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(71) Applicant *(for all designated States except US)*: **HOFMAN DUJARDIN ARCHITECTEN V.O.F.** [NL/NL]; Haarlemmer Houttuinen 23, NL-1013 GL Amsterdam (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **HOFMAN, Michiel, Marc** [NL/NL]; p/a Haarlemmer Houttuinen 23, NL-1013 GL Amsterdam (NL). **DUJARDIN, Barbara, Christine** [NL/NL]; p/a Haarlemmer Houttuinen 23, NL-1013 GL Amsterdam (NL).

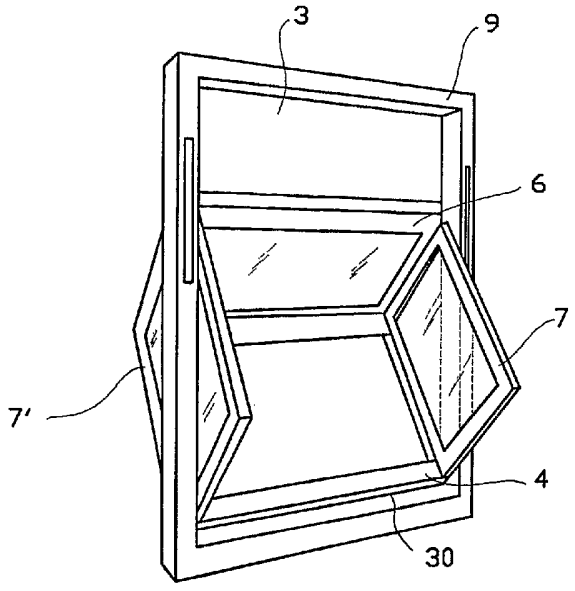
(74) Agent: **DE HOOP, Eric**; c/o Octrooibureau Vriesendorp & Gaade, P.O. Box 266, NL-2501 AW The Hague (NL).

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(54) Title: BALCONY THAT CAN BE FOLDED



(57) Abstract: The invention relates to an exterior wall element that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel that is movably connected to the exterior wall element and is movable between a first position substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, which exterior wall element at least partially closes off the passage.

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Balcony that can be folded and unfolded

The invention relates to an exterior wall element, placeable in a passage in a wall.

Usually a panel is fixedly attached to a wall as an extra floor surface or outdoor space, such as a balcony or a platform, for instance at an exterior wall of a building or in a building or patio. This does not always result in a fine-looking exterior wall.

In addition a radical reconstruction usually is necessary to provide an existing building with a balcony, if at all possible.

In addition a balcony at a building may render the building easier to burgle.

Furthermore such an outdoor space like a balcony in many cases also takes up a lot of indoor space as well.

US-4.090.585 shows an unfoldable balcony that is attached to the exterior wall of a building. The balcony shown is difficult to reach and is not a usable extension of the indoor space.

DE-A1-199 30 679 shows a panel which in a first position forms a part of a pitched roof. The panel is rotatable to a second position in which it serves as balcony floor. A part of the balcony then extends into the house. For creating

an outdoor surface either a complex construction is necessary that enables rotation or translation far to the outside, or a construction that extends far into the house when the panel serves as surface.

It is an object of the invention to at least partially overcome said drawbacks and to provide new possibilities.

To that end the invention provides an exterior wall element that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel that is movably connected to the exterior wall element and is movable between a first position substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the exterior wall element at least partially closes off the passage.

By selecting a panel that can be brought from a first position into a second position, new application possibilities can be created. For instance an outdoor space such as a balcony can easily be made in an existing building. Moreover such a balcony can be unfolded only when needed or when people are present in the building. As a result improved security of the building can be made possible. In addition the invention provides the possibility of providing an extra floor surface, outdoor space or balcony that can be used at choice, and which itself takes up little to no space at all in a building or the like. The invention can also be used instead of a loggia, or to replace it, wherein the loggia can be included in the indoor space again. Usually the exterior wall element according to the invention will be placed in a (vertical) outer wall. However, it is also possible to use the exterior wall element in an inner wall, wherein the balcony for instance extends into a covered hall. The wall may in addition comprise a wooden frame construction or a facade of for instance wood or aluminium. The exterior wall element then is a part of said facade.

As mentioned before the wall and the panel may for instance form a part of a

building. The panel including optional balustrade means may in that case for instance simply form a balcony that can be folded and unfolded. The panel and optional balustrade means thus have a double function.

In an embodiment the exterior wall element at least partially closes off the passage when the panel is in the first position. In a particular embodiment it even fully closes off the passage.

In an embodiment of the exterior wall element it further comprises a casing, which in a further embodiment bounds the passage.

In an embodiment of the exterior wall element according to the invention the panel has a wall side oriented to the wall when in the first position, and at the wall side has a surface that can be walked on.

In an embodiment the exterior wall element fully closes off the passage. As a result the exterior wall element has a double function.

In an embodiment of the exterior wall element according to the invention the panel in the first position closes off at least a part of the passage.

In an embodiment of the exterior wall element according to the invention, the panel is dimensioned for in the first position closing off the entire passage.

In an embodiment an edge of the panel is movably connected to a lower edge of the passage. Thus it is possible to create an exterior wall element that takes up little to no space within a building.

In an embodiment of the exterior wall element according to the invention, the panel is rotatable about an edge of the panel from the first to the second position.

In an embodiment of said exterior wall element, said edge is near the lower edge of the passage, when the exterior wall element is placed in the passage.

In an embodiment of the exterior wall element according to the invention, when the wall connects to a floor, the lower side of the passage continues to near the floor and the balcony floor connects to the floor.

In an embodiment of the exterior wall element according to the invention, the panel is movable over approximately 90 degrees.

In an embodiment of the exterior wall element according to the invention, the casing bounds the passage and it has a sill, wherein the panel with an edge is movably connected to the sill.

In an embodiment of the exterior wall element according to the invention, the exterior wall element further comprises balustrade means that in the second position of the panel are connectable to the panel to form a balustrade for the balcony.

In an embodiment of the exterior wall element according to the invention the balustrade means can be folded, wherein the balustrade means are folded in the first condition of the panel. Thus a compact exterior wall element is created in the first position, which makes it possible to create an exterior wall element using a minimum of space.

In another embodiment the balustrade means are extendable on the panel in the second condition, preferably from a space behind the wall or from the passage in the wall. Thus the balustrade means can be realised with a simple construction. It is possible here, when there is a passage in the wall behind the panel in the first position, to have the balustrade means close off the passage until the panel is in the second position, and subsequently to slide

the balustrade means into position on the panel for functioning as a balustrade there.

In an embodiment of the exterior wall element according to the invention, the panel is provided with the balustrade means. As a result panel and balustrade means can quickly be moved from the first to the second condition. In an embodiment the wall has a passage at the location of the panel when the panel is in the first position. Thus further new application possibilities are created. For instance the panel can be easily accessible for operation from the inside of a building. In a particular embodiment the wall comprises closing means for closing off the passage.

In a particular embodiment the panel forms at least a part of the closing means of the passage. As a result the panel may get a double function. In the first position the panel serves to close off the passage, and in the second position an extension of the floor surface may be achieved. In an embodiment the panel is in the passage when in the first position. For instance, when there is a passage in the wall behind the panel, particularly a passage almost having the width of the panel, the panel may serve as foldable and unfoldable balcony and at least as a part of the closing means of the passage.

In a particular embodiment the panel together with a part of the balustrade means form the closing means for the passage. The panel and/or the balustrade means may be provided with transparent or translucent elements so that they may for instance form windows or allow daylight into a building.

In an embodiment of the exterior wall element an edge of the panel is attached at the level of, in a preferred embodiment even at, the lower edge of the passage when the in the second position. When a floor connects to the lower edge the panel is easily accessible from the inside.

In a particular embodiment of the exterior element as described above the panel can be folded and unfolded from the first position to the second position and vice-versa. This can be realised in various ways. A simple way in which this can be realised is where the panel, particularly an edge thereof, is hinged, for instance by a hinge, to the wall or the casing. In an embodiment thereof wherein the wall comprises the passage at the location of the panel, a hinge is connected to the wall at or near the lower edge of the passage.

In an embodiment of the exterior wall element the balustrade means comprise a front balustrade part. In an embodiment thereof the front balustrade part together with the panel form the closing means. Thus a large passage may be closed off, and both parts have a double function. In an embodiment of the exterior wall element described above the lower edge of the front balustrade part is movably connected, for instance by means of a hinge, to an edge of the panel which is removed from the wall in the second position. As a result a foldable and unfoldable balcony in an exterior wall can easily be realised. Moreover both parts are thus easily given a double function. Particularly when the sill of the casing connects to a floor an easily accessible balcony is created in the second position of the panel.

In an embodiment of the exterior wall element the balustrade means comprise mutually hinged parts for folding the balustrade when the panel is the first position. As a result a compact construction can be made.

In an embodiment of the exterior wall element the balustrade means comprise a front balustrade part and balustrade side parts.

In an embodiment of the exterior wall element wherein the balustrade means comprise the front balustrade part and the balustrade side parts, the exterior wall element is characterised in that the lower edge of the balustrade side parts are each movably connected, for instance hinged by a hinge, to an

edge of the panel. As a result the balustrade means may easily be folded and unfolded while the panel is moved between the first and second condition.

In an embodiment of the exterior wall element described above, the wall is an exterior wall and the passage is bounded by a casing in the passage. In an embodiment wherein the balustrade means comprise the front balustrade part, the exterior wall element is characterised in that the panel together with said front balustrade part connects in the casing in order to close off the passage. Both parts may together in the first position serve as a window, and in the second position as a balcony. In an embodiment thereof the casing comprises a sill, and the panel is connected to the sill by means of a hinge. As a result for instance a balcony that can easily be folded and unfolded can be created which moreover is can be reached well.

In an embodiment of the exterior wall element described above, the front balustrade part and the panel together form windows in the casing. In an embodiment one of these parts or both parts separately, can also be opened as a window in an opened position.

In an embodiment of the exterior wall element according to the invention the exterior wall element further comprises locking means for locking the panel in the first position and the second position. In an embodiment wherein the balustrade means comprise the front balustrade part, the front balustrade part comprises locking means for locking the front balustrade part as a balustrade.

In an embodiment of the exterior wall element the front balustrade part comprises further locking means for locking the front balustrade part in the passage when the panel is in the first position.

In an embodiment of the exterior wall element the front balustrade part with the panel close off the passage, preferably in the passage.

In an embodiment of the exterior wall element the balustrade means further comprise balustrade side parts, wherein the locking means of the front balustrade part cooperate with locking means of the balustrade side parts for locking the front balustrade part to the balustrade side parts for forming the balustrade. Apart from their function in the balustrade the balustrade side parts also have a function in retaining and locking the front balustrade part. In an embodiment balustrade side parts together with the panel can be folded in the passage. Preferably the balustrade side parts are hinged to the side edges of the panel, so that they can be folded against the panel. In an embodiment the balustrade side parts close against each other with the side opposite the hinging side.

According to another aspect the invention relates to an exterior wall element, placeable in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel movable between a first position in which it is substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the panel in the first position at least partially closes off the passage.

In an embodiment thereof the panel is moveable over approximately 90 degrees.

