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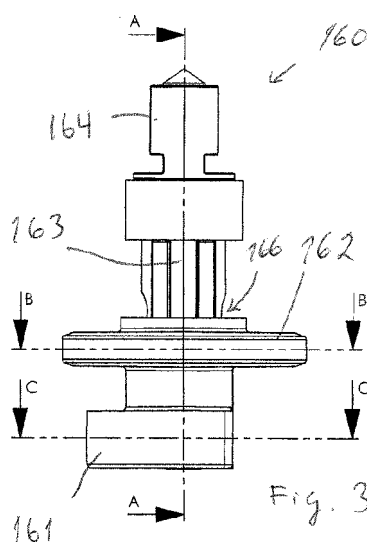
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(54) **Glazing arrangement**

(57) The invention relates to a glazing arrangement of a balcony, terrace, of corresponding space and comprises sliding window elements between top and bottom rails. To enable the sliding and turning of the window elements in relation to the top and bottom rails, the glaz-

ing arrangement comprises a top guide between the window element and top rail and a bottom guide (160) between the window element and bottom rail. In the invention, the hinge roll (161) and guide roll (162) of the bottom guide (160) are supported by vertical sliding support to a vertical swivelling hinge axis (163) of the bottom guide.



Description

Field

[0001] The invention relates to a glazing arrangement of a balcony, terrace, or corresponding space that comprises sliding window elements between top and bottom rails, and that to enable the sliding and turning of the window elements in relation to the top and bottom rails, the glazing arrangement comprises a top guide between the window element and top rail and a bottom guide between the window element and bottom rail.

Background

[0002] People do not want walls that hinder visibility on their balcony or terrace, but on the other hand, an open balcony is windy and possibly even cold. However, visibility and protection from wind can be provided with a balcony glazing arrangement that comprises several panes usually made of glass. The panes may also be turned aside when necessary.

[0003] Variation in the elevation of the installation site of the glazing arrangement during post-installation years require that a guide roll attached to the bottom part of a pane and guided along the bottom rail move in the vertical direction. The prior-art solutions are not optimal, because they require adjustments.

[0004] Thus, there is a need for a new type of glazing arrangement.

Brief description

[0005] It is an object of the invention to provide an improved glazing arrangement. This is achieved by a glazing arrangement that is **characterised in that** a hinge roll and guide roll of a bottom guide are supported by vertical sliding support to a vertical swivelling hinge axis of the bottom guide.

[0006] Preferred embodiments of the invention are disclosed in the dependent claims.

[0007] The glazing arrangement of the invention provides several advantages, such as an automatic vertical adjustment while the structure still remains easy to make and install. The window pane has a floating bottom end.

List of figures

[0008] The invention will now be described in greater detail by means of preferred embodiments, with reference to the accompanying drawings, in which:

Figure 1 shows a glazing arrangement,
Figure 2 shows a cross-section of the glazing arrangement,
Figure 3 shows a bottom guide while the rolls are in their lower position,
Figure 4 shows a cross-section A-A of Figure 3,

Figure 5 shows a cross-section B-B of Figure 3,
Figure 6 shows a cross-section C-C of Figure 3,
Figure 7 shows a cross-section D-D of Figure 4,
Figure 8 shows the bottom guide while the rolls are in their upper position,
Figure 9 shows hinge rolls at the position of a bottom rail support comb having a housing.

Description of embodiments

[0009] With reference to the figures, especially Figure 1, the glazing arrangement 100 comprises at least two panes 120, 122, 124. Each pane may be made of glass or some other material that permeates light to a desired extent and in a desired manner. The glazing arrangement 100 may comprise at least one pane 120 that is not movable.

[0010] The panes are between a top rail structure 130 and a bottom rail structure 140. On the top and bottom edges of the actual glass portion of the panes 120, 122, 124, there is a top guide 150 and a bottom guide 160, by means of which the glass is supported to the top rail structure and the bottom rail structure 140.

[0011] This, then, is a glazing arrangement of a balcony, terrace, of a corresponding space and comprises sliding window elements 120, 122, 124 between the top rail 130 and the bottom rail 140.

