversely to the cavity 2ld. In particular, as it is apparent from the figure 2f, the slot 2lm connects the through seat 2ld also obtained in the head 2la with the surface of the head 2la which abuts against the pane 3.

The anchoring of the pane 3 to the anchoring means 2l occurs as described below.

First of all, in a through hole 3c of the pane 3 is inserted a threaded element 3b, for example a screw provided with a head suitable to abut against the external face of the pane 3, at opposite side thereto relative to the corresponding anchoring member 2l. The pane, together with the threaded element 3b received in the through hole 3c, is then moved close to the anchoring member 2l until the screw 3b engages the threaded through hole 2m of the plate 2m' received in a slidable manner in the seat 2ld. In the subsequent phase, one proceeds by acting on the dowel 2le housed in the cylindrical seat 2le'; in this way, a thrust action is exerted from the top to the bottom against the plate 2m', thus moving it, together with the screw 3b and the pane 3. On the other hand it is obvious that, by acting on the dowel 2le in an opposite manner, the plate 2m', and thus the pane 3, are displaced by gravity from the top to the bottom.

Once the desired position for the pane 3 is achieved, one proceeds with completing the anchoring of the pane 3 to the second fastening units 2l by acting on the

corresponding screws 3b. It is apparent that the action on the dowel 21e allows a fine adjustment of the position of the pane 3.

Figure 2h shows a spider 2b'' coupled to a second fastening unit 2i to fasten a pane or panel 3 to a fixed structure, such as for example a masonry work 4, which can be obtained, for example, although without limitation, through a pillar, a wall or the like.

A description of these units is superfluous and is thus omitted.

It should be noted that this spider 2b'' carries at the opposite end of the anchoring member 21 a further anchoring member 4a connected to the fixed structure by means of threaded connections.

However, it should be noted that other solutions for anchoring the anchoring means 4a to the wall 4 can be adopted, based on the circumstances and the requirements; these alternative solutions are however known from the prior art and, as they lie outside the scope of the present invention, they will not be described in detail.

In view of the above description, the various possibilities of adjustment offered by the partition coordinated system 100 are well understood. A first adjustment is the adjustment of the angular orientation of the panes or panels 3 relative to the uprights 2 or to the other supports such as walls or the like 4. This adjustment of the orientation is in particular assured by the fact that each second fastening unit 21 is carried rotatable by the corresponding first fastening unit, both of the two-way type 2b and of the one-way type 2b' or 2b''.

It is therefore apparent that through the system 100 it is possible to obtain even non perfectly rectilinear partition walls, in particular partition walls in which the panes 3 have a particular orientation.

A further possibility of adjustment is the possibility of choosing the position of the spiders 2b and / or 2b' along the uprights 2. The possibility of adjustment is assured by the fact that these spiders are slidable along
5 the respective uprights 2, and can be fastened along them by acting on the respective dowel 2ba'.

A further possibility of adjustment of the height and / or the position of the panes 3 along the uprights 2 relates to the use of the support elements 2i, also
10 connected to the uprights 2 in correspondence of desired positions by acting on the respective dowel 2ib'.

Furthermore, it should be reminded that it is possible to adjust the position of the spiders 2b and / or 2b' relative to the corresponding support element 2i by acting
15 on the dowel 2ia' housed inside the support element 2i.

A further possibility of adjustment relates to the reciprocal position of the pane or of the panes relative to the respective anchoring member 2l by acting on the respective dowels 2le.

20 Figure 3a shows an example of a hinge 6 suitable to be used in combination with the system 100 according to the present invention. The hinge 6 comprises, in particular, a portion 6a suitable to be fastened to a fixed pane 3 (not shown in figure 3a) by means of suited means such as for
25 example screws 6ab received in through holes obtained both in the plate 6a of the hinge and in the fixed wall 3.

The hinge 6 of figure 3a further comprises a part 6b, hinged and thus connected in a rotatable manner to the plate 6a. Also the plate 6b will be fastened to the
30 rotatable pane or door (not shown in figure 3a) according to the solutions deemed adequate by those skilled in the art. However, these solutions, such as the solutions relating to the type of rotatable constraint between the plate 6b and the plate 6a, lie outside the scope of the

present invention and a detailed description thereof is therefore omitted.