According to another aspect the invention relates to an exterior wall element placeable in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel that is movable between a first position substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the panel in the first position has a wall side and a side oriented to the outside, and a surface that can be walked on which in the first position is at the wall side.

According to another aspect the invention relates to an exterior wall element

that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel rotatable about an edge between a first position substantially parallel to the wall and a second position substantially perpendicular to the wall for forming a balcony floor.

In an embodiment thereof, when the exterior wall element is placed in the passage, said edge is situated near the lower side of the passage.

Said aspects can be combined.

Another aspect of the invention relates to a vehicle, such as a lorry trailer, train or caravan, comprising a panel as described above.

As a result a balcony that can be folded and unfolded can be realised which hardly takes up any indoor space and which can easily be put into use. For instance a stage for performances can thus be created quickly. A wall with the panel may then also be a part of a lorry trailer, train or caravan. In that case for instance a lorry trailer can be used as an exhibition space or a stage. A caravan may thus also be provided with a veranda or balcony that can be folded or unfolded.

The invention will be further elucidated on the basis of an exemplary embodiment of an exterior wall element of a wall and a panel according to the invention in the form of a balcony that can be folded and unfolded, in which:

Figure 1 shows an exterior wall element having a balcony that can be folded and unfolded according to the invention;

Figures 2A-2C show a detail of figure 1 from the inside, in vertical cross-section and from the outside, respectively;

Figures 3A-3C show the views of figures 2A-C respectively, during a first stage of unfolding the balcony;

Figures 4A-4C show a second stage during the unfolding of the balcony;

Figures 5A-5C show the balcony in unfolded condition according to the views of figures 2A-2C;

Figures 6A-9B show a horizontal and a vertical cross-section of the views shown in the figures 2A-5C;

Figures 10A-15B show various embodiments of a balcony according to the invention, wherein each time figures A-D show views from the inside during the various stages of unfolding the balcony, and figures E-H show the same stages from the outside.

Figure 1 shows the exterior wall element of a wall and a panel according to the invention in the shape of a foldable and unfoldable balcony at an exterior wall.

The wall 1 is provided with a foldable and unfoldable balcony 2. The wall 1 has a passage 3 in the wall, which passage is bounded by a casing 9. The panel 4 is in the unfolded condition here, wherein a panel 4 is perpendicular to the wall 1 thus forming a floor of a balcony. The panel 4 is here provided with a standing surface or walked-on finish 8.

The unfoldable balcony 2 is provided with a balustrade 5 having a front balustrade part 6 and balustrade side parts 7 and 7'.

The balustrade parts 6, 7, 7', are hinged to the panel 4 and to each other, respectively, and panel 4 is hinged, in this case, to the casing. The figure further shows a rod 10 which is connected to means for automatically

folding the balcony. In an embodiment the balustrade part 6 can be uncoupled from panel 4 and be opened independently as a window, for instance hinging about the upper edge.

Each time in three views, respectively, the figures 2A up to and including 5C one after the other show the process of unfolding a balcony according to the invention.

The figures A show a view from the inside, the figures B show a vertical cross-section and the figures C show a view from the outside.

Figure 2A shows a view from the inside showing the casing 9 with the front balustrade part 6 in it closing off a part of the passage surrounded by the casing and the balustrade side parts 7 and 7' in folded condition. In figure 2C, the view from the outside, the front balustrade part 6 can also be seen as well as the panel 4. The panel 4 here is provided with a frame 11 provided with a translucent material 12. Panel 4 and front balustrade part 6 together form the closing off of passage 3.

At the inside of the casing, figure 2A, first operation means, in this case a handle, can be seen for forming the balustrade, and optionally for bringing the panel in the third condition (figures 4A-4C) between the first and second condition, and second operation means (in this case a push button) for unfolding the balcony (figure 5A-5C).

In figures 3A-3C the balustrade side parts 7 and 7' are unfolded to the inside, and the panel 4 has become visible from the inside. The panels 7 and 7' are connected to panel 4 by hinges 20 and 20'. Panel 6 is connected to panel 4 by means of hinge 21. In the vertical cross-section it can be seen how balustrade side part 7 is unfolded and is connected to panel 4 by means of hinge 20.

Figures 4A-4C show a second stage in the unfolding of the foldable and unfoldable balcony according to the invention, wherein the front balustrade part 6 is first folded to the inside about hinge 21 and is attached to balustrade side parts 7 and 7', after which the balcony in its entirety can be unfolded to the outside.

In figures 5A-5C the foldable and unfoldable balcony can be seen in its unfolded condition. Here the panel 4 forms the floor of the balcony having a standing surface or walked-on finish 8 and balustrade parts 6, 7 and 7' together form the balustrade of the balcony. The panel 4 and the front balustrade part 6 in this embodiment have a double function, namely the closing off of a passage and a balcony function.

In another embodiment of the foldable and unfoldable balcony according to the invention the front balustrade part 6 is not first folded to the inside and attached to the balustrade side parts 7 and 7' prior to the unity being folded to the outside, but panel 4 is folded to the outside, and during the folding to the outside of panel 4, panel 6, forming the front balustrade part, is connected to panel 4 by a hinge and is lowered along the rebate (optionally by means of a guide), until it abuts the balustrade side parts 7 and 7'.

In a further embodiment means may be provided for either electronically or hydraulically regulating the unfolding of the balcony, for instance by means of an electromotor connected to a tension member 10. All this may be connected such that by means of this one tension member the various parts may slide into each other and fold wherein they fully close off the passage 3 and can be converted into the balcony 2.

Figure 6A shows a vertical cross-section of the foldable balcony in folded condition as also shown in the figures 2A-2C.

It can clearly be seen in this cross-section that panel 4 together with the

front balustrade part 6 form the windows in casing 9.

The front balustrade part 6 comprises a (in this case wooden) frame 29 provided with safety glazing 28. Panel 4 also comprises a (in this case wooden) frame 34 provided with (in this case double) glazing consisting of textured and laminated glass that is not transparent, provided with a reinforcement structure therein, so that one can stand on the glazing when the balcony is unfolded. The figures also show the hinge 30 about which panel 4 can be folded from the first condition into the second condition, and hinge 21 with which the front balustrade part 6 can be folded into its position as part of the balustrade.

The cross-section also clearly shows the balustrade side parts 7, wherein it can clearly be seen that the balustrade side parts comprise a wooden frame 32 also including safety glazing 33 therein.

All this is schematically shown in figure 6B, the horizontal cross-section.

Figures 7A and 7B show the first stage of the unfolding of the balcony, wherein first of all the balustrade parts 7' and 7 are unfolded. In figure 7B in the cross-section of the casing 9 the guide system is shown, which is provided with a counterbalance mechanism and cabling, for automatically, that means either electronically or hydraulically, unfolding the balcony. To that end activation handle 31 is arranged on the casing 9.

Figures 8A and 8B show the second stage of the unfolding wherein the front balustrade part 6 connects to the balustrade side parts 7 and 7'. A cable 10 is also shown with which panel 4 can be lowered slowly in a motorised manner. In the unfolded condition of the balcony the cable serves to lock the unfolded condition.

In figure 8A a guide 60 is furthermore shown, for guiding the front

balustrade part 6, particularly the upper corner of the front balustrade part 6 is provided with a pin running in a guide. In figure 9A it can be seen how guide 60 extends into a discharge portion 60 as a result of which the front balustrade part 6 gets detached there from the casing and the balcony can be completely unfolded. In figure 9A it can also be seen how the sill of the casing 9 forms a stop 39 which together with the cable 10 locks the balcony in the unfolded second condition. The cable is connected to operation means 31, and then has a function both in the lowering of the balcony and in the locking of the panel 4 in the first and second condition.

In figures 9A and 9B the unfoldable balcony is shown in its unfolded condition. A counterweight 70 can clearly be seen here, which counterweight is movable in the casing for facilitating the folding and unfolding or lifting and lowering of the balcony. Optionally the cable may also be connected to an electromotor or hydraulic drive.

Figures 10A-15B show various embodiments of a balcony according to the invention, wherein each time the figures A-D show views from the inside during various stages of unfolding the balcony, and figures E-H show the same stages from the outside. Each time panel 4 at least partially closes off a passage in a wall. Panel 4 is attached in a hinging manner near the bottom side of the passage in the wall, such that in unfolded condition the floor at the inside almost connects to the panel surface as a result of which an almost contiguous surface is created and the floor changes into the panel surface. Balustrade parts are connected with the panel in various ways.

In figure 10A the side parts 7 and 7' of the balustrade are folded against the wall when the balcony is not being used. Said panels are first positioned perpendicular to the wall (figure 10B) after which the panel 4 is folded downwards (figure 10C). Balustrade part 6 may either be hinged at its bottom side to panel 4, which is easiest to manufacture, or be slidable over the sides of balustrade parts 7 and 7' after which the upper side connects to

panel 4. Figure 10D shows the balcony in unfolded condition wherein it can clearly be seen how panel 4 is a continuation of the floor. Figures 10E-10H show the situations shown in figures 10A-10D as considered from the outside.

In an alternative embodiment of the figures 10A-10H one of the panels 7 or 7', or both panels 7 and 7', are part of a passage in the exterior wall or facade extending adjacent to panel 4. In said embodiment in the situation of figures 10B-10D and 10F-10H one or two windows 7, 7' are actually opened, and the exterior wall is open at that location. For safety measures a balustrade or fence may be placed at the outside like in a French casement.

In another embodiment the planes 7 and/or 7' are provided at the outside with windows that may or may not be fixed, having at the inside windows that can be folded towards each other as shown in figure 10B, so that the windows when unfolding panel 4 may form balustrade parts.

What has been shown in relation to panel 7 and 7' in figures 10A-10H naturally is also possible in figures 11A-11H and 15A-15H.

Figures 11A-11H show an embodiment wherein panel 4 is almost just as large as the passage in the wall. Balustrade part 6 (as considered from the inside) is arranged in front of panel 4 and hinged to it at its bottom side. Balustrade parts 7 and 7' are again positioned perpendicular to the wall, and balustrade part 6 is folded upwards (with its bottom side) and when perpendicular to the wall, connected to the other balustrade parts 7 and 7'. After that the entire balcony including balustrade is unfolded. It may even be possible that the balustrade parts get into their positions during unfolding panel 4. Figures 11E-11H again show the various stages from the inside.

Figures 12A-12H show an embodiment wherein panel 4 again almost and substantially closes off the entire passage in the wall. Balustrade parts 7 and

7' have been folded into the passage, as was also the case in the figures 1-9. Balustrade part 6 (as considered from the inside) has here been arranged over the balustrade parts 7 and 7', but it could also be arranged between these balustrade parts and panel 4 (in the folded condition of the balcony).

Figures 13A-13H show an embodiment wherein panel 4 closes off the passage in the wall. The balustrade is arranged and connected to panel 4 (figure 13B), after which panel 4 is brought into the user position (figure 13C) and locked (figure 13D).

Figures 14A-14H show an alternative embodiment of figures 13A-13H, wherein the balcony is smaller, and an upper panel 100 serves as awning.

Figures 15A-15H show another alternative embodiment. Here first balustrade parts 7 and 7' are brought from a position substantially parallel to the wall 1 (figure 15A) into a position substantially perpendicular to the wall 1 (figure 15B). Simultaneously or subsequently balustrade part 6 is folded to the outside (figure 15B). After that panel 4 is brought into the user position (figure 15C and 15D). Figures 15E-15H again show the stages from the inside.

