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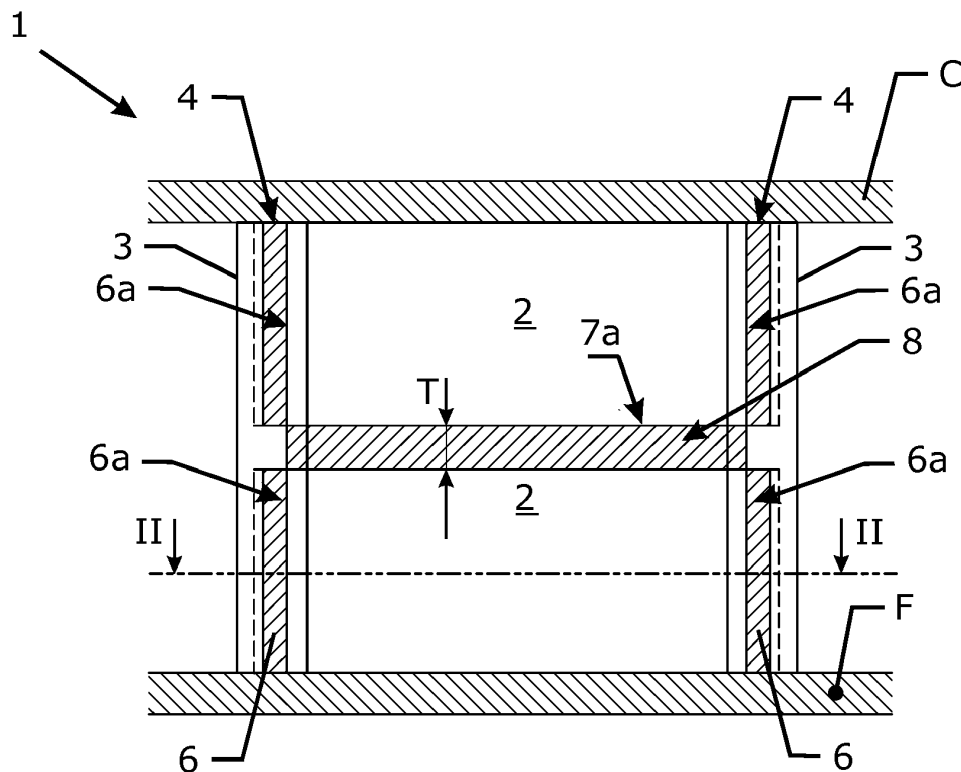
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**(54) FIRE PROTECTION GLAZING**

(57) The present invention relates to a fire protection glazing (1) for preventing the passage of fire and smoke from one room to another room in the event of fire, having at least two, vertically, adjacent and coplanar arranged fire protection panes (2), which are held at their vertical edges by means of two profile elements (3), at least one

profile element (3) is arranged at each of the vertical edges of the fire protection panes (3), a joint opening (7) being defined between the adjacent horizontal edges of the fire protection panes (3). The present invention further relates to a method for establishing such an inventive fire protection glazing (1).

**Fig. 1**

## Description

### Field of the invention

**[0001]** The present invention relates to a fire protection glazing for preventing the passage of fire and smoke from one room to another room in the event of fire, having at least two, vertically, adjacent and coplanar arranged fire protection panes, which are held at their vertical edges by means of two profile elements, at least one profile element is arranged at each of the vertical edges of the fire protection panes, a joint opening being defined between the adjacent horizontal edges of the fire protection panes.

**[0002]** The present invention further relates to a method for establishing such an inventive fire protection glazing.

### Background of the invention

**[0003]** Fire protection glazings are translucent components that prevent the spread of fire and smoke from one room to another, and also prevents the impermissible transition of heat between rooms, within the scope of a certain fire resistance duration. According to the DIN EN 13501 standard, especially the fire resistance classes EI and EW are normalized and explained with regard to the requirements, especially for fire classification of construction products and building elements.

**[0004]** Fire protection panes used for fire protection glazing are normally constructed in multiple layers of glass panes with a fire protection layer arranged in between. In case of fire, a protective material contained in this fire protection layer is activated, whereby the fire protection pane absorbs heat radiation and forms a highly effective insulation layer. As a result the originally transparent glazing creates a practically opaque fire protection wall.

**[0005]** The fire protection panes used for fire protection glazing are normally fixed by a support construction, especially in frames, which are matched in size and their fire protection properties to the fire protection panes used. The frames normally comprise vertically and/or horizontally arranged profile elements which hold respectively carry the fire protection panes and realize load transfer. Since fire protection panes used for fire protection glazings can have a very high weight (especially depending on the requirements according to DIN EN 13501), secure fastening respectively fixing of fire protection panes to support construction is necessary, and correspondingly effortful and expensive. Moreover, the so far known support constructions used for such fire protection glazings can affect the optical appearance and limit the light transmission of these glazings. Seen the high weight of the panes, small studs transferring the load are placed between two vertically adjacent panes to transfer the weight of an upper pane to the lower pane or to panes located lower than these panes. The joint

opening between horizontal edges of adjacent panes are closed by a sealant, while leaving the studs in place.

**[0006]** Furthermore, establishing of such fire protection glazings is cumbersome and expensive, especially with regard to the very high weight of fire protection panes, especially since the so far known support constructions comprise various types of fixing elements respectively fastening elements, which can have difficult handling. The same applies for repair respectively replacement of fire protection panes of such fire protection glazings.

### Summary of the invention

**[0007]** Against this background it is object of the present invention to provide a fire protection glazing for preventing the passage of fire and smoke from one room to another room in the event of fire, which is improved with regard to the mentioned disadvantages and can especially be manufactured respectively established easily and cost-effectively and furthermore especially allows an easy and cost-effective repair respectively replacement of fire protection panes.