Figure 3b shows an example of a lock 5 suitable to be used in combination with the system 100. This lock 5 presents two plates 5aa and 5ab designed to be positioned on the opposite faces of the rotatable pane or door (not shown in figure 3b). On the plate 5aa a handle 5ba is provided; at the same manner, on the plate 5ab a handle 5bb is provided. Furthermore, a hole 5d is provided for a safety element such as for example a key or the like. The lock further comprises two plates 5ca and 5cb designed to be arranged, in correspondence of the set of the plates 5aa and 5ab, respectively on the opposite sides of a fixed pane (not shown in the figure).

Figure 4a shows a schematic view of a substantially annular handle 7, particularly suitable to be used in combination with the system 100. it should be stressed that, although in figure 4a the handle 7 is represented as comprising two mutually opposite parts 7a and 7b, arranged on the opposite sides of a rotatable pane 3, which in this case serves as a door and as a door it will be indicated hereunder, there are also possible solutions in which only one of the two parts 7a and 7b shown in figure 4 a is provided, in this case on a single side of the rotatable pane or door 3. As the two parts 7a and 7b are substantially identical, below only the part 7b will be described, keeping in mind that the observations set forth herein are deemed to be applicable also to the case of the part 7a.

Each part 7a / 7b of the handle 7 will be individually indicated, for the sake of convenience, with the term handgrip, which comprises in particular a part 7aa / 7ba which is vertical in figure 4a. The two parts 7aa and 7ba present substantially elliptical cross section and are

mutually connected by means of two modular portions 77 which comprise respectively two segments 7ab and 7bb and two segments 7ac and 7bc.

5 The enlargement of figure 4b shows the connection of the upper part 7bb with the vertical part 7ba with elliptical cross section; nonetheless, it should be noted that the description set forth below with reference to figure 4b also applies to the connection of the part 7bc with the part 7ba, as well as to the connection of the horizontal parts 7ac and 7ab with the upright 7aa, if these latter are provided. Through milling of a rod 7ba with elliptical cross section, a seat is obtained on one end of the rod, this seat being suitable to house the end of a rod 7bb with cylindrical cross section.

15 In particular, from figure 4b it is understood that it is possible to make the end of the part 7ba perfectly to coincide with the end of the part 7bb by means of an adequate milling of the rod 7ba (of the respective end thereof). Furthermore, inside the part 7bb a through hole is provided, inside which is housed a threaded fastening element 7bf, for example, although without limitation, a stud, suitable to engage a threaded blind hole 7bd obtained on the end of the rod 7ba. By acting the stud 7bf it is therefore possible to connect integrally the rods 7ba and 7bb. The same solution is adopted to connect the lower end (in figure 4a) of the rod 7ba with the horizontal element or the rod 7bc.

30 Figure 4c schematically shows the coupling between the two horizontal parts 7ab and 7bb by means of a threaded connection 71, keeping in mind that the considerations set forth below can be applied also to the integral fastening of the horizontal parts 7ac and 7bc of figure 4a. In particular, a blind threaded hole 7al is obtained in the part 7ab; in the same manner, the end 7be opposite to the

elliptical upright 7ba of the hole 7bd of the horizontal part 7bb presents a threaded hole 7dd. The threaded connection 71 comprises a hooking element 7bi, substantially a stud 7bi, which presents respective
5 threaded ends which engage respectively the hole 7al and the hole 7dd. In this regard, the threadings of the hooking element 7bi are in the opposite direction, so that by rotating the element 7bi in one direction both its ends are screwed inside the respective threaded holes 7al and 7be,
10 whilst by rotating the element 7bi in the opposite direction the threaded ends will be loosened with respect to the threaded holes 7al and 7be.

As shown in figures 4d and 4e, the hooking element 7bi comprises a head 7bl, for example, although without
15 limitation, with hexagonal shape. On the hooking element 7bi, on the side toward the horizontal element 7bb of the handle, the threaded connection a coaxial cylindrical member 7bh is keyed, having a seat corresponding to the head 7bl of the screw 7bi, as well as a cylindrical seat
20 suitable to receive the threaded part 7bi'' which extends from the head 7bl. The coaxial cylindrical member 7bh gives the handle 7 a pleasing harmonious aesthetics and it furthermore avoids the use of particular tools for the rotation of the bolt 7bi, rotation which, on the contrary,
25 can be made manually until the horizontal portions 7ab and 7bb of the handle are integrally connected.

