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(54) **HEIGHT-ADJUSTABLE BARRIER AND METHOD FOR CONVERTING A BARRIER SECTION TO A HEIGHT-ADJUSTABLE BARRIER**

HÖHENVERSTELLBARE BARRIERE UND VERFAHREN ZUR UMWANDLUNG EINES
BARRIEREABSCHNITTS IN EINE HÖHENVERSTELLBARE BARRIERE

BARRIÈRE RÉGLABLE EN HAUTEUR ET PROCÉDÉ DE CONVERSION D'UNE SECTION DE
BARRIÈRE EN UNE BARRIÈRE RÉGLABLE EN HAUTEUR

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Description

Technical field

[0001] The present invention relates generally to a barrier section to be used for shielding of areas such as a balcony, a platform, a restaurant area or the like, and which is prepared to easily be converted to a height-adjustable barrier for providing a higher shield which is adjustable.

Background art

[0002] When a contractor or developer, for example within the building sector, installs barrier sections at balconies or the like he/she must decide on if the balcony should have a fence, a full-height weather protection in the form of a glass wall or the like. The latter is very expensive, and normally, a tenant who will buy for example a flat in the building, must decide if he/she wants the full weather protection or not and if he/she can afford it at an early stage at the contract stage. This is a problem for the developer, because the developer wants to know this decision at this early stage but will eventually not receive it. For the end-user (the tenant) it might be difficult to know if there is a need in the future for a higher weather protection than the fence/barrier sections included in the price. It is a problem to take a decision regarding if he/she wants a height-adjustable barrier or not from the start, when signed a contract at a new building. It may be convenient to postpone the decision until he/she can afford it or wants it, if the tenant is not sure of the need at the contract stage.

[0003] There are a number of known solutions of fixed barrier sections/fences as well as height-adjustable barriers used for shielding of areas such as balconies, platforms, restaurant areas or the like.

[0004] One example of a height-adjustable barrier is shown in the patent application EP2775057A1. This provides a good solution for shielding of an area and a smooth and nice looking solution which is adjustable between a lower position and a raised position. Another example is shown in WO 2017060742A1. Both solutions provide a complete height-adjustable barrier which may be locked in the lower position and unlocked by a slight pressure downwards on a movable part of the barrier, such as the movable part is released, wherein it is raised from the fixed lower part. The motion is facilitated by a lockable/unlockable piston/gas or fluid spring. Other similar solutions may be seen in WO 2018/163029A1 and EP2395167A1. Both these solutions also show complete height-adjustable barriers each comprising a first barrier section with a panel arranged between two tube-shaped posts. Each post comprises a lower end and an upper end and a slit, wherein the slit is arranged to accommodate a sliding front panel of a second barrier section. The barriers further comprise a second barrier section and a fluid spring fitted into each of the first and second post,

wherein the barriers according to the cited art are pre-mounted with the second barrier section connected to the first barrier section via the fluid spring and where the second barrier section is movable inside the first, and where the motion is facilitated by the fluid spring. Yet another similar solution is presented in IT VR20120158A1. No prior art solutions can provide a fixed barrier or fence which is convertible to a height-adjustable barrier.

Summary of invention

[0005] An object of the present invention is to provide a height-adjustable barrier comprising a first barrier section, and a method for converting the first barrier section to a height-adjustable barrier. These objects of are achieved by the independent claims of the application.

[0006] The following aspects regarding a first barrier section and a kit of parts are not according to the invention and are present for illustration purposes.

[0007] A first barrier section to be used for shielding of areas such as a balcony, a platform, a restaurant area or the like, is disclosed. The first barrier section comprises a first panel and two tube-shaped first posts which are fixedly arranged at opposite sides of the first panel, to support the first panel in an erect position. Each first post is further arranged to be attached to a substrate (like a floor, a balcony, a platform etc.), preferably via a foot member. The respective first post comprises a lower end, an upper end arranged opposite the lower end and a slit which extends from the upper end in direction towards the lower end of the respective first post. The slit is a cut out in the wall material of the first post and the respective slit faces the other first post. This means that the two first posts are arranged with their slits facing the other post so that a second panel of a second barrier section can be slidably arranged into the slits. The respective first post further comprises a stop arranged to fit inside the respective tube-shaped first post, which stop comprises a stop surface which is to be arranged at a distance from the lower end of the respective first post. The respective first post further is arranged to, from the upper end of the first post, telescopically receive a second post of a second barrier section inside the respective first post, and the respective stop is arranged to prevent a further motion of a second post of a second barrier section inside the respective first post in direction towards the lower end of the first post.

[0008] Such a solution provides that a barrier section may be complemented later with a height-adjustable second barrier section to provide a higher shield compared to the base barrier section. This is a great advantage, since for example a developer within the building sector or the like may order and install a barrier section according to the invention without the need of knowing if the barrier section is to be height-adjustable barrier or not, during the construction process or later. It is also a great advantage for the end-user, for example a tenant at a

cooperative apartment, which tenant now do not need to decide regarding if he/she wants a height-adjustable barrier or not from the start when signing a contract at a new building, but can postpone the decision until he/she can afford it or wants it, if the tenant is not sure of the need at the contract stage. The barrier section is in this way prepared for an installation of a second barrier section such as a height-adjustable barrier is possible, wherein a great freedom is achieved. The stop with its stop surface may be pre-assembled into the respective post as a bracket or the like or may be inserted into the respective post from the top end of the post when the post is assembled to the substrate, for example as a spacer or the like. It is important that the stop surface of the stop is arrangeable at a determined position in the post to position the end of a second barrier post into the posts of the first barrier section. The stop may also be arranged to position an end of a gas or fluid spring of a second barrier section in an end position inside the respective first post of the first barrier section. Prior art barrier sections do not provide a possibility to complement the "base" barrier section to a height-adjustable barrier. If a known barrier section is to be complemented with a second barrier section to a height-adjustable barrier, it is very difficult and expensive, since barrier sections normally are arranged side-by-side along for example the outer edge of a balcony, which makes it hard or impossible to do this on an already installed barrier section. The inventive barrier section is prepared for an easy installation of a second barrier section which provides a function to convert the barrier section to height-adjustable barrier at a later stage, without that the barrier section being very expensive, because of a cost-efficient solution of providing the function.

[0009] The first barrier section preferably comprises tube-shaped first posts with a height which is approximately equal to the height of the first panel and the panel is attached to the first posts in a permanent manner e. g. by glue, screws, clamping or any other suitable means known in the art. The material of the panels could be plastic, glass, wood, metal or any other material suitable for the conditions on the construction site and for the desired properties of the barrier section.

[0010] According to an embodiment, the stop comprises guiding means arranged to guide an end of second post of a second barrier section towards the stop surface of the stop. By the stop having guiding means, provides a secure positioning of the end of a second post inside the first post of the first barrier section when introducing a second post inside the first post and the guiding means guides the end towards the determined position in the first post. The end of the second post may be the end of a gas spring or the like, arranged at the second post, and in this case, the guiding means of the stop guides the end of the gas spring of the second post to a determined position inside the first post of the first barrier section. The position is preferably at a determined distance from the bottom of the first post and preferably at a central

position between the sidewalls of the first post. By the guiding means of the stop, the invention provides an easy installation of a second post of a second barrier section inside the first posts of the first barrier section. This is an advantage especially during installation after the building is finished, since for example scaffolding may not be needed.

[0011] According to an embodiment, the stop surface of the stop substantially is U-shaped and connected to the guiding means. For example, this embodiment may comprise one or several U-shaped brackets, where the guiding means are outwardly reaching "wings" connected to the U-shaped stop surface. The guiding means may for example be two wings connected to a U-shaped stop surface and extending outwardly in direction towards insides of two opposite walls of the first post. This type may be pre-assembled into the first post as one or preferably two wing-shaped brackets with U-shaped stop surfaces, ready to guide and to hold an end of a second post, or more preferred guide and then hold an end of a gas spring which is attached with an upper end inside a second post and with a free end arranged to be fitted into the first post by means of the stop. The U-shaped stop may also be for example spacer or the like which may be inserted from the open top of the first post into an end position near the lower end of the first post. The guiding means may preferably be a part of the spacer.

[0012] According to an embodiment, the stop is two stops spaced apart such as a free space is available between the two stops. This enables that and end, for example an end of a gas spring, may extend below the stop such as a mid-part of the end of the gas spring enters the free space between the stops.

[0013] According to an embodiment, a cover is removably arranged at the slit of the first post, wherein the cover is arranged for covering the slit when a second panel of a second barrier section is not slidably arranged in the slit. The first barrier section is prepared for a second barrier section to convert it to a height-adjustable barrier. Further, the respective first post of the first barrier section is prepared for accommodate a second post of a second barrier section inside the post and also prepared with the slit for the second panel of the second barrier section. To have a nice look of the first posts of the first barrier section, the slits are "invisible" by means of a respective cover which covers the respective slit. The cover is easy to remove if the first barrier section is to be converted to a height-adjustable barrier. The cover may be a number of covers arranged to cover other slits and grooves than the elongated slit arranged for a panel. Other slits and covers may for example be arranged for complementing the first post with sliding blocks which may be needed at the top of the first post for guiding the motion of a second post inside the first post.