It will be clear that the description above has been included to illustrate the operation of preferred embodiments of the invention, and not to limit the scope of the invention. Starting from the above elucidation many variations that fall within the spirit and scope of the present invention will be evident to the expert.

Claims

1. Exterior wall element that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel that is movably connected to the exterior wall element and is movable between a first position substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the exterior wall element at least partially closes off the passage.

2. Exterior wall element according to claim 1, wherein the exterior wall element fully closes off the passage.

3. Exterior wall element according to claim 1 or 2, wherein the exterior wall element at least partially closes off the passage when the panel is in the first position.

4. Exterior wall element according to any one of the preceding claims, wherein the exterior wall element further comprises a casing.

5. Exterior wall element according to claim 4, wherein the panel is movably connected to the casing.

6. Exterior wall element according to any one of the claims 4 or 5, wherein the casing bounds the passage.

7. Exterior wall element according to any one of the preceding claims, wherein the panel has a wall side oriented to the wall when in the first position, and at the wall side has a surface that can be walked on.

8. Exterior wall element according to any one of the preceding claims, wherein the panel in the first position closes off at least a part of the passage.

9. Exterior wall element according to any one of the preceding claims, wherein the panel in the first position closes off the entire passage.

10. Exterior wall element according to any one of the preceding claims, wherein the panel is rotatable about an edge of the panel from the first to the second position.

11. Exterior wall element according to claim 10, wherein when the exterior wall element is placed in the passage said edge is near the lower edge of the passage.

12. Exterior wall element according to any one of the preceding claims, wherein when the wall connects to a floor and the lower side of the passage extends to near the floor, the placed exterior wall element with the panel in the second position provides a balcony floor connecting to the floor.

13. Exterior wall element according to any one of the preceding claims, wherein the panel is movable from the first position to the second position over approximately 90 degrees.

14. Exterior wall element according to any one of the preceding claims, wherein the casing has a sill and the panel with an edge is movably connected to the sill.

15. Exterior wall element according to any one of the preceding claims, further comprising balustrade means that in the second position of the panel are connectable to the panel to form a balustrade for the balcony.

16. Exterior wall element according to claim 15, **characterized in that** the balustrade means can be folded, wherein the balustrade means are folded in the first condition of the panel.

17. Exterior wall element according to claim 16, **characterized in that** the balustrade means are extendable on the panel in the second condition, preferably from a space behind the wall or from the passage in the wall.

18. Exterior wall element according to any one of the preceding claims, **characterized in that** the panel is provided with balustrade means.

19. Exterior wall element according to any one of the claims 15-18, wherein the panel together with a part of the balustrade means form the closing means.

20. Exterior wall element according to any one of the preceding claims, wherein the panel is connected by means of a hinge.

21. Exterior wall element according to any one of the preceding claims 15-20, wherein the balustrade means comprise a front balustrade part.

22. Exterior wall element according to claim 21, wherein the front balustrade part together with the panel form closing means, preferably for closing off the passage.

23. Exterior wall element according to claim 21 or 22, wherein the front balustrade part is movably connected with an edge of the panel.

24. Exterior wall element according to claim 13, wherein the front balustrade part with an edge is movably connected to an edge of the panel, preferably hinged.

25. Exterior wall element according to claim 24, wherein the edge situated opposite the edge connected to the front balustrade part is movably connected to the casing.

26. Exterior wall element according to any one of the claims 15-25, wherein the balustrade means comprise balustrade side parts, movably connected to the panel.

27. Exterior wall element according to any one of the preceding claims, wherein the balustrade means comprise mutually hinged parts to each other for folding the balustrade when the panel is in the first position or when it is brought from the second position into the first position.

28. Exterior wall element according to any one of the preceding claims wherein the balustrade means comprise the front balustrade part and the balustrade side parts, wherein the lower edge of the balustrade side parts are each movably connected, preferably hinged, to an edge of the panel.

29. Exterior wall element according to any one of the preceding claims, wherein the wall is an outer wall.

30. Exterior wall element according to claim 15-29, wherein the balustrade means comprise the front balustrade part, wherein the panel together with the front balustrade part connects in the casing in order to close off the passage.

31. Exterior wall element according to any one of the preceding claims, wherein the casing comprises a sill, and the panel is connected to the sill by means of a hinge.

32. Exterior wall element according to any one of the preceding claims, wherein the panel has a width matching the width of the casing.

33. Exterior wall element according to any one of the claims 21-32, wherein the front balustrade part and the panel together form windows in the casing.

34. Exterior wall element according to any one of the preceding claims, **characterized in that** the exterior wall element further comprises locking means for locking the panel in the first condition and the second condition.

35. Exterior wall element according to any one of the preceding claims, wherein the exterior wall element comprises the balustrade means with the front balustrade part, wherein the front balustrade part comprises locking means for locking the front balustrade part as a balustrade.

36. Exterior wall element according to claim 35, wherein the front balustrade part comprises further locking means for locking the front balustrade part in the passage when the panel is in the first condition.

37. Exterior wall element according to claim 27, wherein the front balustrade part with the panel in the casing close off the passage.

38. Exterior wall element according to any one of the preceding claims, wherein the exterior wall element comprises the balustrade means with the balustrade side parts, wherein the locking means of the front balustrade part cooperate with the locking means of the balustrade side parts for locking the front balustrade part to the balustrade side parts for forming the balustrade.

39. Exterior wall element, placeable in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel movable between a first position in which it is substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the panel in the first position at least partially closes off the passage.

40. Exterior wall element according to claim 39, wherein the panel is moveable over approximately 90 degrees.

41. Exterior wall element according to claim 39 or 40, wherein the exterior wall element at least partially closes off the passage.

42. Exterior wall element that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel that is movable between a first position in which it is substantially parallel to the wall, and a second position substantially perpendicular to the wall for forming a balcony floor, wherein the panel in the first position has a wall side and a side oriented to the outside, and a surface that can be walked on which in the first position is at the wall side.

43. Exterior wall element that can be placed in a passage in a wall, for providing a balcony that can be folded and unfolded, comprising a panel rotatable about and edge between a first position substantially parallel to the wall and a second position substantially perpendicular to the wall for forming a balcony floor.

44. Exterior wall element according to claim 43, wherein when the exterior wall element is placed in the passage said edge is situated near the lower side of the passage.

45. Exterior wall element that can be placed in a passage in a wall for providing a balcony that can be folded and unfolded, comprising a panel which with an edge is rotatably connected near the lower side of the passage.

46. Exterior wall element according to claim 45, wherein the distance between the opposite edges that are not connected corresponds to the width of

the passage.

47. Device provided with one or more of the characterising measures described in the description and/or shown in the drawings.