Therefore, it has been verified that the coordinated system 100 allows to achieve the predetermined objectives and scopes described above. In particular, the partition
30 system 100 can be obtained through substantially simple processes, and thus with low costs. Besides, the numerous possibilities of adjustment provided by the system 100 allow easy and simple installation, which has never been achieved with the partition systems known in the prior art.

Furthermore, easy installation means low installation costs. In addition, little adjustments and / or regulations possible during regulation allow to give the separate spaces obtained through the system 100 a particular harmonic, and thus pleasing, aesthetics, as well as a functionality never achieved with the partition systems known in the prior art. It should also be noted that various modifications can be made to the embodiments and the examples of the system 100 described above.

Therefore, it should be kept in mind that the scope of the present invention comprises these changes or modifications, this scope of the present invention being defined by the claims.

The use of the partition coordinated system 100 suitable to produce partition walls for delimiting spaces is easily understood from the above description and requires no further explanations.

Lastly, it is apparent that modifications and variants can be made to the system 100 described and illustrated herein without however departing from the protective scope of the present invention.

CLAIMS

1. A partition coordinated system (100) to produce walls suitable for delimiting spaces, said partition coordinated system comprising at least one partition panel (3), at least one upright (2) suitable to support said at least one panel (3) and hooking means (2a) (2a') (2a'') suitable to rigidly connect said at least one panel (3) to each said upright (2); characterised in that said hooking means (2a) (2a') (2a'') comprise a first fastening unit (2b) (2b') (2b'') suitable to connect said at least one panel (3) along said at least one upright (2) in a given vertical position and at least one second fastening unit (2l) suitable to connect said at least one panel (3) to said at least one upright (2) oriented along a given angular position.

2. A system according to claim 1, characterised in that said at least one upright (2) comprises at least one longitudinal seat (2c) of given shape, and in that said first fastening unit (2b) (2b') (2b'') comprise one first head (2bp) shaped complementary to said longitudinal seat (2c) in order to be suitable to engage with said seat (2c) in a slidable manner.

3. A system according to claim 2, characterised in that said longitudinal seat (2c) is delimited internally by an abutment wall (2cb), the said first fastening unit (2b) (2b') (2b'') comprising one first at least partially threaded through hole (2ba) in which is housed one first contrast threaded dowel (2ba') suitable to cooperate with said abutment wall (2cb) to fasten said first fastening unit (2b) (2b') (2b'') along said at least one upright (2) in a predetermined position.

4. A system according to any one of claims 1 to 3, characterised in that said first fastening unit (2b) (2b') (2b'') comprises a first support element (2i) so

shaped as to be coupled in a slidable and selectively fixed manner along said at least one upright (2) in a given position.

5 5. A system according to claim 4, characterised in that said first support element (2i) comprises a second head (2ip) shaped conjugated to said longitudinal seat (2c) to engage said longitudinal seat (2c) in a slidable manner.

10 6. A system according to claim 5, characterised in that said second head (2ip) presents a second at least partially threaded through hole (2ib), in which a second contrast dowel (2ib') is housed, suitable to cooperate with said abutment wall (2cb) to fasten said first support element (2i) along said at least one upright (2) in a longitudinally given position.

15 7. A system according to claim 6, characterised in that at least one said first support element (2i) comprises one at least partially threaded third through hole (2ia) arranged substantially parallel to said at least one upright (2) to house a third contrast dowel (2ia') suitable to be operated
20 so as to serve as an abutment against said first fastening unit (2b), (2b'), (2b'') is such a way as to adjust a position thereof along the respective said upright (2).

8. A system according to any one of the previous claims, characterised in that each said first fastening unit
25 (2b)(2b')(2b'') comprises at least one arm (2b) (2b') (2b'') provided with one said first head (2bp) to support, in end position, one said panel (3) through the interposition of one said second fastening unit (2l).

30 9. A system according to claim 8, characterised in that each said second fastening unit (2l) comprises an anchoring member (2l) provided with an interface (2la) so shaped as to couple with said at least one panel (3) in a rigid manner; said interface (2la) presenting a cavity (2ld) of substantially rectangular shape which extends parallel to

each said upright (2) and is provided with a central portion (21e') of substantially cylindrical shape; said second fastening unit (21) further comprising a substantially rectangular plate (2m') housed inside said cavity (21d) in a longitudinally slidable manner for resting an adjustment member (21e) for adjusting the longitudinal position relative to one said upright (2), in such a way that by acting on this adjustment member (21e) it is possible to vary at will the position of said plate (2m') inside said cavity (21d).