[0014] According to an aspect of the invention, a height-adjustable barrier arranged for shielding of areas such as a balcony, a platform, a restaurant area or the like, is disclosed. The height-adjustable barrier compris-

es a first barrier section as defined in any of the preceding embodiments above and also a second barrier section. The second barrier section comprises a second panel, two tube-shaped second posts fixedly arranged at opposite sides of the second panel, to support the second panel in an erect position. Each second post is further arranged to be telescopically arranged inside the respective tube-shaped first post of the first barrier section, wherein the respective second post comprises a lower end and an upper end arranged opposite the lower end. Further, the respective second post comprises a gas or fluid spring attached with a first end to an inside of the second post at a distance from the upper end of the second post. The gas or fluid spring further comprises a second end which is opposite the first end. The second barrier section is telescopically arranged relative the first barrier section by that the respective second post of the second barrier section is telescopically arranged inside the respective first post of the first barrier section. The second panel of the second barrier section is slidably arranged in the slit of the respective first post of the first barrier section, and the second end of the respective gas or fluid spring of the second barrier section is arranged at the stop of the respective first post of the first barrier section.

[0015] Such a system is first of all easy to install since the first post of the first barrier section is prepared for providing a second barrier section and by that achieving a height-adjustable barrier, i.e. a system for providing a first barrier section which is possible to convert to a height-adjustable barrier if wanted. Secondly, no known solutions on the market provide a possibility to convert a fixed and installed barrier section to a height-adjustable barrier, without the need of extensive reconstruction with high costs and a lot of man hours invested.

[0016] If there is a need for a higher barrier than the first barrier section, from time to time, the barrier according to the invention may be raised to its raised mode by that a slightly pressure is applied to the second panel of the second barrier section. The raised mode is suitable for forming a wind-guard, built-in balconies, or a barrier for privacy or sound-damping and the like. In a lower mode, the barrier sections are arranged overlapping at a short distance from one another, to form a double panel, and the barrier gives the impression, at least from a distance, to consist of a single panel. In many applications this is a desirable appearance. The panels need not be of the same material, the movable second barrier section could for example have a panel of glass, while the stationary panel of the first barrier section may be of wood or other material. The advantages concerning the functionality of converting the first barrier section to a height-adjustable barrier are explained above. To provide an "automatic" raising of the second barrier section relative the first barrier section, the gas or fluid spring preferably comprises a lock such as the spring is releasable and lockable, by a compression of the spring, like in known solutions on the market.

[0017] According to an embodiment of the invention,

the second end of the gas or fluid spring comprises a transverse shaft, which shaft is arranged to be received by the stop of the first post of the first barrier section. Such a solution provides an easy installation of the second post with its gas or fluid spring, where an upper end of the spring is attached inside the second post, preferably near the top of the same, and the second end of the gas or fluid spring is guided by the guiding means towards the stop. The second end of the gas or fluid spring arrives with its shaft in the preferably U-shaped stop surface where the shaft is received and hold in the right position inside the first post. Thereby the respective second post of the second barrier section is positioned and held in place wherein the second barrier section is correctly positioned relative the first barrier section. The shaft may be kept in place by weight of the second barrier section or may be secured by fastening means such as an adhesive or the like, or a screw if it is applicable. The transverse shaft provides a good positioning of the second end of the spring in the stop.

[0018] According to an embodiment of the invention, a gas or fluid pressure of the gas or fluid spring is balanced in relation to the total weight of the second panel and the two second posts of the second barrier section.

This means that when pressing the second barrier section (or the panel of it) slightly downwards, to release the spring force of the gas or fluid spring to raise the second barrier section relative the first barrier section, the second barrier section raises about half its height up from the first barrier section. To raise it to the full height one needs to pull the second barrier section to the top position with a light pulling motion. Of course, the spring force may be set higher to facilitate the complete motion to the highest position but the drawback with that is that it might be too hard to press down the second barrier section to its locked position inside the first barrier section. The balancing force is as mentioned balanced to the total weight of the second barrier section.

[0019] A kit of parts for shielding of areas such as a balcony, a platform, a restaurant area or the like, is disclosed. The kit of parts comprises a first panel, two tube-shaped first posts which are fixedly arranged at opposite sides of the first panel to support the first panel in an erect position, wherein the respective first post comprises a lower end, an upper end arranged opposite the lower end, and further a slit which extends from the upper end in direction towards the lower end of the respective first post and which respective slit facing the other first post, wherein the two first posts are arranged with their slits facing the other post. The kit of parts further comprises two foot members, arranged to be attached to the respective lower end of the respective first post, to attach the first posts to a substrate, and at least two stops each arranged to fit inside the respective tube-shaped first post, wherein each stop comprises a stop surface to be arranged at a distance from the lower end of the respective first post.

[0020] Such a kit provides a solution for installing a first

barrier section to a substrate, and which first barrier section may be complemented later with a height-adjustable second barrier section, to provide a higher shield compared to the base barrier section. The stop may be in the form of pre-assembled stops inside the respective posts or stops to be inserted in the post at installing of the first posts or later when converting the first barrier section with a second barrier section to a complete height-adjustable barrier. This kind of kit is not previously known on the market.

[0021] According to an embodiment, the kit of parts further comprises a plurality of covers, wherein at least two covers are arranged to cover the respective slit of the respective tube-shaped first posts. This to provide a nice look of the prepared tube-shaped first posts, the elongated slits arranged for the sliding motion of the second panel relative the first posts are covered with detachable covers, and other slits arranged for sliding blocks/sliders etc. may also be covered with detachable covers, which are to be detached when installing a second barrier section to the first barrier section.

[0022] According to an embodiment, the kit of parts further comprises a second panel, two tube-shaped second posts fixedly arranged at opposite sides of the second panel to support the second panel in an erect position, wherein the respective second post comprises a lower end, an upper end arranged opposite the lower end, a gas or fluid spring attached with a first end to an inside of the respective second post at a distance from the upper end of the second post, wherein the gas or fluid spring further comprises a second end which is opposite the first end. By providing a kit which also comprises the items of a second barrier section, a complete height-adjustable barrier is provided. The "second barrier kit" may of course be provided as a second kit, for delivery to a construction site or later as a complement to provide the height-adjustable barrier.

[0023] According to an embodiment, the second end of the gas or fluid spring comprises a transverse shaft.

[0024] According to an aspect of the invention, a method for converting a first barrier section according to any of the above described embodiments, to a height-adjustable barrier arranged for shielding of areas such as a balcony, a platform, a restaurant area or the like, is disclosed. The method comprises:

- provide a second barrier section which comprises a second panel, two tube-shaped second posts fixedly arranged at opposite sides of the second panel to support the second panel in an erect position, wherein each second post further is arranged to be telescopically arranged inside the respective tube-shaped first post of the first barrier section, and wherein the respective second post comprises a lower end, an upper end arranged opposite the lower end, and further the respective second post comprises a gas or fluid spring attached with a first end to an inside of the second post at a distance from the

upper end of the second post, wherein the gas or fluid spring further comprises a second end which is opposite the first end,

- insert the respective second ends of the respective gas springs of the second barrier section into upper ends of the respective first post of the first barrier section,
- sequentially insert the respective second post of the second barrier section into upper ends of the respective first post of the first barrier section,
- slide the second barrier section in direction towards the lower ends of the first barrier section, wherein the second panel of the second barrier section sequentially enters the respective slit of the first posts of the first barrier section,
- continue the sliding of the first barrier section at least until the second end of the respective gas or fluid spring of the second barrier section arrives at the stop of the respective first post of the first barrier section.

[0025] By such a method, it is possible to convert a normally fixed and already mounted first barrier section to a height-adjustable barrier arranged for shielding of areas such as a balcony, a platform, a restaurant area or the like. No prior art solutions provide a solution for the problem to convert a fixed shielding to a height-adjustable one, and no prior art provide such an easy and cost-efficient method like the inventive method.

[0026] According to an embodiment, the method further comprises:

- before the step of providing a second barrier section removing a plurality of covers from the first barrier section for exposing the interior as well as the slits of the two tube-shaped first posts of the first barrier section. The covers may be top covers, elongate side covers and other covers which all are present at the first posts of the first barrier section, to cover slits and grooves and the like when the first barrier section only is arranged as a not height-adjustable barrier. The covers need to be removed to expose the interior and the slits of the two tube-shaped first posts of the first barrier section before the insert of the posts and panels of the second barrier section.

[0027] According to an embodiment, the method further comprises:

- before the step of providing a second barrier section insert a stop from the upper end of the respective first post of the first barrier section and move the stop to the lower end of the respective first post. Typically, the stop may be a spacer which may be inserted (dropped) into the first post after removing the covers, wherein the stop falls or is pressed downwards inside the first post until the correct position. The correct position may be determined by the substrate

or the foot member or any other positioning means inside the first post. The stop may for example be in the form of a rubber or plastic part, with guiding means and stop surface, wherein the stop is arranged to fit inside the first post, for providing a secure and determined positioning of the end of the gas or fluid spring of the second post, inside the first post.

Brief description of drawings

[0028] The invention is now described, by way of example, with reference to the accompanying drawings, in which:

Fig. 1 shows a rear view of a plurality of first barrier sections according to the invention, when assembled together for shielding of an area.