1

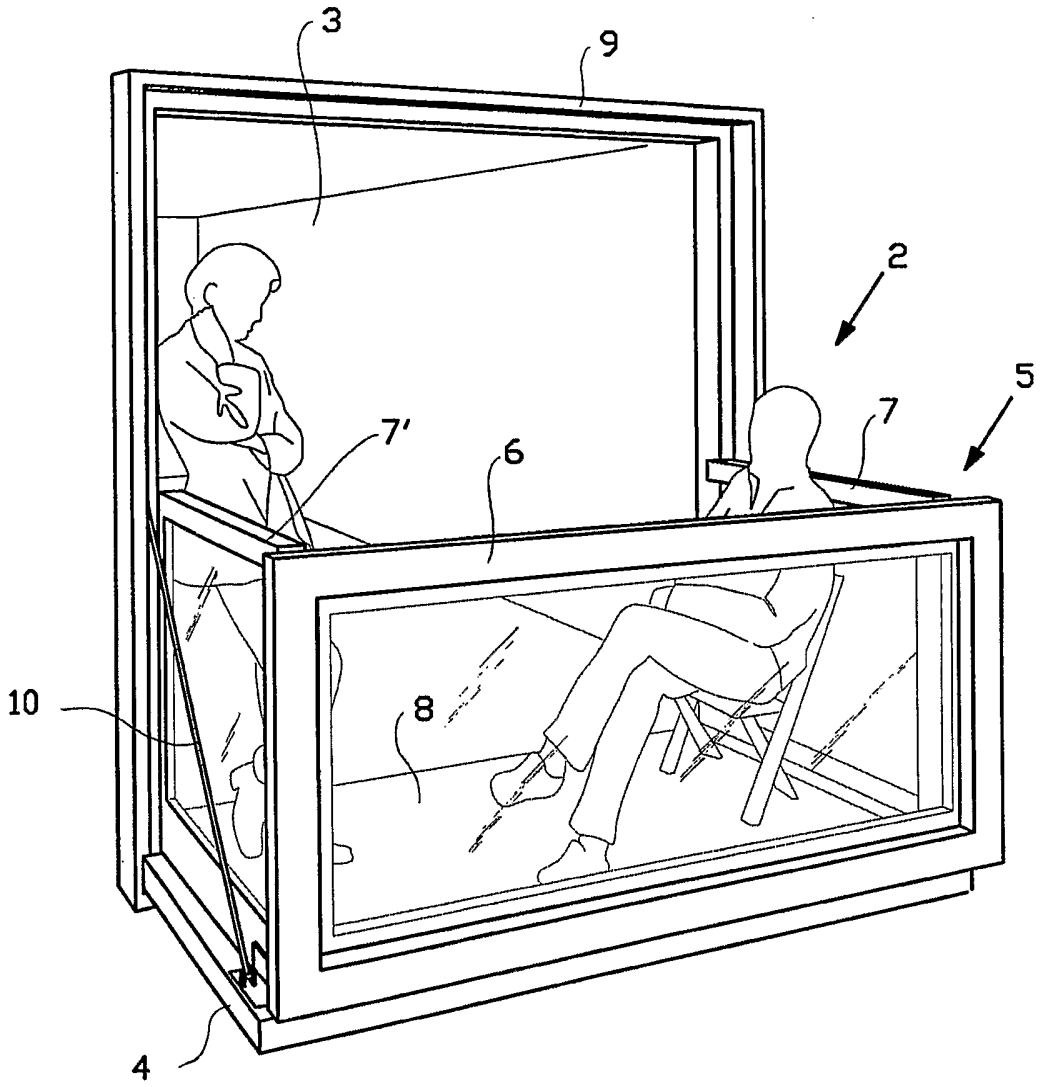


FIG. 1

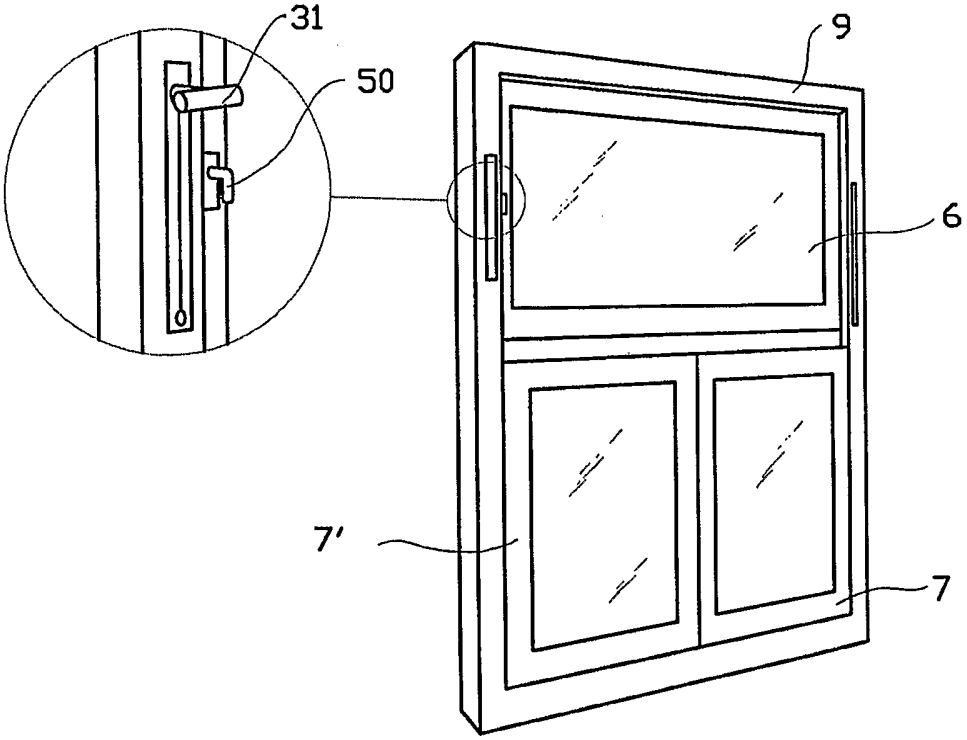


FIG. 2A

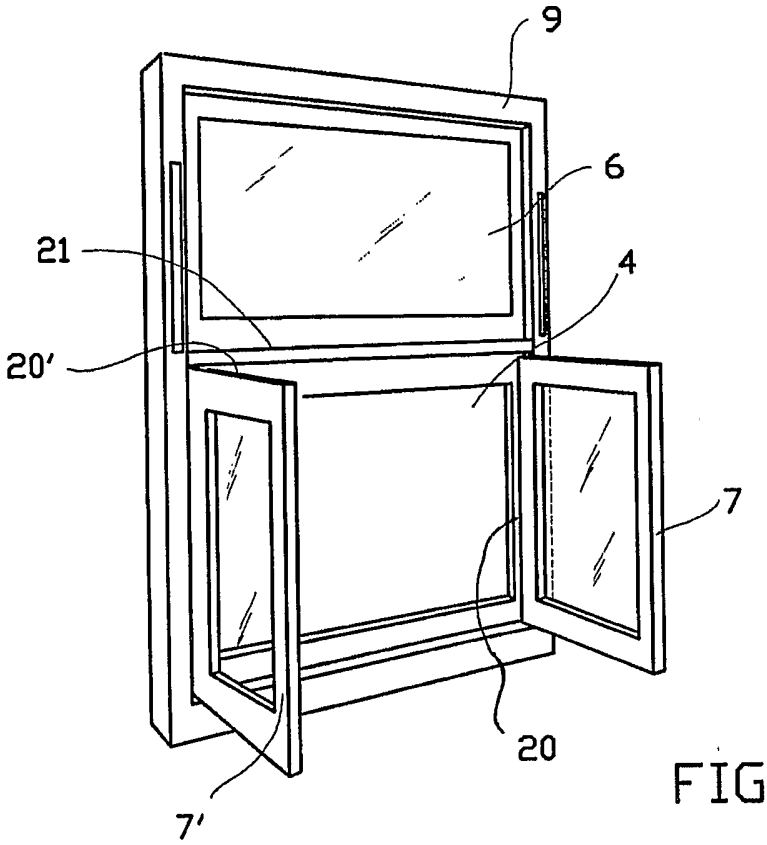


FIG. 3A

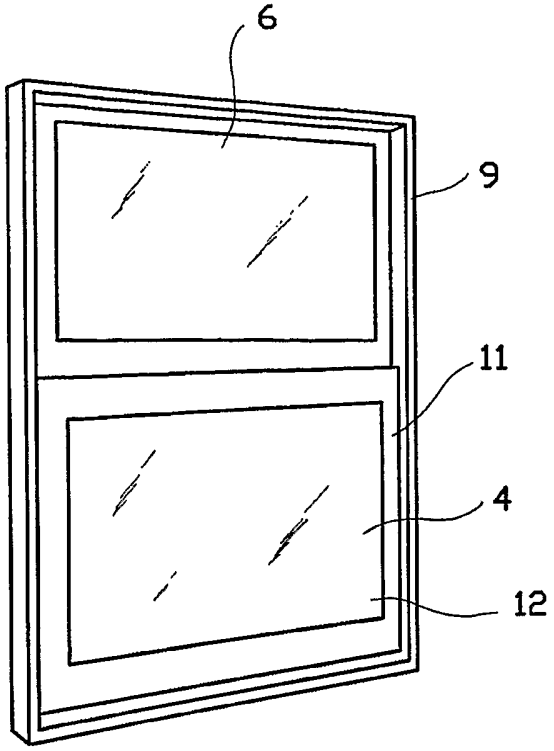


FIG. 2C

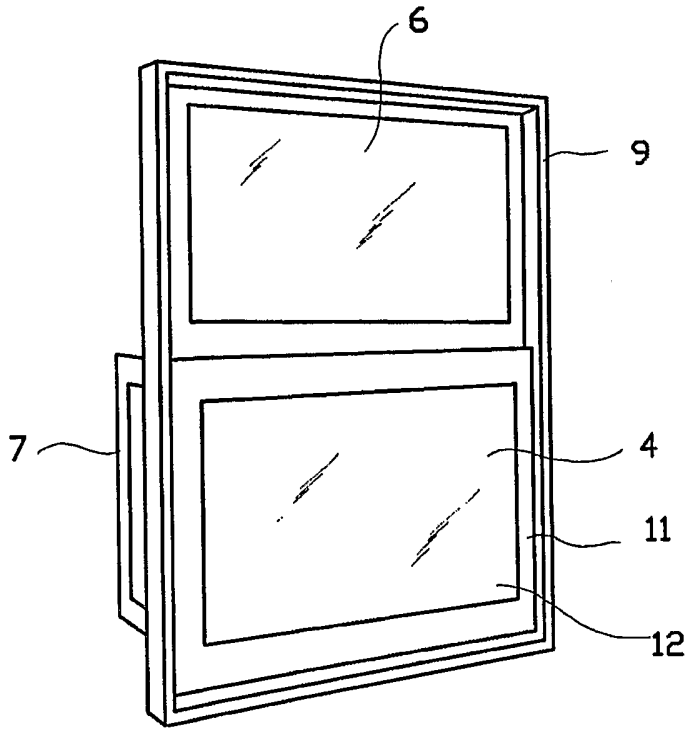


FIG. 3C

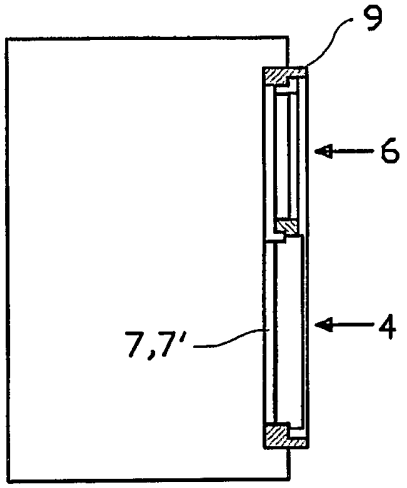


FIG. 2B