10. A system according to claim 8 or 9, characterised in that said at least one arm (2b)(2b')(2b'') comprises at least a fork (20) provided with two ends (2bx), (2by) and in that said anchoring member (21) comprises a first end (21b) suitable to be housed between said two ends (2bx), (2by) in a rotatable manner.

11. A system according to claim 10, characterised in that said first end (21b) is coupled in a rotatable manner between said two ends (2bx), (2by) by means of an axial symmetrical member (2bc) housed in through holes of said first end (21b) and of said opposite ends (2bx), (2by).

12. A system according to claim 11, characterised in that said anchoring member (21) presents a seat (21m) elongated transversely to said upright (2) and communicating with said cavity (21d); said second fastening unit (2b)(2b')(2b'') comprising a second support element (3b) rigidly couplable to the respective said panel (3) and provided with an elongated portion (30) engaging said seat (21m) elongated and coupled to said plate (2m') stably to connect the respective said panel (3) to said upright (2).

13. A system according to claim 12, characterised in that said second support element (3b) comprises a threaded stem (3bb) and in that said elongated seat (21m) communicates with said cavity (21d); said plate (2m') comprising a

threaded through hole (2m) suitable to house said second threaded stem (3b) in an axially rotatable manner.

14. A system according to any one of the preceding claims, characterised by comprising at least two panes (3) and at least two fastening means (2b), (2b'), (2b'') suitable to fasten said at least two panes (3) to said at least one upright (2).

15. A system according to any one of the previous claims, characterised in that at least two said panels are mutually coupled in a rotatable manner around an axis parallel to each said upright (2) by means of hinges and / or the like.

16. A system according to claim 15, characterised by comprising at least one handle (7) substantially ring-shaped and provided with two respective first portions (7aa) (7ba) substantially parallel to each other and mutually opposite suitable to be arranged on opposite faces of a corresponding said panel (3), to act as handgrip and to allow said corresponding panel (3) to be actuated in rotation; said first portions (7aa) (7ba) being connected to each other by means of a second portion (77) of the modular type comprising two segments (7ab) (7bb), (7ac) (7bc).

17. A system according to claim 16, characterised in that said two segments (7ab) (7bb), (7ac) (7bc) are substantially perpendicular to the corresponding said panel (3) and are mutually connected by means of threaded connections (71).

18. A system according to claim 17, characterised in that each said threaded connection (71) comprises a stud (7bi) for connecting said segments (7ab) (7bb), (7ac) (7bc) which is substantially transverse to the corresponding said panel (3) and comprising a manoeuvring member (7bl) rigidly coupled to said stud (7bi) for the respective assembly.

19. A system according to claim 18, characterised in that said two segments (7ab) (7bb), (7ac) (7bc) are cylindrical and

substantially coaxial to each other; each said threaded connection (71) is substantially coaxial to said segments (7ac)(7bc) and presents a cylindrical member (7bh) substantially coaxial to said two segments (7ab)(7bb), (7ac)(7bc) which has radius substantially identical to at least one of said respective segments (7ab)(7bb), (7ac)(7bc) in order to facilitate, in use, a rotation of said stud (7bi) in assembly phase, and to give a pleasing aesthetics to said handle (7).

10 20. A system according to claim 19, characterised in that each said first portion (7aa) (7ba) presents substantially elliptical cross section.

21. A system according to any one of claims 16-20, characterised in that each said first portion (7aa) (7ba) is substantially parallel to the corresponding said panel (3), whereto it is connected through two segments (7bb, 7bc) substantially perpendicular to said at least one panel (3), said segments (7bb, 7bc) being rigidly connected at one side to the opposite ends of said portion (7ba) and at the opposite side to said at least one panel (3).

22. A system according to claim 21, characterised in that each said segments (7bb) (7bc), (7ac) (7ab) is connected to the corresponding said first portion (7ba) (7aa) by means of studs (7bf).

25 23. A system according to any one of claims 15-22, characterised by comprising at least one lock (5) supported by one said panel (3).