Fig. 2 shows a rear view of two height-adjustable barriers according to the invention, when assembled together for shielding of an area.

Fig. 3 shows an isometric view of a lower part and a foot member of a tubular first post of the first barrier section of Fig. 1.

Fig. 4 shows an isometric view of an upper part of a tubular first post of the first barrier section of Fig. 1, where a number of covers are removed from the first post of the first barrier section.

Fig. 5a-c show some steps when inserting a second barrier section into the first barrier section of Fig. 1, for complementing the first barrier section of Fig. 1 to a height-adjustable barrier according to the invention.

Fig. 6a-c show the upper end of a tubular first post of the first barrier section of Fig. 1, and how different types of sliding blocks are introduced between a first post of the first barrier section and a second post of the second barrier section, for guiding of the second post inside the first post. Further, Fig. 6c shows how an end cover is assembled on top of the first post.

Fig. 7a show an isometric view of a lower end of a first post of the first barrier section of Fig. 1 and Fig. 7b-c are side views of the same from different angles, where one sidewall of the post is removed to show the inside of the post.

Description of embodiments

[0029] In the following, a detailed description of a first barrier section and a height-adjustable barrier according to the invention is disclosed in detail in respect of embodiments and in reference to the accompanying draw-

ings. All examples herein should be seen as part of general description and therefore possible to combine in any way in general terms.

[0030] Fig. 1 shows a rear view of a plurality of first barrier sections 1 according to a first aspect of the invention, which barrier sections 1 are assembled side-by-side for shielding of an area, for example a balcony a platform, a restaurant area or the like. One first barrier section 1 comprises a first panel 2 and two tube-shaped first posts 3 which are fixedly arranged at opposite sides of the first panel 2 and arranged to support the first panel 2 in an erect position. The height of the tube-shaped first posts 3 is approximately equal to the height of the first panel 2 and the first panel 2 is attached to the first posts 3 in a permanent manner e. g. by glue, screws, clamping or any other suitable means known in the art. The material of the first panels 2 could be as mentioned above plastic, glass, wood, metal or any other material suitable for the conditions on the construction site and for the desired properties of the barrier section. Each first post 3 is arranged to be attached to a substrate, such as a floor or the like, via a foot member 21, and the respective first post 3 comprises a lower end 4 and an upper end 5, which of course is arranged opposite the lower end 4. The respective first post 3 is arranged to, from the upper end 5 of the first post 3, telescopically receive a second post 13 (not visible, see Fig. 2) of a second barrier section 11 (not visible, see Fig. 2) inside the respective first post 3. Inside the respective first post 3, and thereby not visible in this figure, is a respective stop 7 arranged in order to prevent a further motion of a second post 13 of a second barrier 11 section inside the respective first post 3 in direction towards the lower end 4 of the first post 3. Further details of the first barrier section will be explained below.

[0031] In Fig. 1, three first barrier sections 1 are assembled side-by-side to form a shield (or a fence) for shielding of an area. It is very common to deliver such barrier sections which are assembled together on site, which means that the first posts 3 from two such first barrier sections 1 are mounted side-by-side and normally fixed to each other by screws or the like.

[0032] Fig. 2 shows a rear view of two height-adjustable barriers 20 according to a second aspect of the invention, which barriers 20 are assembled side-by-side for shielding of an area. The barrier 20 comprises the first barrier section 1 and a second barrier section 11, which is telescopically arranged in the first barrier section 1. To the left, the height-adjustable barrier 20 is in a lower position where a more-or-less only the first barrier section 1 is visible. To the right, the height-adjustable barrier 20 is in a raised position, where the second barrier section 11 is visible above the first barrier section 1. The second barrier section 11 comprises a second panel 12, and two tube-shaped second posts 13 which are fixedly arranged at opposite sides of the second panel 12 to support the second panel 12 in an erect position. Each second post 13 is arranged to be telescopically arranged inside the respective tube-shaped first post 3 of the first barrier sec-

tion 1. This means that the first and second posts 3, 13 have cross-sections which correlates with each other to provide the telescopic motion and guidance during the raising and lowering of the second barrier section 11 relative the first barrier section 1. In the same way as the first post 3, the respective second post 13 comprises a lower end 14 and an upper end 15 arranged opposite the lower end 14. The height-adjustable barrier 20 will be explained further below.

[0033] Fig. 3 shows an isometric view of a lower end 4 of one of the two tube-shaped first posts 3 of the first barrier section 1 with a foot member 21 fixedly arranged by a first type of fasteners 22 to the lower end 4 of the first post 3. The first panel 2 is preferably glued to the first post 3 on a front side of the same and the foot member 21 preferably is screwed to a substrate, for example the floor of a balcony or the like. A second type of fasteners 23 is also visible in the figure and these are arranged for fixation of a stop 7 (not visible) inside the lower part of the first post 3. For further description of the stop 7, see Fig. 7a-c.

[0034] Fig. 4 shows an isometric view of an upper part of one of the two tube-shaped first posts 3 of the first barrier section 1 with a number of covers 9a-c are visible like an exploded view. The respective first post 3 comprises a slit 6 which extends from the upper end 5 in direction towards the lower end 4 of the respective first post 3. The respective slit 6 is arranged at an inside such as the slit 6 faces the other first post 3. The slit 6 is a cut out of the sidewall which faces the other first post 1 and is arranged behind the first panel 2, which as told above is glued to a front side of the first post 3. Since the two first posts 3 are arranged with their slits 6 facing the other first post 3, a second panel 12 of a second barrier section 11 can be slidably arranged into the slits 6, see further Fig. 6b-c. The elongate slit 6 is in a using mode of the first barrier section 1 (not height-adjustable barrier 20) covered by an elongate cover 9a, which is detachably arranged at the slit 6 and which may be removed if the first barrier section 1 is to be converted to a height-adjustable barrier 20. When the elongate cover 9a is removed, the slit 6 may receive the second panel 12 of the second barrier section 11. A second type of cover 9b is arranged at the upper end 5 of the first post 3 in the using mode of the first barrier section 1. This cover 9b covers some cut outs 6a arranged for so-called sliding blocks or slide bearings, which are arranged at the cut outs 6a when converting the first barrier section 1 to a height-adjustable barrier 20, see Fig. 6a-c. A top cover 9c covers the open top of the tube-shaped first post 3 in the using mode of the first barrier section 1. All these covers 9a-c must be removed when converting the first barrier section 1 to a height-adjustable barrier 20.

[0035] Fig. 5a-c show some steps when inserting a second barrier 11 section into the first barrier section 1, for complementing the first barrier section 1 to a height-adjustable barrier 20, according to the invention. The first barrier section 1 may be provided as a kit of parts com-

prising a complete number of parts as described above in the description of the first barrier section 1. The kit of parts may be delivered to a construction site where it is assembled to a first barrier section 1. The first barrier section 1 has a predetermined width and normally a number of first barrier sections 1 are assembled side-by-side to provide a full length shield, for example like a fence of a balcony.

[0036] To convert a first barrier section 1 to a height-adjustable barrier 20, a second kit of parts comprising the second barrier section 11 may be provided to the construction site, or to the finished building, some months or years later, if the need for a higher shield has occurred. The second kit of parts may of course be a part of the kit of parts described above and delivered at the same time, if a height-adjustable barrier 20 is to be installed from the beginning.

[0037] The second barrier section 11 was briefly described above but must be explained further along with Fig. 5a-c. The second panel 12 of the second barrier section 11 preferably is glued to front sides of the two tube-shaped second posts 13. As mentioned above, each second post 13 is to be telescopically arranged inside the respective tube-shaped first post 3 of the first barrier section 1. The respective second post 13 comprises a gas or fluid spring 16 attached with a first end 16a (not visible) to an inside of the second post 13 at a distance from the upper end 15 of the second post 13. The gas or fluid spring 16 is preferably a gas spring why the term gas spring 16 will be used from now on in the description. The gas spring further comprises a second end 16b which is opposite the first end 16a. Below is the method to convert the first barrier section 1 to the height-adjustable barrier 20 is described.