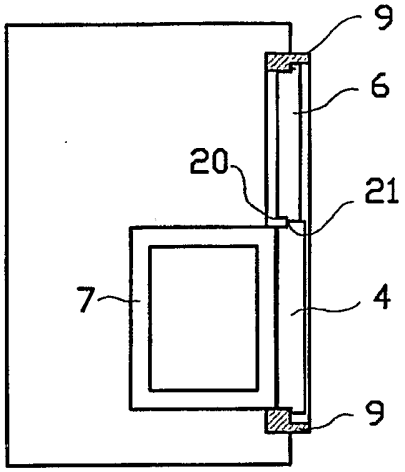


FIG. 3B

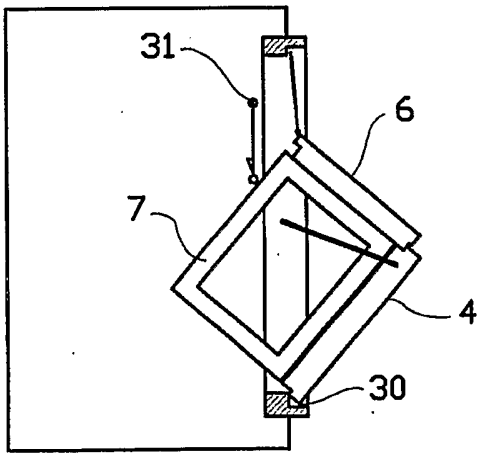


FIG. 4B

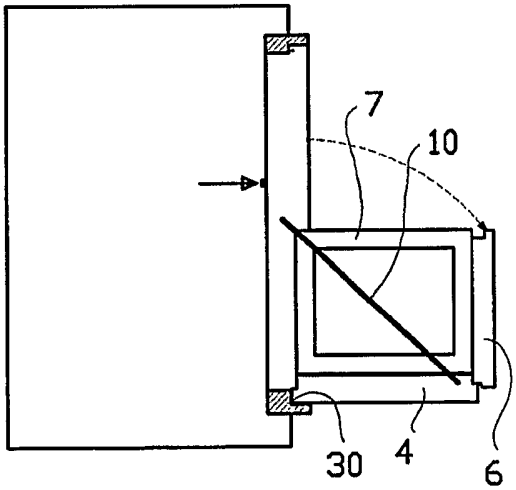


FIG. 5B

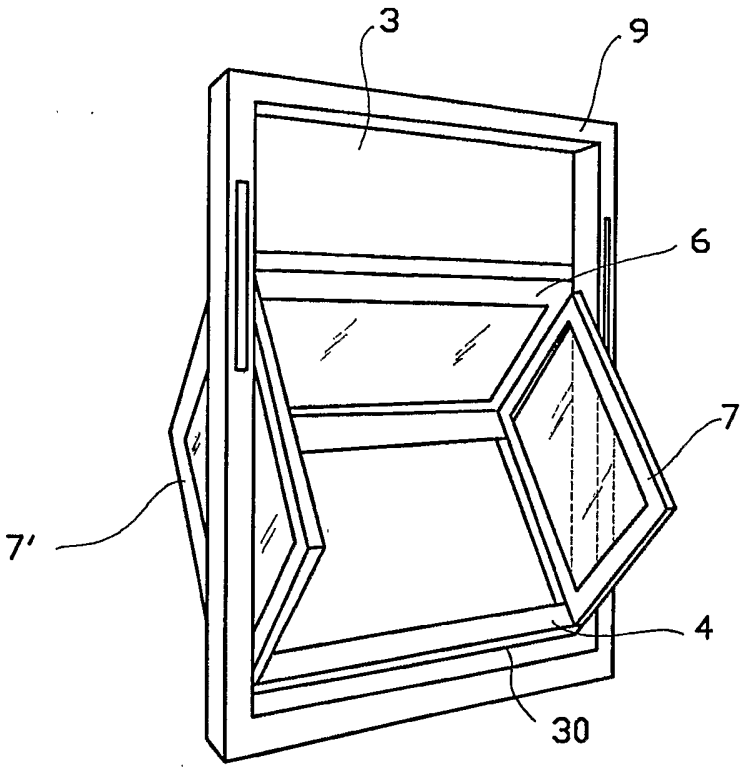


FIG. 4A

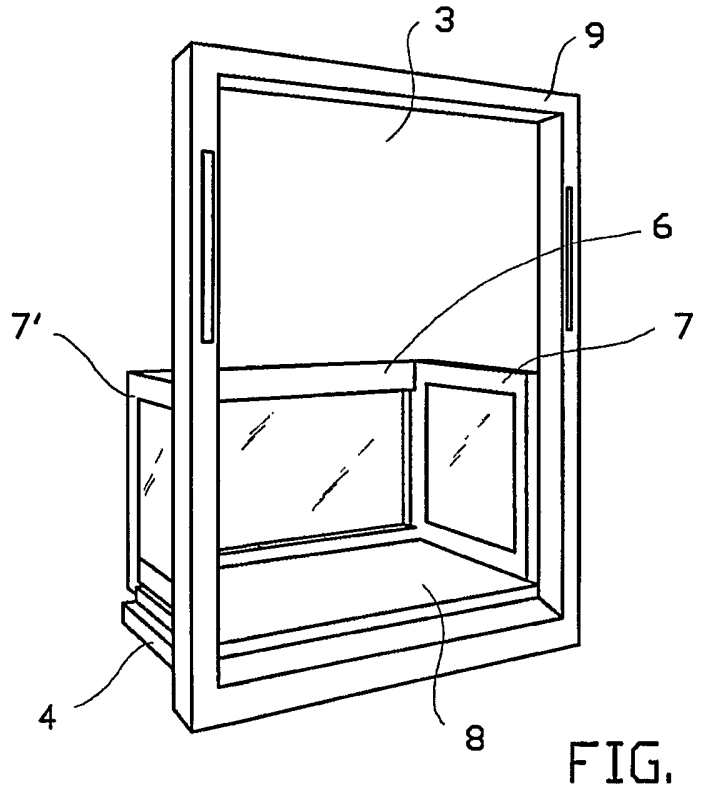


FIG. 5A

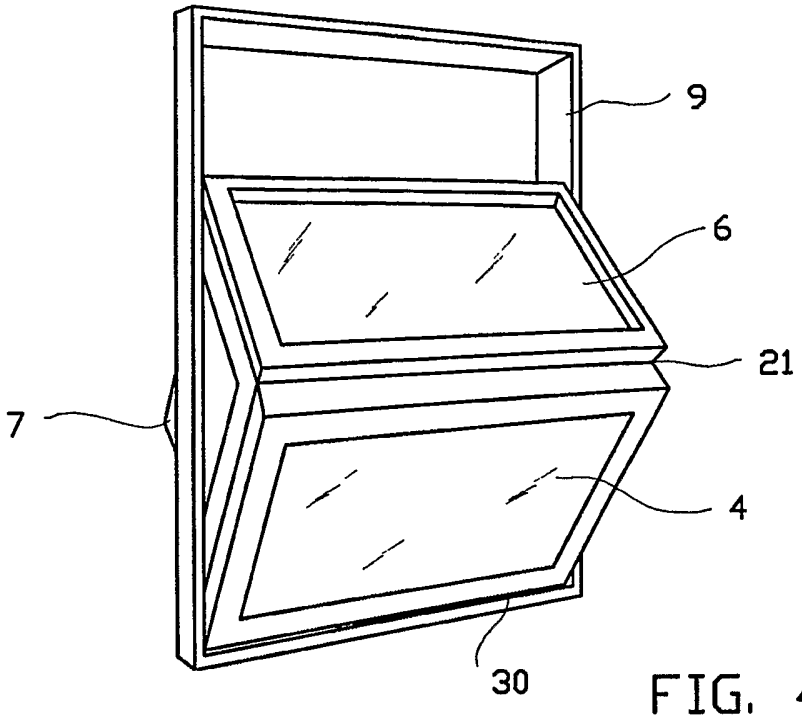


FIG. 4C