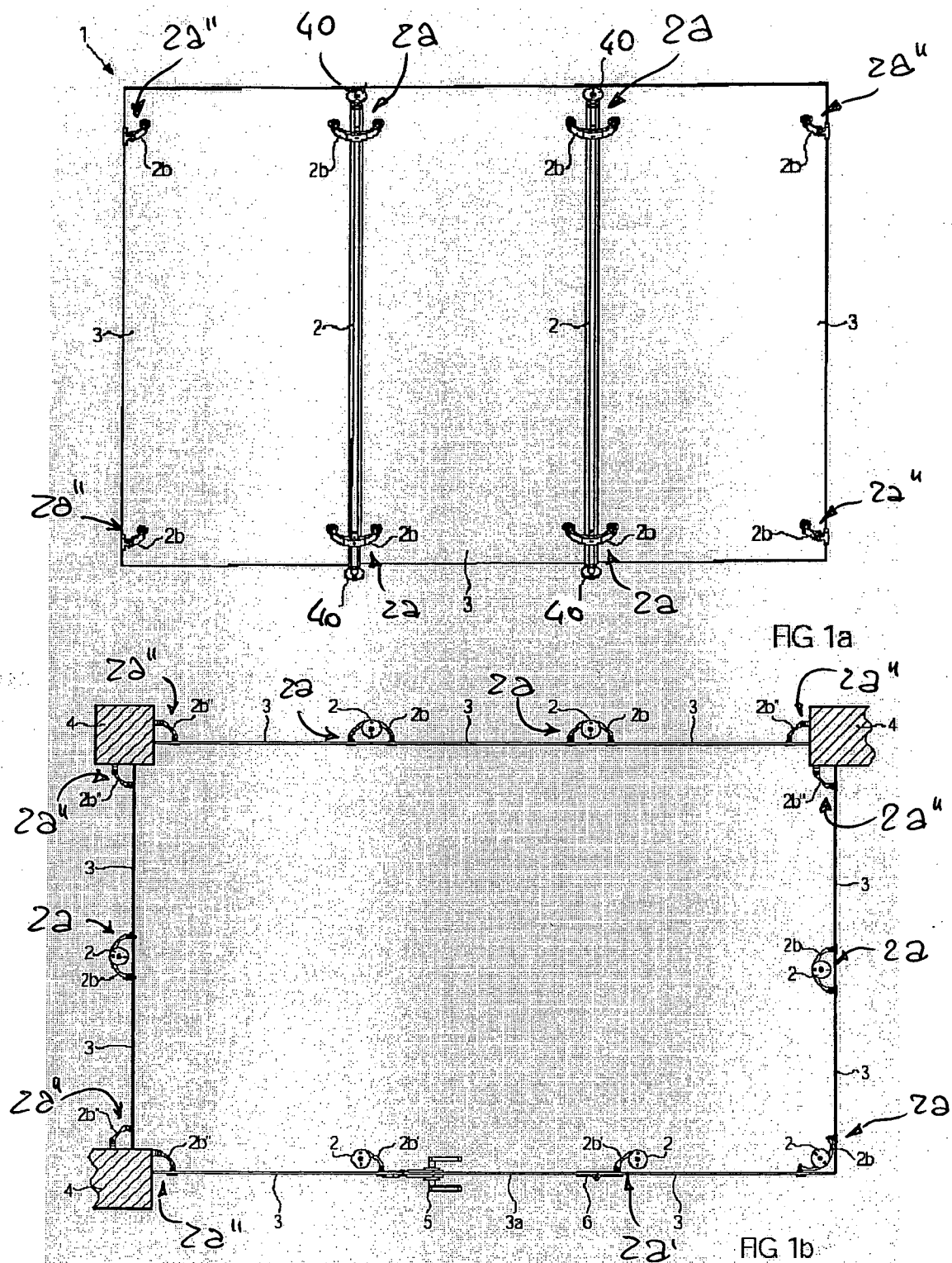
24. A system according to any one of the previous claims, characterised in that each said upright (2) is produced by extrusion.

25. A system according to any one of claims 8-24, characterised in that each said arm (2b) (2b') (2b'') is produced by extrusion.