[0038] Starting with an already assembled first barrier section 1, first of all, a complete second barrier section 11 must be provided, preferably as a kit of parts comprising the complete second barrier section 11. Remove the plurality of covers 9a, 9b, 9c from the respective first posts 3 of the first barrier section 1 for exposing the interior as well as the respective slits 6 of the two tube-shaped first posts 3. Then insert the respective second ends 16b of the respective gas springs 16 of the second barrier section 11 into the upper ends 5 of the respective first post 3 of the first barrier section 1. Sequentially insert the respective second post 13 of the second barrier section 11 into upper ends 5 of the respective first post 3 of the first barrier section 1. Slide the second barrier section 11 in direction towards the lower ends 4 of the first barrier section 1, wherein the second panel 12 of the second barrier section 11 sequentially enters the respective slit 6 of the first posts 3 of the first barrier section 1. Continue the sliding of the first barrier section 11 at least until the second end 16b of the respective gas or fluid spring 16 of the second barrier section 11 arrives at the stop 7 (not visible, see Fig. 7a-c) of the respective first post 3 of the first barrier section 1. Now the second posts 13 and the second panel 12 of the second barrier section 11 is in-

serted and accommodated into the first posts 3 of the first barrier section 1. The stop 7, which is not visible, may be a preassembled stop, for example as the preferred embodiment described in Fig. 7a-c, but it may also be an insertable stop which then is to be inserted after removing the covers 9a-c and before the introduction of the second barrier section 11 in the first barrier section 1. The insertable stop may be in the form of a plastic or rubber spacer, arranged to be insertable into the first post 3 and moveable (by gravity or by being pushed) to a determined position such as a stop surface of the stop

[0039] Fig. 6a-c show the upper end 5 of one of the two tube-shaped first posts 3 of the first barrier section 1, and how different types of sliding blocks 30, 31 are introduced between the first post 3 of the first barrier section 1 and the second post 13 of the second barrier section 11, for guiding of the second post 13 inside the first post 1. In Fig. 6a a first type of sliding blocks 30 is arranged between the first and second posts 3, 13, preferably, these are assembled to an outside of the inner lying second post 13. The first sliding blocks 30 positions and guides the lower end 14 of second post 13 during the telescopic motion inside the first post 3. A second type of sliding blocks 31 is arranged at the cut outs 6a of the first post 3 and positions and guides the second post 13 during the telescopic motion inside the first post 3. In the figures the second panel 12 of the second barrier section 11 may be seen before and during sliding in the slits 6 of the first posts 3, such as the second panel 12 slides down behind the first panel 2. Fig. 6c shows how a top end cover 9c is assembled on top of the first post 3. This top end cover 9c is an adapted cover for this application which differs a bit from the top end cover 9c presented in Fig. 4.

[0040] Fig. 7a show an isometric view of the lower end 4 of one of the first posts 3 of the first barrier section 1 and Fig. 7b-c are side views of the same from different angles, where one sidewall of the first post 1 is removed to show the inside of the post. At the bottom of the tubular first post 3 is the foot member 21 arranged with upwardly protruding parts which are introduced into the lower end 4 of the first post 3. The foot member 21 is fixed to the first post 3 by means of the fasteners 22. At a distance from an edge of the lower end 4 of the first post 3 is the stop 7 fixedly arranged to the first post 3 by means of screws 23. The stop 7 preferably is U-shaped and comprises a U-shaped stop surface 7c which is connected to guiding means 7a, 7b. The guiding means are outwardly reaching "wings" connected to the U-shaped stop surface and extending outwardly in direction towards insides of two opposite sidewalls of the first post 3. The stop 7 is actually two stops 7 spaced apart such as a free space 8 is available between the two stops 7. This enables that the second end 16b of the gas spring 16, may extend below the stops 7 such as a mid-part of the second end 16b of the gas spring 16 enters the free space 8 between the stops 7. This type of stop 7 may be pre-

assembled into the first post 3 as one or preferably two wing-shaped brackets, ready to guide and to hold the second end 16b of the gas spring 16. The second end 16b of the gas spring 16 comprises a transverse shaft 17, which is arranged to be received by the stop 7 of the first post 3 of the first barrier section 1.

[0041] As described above in relation to Fig. 5a-c the gas spring 16 and the second post 13 of the second barrier section 11 is introduced inside the first post 3 of the first barrier section 1. The stop 7 is arranged to prevent a further motion of the second end 16b of the gas spring 16 in direction towards the lower end 4 of the first post 3, and the guiding means 7a, 7b guides the second end 16b of the gas spring 16 towards the stop surface 7c, by that the transverse shaft 17 enters between the "wings"/guiding means 7a, 7b. The shaft 17 finally arrives in its end position in the first post 3 where the shaft is positioned and stopped at the stop surface 7c of the stop 7. An adhesive may be arranged at the shaft 17 or at the stop surface 7c, to hold the shaft, but this is an option if needed. The guiding means 7a, 7b may reach all the way out to the insides of the first post 3, but normally this is not needed since the second post 13 and thereby also the gas spring 16 is also guided by the sliding blocks 30, 31 which helps the shaft 17 to enter between the guiding means 7a, 7b.

Claims

1. A height-adjustable barrier (20) arranged for shielding of areas such as a balcony, a platform, a restaurant area or the like, the height-adjustable barrier (20) comprising:

- a first barrier section (1) and a second barrier section (11), the first barrier section (1) comprising:

- a first panel (2),
- two tube-shaped first posts (3) fixedly arranged at opposite sides of the first panel (2) to support the first panel (2) in an erect position, wherein each first post (3) further is arranged to be attached to a substrate, preferably via a foot member (21), wherein the respective first post (3) comprises:

- a lower end (4),
- an upper end (5) arranged opposite the lower end (4),
- a slit (6) which extends from the upper end (5) in a direction towards the lower end (4) of the respective first post (3) and which respective slit (6) faces the other first post (3), wherein the two first posts (3) are arranged with their slits (6) facing the other post (3) so that a

second panel of the second barrier section (11) can be slidably arranged into the slits (6), wherein the respective first post (3) further is arranged to, from the upper end (5) of the first post (3), telescopically receive a second post of a second barrier section (11) inside the respective first post (3),

- a stop (7) fitted inside the respective tube-shaped first post (3), which stop (7) comprises a stop surface (7c) arranged at a distance from the lower end (4) of the respective first post (3), the second barrier section (11) comprising:

- a second panel (12),

- two tube-shaped second posts (13) fixedly arranged at opposite sides of the second panel (12) to support the second panel (12) in an erect position, wherein each second post (13) further is arranged to be telescopically arranged inside the respective tube-shaped first post (3) of the first barrier section (1), wherein the respective second post (13) comprises a lower end (14), an upper end (15) arranged opposite the lower end (14), and further the respective second post (13) comprises a fluid spring (16), wherein said fluid spring is preferably a gas spring, which fluid spring (16) is attached with a first end (16a) to an inside of the second post (13) at a distance from the upper end (15) of the second post (13), wherein the second barrier section (11) is telescopically arranged relative to the first barrier section (1) by the respective second post (13) of the second barrier section (11) being telescopically arranged inside the respective first post (3) of the first barrier section (1) and the second panel (12) of the second barrier section (11) is slidably arranged in the slit (6) of the respective first post (3) of the first barrier section (1), **characterised in that**

said respective stop (7) fitted inside the respective tube-shaped first post (3) is arranged to prevent a further motion of a second post of a second barrier section (11) inside the respective first post in the direction towards the lower end (4) of the first post;

and **in that** said fluid spring (16) further comprises a second end (16b) which is opposite the first end (16a), and the second end (16b) of the respective fluid spring (16) of the second barrier section (11) is arranged at the stop (7) of the respective first post (3) of the first barrier section (1).

2. Height-adjustable barrier (20) according to claim 1, wherein the second end (16b) of the fluid spring (16) comprises a transverse shaft (17), which shaft (17) is arranged to be received by the stop (7) of the first post (3) of the first barrier section (1).

3. Height-adjustable barrier (20) according to any of claims 1 - 2, wherein a fluid pressure of the fluid spring (16) is balanced in relation to the total weight of the second panel (12) and the two second posts (13) of the second barrier section (11).

4. Method for converting a first barrier section (1) to a height-adjustable barrier (20) arranged for shielding of areas such as a balcony, a platform, a restaurant area or the like, the first barrier section (1) comprising:

- a first panel (2),

- two tube-shaped first posts (3) fixedly arranged at opposite sides of the first panel (2) to support the first panel (2) in an erect position, wherein each first post (3) further is arranged to be attached to a substrate, preferably via a foot member (21), wherein the respective first post (3) comprises:

- a lower end (4),

- an upper end (5) arranged opposite the lower end (4),

- a slit (6) which extends from the upper end (5) in direction towards the lower end (4) of the respective first post (3) and which respective slit (6) faces the other first post (3), wherein the two first posts (3) are arranged with their slits (6) facing the other post (3) so that a second panel of a second barrier section can be slidably arranged into the slits (6), wherein the respective first post (3) further is arranged to, from the upper end (5) of the first post (3), telescopically receive a second post of a second barrier section inside the respective first post (3),

- a stop (7) fitted inside the respective tube-shaped first post (3), which stop (7) comprises a stop surface (7c) arranged at a distance from the lower end (4) of the respective first post (3), wherein the respective stop (7) is arranged to prevent a further motion of a second post of a second barrier

section inside the respective first post (3) in direction towards the lower end (4) of the first post (3),

two tube-shaped first posts (3) of the first barrier section (1).

the method comprising:

- providing a second barrier section (11) comprising:

- a second panel (12),
- two tube-shaped second posts (13) fixedly arranged at opposite sides of the second panel (12) to support the second panel (12) in an erect position, wherein each second post (13) further is arranged to be telescopically arranged inside the respective tube-shaped first post (3) of the first barrier section (1), wherein the respective second post (13) comprises a lower end (14), an upper end (15) arranged opposite the lower end (14), and further the respective second post (13) comprises a fluid spring (16), wherein said fluid spring (16) is attached with a first end (16a) to an inside of the second post (13) at a distance from the upper end (15) of the second post (13), wherein the fluid spring (16) further comprises a second end (16b) which is opposite the first end (16a),

- inserting the respective second ends (16b) of the respective fluid springs (16) of the second barrier section (11) into upper ends (5) of the respective first post (3) of the first barrier section (1),

- sequentially inserting the respective second post (13) of the second barrier section (11) into upper ends (5) of the respective first post (3) of the first barrier section (1),

- sliding the second barrier section (11) in direction towards the lower ends (4) of the first barrier section (1), wherein the second panel (12) of the second barrier section (11) sequentially enters the respective slit (6) of the first posts (3) of the first barrier section (1),

- continuing the sliding of the second barrier section (11) until the second end (16b) of the respective fluid spring (16) of the second barrier section (11) arrives at the stop (7) of the respective first post (3) of the first barrier section (1).