**[0008]** According to the first aspect of the invention, a fire protection glazing is provided. The fire protection glazing for preventing the passage of fire and smoke from one room to another room in the event of fire, has at least two, vertically, adjacent and coplanar arranged fire protection panes, which are held at their vertical edges by means of at least two profile elements, at least one profile element is arranged at each of the vertical edges of the fire protection panes, a joint opening being defined between the adjacent horizontal edges of the fire protection panes, at each interface between the surface of a fire protection pane and a profile element the fire protection pane is adhered to the profile element by means of glue, the glue being present all the length of the interface between the surface of the fire protection pane and the profile element such that it provides a continuous or interrupted glue strip of a width of more than or equal to 10mm along the length of the interface between the surface of the fire protection pane and the profile element, and the joint opening between two fire protection panes is closed by sealant, the joint opening preferably being provided and closed by a sealant only, along the adjacent horizontal edges of the fire protection panes.

**[0009]** In some embodiments of the present invention, the joint opening between two fire protection panes may be closed by sealant, the joint opening preferably being provided and closed by a sealant only, all along the adjacent horizontal edges of the fire protection panes.

**[0010]** In some embodiments of the present invention, the at least two, vertically, adjacent and coplanar arranged fire protection panes may be held at and all along their vertical edges by means of at least two profile elements.

**[0011]** In some embodiments of the present invention, the joint opening between two fire protection panes is

closed by a silicon paste, possibly by a silicon paste only.

**[0012]** The invention is based on the knowledge made through experiments that adhering of fire protection panes to profile elements by means of glue, advantageously by means of glue only, allows respectively enables an easy and cost-effective establishment of fire protection glazing and furthermore an easily and cost-effectively replacement of fire protection panes of the fire protection glazing, whereby the fire protection glazing advantageously fulfils fire protection requirements, especially the requirements according to DIN EN 13501, preferred the fire resistance classes EI or EW.

**[0013]** Advantageously fire protection panes are adhered to profile elements which extend vertically between the floor and the ceiling of the rooms. A preferred embodiment of the present invention suggests, that fire protection panes are adhered only to profile elements which extend vertically between the floor and the ceiling of the rooms. According to a further preferred embodiment of the present invention the fire protection glazing only comprises profile elements which extend vertically between the floor and the ceiling of the rooms. With elimination respectively, omission of profile elements which especially extend horizontally especially substantially parallel to the floor or the ceiling of the rooms especially the optical appearance and the light transmission of such inventive fire protection glazing is improved further.

**[0014]** In some embodiments of the present invention, the glue strip may have a width of more than 10mm, such as more than or equal to 12mm or more than or equal to 15mm or even more than or equal to 20mm. In some embodiments of the present invention the glue strip may have width of less than or equal to 50mm, such as less than or equal to 45mm or even less than or equal to 40mm.

**[0015]** In some embodiments of the present invention, the glue strip may have a thickness of more than or equal to 0.8mm, such as more than or equal to 1.5mm. In some embodiments of the present invention the glue strip may have a thickness of less than or equal to 4mm, such as less than or equal to 3mm. Too thick glue strips may fail under shear stress causing the fire protection panes to loosen from the profile elements when the joint opening is closed by a sealant only.

**[0016]** In some embodiments of the present invention, at least one glue strip is present along the length of the interface between the surface of the fire protection pane and the profile element. In some embodiments of the present invention the glue strip being continuous along the length of the interface between the surface of the fire protection pane and the profile element. However, the glue strip may be interrupted along the length of the interface between the surface of the fire protection pane and the profile element. In the latter case, two glue strips may partially overlap along the length of the interface between the surface of the fire protection pane and the profile element.

**[0017]** In some embodiments of the present invention,

the glue advantageously may be a silicon glue.

**[0018]** In some embodiments of the present invention, the joint between two fire protection panes may be provided by a silicon paste, preferably the joint between two fire protection panes is provided by a silicon paste only. This may result in an improved optical appearance and the light transmission of such inventive fire protection glazing may be further improved.

**[0019]** In some embodiments of the present invention, the joint opening, or space or gap, between two fire protection panes may be more than or equal to 1mm, or even more than or equal to 2mm, such as more than or equal to 3mm. In some embodiments of the present invention, the joint opening, or space or gap, between two fire protection panes may be less than or equal to 10mm, e.g. less than or equal to 7mm, such as less than or equal to 6mm, e.g. less than or equal to 5mm.

**[0020]** In some embodiments of the present invention, the profile element may have a cross section which is substantially rectangular, substantially rectangular hollow, substantially U-shaped, substantially H-shaped or substantially L-shaped.

**[0021]** In some embodiments of the present invention, the profile element may be made of wood, steel, aluminium or concrete. This allows to design the optical appearance of an inventive fire protection glazing with numerous options.

**[0022]** In some embodiments of the present invention, each fire protection pane may be a compound structure of at least two glass panes arranged in parallel to each other, between which in each case at least one fire protection layer respectively at least one fire resistant layer is arranged.

**[0023]** The fire protection pane may be build according to the so-called water-glass-technology or according to the so-called gel-technology. In the case of a fire protection pane according to the water-glass technology, as a fire protection layer between a multiplicity, at least two glass panes are used materials, which in particular comprises an alkali silicate mass, which acts as a foaming agent in the event of fire and lathers up. In the case of a fire protection pane according to the gel-technology, the fire protection layer arranged between two glass panes, which is activated in the event of fire, is formed of gelatinous materials, in particular of organic polymers. As a result, in both cases the originally transparent glazing creates a practically opaque fire protection wall in case of fire.

**[0024]** The at least two glass panes of the fire protection pane may be spaced apart from each other by means of a spacer providing an edge-compound, which spacer preferably is arranged between the at least two glass panes of the fire protection pane and particularly preferred extends along the side edges of the fire protection pane.

**[0025]** In some embodiments of the present invention, the fire protection pane may have a height in a range of more than or equal to 1 meter, such as more than or

equal to 1.5m. In some embodiments of the present invention, the fire protection pane may have a width in a range of more than 2 meter, such as more than or equal to 3 meter, even more than or equal to 4m.