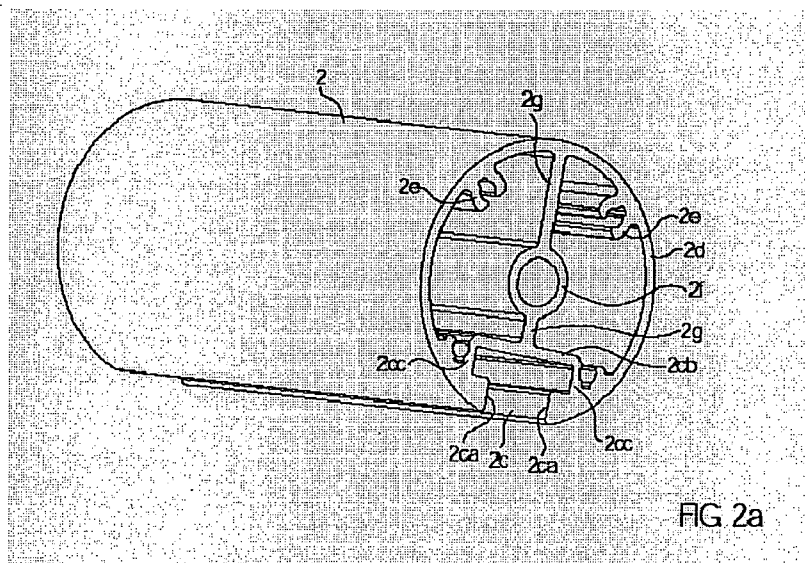
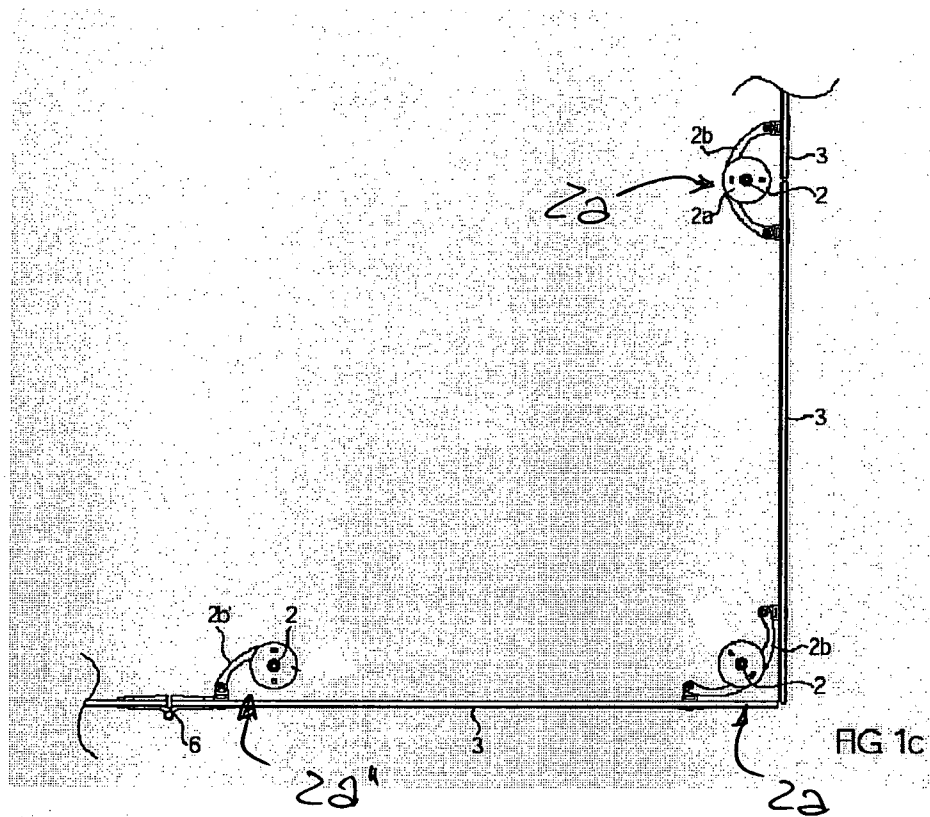
26. A system according to any one of claims 4-25, characterised in that each said support element (2i) is produced by extrusion.

27. A system according to claims 25-26, characterised in
5 that at least one said upright (2) and / or at least one said arm (2b)(2b')(2b'') and / or said support element (2i) is made in aluminium.