5. Method according to claim 4, the method further comprising

- before the step of providing a second barrier section (11), removing a plurality of covers (9a, 9b, 9c) from the first barrier section (1) for exposing the interior as well as the slits (6) of the

5 Patentansprüche

1. Eine höhenverstellbare Barriere (20), die zum Abschirmen von Bereichen wie einem Balkon, einer Plattform, einem Restaurantbereich oder Ähnlichem angeordnet ist, wobei die höhenverstellbare Barriere (20) umfasst:

- einen ersten Barrierenabschnitt (1) und einen zweiten Barrierenabschnitt (11), der erste Barrierenabschnitt (1) umfasst:

- ein erstes Paneel (2),
- zwei rohrförmige erste Pfosten (3), die fest an gegenüberliegenden Seiten des ersten Paneels (2) angeordnet sind, um das erste Paneel (2) in einer aufrechten Position zu stützen, wobei jeder erste Pfosten (3) weiterhin so angeordnet ist, dass er an einem Substrat befestigt wird, vorzugsweise über ein Fußelement (21), wobei der jeweilige erste Pfosten (3) umfasst:

- ein unteres Ende (4),
- ein oberes Ende (5), das dem unteren Ende (4) gegenüber angeordnet ist,
- einen Schlitz (6), der sich vom oberen Ende (5) in Richtung zum unteren Ende (4) des jeweiligen ersten Pfostens (3) erstreckt und der jeweilige Schlitz (6) Gesichter dem anderen ersten Pfosten (3) zuwendet, wobei die beiden ersten Pfosten (3) mit ihren Schlitz (6) so angeordnet sind, dass sie einander gegenüberstehen, sodass ein zweites Paneel des zweiten Barrierenabschnitts (11) gleitend in die Schlitz (6) eingesetzt werden kann, wobei der jeweilige erste Pfosten (3) weiterhin so angeordnet ist, dass er vom oberen Ende (5) des ersten Pfostens (3) aus einen zweiten Pfosten eines zweiten Barrierenabschnitts (11) teleskopisch im jeweiligen ersten Pfosten (3) aufnimmt,
- ein Stopp (7), der im jeweiligen rohrförmigen ersten Pfosten (3) angebracht ist, welcher Stopp (7) eine Stoppfläche (7c) umfasst, die in einem Abstand vom unteren Ende (4) des jeweiligen ersten Pfostens (3) angeordnet ist, der zweite Barrierenabschnitt (11) umfasst:

- ein zweites Paneel (12),
- zwei rohrförmige zweite Pfosten

(13), die fest an gegenüberliegenden Seiten des zweiten Paneels (12) angeordnet sind, um das zweite Paneel (12) in einer aufrechten Position zu stützen, wobei jeder zweite Pfosten (13) weiterhin so angeordnet ist, dass er teleskopisch im jeweiligen rohrförmigen ersten Pfosten (3) des ersten Barrierenabschnitts (1) angeordnet wird, wobei der jeweilige zweite Pfosten (13) ein unteres Ende (14), ein oberes Ende (15), das dem unteren Ende (14) gegenüber angeordnet ist, umfasst und weiterhin der jeweilige zweite Pfosten (13) eine Flüssigkeitsfeder (16) umfasst, wobei besagte Flüssigkeitsfeder vorzugsweise eine Gasfeder ist, welche Flüssigkeitsfeder (16) mit einem ersten Ende (16a) an einem Inneren des zweiten Pfostens (13) in einem Abstand vom oberen Ende (15) des zweiten Pfostens (13) befestigt ist, wobei der zweite Barrierenabschnitt (11) teleskopisch in Bezug auf den ersten Barrierenabschnitt (1) angeordnet ist, indem der jeweilige zweite Pfosten (13) des zweiten Barrierenabschnitts (11) teleskopisch im jeweiligen ersten Pfosten (3) des ersten Barrierenabschnitts (1) angeordnet wird und das zweite Paneel (12) des zweiten Barrierenabschnitts (11) gleitend in den Schlitz (6) des jeweiligen ersten Pfostens (3) des ersten Barrierenabschnitts (1) eingesetzt wird, **gekennzeichnet dadurch, dass** der jeweilige Stopp (7), der im jeweiligen rohrförmigen ersten Pfosten (3) angebracht ist, so angeordnet ist, dass er eine weitere Bewegung eines zweiten Pfostens eines zweiten Barrierenabschnitts (11) im jeweiligen ersten Pfosten in Richtung zum unteren Ende (4) des ersten Pfostens verhindert; und dass besagte Flüssigkeitsfeder (16) weiterhin ein zweites Ende (16b) umfasst, das dem ersten Ende (16a) gegenüberliegt, und das zweite Ende (16b) der jeweiligen Flüssigkeitsfeder (16) des zweiten Barrierenabschnitts (11) am Stopp (7) des jeweiligen ersten Pfostens (3) des ersten Barrierenabschnitts (1)

angeordnet ist.

2. Höhenverstellbare Barriere (20) gemäß Anspruch 1, wobei das zweite Ende (16b) der Flüssigkeitsfeder (16) eine Querwelle (17) umfasst, welche Welle (17) so angeordnet ist, dass sie vom Stopp (7) des ersten Pfostens (3) des ersten Barrierenabschnitts (1) aufgenommen wird.
3. Höhenverstellbare Barriere (20) gemäß einem der Ansprüche 1 - 2, wobei ein Flüssigkeitsdruck der Flüssigkeitsfeder (16) in Beziehung zum Gesamtgewicht des zweiten Paneels (12) und der beiden zweiten Pfosten (13) des zweiten Barrierenabschnitts (11) ausgeglichen ist.
4. Verfahren zur Umwandlung eines ersten Barrierenabschnitts (1) in eine höhenverstellbare Barriere (20), die zum Abschirmen von Bereichen wie einem Balkon, einer Plattform, einem Restaurantbereich oder Ähnlichem angeordnet ist, wobei der erste Barrierenabschnitt (1) umfasst:
 - ein erstes Paneel (2),
 - zwei rohrförmige erste Pfosten (3), die fest an gegenüberliegenden Seiten des ersten Paneels (2) angeordnet sind, um das erste Paneel (2) in einer aufrechten Position zu stützen, wobei jeder erste Pfosten (3) weiterhin so angeordnet ist, dass er an einem Substrat befestigt wird, vorzugsweise über ein Fußelement (21), wobei der jeweilige erste Pfosten (3) umfasst:
 - ein unteres Ende (4),
 - ein oberes Ende (5), das dem unteren Ende (4) gegenüber angeordnet ist,
 - einen Schlitz (6), der sich vom oberen Ende (5) in Richtung zum unteren Ende (4) des jeweiligen ersten Pfostens (3) erstreckt und der jeweilige Schlitz (6) Gesichter dem anderen ersten Pfosten (3) zuwendet, wobei die beiden ersten Pfosten (3) mit ihren Schlitz (6) so angeordnet sind, dass sie einander gegenüberstehen, sodass ein zweites Paneel eines zweiten Barrierenabschnitts gleitend in die Schlitz (6) eingesetzt werden kann, wobei der jeweilige erste Pfosten (3) weiterhin so angeordnet ist, dass er vom oberen Ende (5) des ersten Pfostens (3) aus einen zweiten Pfosten eines zweiten Barrierenabschnitts teleskopisch im jeweiligen ersten Pfosten (3) aufnimmt,
 - einen Stopp (7), der im jeweiligen rohrförmigen ersten Pfosten (3) angebracht ist, welcher Stopp (7) eine Stoppfläche (7c) umfasst, die in einem Abstand vom unteren Ende (4) des jeweiligen ersten Pfostens (3) an-

geordnet ist, wobei der jeweilige Stopp (7) so angeordnet ist, dass er eine weitere Bewegung eines zweiten Pfostens eines zweiten Barrierenabschnitts im jeweiligen ersten Pfosten (3) in Richtung zum unteren Ende (4) des ersten Pfostens (3) verhindert, das Verfahren umfasst:

- Bereitstellung eines zweiten Barrierenabschnitts (11), der umfasst:

- ein zweites Paneel (12),
- zwei rohrförmige zweite Pfosten (13), die fest an gegenüberliegenden Seiten des zweiten Paneels (12) angeordnet sind, um das zweite Paneel (12) in einer aufrechten Position zu stützen, wobei jeder zweite Pfosten (13) weiterhin so angeordnet ist, dass er teleskopisch im jeweiligen rohrförmigen ersten Pfosten (3) des ersten Barrierenabschnitts (1) angeordnet wird, wobei der jeweilige zweite Pfosten (13) ein unteres Ende (14), ein oberes Ende (15), das dem unteren Ende (14) gegenüber angeordnet ist, umfasst und weiterhin der jeweilige zweite Pfosten (13) eine Flüssigkeitsfeder (16) umfasst, wobei besagte Flüssigkeitsfeder vorzugsweise eine Gasfeder ist, welche Flüssigkeitsfeder (16) mit einem ersten Ende (16a) an einem Inneren des zweiten Pfostens (13) in einem Abstand vom oberen Ende (15) des zweiten Pfostens (13) befestigt ist, wobei die Flüssigkeitsfeder (16) weiterhin ein zweites Ende (16b) umfasst, das dem ersten Ende (16a) gegenüberliegt,
- Einführen der jeweiligen zweiten Enden (16b) der jeweiligen Flüssigkeitsfedern (16) des zweiten Barrierenabschnitts (11) in die oberen Enden (5) der jeweiligen ersten Pfosten (3) des ersten Barrierenabschnitts (1),
- sequentielles Einführen der jeweiligen zweiten Pfosten (13) des zweiten Barrierenabschnitts (11) in die oberen Enden (5) der jeweiligen ersten Pfosten (3) des ersten Barrierenabschnitts (1),
- Gleiten des zweiten Barrierenabschnitts (11) in Richtung zu den unteren Enden (4) des ersten Barrie-

renabschnitts (1), wobei das zweite Paneel (12) des zweiten Barrierenabschnitts (11) sequentiell in die jeweiligen Schlitze (6) der ersten Pfosten (3) des ersten Barrierenabschnitts (1) eintritt, - Fortsetzen des Gleitens des zweiten Barrierenabschnitts (11), bis das zweite Ende (16b) der jeweiligen Flüssigkeitsfeder (16) des zweiten Barrierenabschnitts (11) am Stopp (7) des jeweiligen ersten Pfostens (3) des ersten Barrierenabschnitts (1) ankommt.

5. Verfahren gemäß Anspruch 4, das Verfahren umfasst weiterhin:

- vor dem Schritt der Bereitstellung eines zweiten Barrierenabschnitts (11) das Entfernen einer Mehrzahl von Abdeckungen (9a, 9b, 9c) vom ersten Barrierenabschnitt (1), um das Innere sowie die Schlitze (6) der beiden rohrförmigen ersten Pfosten (3) des ersten Barrierenabschnitts (1) freizulegen.

Revendications

1. Une barrière réglable en hauteur (20) disposée pour protéger des zones telles qu'un balcon, une plate-forme, une zone de restaurant ou similaire, la barrière réglable en hauteur (20) comprenant:

- une première section de barrière (1) et une seconde section de barrière (11), la première section de barrière (1) comprenant:

- un premier panneau (2),
- deux premiers poteaux en forme de tube (3) disposés de manière fixe de part et d'autre du premier panneau (2) pour soutenir le premier panneau (2) en position verticale, chaque premier poteau (3) étant également prévu pour être fixé à un substrat, de préférence via un élément de pied (21), le premier poteau respectif (3) comprenant:

- une extrémité inférieure (4),
- une extrémité supérieure (5) disposée à l'opposé de l'extrémité inférieure (4),
- une fente (6) qui s'étend de l'extrémité supérieure (5) dans une direction vers l'extrémité inférieure (4) du premier poteau respectif (3) et cette fente respective (6) fait face à l'autre premier poteau (3), les deux premiers poteaux (3) étant disposés avec leurs fentes (6) face à

l'autre poteau (3) de sorte qu'un second panneau de la seconde section de barrière (11) puisse être inséré de manière coulissante dans les fentes (6), le premier poteau respectif (3) étant en outre agencé pour, à partir de l'extrémité supérieure (5) du premier poteau (3), recevoir télescopiquement un second poteau d'une seconde section de barrière (11) à l'intérieur du premier poteau respectif (3),

- un arrêt (7) installé à l'intérieur du premier poteau en forme de tube respectif (3), cet arrêt (7) comprenant une surface d'arrêt (7c) disposée à une distance de l'extrémité inférieure (4) du premier poteau respectif (3), la seconde section de barrière (11) comprenant:

- un second panneau (12),
- deux seconds poteaux en forme de tube (13) disposés de manière fixe de part et d'autre du second panneau (12) pour soutenir le second panneau (12) en position verticale, chaque second poteau (13) étant en outre prévu pour être disposé de manière télescopique à l'intérieur du premier poteau en forme de tube respectif (3) de la première section de barrière (1), le second poteau respectif (13) comprenant une extrémité inférieure (14), une extrémité supérieure (15) disposée à l'opposé de l'extrémité inférieure (14), et en outre, le second poteau respectif (13) comprenant un ressort à fluide (16), ledit ressort à fluide étant de préférence un ressort à gaz, lequel ressort à fluide (16) est attaché avec une première extrémité (16a) à l'intérieur du second poteau (13) à une distance de l'extrémité supérieure (15) du second poteau (13), la seconde section de barrière (11) étant disposée de manière télescopique par rapport à la première section de barrière (1) par le second poteau respectif (13) de la seconde section de barrière (11) étant disposé de manière télescopique à l'intérieur du premier poteau respectif (3) de la première section de barrière (1) et le second panneau (12) de la seconde section de barrière (11) étant disposé de manière coulissante dans la

fente (6) du premier poteau respectif (3) de la première section de barrière (1), **caractérisé en ce que** ledit arrêt respectif (7) installé à l'intérieur du premier poteau en forme de tube respectif (3) est agencé pour empêcher un mouvement ultérieur d'un second poteau d'une seconde section de barrière (11) à l'intérieur du premier poteau respectif dans la direction de l'extrémité inférieure (4) du premier poteau ; et **en ce que** ledit ressort à fluide (16) comprend en outre une seconde extrémité (16b) qui est opposée à la première extrémité (16a), et la seconde extrémité (16b) du ressort à fluide respectif (16) de la seconde section de barrière (11) est disposée au niveau de l'arrêt (7) du premier poteau respectif (3) de la première section de barrière (1).

2. Barrière réglable en hauteur (20) selon la revendication 1, où la seconde extrémité (16b) du ressort à fluide (16) comprend un arbre transversal (17), cet arbre (17) étant prévu pour être reçu par l'arrêt (7) du premier poteau (3) de la première section de barrière (1).
3. Barrière réglable en hauteur (20) selon l'une quelconque des revendications 1 - 2, où une pression de fluide du ressort à fluide (16) est équilibrée par rapport au poids total du second panneau (12) et des deux seconds poteaux (13) de la seconde section de barrière (11).
4. Méthode pour convertir une première section de barrière (1) en une barrière réglable en hauteur (20) disposée pour protéger des zones telles qu'un balcon, une plateforme, une zone de restaurant ou similaire, la première section de barrière (1) comprenant:
 - un premier panneau (2),
 - deux premiers poteaux en forme de tube (3) disposés de manière fixe de part et d'autre du premier panneau (2) pour soutenir le premier panneau (2) en position verticale, chaque premier poteau (3) étant en outre prévu pour être fixé à un substrat, de préférence via un élément de pied (21), le premier poteau respectif (3) comprenant:
 - une extrémité inférieure (4),
 - une extrémité supérieure (5) disposée à l'opposé de l'extrémité inférieure (4),

- une fente (6) qui s'étend de l'extrémité supérieure (5) dans une direction vers l'extrémité inférieure (4) du premier poteau respectif (3) et cette fente respective (6) fait face à l'autre premier poteau (3), les deux premiers poteaux (3) étant disposés avec leurs fentes (6) face à l'autre poteau (3) de sorte qu'un second panneau d'une seconde section de barrière puisse être inséré de manière coulissante dans les fentes (6), le premier poteau respectif (3) étant en outre agencé pour, à partir de l'extrémité supérieure (5) du premier poteau (3), recevoir télescopiquement un second poteau d'une seconde section de barrière à l'intérieur du premier poteau respectif (3),

- un arrêt (7) installé à l'intérieur du premier poteau en forme de tube respectif (3), cet arrêt (7) comprenant une surface d'arrêt (7c) disposée à une distance de l'extrémité inférieure (4) du premier poteau respectif (3), l'arrêt respectif (7) étant agencé pour empêcher un mouvement ultérieur d'un second poteau d'une seconde section de barrière à l'intérieur du premier poteau respectif (3) dans la direction de l'extrémité inférieure (4) du premier poteau (3), la méthode comprenant:

- la fourniture d'une seconde section de barrière (11) comprenant:

- un second panneau (12),

- deux seconds poteaux en forme de tube (13) disposés de manière fixe de part et d'autre du second panneau (12) pour soutenir le second panneau (12) en position verticale, chaque second poteau (13) étant en outre prévu pour être disposé de manière télescopique à l'intérieur du premier poteau en forme de tube respectif (3) de la première section de barrière (1), le second poteau respectif (13) comprenant une extrémité inférieure (14), une extrémité supérieure (15) disposée à l'opposé de l'extrémité inférieure (14), et en outre, le second poteau respectif (13) comprenant un ressort à fluide (16), ledit ressort à fluide étant de préférence un ressort à gaz, lequel ressort à fluide (16) est attaché avec une première extrémité (16a) à l'intérieur du second poteau (13) à une distance de l'extrémité supérieure (15) du second poteau (13), le ressort à fluide (16) comprenant en outre une seconde extrémité (16b) qui est opposée à la première extrémité (16a),

- l'insertion des secondes extrémités respectives (16b) des ressorts à fluide respectifs (16) de la seconde section de barrière (11) dans les extrémités supérieures (5) du premier poteau respectif (3) de la première section de barrière (1),

- l'insertion séquentielle des seconds poteaux respectifs (13) de la seconde section de barrière (11) dans les extrémités supérieures (5) du premier poteau respectif (3) de la première section de barrière (1),

- le glissement de la seconde section de barrière (11) dans la direction des extrémités inférieures (4) de la première section de barrière (1), le second panneau (12) de la seconde section de barrière (11) entrant séquentiellement dans les fentes respectives (6) des premiers poteaux (3) de la première section de barrière (1),

- continuant le glissement de la seconde section de barrière (11) jusqu'à ce que la seconde extrémité (16b) du ressort à fluide respectif (16) de la seconde section de barrière (11) arrive à l'arrêt (7) du premier poteau respectif (3) de la première section de barrière (1).