**[0026]** A further embodiment of the present invention is characterized in that the fire protection pane has a weight in a range of  $\geq 25 \text{ kg/m}^2$  and  $\leq 180 \text{ kg/m}^2$ .

**[0027]** According to a second aspect of the invention, a method for establishing a fire protection glazing is provided. The method for establishing a fire protection glazing for preventing the passage of fire and smoke from one room to another room in the event of fire, comprises the steps of

- providing at least two profile elements (3) in substantial vertical direction,
- providing at least two fire protection panes (2),
- adhering in substantially vertical direction a first of the at least two fire protection panes (2) to the two profile elements (3) by providing a glue strip (6a) of a width of more than or equal to 10mm along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile elements (3),
- adhering in substantially vertical direction and coplanar with the first of the at least two fire protection panes (2) a second of the at least two fire protection panes (2) to the two profile elements (3) by providing a glue strip (6a) of a width of more than or equal to 10mm along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile elements (3), thereby providing a joint opening (7) between the adjacent horizontal edges of the two fire protection panes (2),
- closing the joint opening (7) by a sealant (8), preferably closing the joint opening (7) by a sealant (8) only.

**[0028]** According to preferred embodiments, the method may comprise, the steps of

- prior to the step of adhering the second of the at least two fire protection panes to the at least two profiles, providing load transferring setting blocks at the horizontal edge of the first of the at least two fire protection panes and mounting the second of the at least two fire protection panes in contact with these setting blocks,
- after the step of adhering the second of the at least two fire protection panes (2) to the two profile elements (3) but prior to the step of closing the joint opening, removing the load transferring setting blocks from within the joint opening.

**[0029]** The methods according to the second aspect of the invention may be used to provide a fire protection glazing according to the first aspect of the invention. All preferred features described in relation to the fire protection glazing according to the first aspect of the invention

can be used in methods according to the second aspect of the invention.

**[0030]** The fire protection glazings according to the invention have the advantage that the load transferring setting blocks are not necessarily to be present, hence a load transfer setting block free fire protection glazing can be provided. In case one of the fire protection panes fails, e.g. is broken once installed, this defect pane of the fire protection glazing can be removed from the glazing by cutting it out of the glazing. The sealant along the edge of the remaining panes in the glazing can be removed and a new pane can easily be installed without the need to dismantle all elements and panes of the fire protection glazing.

#### Brief description of the drawings

**[0031]** Further details, characteristics and advantages of the present invention are explained in the following in more detail based on the description of the exemplary embodiments shown in the figures of the drawing. In these figures:

- Fig. 1 shows a front view of a schematic embodiment of a fire protection glazing according to the present invention;
- Fig. 2 shows a sectional view according to section line II - II of Fig. 1;
- Fig. 3a shows a schematic embodiment of a step of a method for establishing a fire protection glazing according to the present invention;
- Fig. 3b shows a schematic embodiment of a further step of a method for establishing a fire protection glazing according to the present invention;
- Fig. 3c shows a schematic embodiment of a further step of a method for establishing a fire protection glazing according to the present invention;
- Fig. 3d shows a schematic embodiment of a further step of a method for establishing a fire protection glazing according to the present invention;
- Fig. 4 shows a front view of a further schematic embodiment of a fire protection glazing according to the present invention; and
- Fig. 5 shows a sectional view according to section line V - V of Fig. 4.

**[0032]** Fig. 1 and Fig. 2 show a schematic embodiment of a fire protection glazing 1 for preventing the passage of fire and smoke from one room to another room in the event of fire. In the present embodiment two, vertically, adjacent and coplanar arranged fire protection panes 2 are held at each of their vertical edges by means of two profile elements 3.

**[0033]** Each of the profile elements 3 is arranged at each of the vertical edges of the fire protection panes 2. The profile elements 3 extend vertically between the floor F and the ceiling C of the rooms. Each of the profile elements 3 has a cross section which is substantially rec-

tangular hollow. Between the adjacent horizontal edges of the fire protection panes 2 a joint opening 7a is defined. The profile elements 3 are made of wood, steel, aluminium and/or concrete.

**[0034]** At each interface 4 between the surface 5 of a fire protection pane 2 and a profile element 3 the fire protection pane 2 is adhered to the profile element 3 - in the present embodiment to at least one of the two substantially rectangular hollow profile elements 3, preferably to both of the substantially rectangular hollow profile elements 3 - by means of glue 6. The glue 6 being present all the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3 such that it provides a glue strip 6a.

**[0035]** The glue strip 6a has a width W of more than or equal to 10mm and a thickness D of less than 4mm, along the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3.

**[0036]** The joint opening 7a between the two fire protection panes 2 is closed by sealant 8 only, along the adjacent horizontal edges of the fire protection panes 2. The glue strip 6a being continuous along the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3.

**[0037]** The glue 6 is a silicon glue with an adhesive force sufficient to keep the fire protective pane to the profile. Suitable glue is Promat-SYSTEMGLASS-silicone.

**[0038]** The joint opening 7a between the two fire protection panes 2 is closed by a sealant 8 only, which is present along the adjacent horizontal edges of the fire protection panes 2. The sealant 8 is a silicon paste. Thus, the joint 7a between the two fire protection panes 2 is provided by a silicon paste 8 only. The joint opening 7 between the two fire protection panes 2 has a space/gap T which is in the range of 2 to 7 mm.

**[0039]** Each fire protection pane 2 is a compound structure of at least two glass panes 9 arranged in parallel to each other, between which in each case at least one fire protection layer 10 is arranged. In the present embodiment a fire protection pane 2 comprises two glass panes 9 which are spaced apart from each other by means of a spacer 11 providing an edge-compound. The spacer 11 is arranged between the two glass panes 9 and extends along the side edges of the fire protection pane 2. The edges of the fire protection pane are sealed with a sealing 12.