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3/6

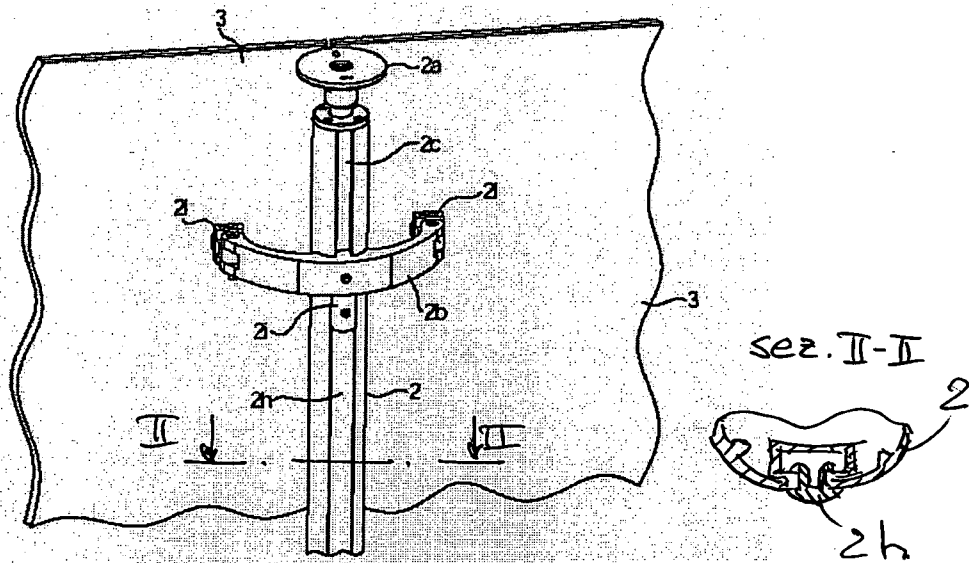


FIG 2b

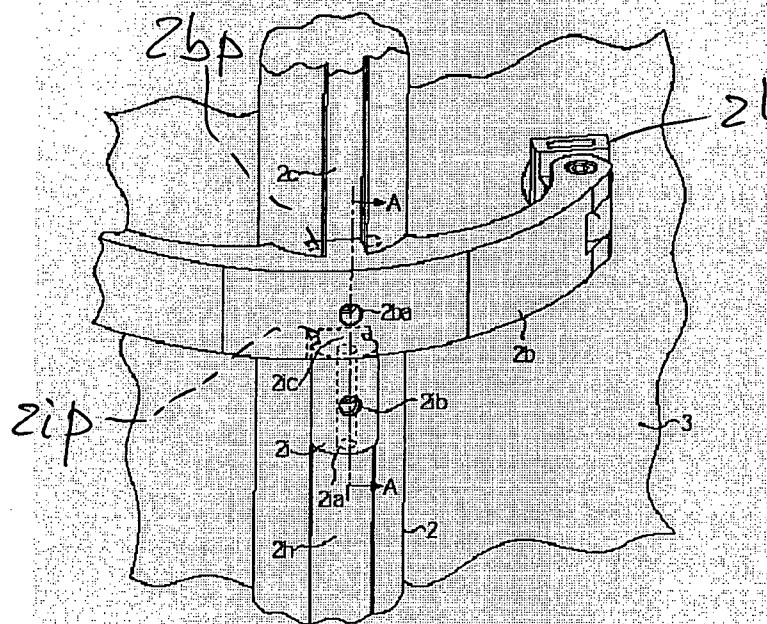


FIG 2c

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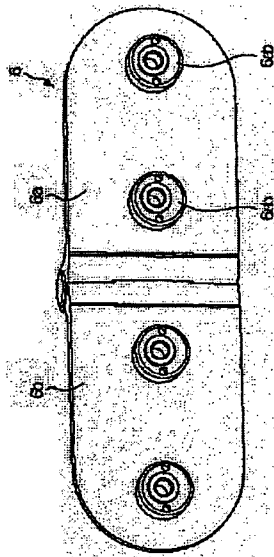


