

Title: Partitioning wall**Description**

The invention relates to a partitioning wall according to the generic part of patent claim 1.

- 5 Glass partitioning walls are known from the brochure "DORMA Universal" (edition 12/93), where rotatable door leaves are disposed by means of fittings between lateral panels and below so-called overpanels. These fittings combine the pivotable support of the door leaf and at the
- 10 same time the connection thereof to the overpanel and to the adjacent lateral panel, in one assembly unit. This functional combination creates a disadvantageous dependency with regard to the conception of the partitioning wall, as the large amount of possible angle
- 15 positions between the glass elements can only be realized with an uneconomical large amount of different fitting variants.

- Mounting such fittings is basically expensive and time consuming, because, by virtue of the fragility of the
- 20 material glass, the fitting members have to be mounted exactly and tension-free with regard to each other and they have to be adjusted. Furthermore, visible fittings obstruct the effort of creating dematerialized products. Moreover, it

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is disadvantageous that the fittings complicate the cleaning process of the glass surfaces.

Therefore, it is the object of the present invention to provide a partitioning wall, for which the disposition and the
5 attachment of the stationary glass elements to each other is realized independently from the construction of the fittings for glass elements, which are rotatably disposed within the partitioning wall.

This problem is solved with the characteristics set forth in
10 patent claim 1. Advantageous embodiments of the partitioning wall result from the dependent claims.

By separating the function of a rotatable support from the function of attaching glass elements to each other, the most various and complex partitioning wall structures can
15 be unrestrictedly realized. The most simple disposition is a completely straight layout. Furthermore, depending on the amount of glass elements used, a plurality of angled layouts can be realized. Thus, such system offers a variety of utilizations from a simple partitioning wall to a complex
20 partitioning wall landscape.

Such a partitioning wall system allows for forming, planning and arranging the glass elements within a so-called modular_system, because the fitting-dependent connection between the glass elements disappears. Thus, the

disposition of the glass elements can be planned without restrictions and tailored to accommodate local requirements and needs.

- This way a visual advantageously dematerialized partitioning wall is created. Cleaning is likewise considerably simplified, as the soiling edges of the fittings are largely reduced and an even glass surface is created. Such a partitioning wall is constructed while using frameless glass panes such that the expenditure for framing work is also eliminated. Disposed between a floor and a ceiling construction, the partitioning wall consists of several lateral panels, between which, in a variable positioning, rotatably disposed leaves are situated below overpanels.
- For example at the top side, the rotatable leaf is supported at the overpanel, and on the lower side at the floor. The fitting is considerably smaller and simplified, as the attachment function to an adjoining glass element is eliminated. Moreover, identical individual parts are largely used. Thus, a simple and inexpensive attachment and support for a rotatable leaf below a co-called overpanel is created, the amount of individual parts and the execution of the fittings being optimized. The mounting and adjusting of the fittings is considerably simplified and can be largely prepared in the factory. In one advantageous embodiment,

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the leaf does not present any further add-on parts, such as door handles or locks, such that a largely continuous glass front is created.

Attaching the glass elements, such as overpanels and lateral panels, to each other is realized without fittings by means of a permanently elastic substance, which positively connects the longitudinal abutting edges of the overpanel to the respective abutting edge of the lateral panel. Locating the overpanel, respectively the lateral panels to the side of the floor and to the side of ceiling is done in profiles disposed at the side of the floor and at the side of the ceiling, the permanent elastic substance being likewise used in this case. The profiles are preferably executed in a U-shape. This type of attaching the glass elements allows for realizing the most different partitioning wall structures without restrictions with regard to the angle positions of individual glass elements to each other.

The substance is permanently elastic in order to guarantee the attachment's resistance against vibrations conditioned by operation. Acrylic and silicone materials are preferably suited for this purpose, particularly as sufficient knowledge is available about the workability procedures thereof.

There are no boreholes in the glass panes of such a partitioning wall landscape, because no fittings are used.

As an additional protective measure against vibrations and for stiffening the glass elements, stiffening elements in the shape of glass blades may be attached, protruding vertically from the glass surface and extending horizontally.

- 5 In addition, the glass blades preferably stand upright on the floor and are likewise attached by means of the permanently elastic substance. The use of glass allows for creating a uniform and aesthetically pleasing front, likewise in this regard.

- 10 Further details, characteristics and advantages of the invention will result from the following description of preferred embodiments, reference being made to the Figures.

15 Figure 1: shows a frontal view of a partial region of a partitioning wall.

Figure 2: shows a cross section of the partitioning wall according to line A-A in Figure 1.

Figure 3: diagrammatically shows a frontal view of a complex partitioning wall layout.

- 20 Figure 4: diagrammatically shows in a top view the layout of a complex partitioning wall.