**[0040]** As an example, two glass panes of 3 meter by 1.4 meter, and having a surface weight of ca. 70 kg/m<sup>2</sup>, were glued to a rectangular hollow section profiled element using Promat-SYSTEMGLASS-silicone applied as glue strips all along the interfaced between the vertically oriented profiles. The glue strips had a width of about 10 mm and a thickness of about 1.2mm. The joint opening between the two fire protection panes is closed by Promat-SYSTEMGLASS-silicone, which is present along the adjacent horizontal edges of the fire protection panes. The joint opening between the two fire protection panes

has a space/gap T which is about 4 mm.

**[0041]** Fig. 3a to Fig. 3d show a schematic embodiment of a steps of a method for establishing a fire protection glazing 1 for preventing the passage of fire and smoke from one room to another room in the event of fire.

**[0042]** Fig. 3a shows providing at least two profile elements 3 in substantial vertical direction. This comprises especially the steps of

- a) placing and mounting a first profile element 3 which extends vertically especially between the floor F and the ceiling C of the rooms; and
- b) placing and mounting a second profile element 3 which is horizontally spaced apart the first profile element 3 at a distance S and extends vertically especially between the floor F and the ceiling C of the rooms.

**[0043]** Fig. 3b shows adhering in substantially vertical direction a first of at least two provided fire protection panes 2 to the two profile elements 3 by providing a glue strip 6a along the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile elements 3. The glue strip 6a has a width W of more than or equal to 10mm and a thickness D of less than 4mm. This comprises especially the steps of

- c) applying silicon glue 6 to the profile elements 3 and/or to the vertical edges of at least one surface 5 of the first fire protection pane 2; and
- d) adhering the first fire protection pane 2 to the profile elements 3 by means of the silicon glue 6, preferably such that at each interface 4 between the surface 5 of the fire protection pane 2 and a profile element 3 the fire protection pane 2 is adhered to the profile element 3 by means of the glue 6, whereby the glue 6 being present all the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3.

**[0044]** Fig. 3c shows adhering in substantially vertical direction and coplanar with the first of the at least two fire protection panes 2 a second of the at least two fire protection panes 2 to the two profile elements 3 by providing a glue strip 6a along the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile elements 3, thereby providing a joint opening 7 between the adjacent horizontal edges of the two fire protection panes 2. The glue strip 6a has a width W of more than or equal to 10mm and a thickness D of less than 4mm. This may comprise the steps of

- e) providing a number (e.g. 2) load transferring setting blocks 20 or spacer elements at the horizontal edge of the first fire protective pane.
- f) applying glue 6 to the profile elements 3 and/or to the vertical edges of at least one surface 5 of a further fire protection pane 2; and

g) adhering the further fire protection pane 2 to the profile elements 3 by means of glue 6, presently above the first fire protection pane 2, preferably adhering such that at each interface 4 between the surface 5 of the fire protection pane 2 and a profile element 3 the fire protection pane 2 is adhered to the profile element 3 by means of the glue 6, whereby the glue 6 being present all the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3.

**[0045]** Fig. 3d shows closing the joint opening 7 by a sealant 8, preferably closing the joint opening 7 by a sealant 8 only. This comprises especially the steps of

- h) remove the load transferring setting blocks, usually after a sufficient time lapse to cure the glue 6a, e.g. 24h.
- i) applying a sealant 8, preferably a silicon paste 8 to the joint opening 7 only, thereby closing the joint opening in full.

**[0046]** Fig. 4 and Fig. 5 show a schematic embodiment of a further fire protection glazing 1 for preventing the passage of fire and smoke from one room to another room in the event of fire. In the present embodiment a plurality of vertically, adjacent and coplanar arranged fire protection panes 2 are each held at their vertical edges by means of two profile elements 3 respectively 3a.

**[0047]** Each of the profile elements 3 respectively 3a is arranged at each of the vertical edges of the fire protection panes 2. The profile elements 3 respectively 3a extend vertically between the floor F and the ceiling C of the rooms. Each of the profile elements 3 has a cross section which is substantially rectangular hollow. Each of the profile elements 3a has a cross section which is substantially H-shaped. Between the adjacent horizontal edges of the fire protection panes 2 a joint opening 7 is defined. The profile elements 3 respectively 3a are made of wood, steel, aluminium and/or concrete.

**[0048]** At each interface 4 between the surface 5 of a fire protection pane 2 and a profile element 3 respectively 3a the fire protection pane 2 is adhered to the profile element 3 respectively 3a - in the present embodiment to at least one of the two substantially rectangular hollow profile elements 3, preferably to both rectangular hollow profile elements 3 and respectively to at least one of the four free legs of the substantially H-shaped profile elements 3a - by means of glue 6. The glue 6 being present all the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3 respectively 3a such that it provides a glue strip 6a.

**[0049]** The glue strip 6a has a width W of more than or equal to 10mm and a thickness D of less than 4mm along the length of the interface 4 between the surface 5 of the fire protection pane 2 and the profile element 3 respectively 3a. The joint opening 7 between two fire protection panes 2 is closed by sealant 8 only, along the

adjacent horizontal edges of the fire protection panes 2. The glue strip 6a being continuous along the length of the interface 4 between the surface 5 of a fire protection pane 2 and the profile element 3 respectively 3a.

**[0050]** The glue 6 is a silicon glue.

**[0051]** The joint opening 7 between two fire protection panes 2 is closed by a sealant 8 only, which is present along the adjacent horizontal edges of the fire protection panes 2. The sealant 8 is a silicon paste. Thus the joint 7a between two fire protection panes 2 is provided by a silicon paste 8 only.

**[0052]** Each fire protection pane 2 is a compound structure of at least two glass panes 9 arranged in parallel to each other, between which in each case at least one fire protection layer 10 is arranged. In the present embodiment a fire protection pane 2 comprises two glass panes 9 which are spaced apart from each other by means of a spacer 11 providing an edge-compound. The spacer 11 is arranged between the two glass panes 9 and extends along the side edges of the fire protection pane 2. The edges of the fire protection pane are sealed with a sealing 12.