FIG 3a

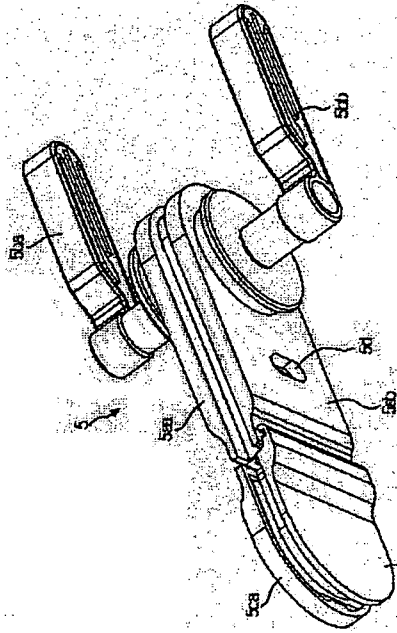


FIG 3b

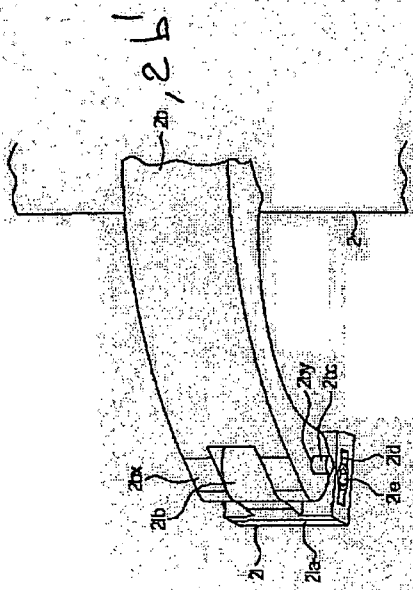


FIG 2e

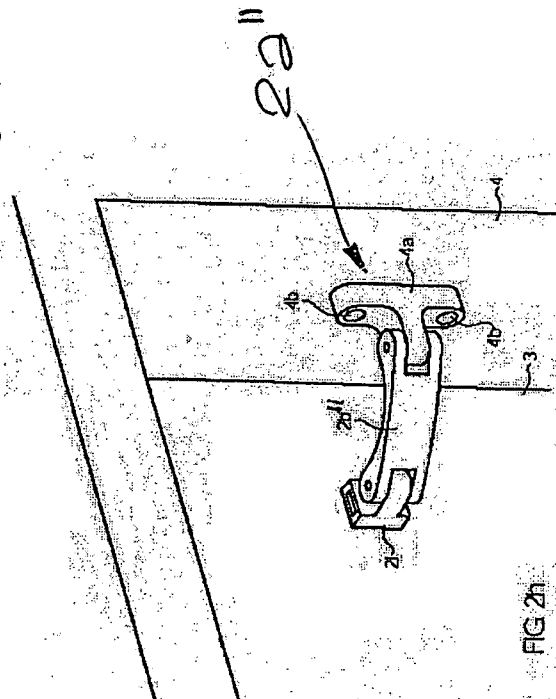
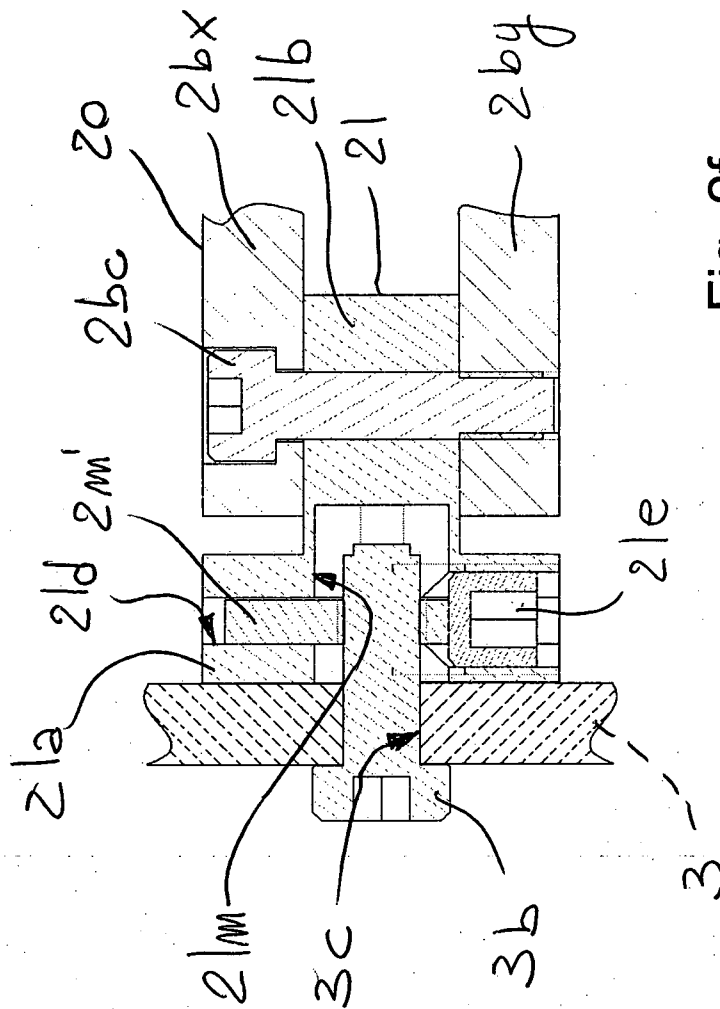


FIG 2h

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