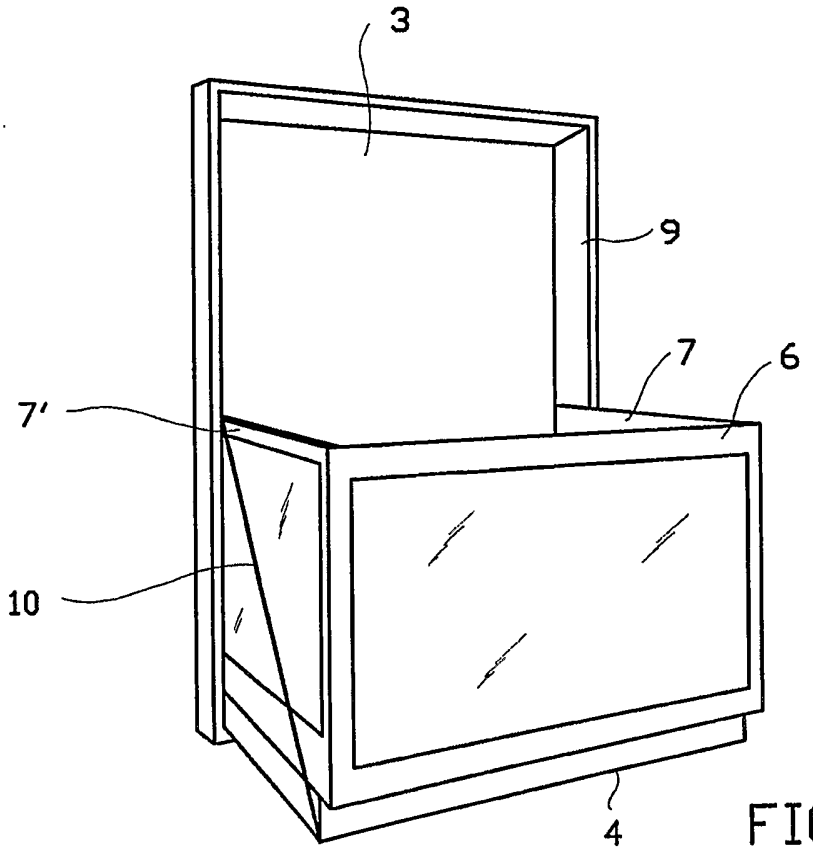


FIG. 5C

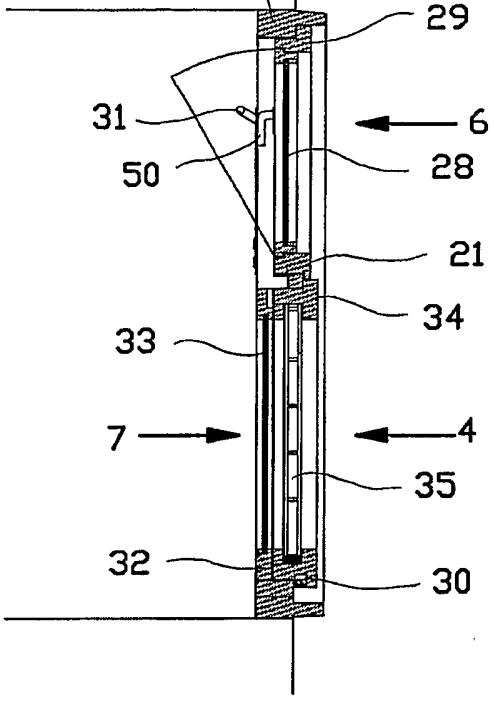


FIG. 6A

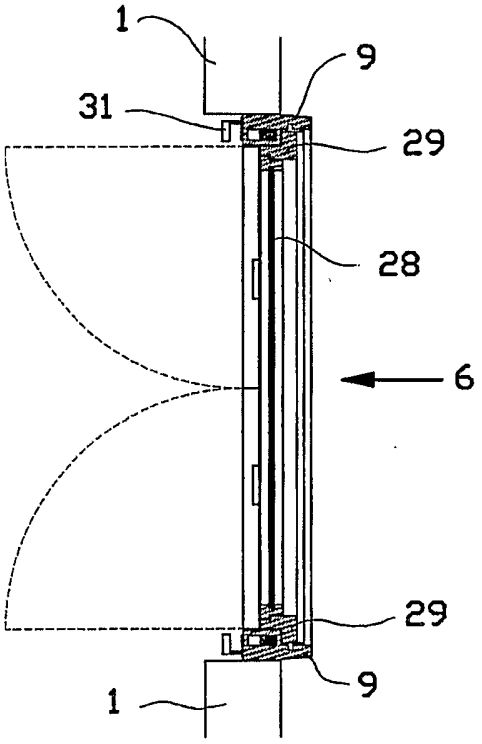


FIG. 6B

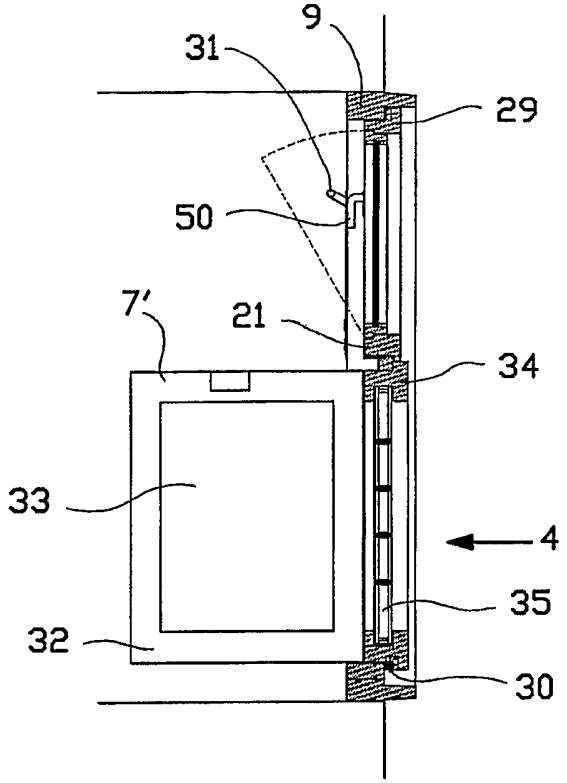


FIG. 7A

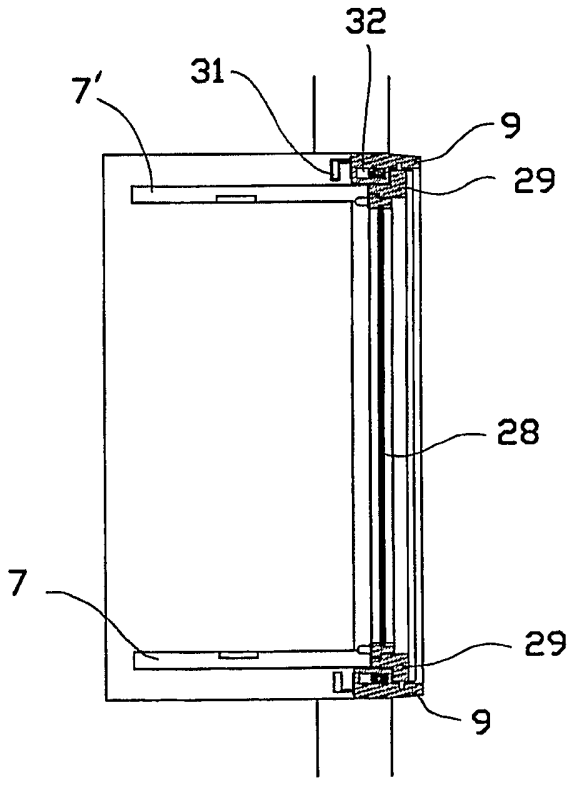


FIG. 7B

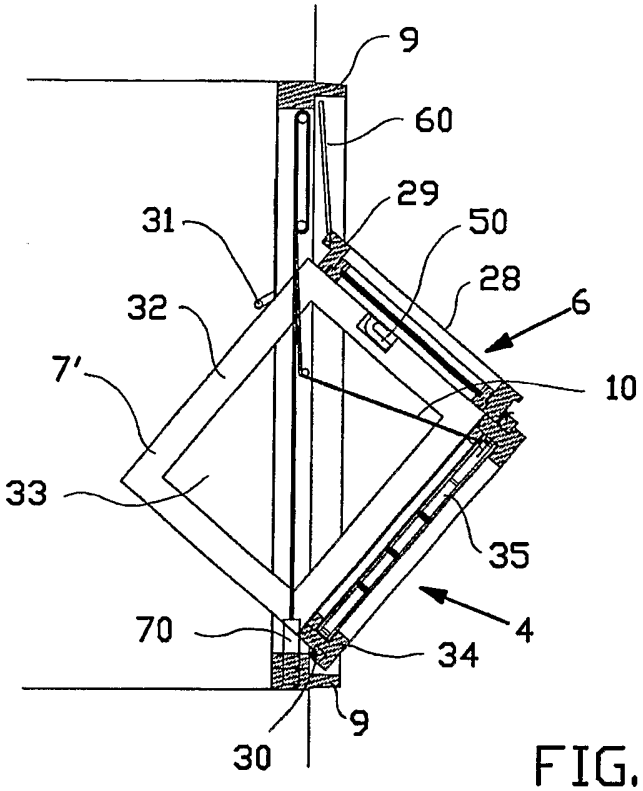


FIG. 8A

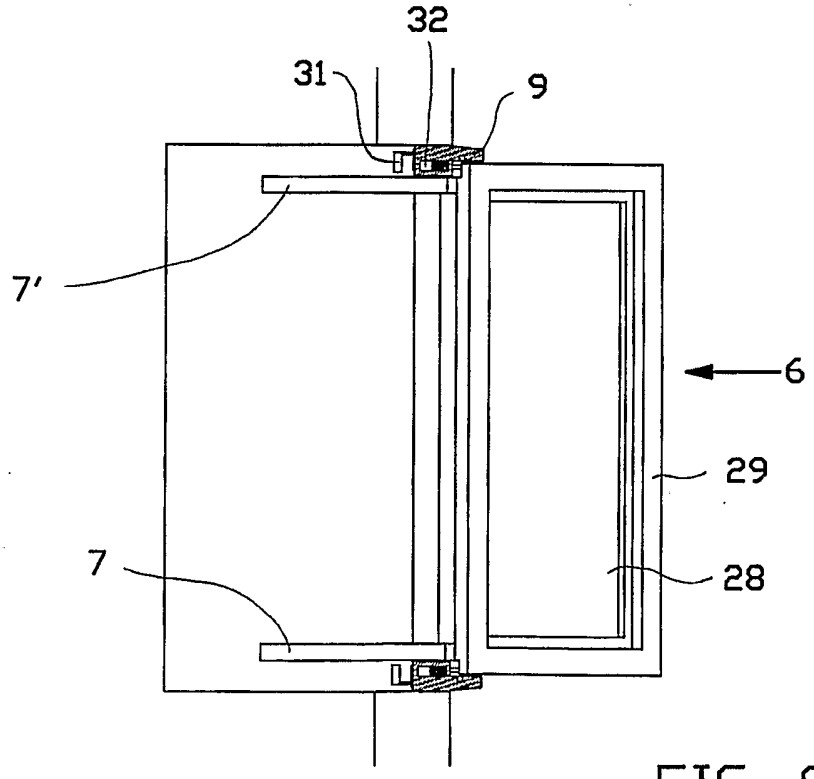