5. Méthode selon la revendication 4, la méthode comprenant en outre

- avant l'étape de fourniture d'une seconde section de barrière (11), retirer plusieurs couvercles (9a, 9b, 9c) de la première section de barrière (1) pour exposer l'intérieur ainsi que les fentes (6) des deux premiers poteaux en forme de tube (3) de la première section de barrière (1).

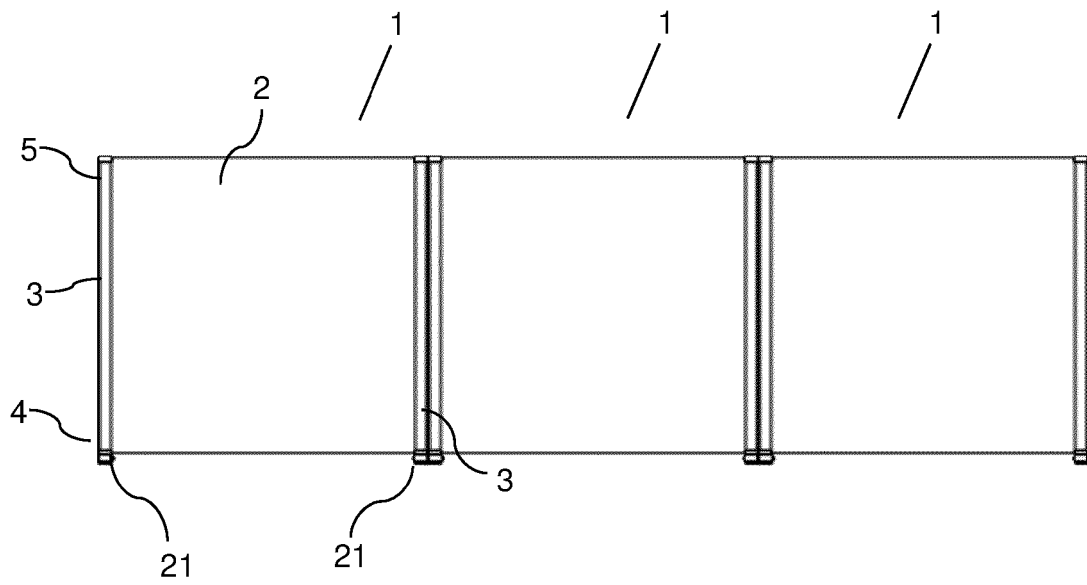


Fig. 1

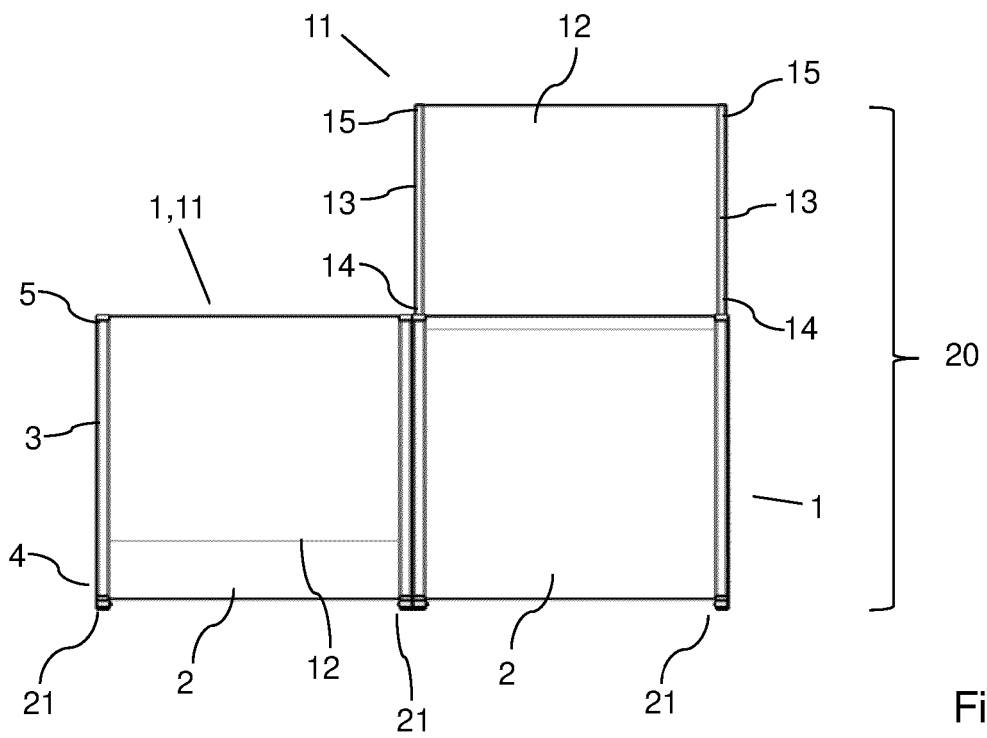


Fig. 2

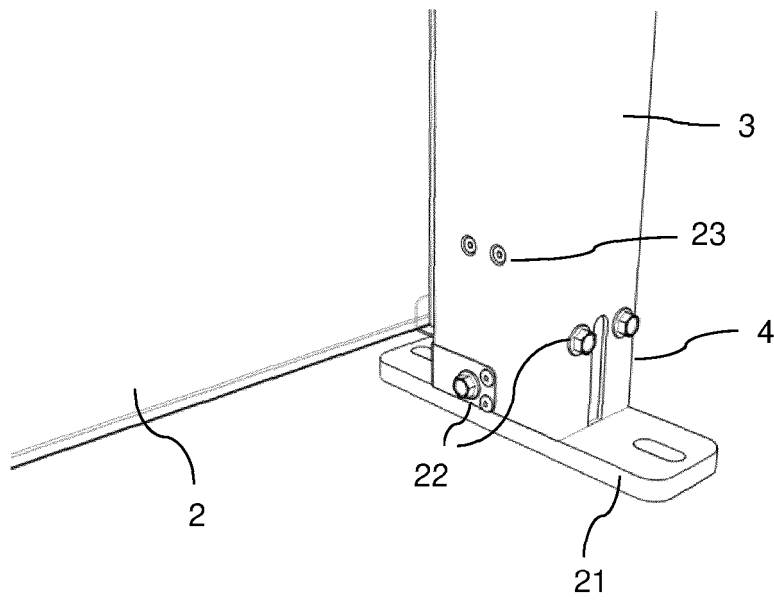


Fig. 3