[0012] To enable the sliding and turning of the window elements in relation to the top and bottom rails, the glazing arrangement thus comprises a top guide 150 between the window element and top rail 130 and a bottom guide 160 between the window element and bottom rail 140.

[0013] A hinge roll 161 and guide roll 162 of the bottom guide 160 are supported by vertical sliding support to a vertical swivelling hinge axis 163 of the bottom guide 160. This way, automatic adjustability is achieved in a situation, in which due to the subsidence of a balcony ceiling, for example, the glass with its guides sinks lower, in which case the hinge roll 161 and guide roll 162 of the bottom guide 160 are able to rise in relation to the swivelling hinge axis 163, as shown in Figure 8. Figure 4 shows an arm 164 of the swivelling hinge axis 163, with which the bottom guide 160 fastens by means of a bolt 165 to the bottom corner of the pane.

[0014] The vertical sliding support of the hinge roll 161 to the vertical swivelling hinge axis 163 of the bottom guide 160 is arranged by means of the vertical sliding support of the guide roll 162, because the hinge roll 161 is integrated to the guide roll 162.

[0015] As shown in Figures 3, 6, 8, and 9, in particular, the hinge roll 161 is a limited-sector roll-like member. Thanks to the limited sector, the hinge roll 161 is able to reach the position of the support comb 180 at the end of the bottom profile or bottom rail 140 and locks into place from its swivel position, as shown in Figure 9. Figure 9 shows a situation, in which there is a fixed pane at the extreme left and two sliding panes have been moved to the leftmost end of the bottom rail 140 with the rightmost

of the sliding panes slightly turned.

with the swivelling hinge axis (163).

[0016] The figure shows that the hinge roll 161 is below the guide roll 162. In addition, in an embodiment, the hinge roll 161 and guide roll 162 are of one piece, so they move and turn together.

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[0017] In an embodiment, the hinge roll 161 and guide roll 162 are non-rotationally fastened to the swivelling hinge axis 163 to permit the turning of the hinge roll 161 and guide roll 162 with the swivelling hinge axis 163.

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[0018] The non-rotational fastening is achieved by shape. Figure 5 shows that between the guide roll 162 and axis 163, there is a housing-bracket-type shape-lock 166. The non-rotational fastening of the hinge roll is achieved at the same time, because the hinge roll 161 is integrated to the guide roll 162.

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[0019] The figures also show a support piece 167 that is fastened by means of a fastening member 168 to the bottom end of the swivelling hinge axis 163.

[0020] Even though the invention is described above with reference to the examples of the attached drawings, it is clear that the invention is not restricted to them, but may be modified in a variety of ways within the scope of the accompanying claims.

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Claims

1. A glazing arrangement of a balcony, terrace, or corresponding space that comprises sliding window elements (122, 124) between a top rail (130) and a bottom rail (140), and that to enable the sliding and turning of the window elements in relation to the top and bottom rails, the glazing arrangement comprises a top guide (150) between the window element and top rail (130) and a bottom guide (160) between the window element and bottom rail (140), **characterised in that** a hinge roll (161) and guide roll (162) of the bottom guide (160) are supported by vertical sliding support to a vertical swivelling hinge axis (163) of the bottom guide.

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2. A glazing arrangement as claimed in claim 1, **characterised in that** the hinge roll (161) is a limited-sector roll-like member.

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3. A glazing arrangement as claimed in claim 1 or 2, **characterised in that** the hinge roll (161) is below the guide roll (162).

4. A glazing arrangement as claimed in any one of claims 1 to 3, **characterised in that** the hinge roll (161) and guide roll (162) are of the same piece.