FIG. 8B

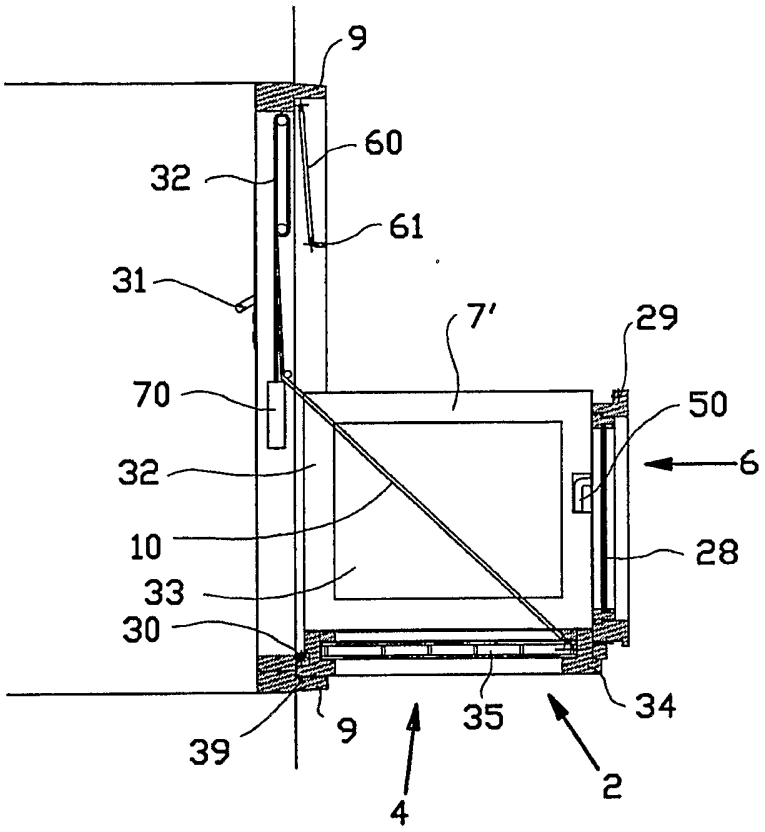


FIG. 9A

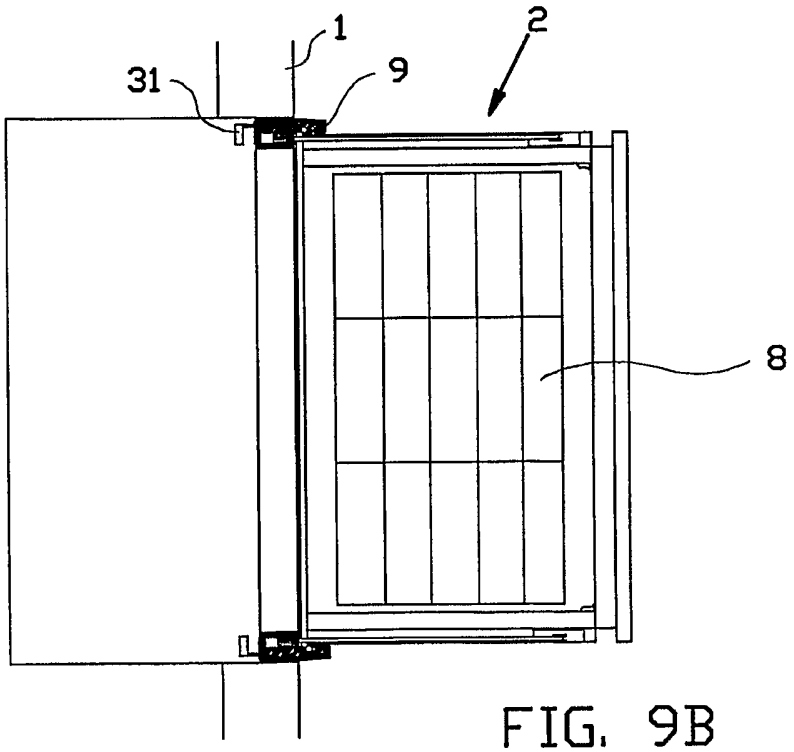


FIG. 9B

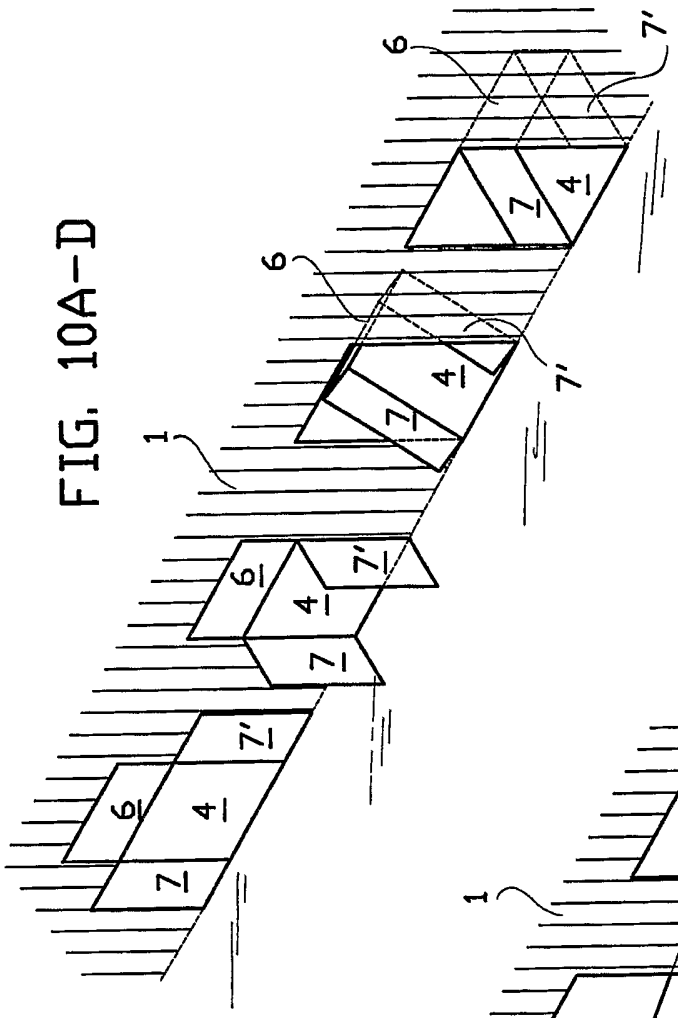


FIG. 10A-D

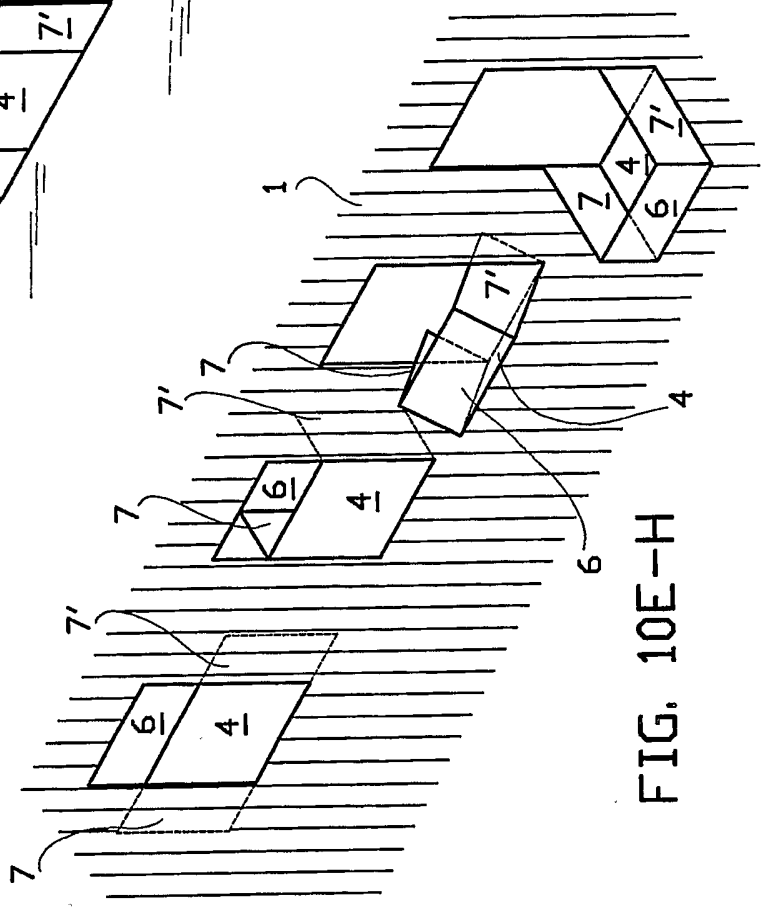


FIG. 10E-H

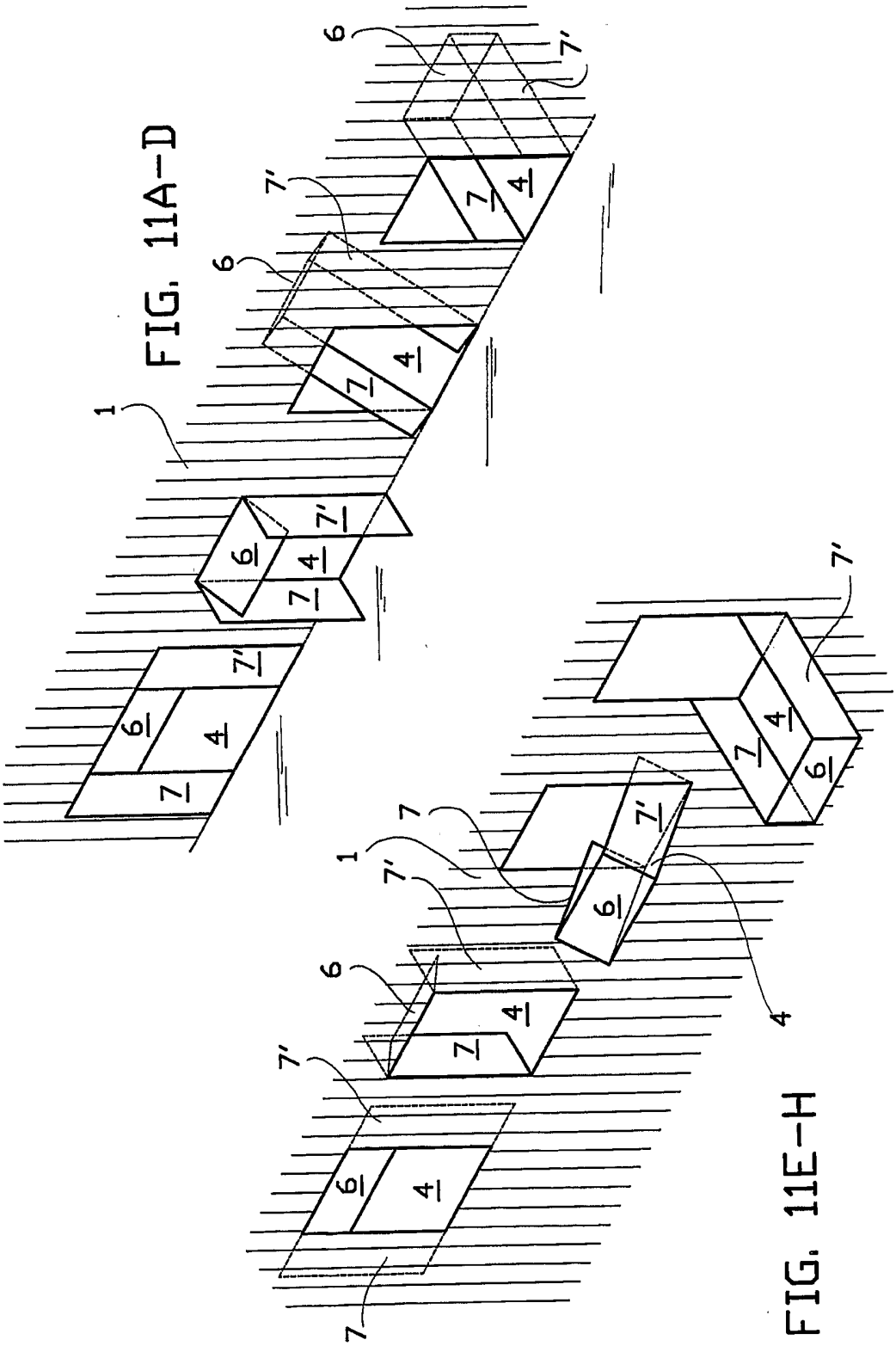
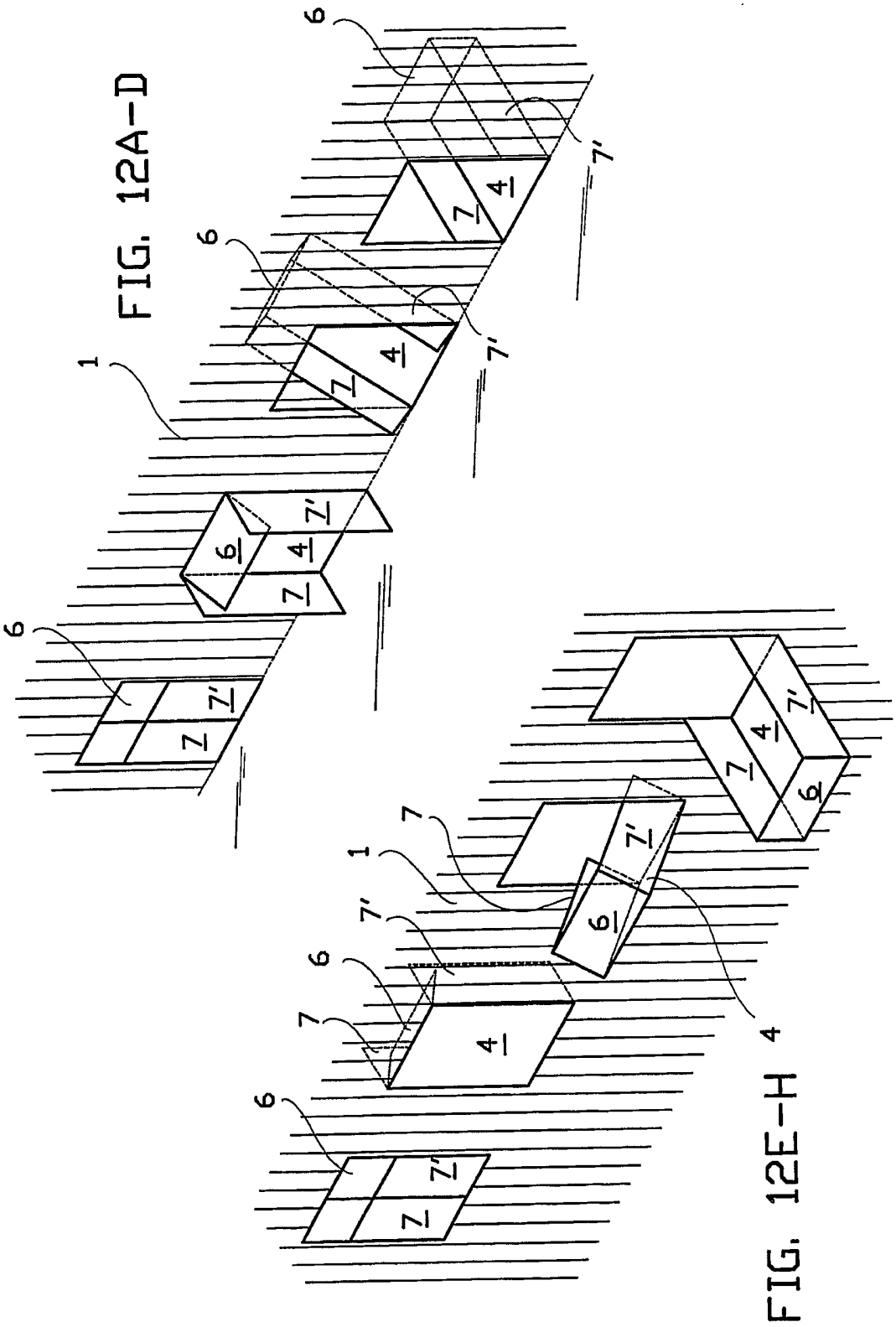