**[0053]** In case of a fire protection glazing 1 according to Fig. 4 and Fig. 5, the method steps described above in the context of the steps of a method according to Fig. 3a to Fig. 3d are - if needed partly and with other sequences - repeated with/for a further fire protection pane 2, profile element 3 respectively 3a, glue 6, glue strip 6a and/or sealant 8, preferably until the fire protection glazing 1 is present, especially in a way that is reasonably and observant for the person skilled in the art, especially with regard to the parts and/or sequences of the method steps.

**[0054]** The exemplary embodiments of the invention shown in the figures merely serve to explain the invention and are in no way restrictive.

## Claims

1. A fire protection glazing (1) for preventing the passage of fire and smoke from one room to another room in the event of fire, having
  - at least two, vertically, adjacent and coplanar arranged fire protection panes (2), which are held at and all along their vertical edges by means of at least two profile elements (3),
  - at least one profile element (3) is arranged at each of the vertical edges of the fire protection panes (2),
  - a joint opening (7) being defined between the adjacent horizontal edges of the fire protection panes (2),
  - at each interface (4) between the surface (5) of a fire protection pane (2) and a profile element (3) the fire protection pane (2) is adhered to the profile element (3) by means of glue (6),
  - the glue (6) being present all the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile element (3) such that it pro-

- vides a glue strip (6a) of a width of more than or equal to 10 mm along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile element (3), and the joint opening (7) between two fire protection panes (2) is closed by sealant (8), all along the adjacent horizontal edges of the fire protection panes (2). 5
2. The fire protection glazing (1) according to claim 1, **characterized in that** the glue (6) provides a glue strip (6a) of a width of more than or equal to 12mm. 10
  3. The fire protection glazing (1) according to claim 1 or 2, **characterized in that** the glue (6) provides a glue strip (6a) of a width of less than or equal to 50mm. 15
  4. A fire protection glazing (1) according to any one of the claims 1 to 3, **characterized in that** the glue (6) provides a glue strip (6a) of a thickness of less than or equal to 4mm. 20
  5. A fire protection glazing (1) according to any one of the claims 1 to 4, **characterized in that** the glue strip (6a) being continuous along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile element (3). 25
  6. A fire protection glazing (1) according to any one of the claims 1 to 4, **characterized in that** the joint opening (7) between two fire protection panes (2) is closed by sealant (8) only. 30
  7. A fire protection glazing (1) according to any one of claims 1 to 6, **characterized in that** the joint opening (7) between two fire protection panes (2) is closed by a silicon paste only. 35
  8. A fire protection glazing (1) according to any one of claims 1 to 7, **characterized in that** each fire protection pane (2) is a compound structure of at least two glass panes (9) arranged in parallel to each other, between which in each case at least one fire protection layer (10) is arranged. 40
  9. A method for establishing a fire protection glazing (1) for preventing the passage of fire and smoke from one room to another room in the event of fire, comprising the steps of 45
    - providing at least two profile elements (3) in substantial vertical direction,
    - providing at least two fire protection panes (2),
    - adhering in substantially vertical direction a first of the at least two fire protection panes (2) to the two profile elements (3) by providing a glue strip (6a) of a width of more than or equal to 10mm along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile elements (3),
    - adhering in substantially vertical direction and coplanar with the first of the at least two fire protection panes (2) a second of the at least two fire protection panes (2) to the two profile elements (3) by providing a glue strip (6a) of a width of more than or equal to 10mm along the length of the interface (4) between the surface (5) of the fire protection pane (2) and the profile elements (3), thereby providing a joint opening (7) between the adjacent horizontal edges of the two fire protection panes (2),
    - closing the joint opening (7) by a sealant (8).
  10. A method according to claim 9, the method further comprising the steps of
    - prior to the step of adhering the second of the at least two fire protection panes to the at least two profiles, providing load transferring setting blocks at the horizontal edge of the first of the at least two fire protection panes and mounting the second of the at least two fire protection panes in contact with these studs,
    - after the step of adhering the second of the at least two fire protection panes (2) to the two profile elements (3) but prior to the step of closing the joint opening, removing the load transferring setting blocks from within the joint opening.
  11. A method according to any one of claims 9 to 10, **characterized in that** a fire protection glazing (1) according to any one of the claims 1 to 8 is provided. 55