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5. A glazing arrangement as claimed in any one of claims 1 to 4, **characterised in that** the hinge roll (161) and guide roll (162) are non-rotationally fastened to the swivelling hinge axis (163) to permit the turning of the hinge roll (161) and guide roll (162)

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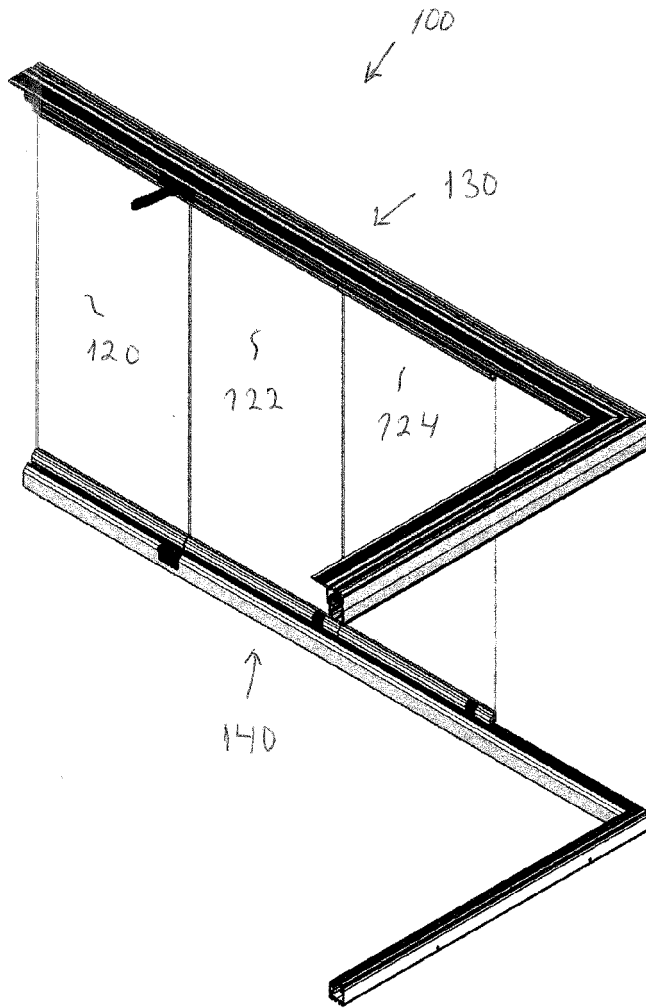