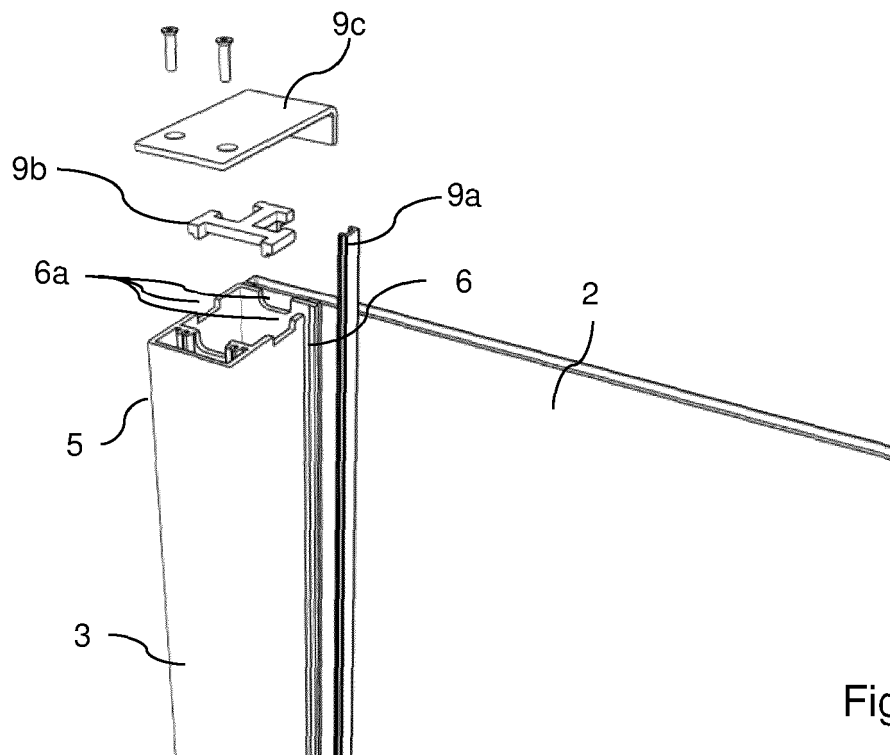


Fig. 4

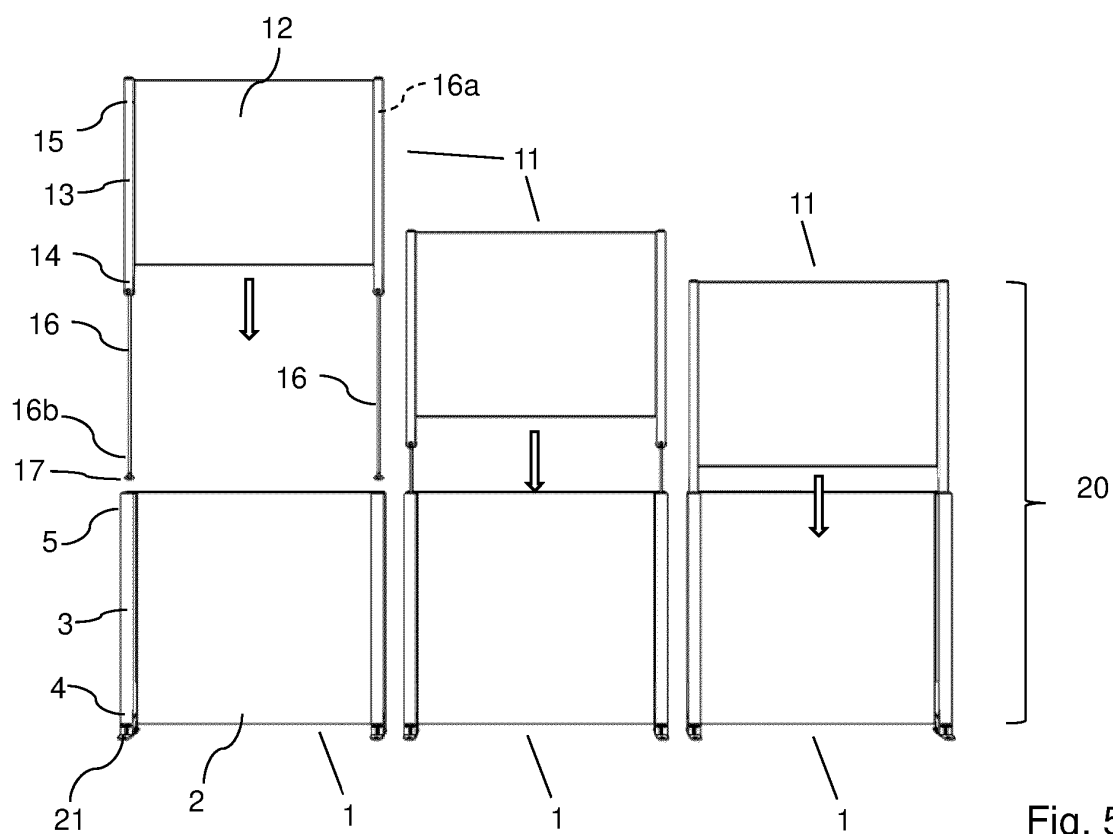


Fig. 5a-c

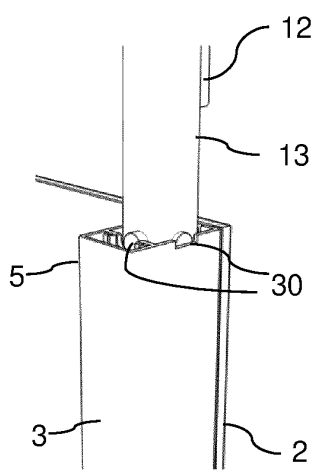


Fig. 6a

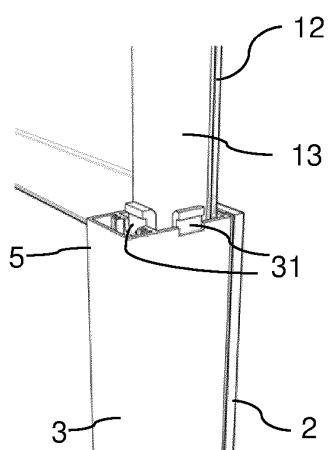


Fig. 6b

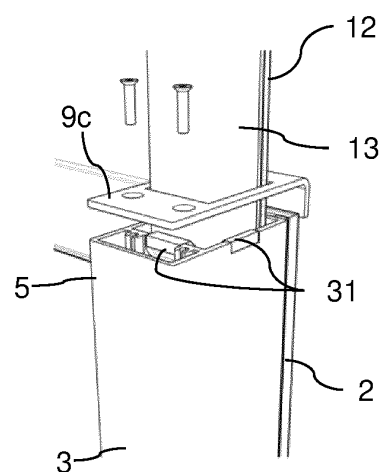


Fig. 6c

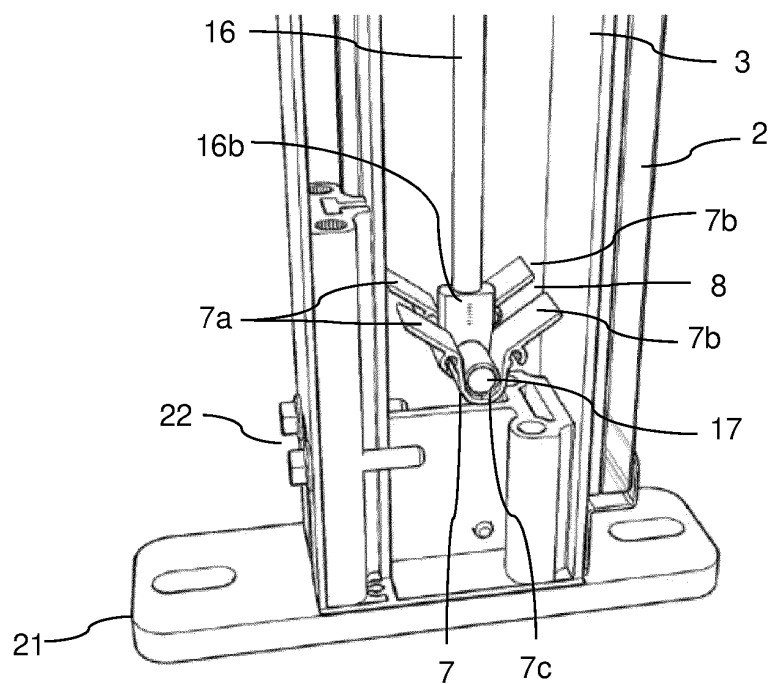


Fig. 7a

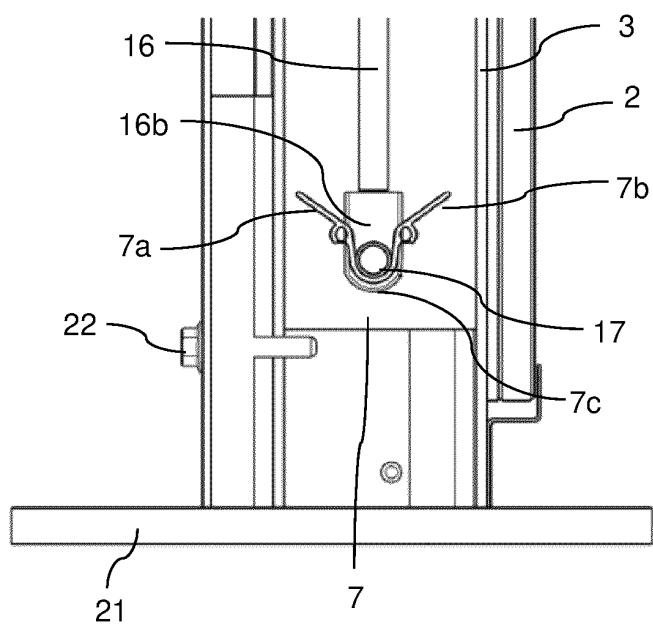


Fig. 7b

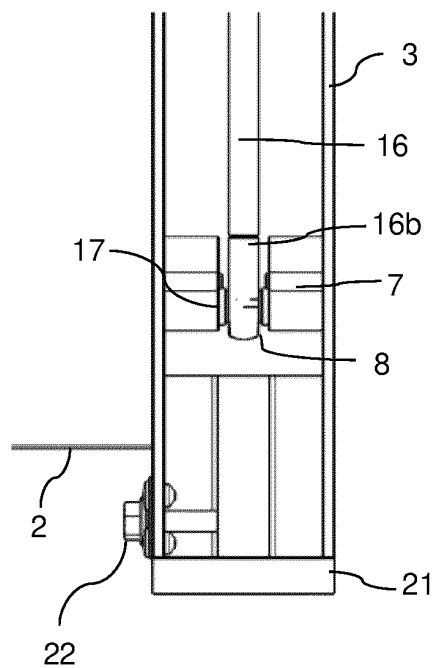


Fig. 7c

REFERENCES CITED IN THE DESCRIPTION

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