FIG. 11A-D

FIG. 11E-H


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FIG. 12A-D
FIG. 12E-H

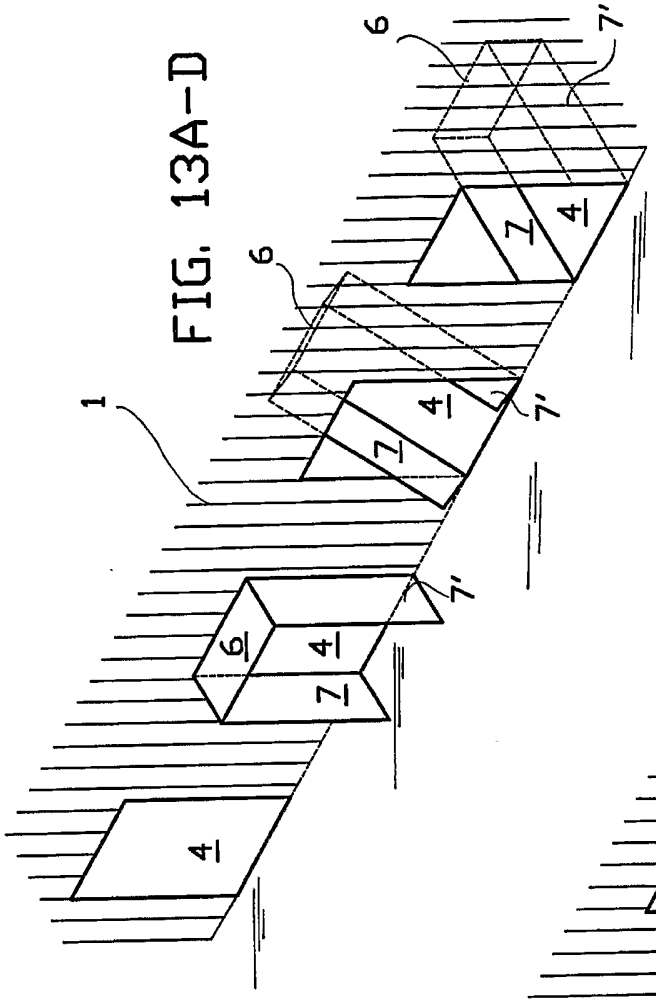


FIG. 13A-D

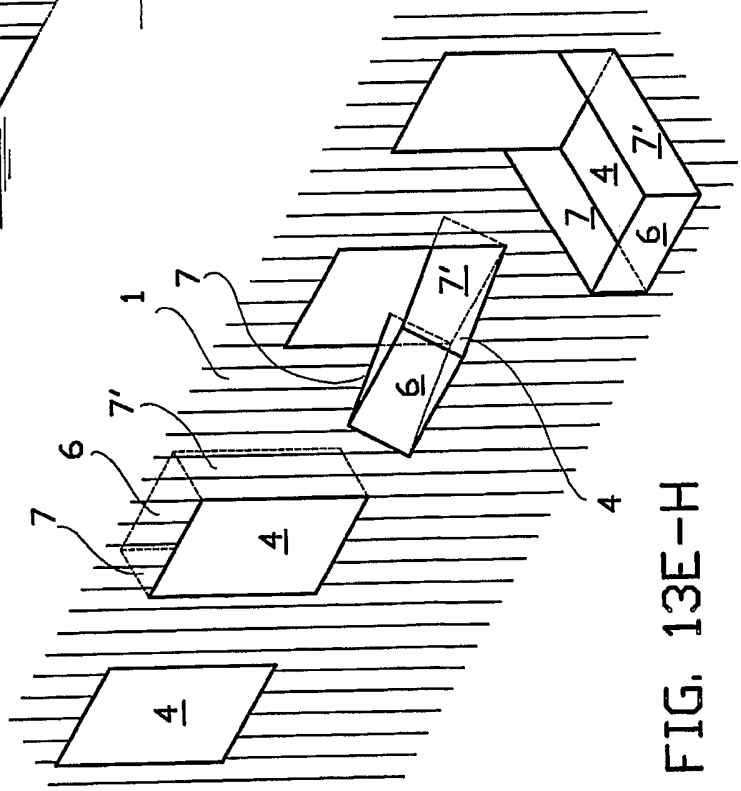


FIG. 13E-H

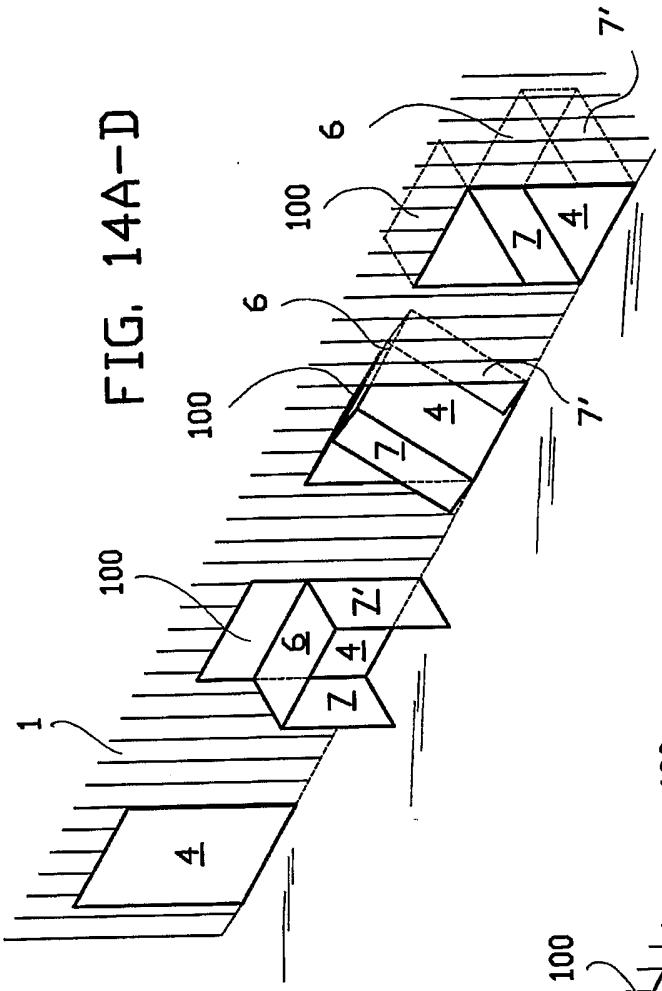


FIG. 14A-D

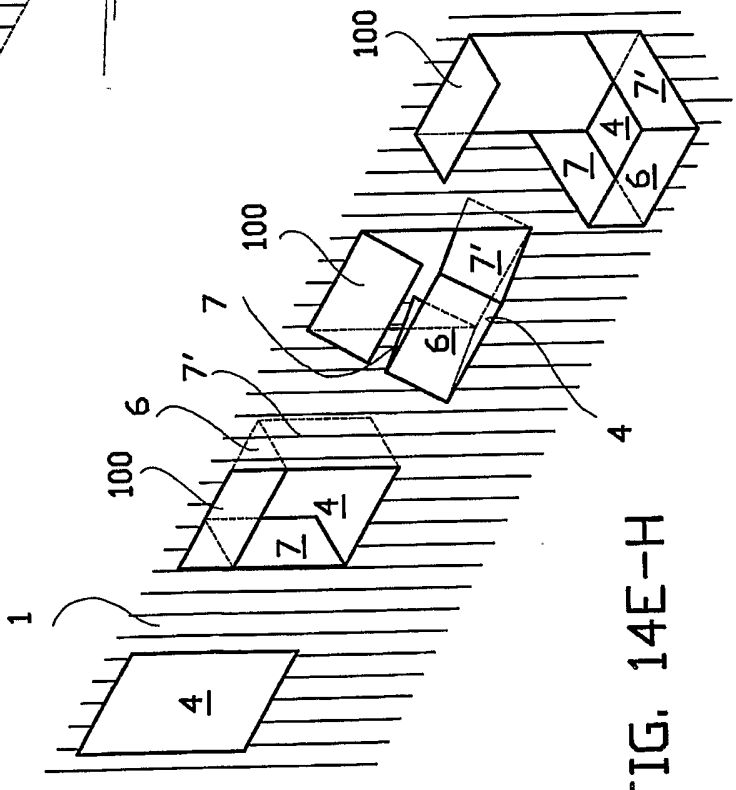


FIG. 14E-H

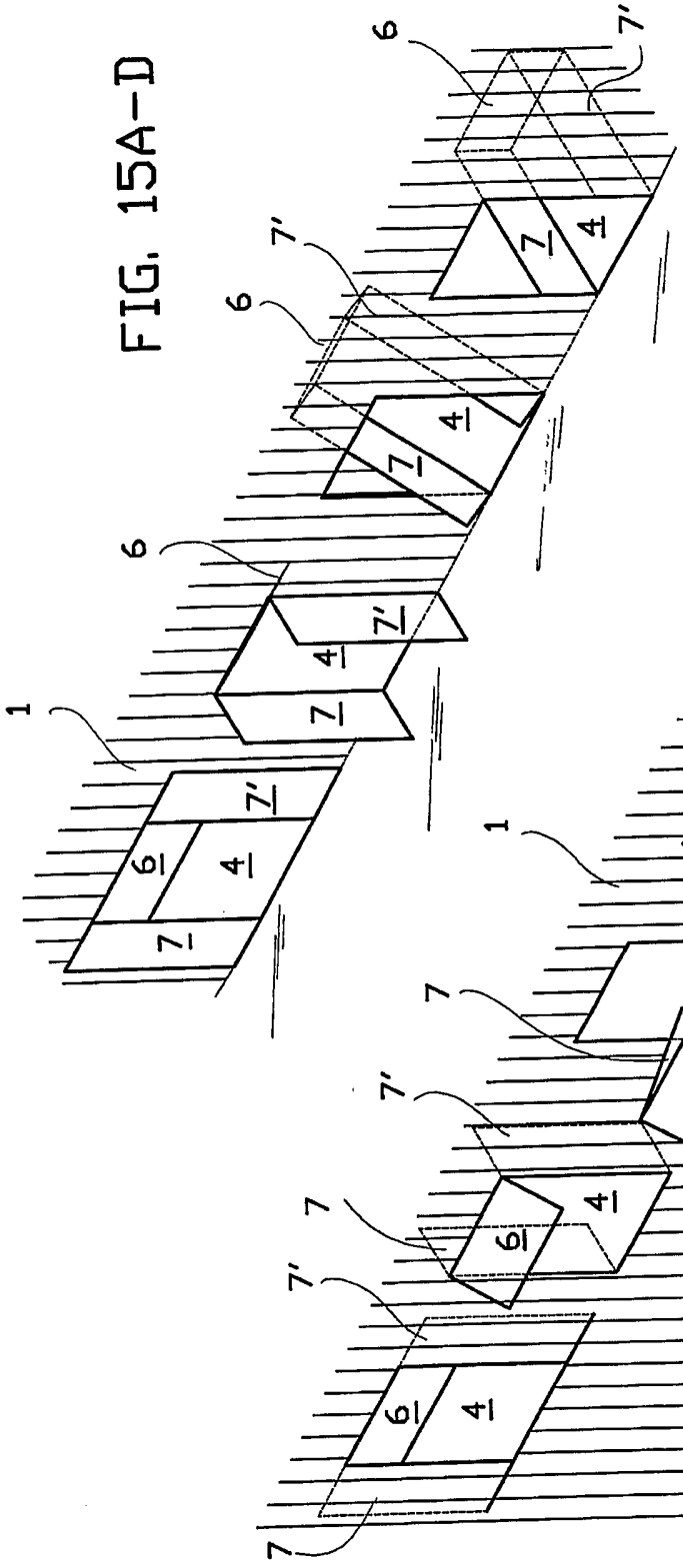


FIG. 15A-D

FIG. 15E-H

INTERNATIONAL SEARCH REPORT

Inte onal Application No
PC T/NL2004/000402

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E04B1/00 E06B1/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E04B E06B B60R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Section PQ, Week 199408 Derwent Publications Ltd., London, GB; Class Q43, AN 1994-063763 XP002298324 -& SU 1 789 620 A1 (VIKTORIYA INVENTORS COOP) 23 January 1993 (1993-01-23) abstract; figure 9	1-47
X	DE 100 13 004 A (GOECKEL JUERGEN) 4 January 2001 (2001-01-04) the whole document	1,47
X	DE 199 30 679 A (ROGGENBAU PETER) 18 January 2001 (2001-01-18) cited in the application the whole document	45-47

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
28 September 2004	11/10/2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Zuurveld, G

INTERNATIONAL SEARCH REPORT

Int[illegible]onal Application No
PCT/NL2004/000402

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
SU 1789620 A1	23-01-1993	NONE	
DE 10013004 A	04-01-2001	DE 10013004 A1	04-01-2001
DE 19930679 A	18-01-2001	DE 19930679 A1	18-01-2001