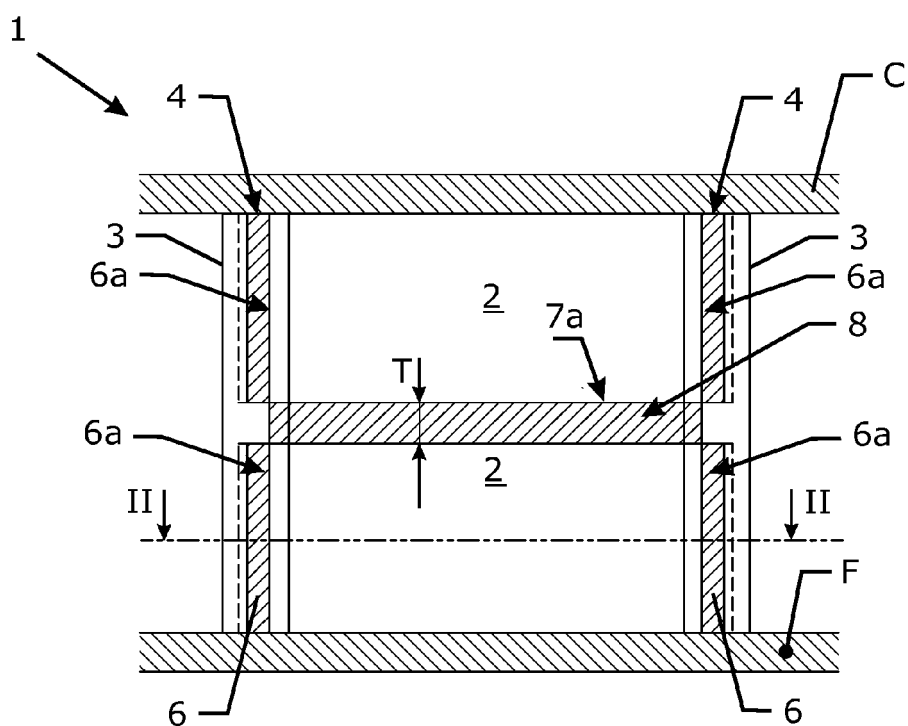


Fig. 1

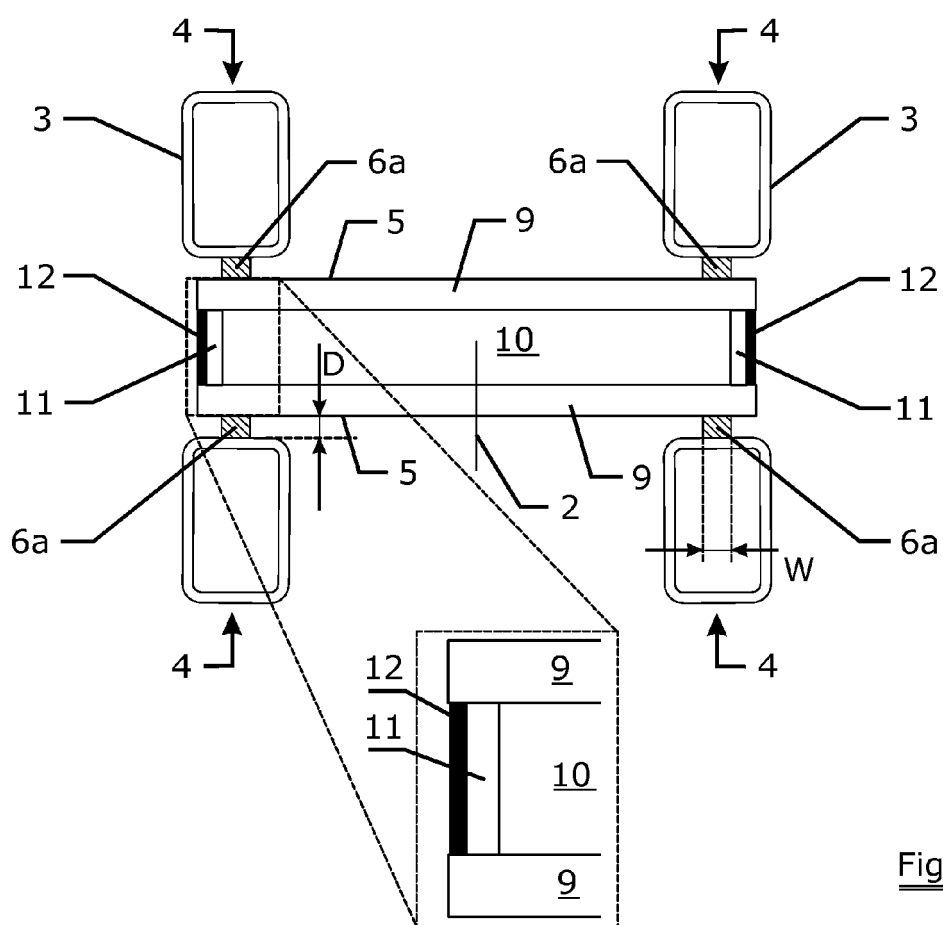


Fig. 2

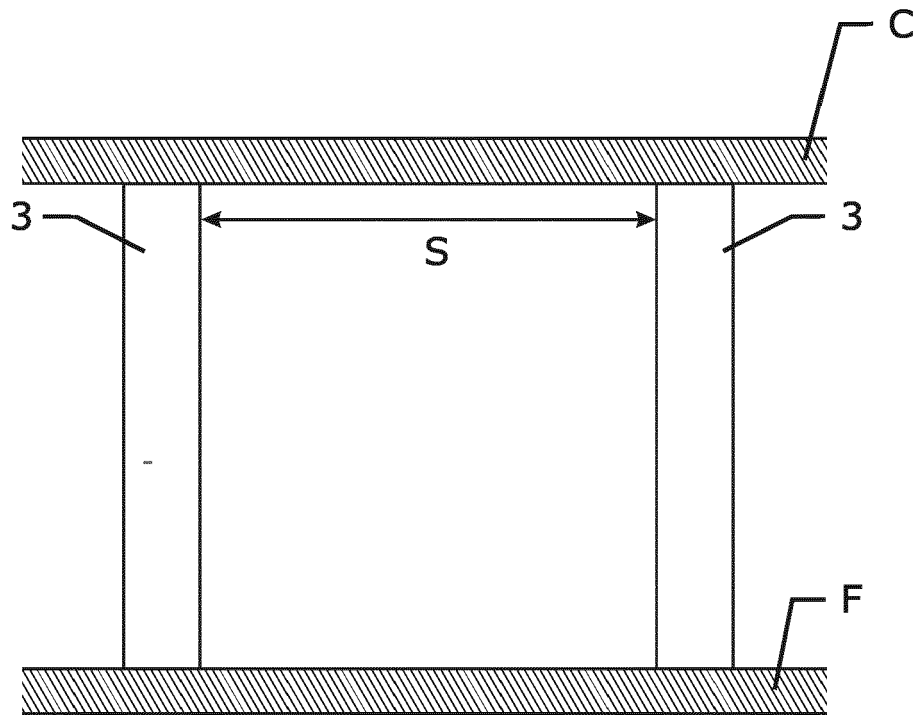


Fig. 3a

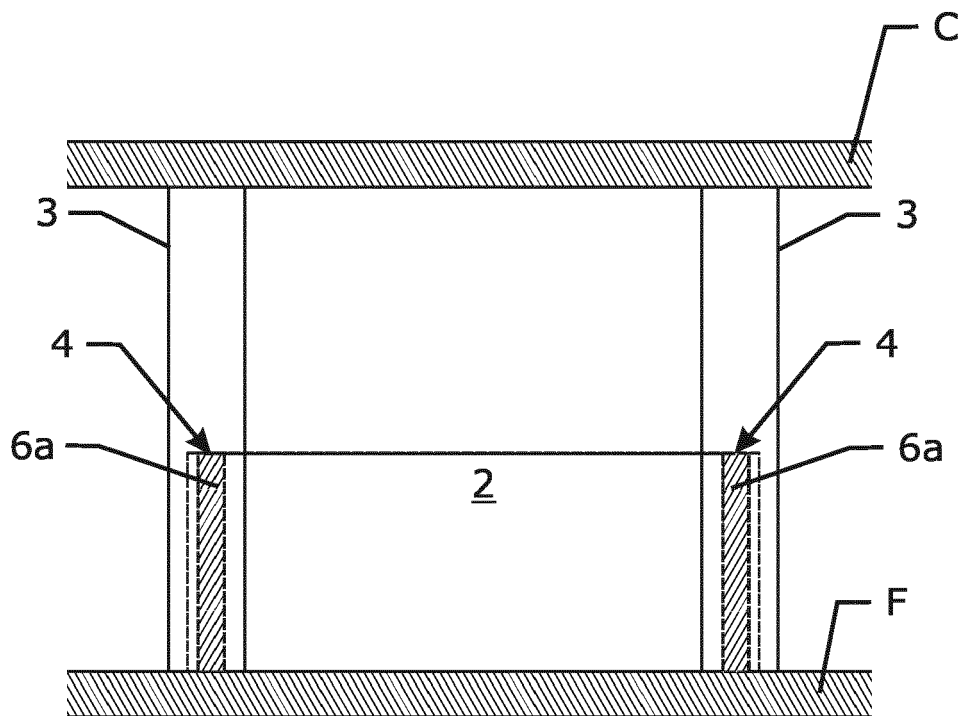