Fig. 1

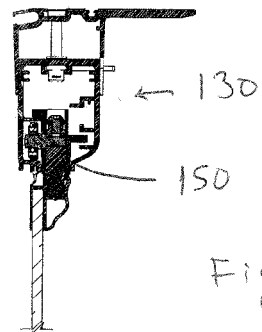


Fig. 2

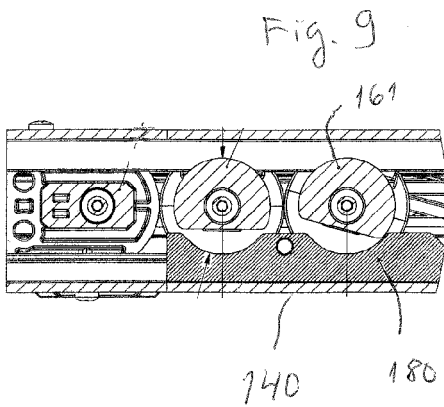
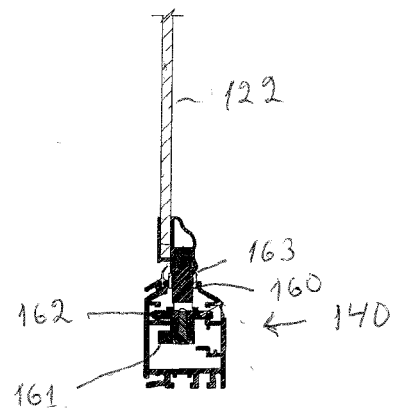
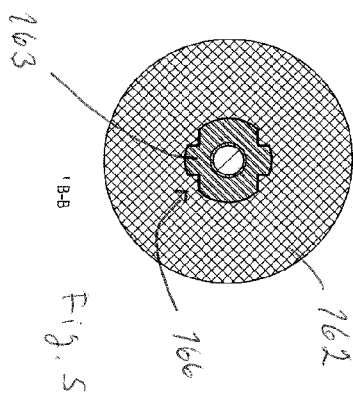
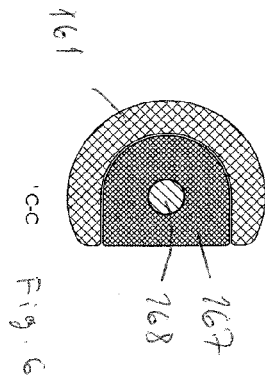
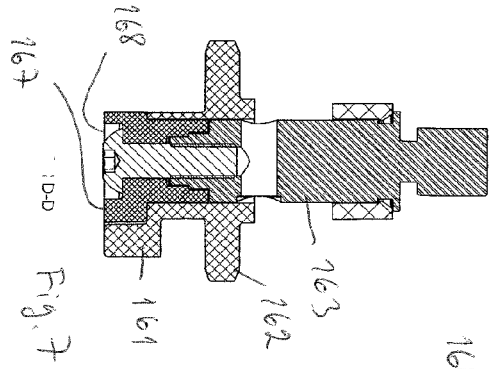
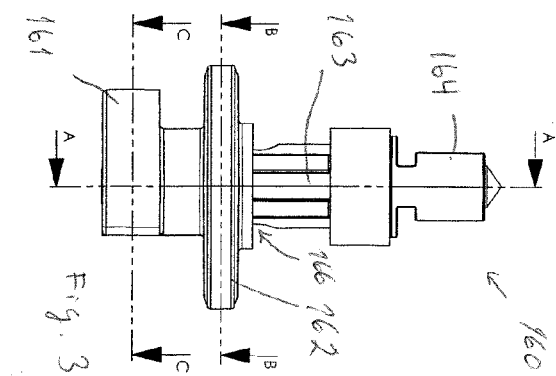
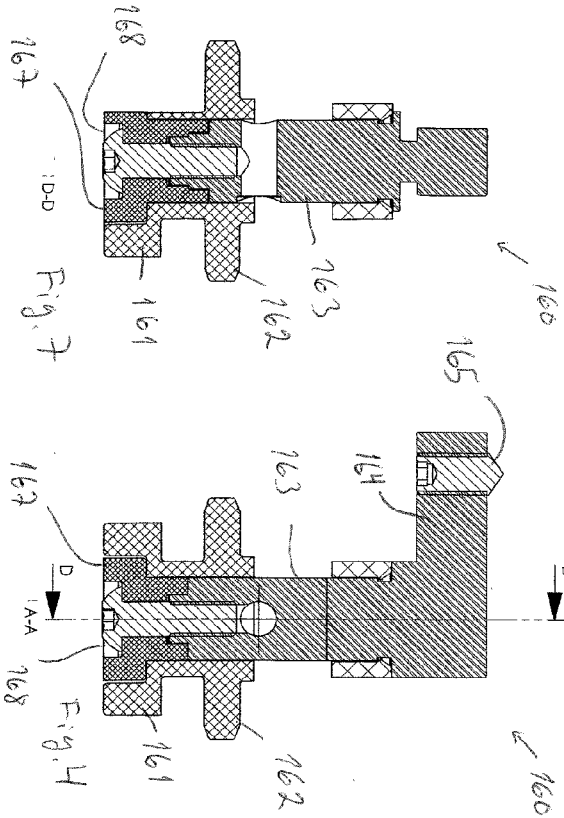
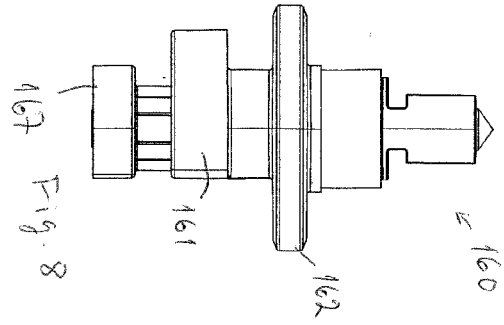


Fig. 9







EUROPEAN SEARCH REPORT

Application Number
EP 12 16 5490

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			TECHNICAL FIELDS SEARCHED (IPC)
			E05D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 August 2012	Examiner Van Kessel, Jeroen
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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