Figures 1 and 2 partially illustrate in a first embodiment an inventive partitioning wall 1, the partitioning wall 1

extending between a ceiling construction 2 and a floor 3. The partitioning wall 1 consists of several frameless glass elements, which, on the one hand, are formed as lateral panels 4 and, on the other hand, represent an overpanel 5
5 disposed between the lateral panels 4. Such an overpanel 5 only extends in the upper region of a partitioning wall 1, such that below the overpanel 5 and between the lateral panels 4 a passage 6 is created. A leaf 7 made from glass is rotatably supported in this passage 6. A continuous,
10 preferably U-shaped profile 8 extends at the ceiling construction 2, whereas two U-shaped profiles 9 extend on the floor.

At the top side, the leaf 7 is rotatably supported at the overpanel 5 and at the lower side in the floor 3. A
15 symmetrically formed fitting member 10 is fixed at the top side of the leaf 7, which fitting member cooperates with a complementary fitting member 11 disposed at the overpanel 5, a bearing journal of the one fitting member cooperating with a bearing bushing of the other fitting
20 member. Furthermore, a symmetrically formed fitting member 12 is fixed at the lower side of the leaf 7, which fitting member cooperates with a bearing disposed in the floor 3. Preferably a non-illustrated door closer, forming the underside support of the leaf 7, is concealed in the floor,
25 such that the leaf 7 automatically closes after a manual

opening. In the illustrated embodiment, the leaf 7 does not present any further add-on parts, as for example door handles or locks, such that an almost continuous glass front is created.

- 5 At the longitudinal abutting edges, the overpanel 5 is positively connected to the respective longitudinal abutting edge of the lateral panels 4 by means of a permanently elastic substance 13. Moreover, the overpanel 5, with the horizontal upper abutting edge, is positively attached by
- 10 means of the permanently elastic substance 13 in the profile 8 at the ceiling. Both lateral panels 4 are likewise attached by means of the permanently elastic substance 13 in the corresponding profiles 8, 9 at the floor and at the ceiling.
- 15 Moreover, stiffening elements 14, protruding vertically and extending horizontally, may be mounted onto the lateral panels 4 by means of the permanently elastic substance 13. The stiffening elements 14 are formed as glass blades and stand upright on the floor.
- 20 Different complex partitioning wall structures, depicting the scope of the inventive idea, are illustrated in Figures 3 and 4. The partitioning walls 1 consist of several lateral panels 4, overpanels 5, and leaves 7, presenting a uniform modular dimension, such that the most different partitioning

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wall layouts can be realized with these glass elements. Particularly in the embodiment example in Figure 4 it can be seen, that, by virtue of the attachment without fittings, the glass elements can be disposed to each other in the
5 most various different angles.

The above description of embodiment examples serves for illustrative purposes only and is not intended to limit the invention. Various changes and modifications are possible within the range of the invention without leaving the scope
10 of the invention or the equivalents thereof.

References

- 1 partitioning wall
- 2 ceiling construction
- 3 floor
- 5 4 lateral panel
- 5 overpanel
- 6 passage
- 7 leaf
- 8 profile
- 10 9 profile
- 10 fitting-member
- 11 fitting-member
- 12 fitting-member
- 13 permanently elastic substance
- 15 14 stiffening elements

Patent claims

1. A partitioning wall consisting of glass with frameless lateral panels, being held at the floor and at a ceiling construction, of at least one
5 frameless overpanel, being held at both lateral panels and at the ceiling construction, and of at least one leaf being rotatably disposed below the overpanel and between both lateral panels, characterized in that the leaf is rotatably
10 supported exclusively at the overpanel and at the floor by means of fitting members, and in that the overpanel and the lateral panels are attached without fittings to each other and at the ceiling construction and at the floor.
- 15 2. A partitioning wall according to claim 1, characterized in that the lateral panels, the overpanel, and the leaf present a uniform modular dimension.
- 20 3. A partitioning wall according to any of the preceding claims, characterized in that the lateral panels, the overpanel, and the leaf are disposed straight and/or angled with regard to each other.
4. A partitioning wall according to any of the preceding claims, characterized in that a fitting

member disposed at the top side of the leaf is rotatably supported at a complementary fitting member disposed at the overpanel, and in that a fitting member disposed at the underside of the leaf is rotatably attached at a bearing concealed in the floor.

5. A partitioning wall according to any of the preceding claims, characterized in that the lateral panels and the overpanel are connected to each other at the longitudinal abutting edges.
6. A partitioning wall according to any of the preceding claims, characterized in that profiles are disposed at the floor and/or at the ceiling, with which lateral panels and the overpanel engage.
7. A partitioning wall according to any of the preceding claims, characterized in that the overpanel and the lateral panels are positively held together and in profiles at the side of the floor and at the side of the ceiling, by means of a permanently elastic substance.
8. A partitioning wall according to any of the preceding claims, characterized in that the permanently elastic substance is made from silicone and/or from acrylic.

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9. A partitioning wall according to any of the preceding claims, characterized in that, vertically oriented stiffening elements protruding in an angle of approximately 90° , are vertically attached at the lateral panels by means of the permanently elastic substance.
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