Fig. 3b

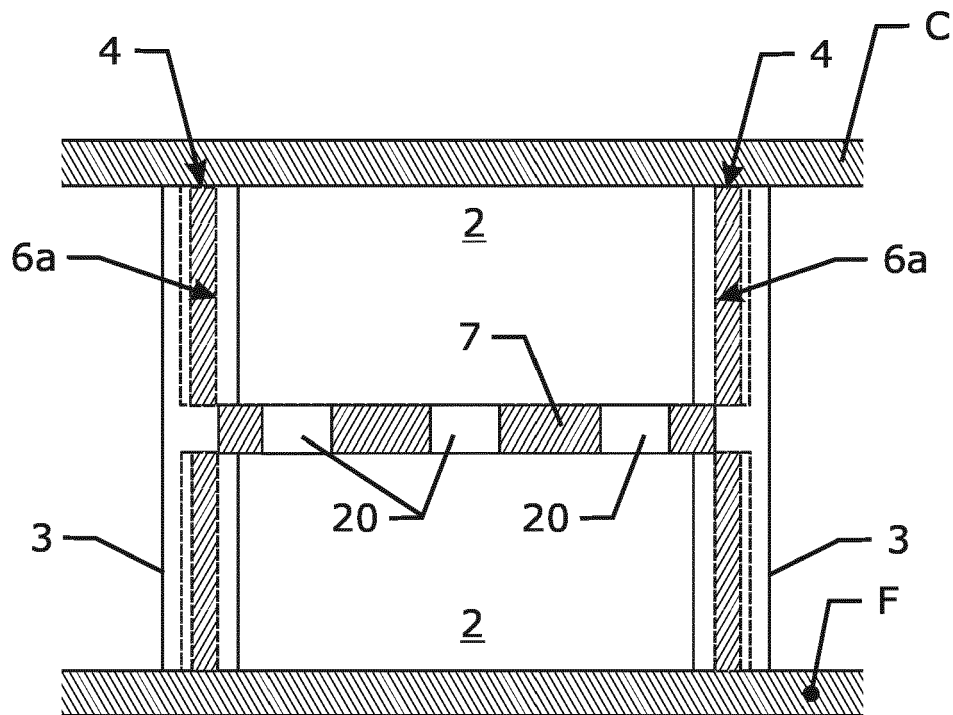


Fig. 3c

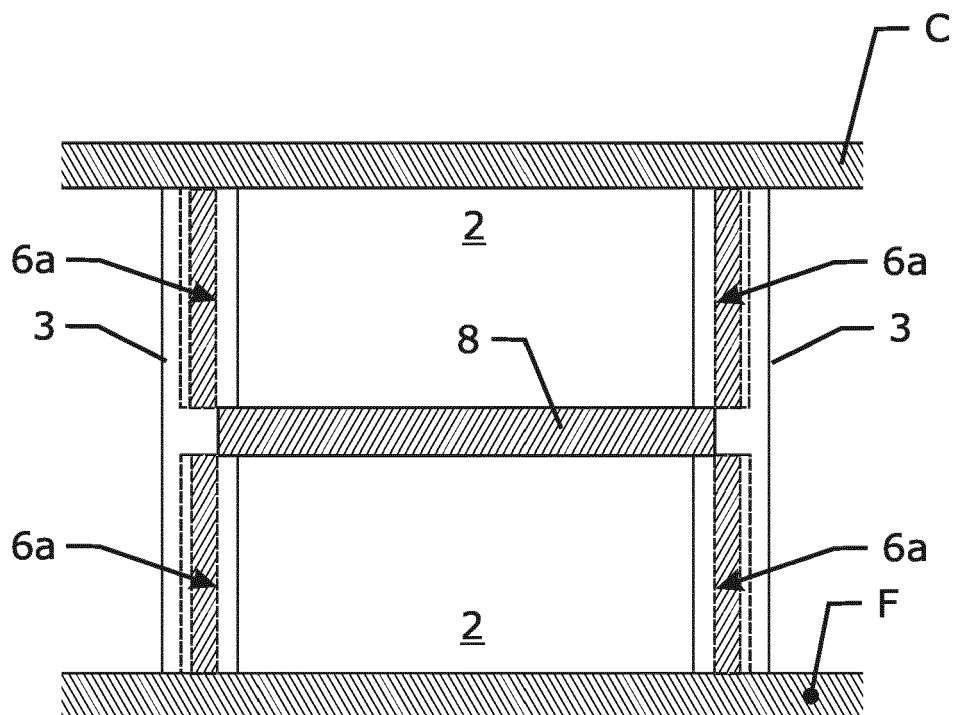


Fig. 3d

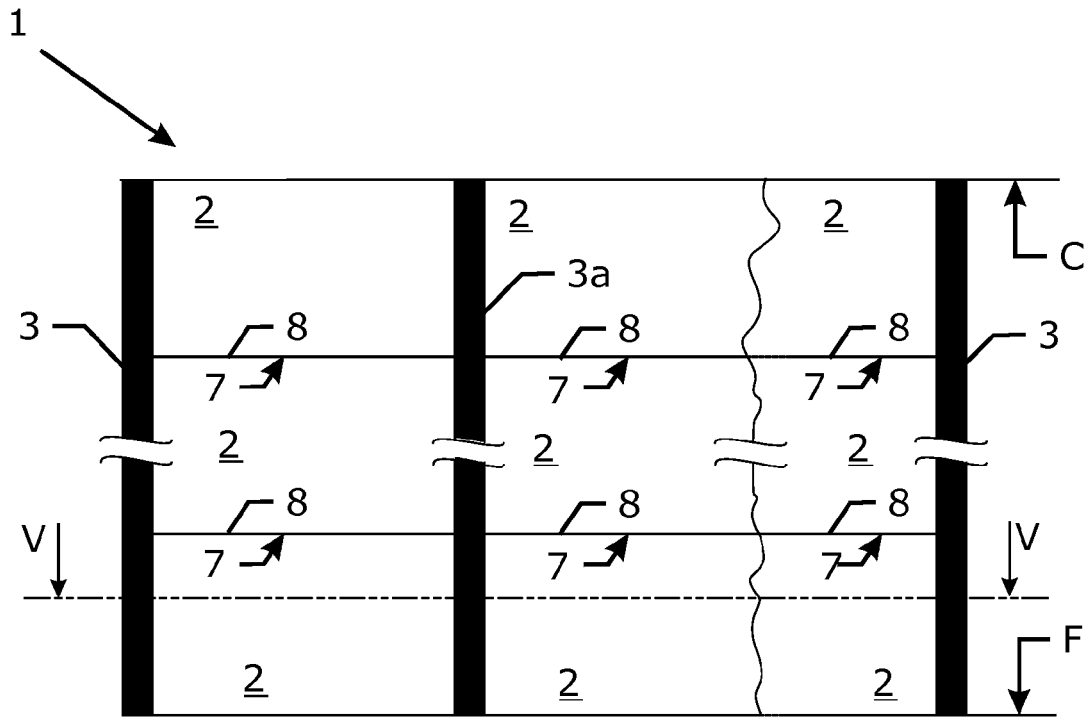


Fig. 4

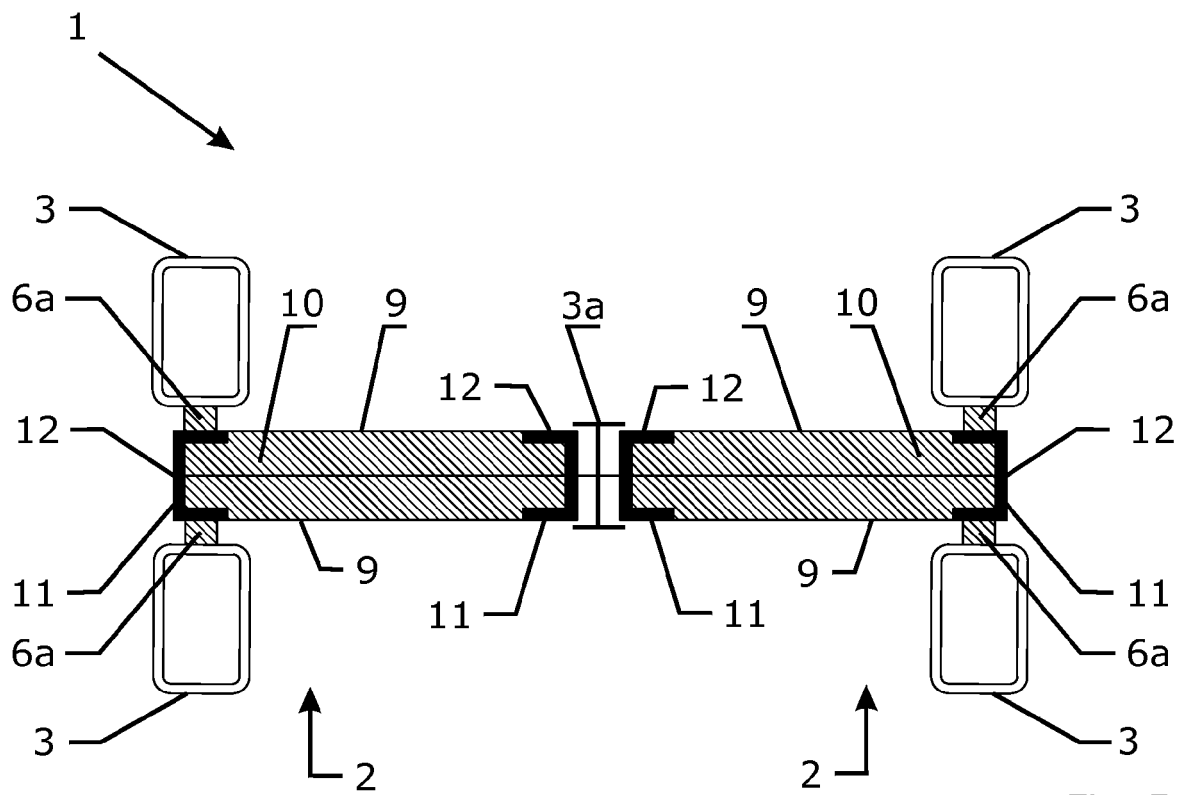


Fig. 5



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The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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