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- (54) Benævnelse: **Rammer til fremstilling af døre eller vinduer med stort areal.**
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EP-A2- 2 853 674
CH-A2- 708 701

DESCRIPTION

Technical field of the invention

[0001] The present invention relates to frames for manufacturing large area doors or windows, having no visible aluminium profiles near the floor and near the ceiling, which is within the field of mechanical engineering applied to civil engineering, more specifically regarding fixed construction elements. Additionally, the invention falls within the scope of the International Patent Classification E06B7/14; E06B03/46; E06B5/20 and E06B7/23.

[0002] The present invention has the following advantages over the aforementioned prior art:

1. a) No visible aluminium profiles near the floor and near the ceiling;
2. b) At the heights near the posts (5) only 1 mm to 5 mm of aluminium is visible;
3. c) The profiles of the posts (5) have thermal break;
4. d) At the heights near the handles (4) only 1 mm to 5 mm of aluminium is visible;
5. e) The upper and lower profiles (2) of the sash (3) are not visible and they are a structural part of the sash, and low friction material bars are attached in the lower profile (2) . These bars are in contact with the bearings thus allowing a smooth sliding of the sashes;
6. f) The thickness of the glass panes can vary from 34mm to 60mm, only by changing the peripheral profile (7) which is coupled to the sashes (3), and keeping unchanged the profiles of the fixed frame (1);
7. g) Possibility of movement of the sashes (3) in parallel or perpendicular planes;
8. h) Any type of fixation elements - such as screws, female fittings, rivets or other - are not visible;
9. i) Using the same profiles, it is possible with this system to produce frames with positive or negative slope, attic ceiling frames, skylights, guillotines, and pivoting doors.

[0003] It must be mentioned that the closest document to the state-of-the art of the invention is the patent application EP 2853674, from which the present invention according to claim 1 among others differs in that the post and the handle are only 1 mm to 5mm visible and in this way it is possible to hide the fixed frame (1) in the floor, in the ceiling and in the walls.

Description of the invention

[0004] The present invention is an aluminium and glass frame system for manufacturing doors or windows, which is applied in an opening of a building.

[0005] The present invention is constituted by at least one fixed frame (1) and by just one or

several fixed or movable sashes (3), which are inserted inside the fixed frame (1) and move laterally in parallel or perpendicular planes. The sashes (3) can be moved by hand or in a motorized way, and may consist of single, double, or triple panes of glass or other type of material. The sashes (3) have a central post (5), as shown in figure 2, which have profiles (2) with 1mm to 5mm. At the other end it is possible they include a handle (4) equally with 1mm to 5mm of visible aluminium. In this way there are no visible aluminium profiles in the floor or in the ceiling.

[0006] The fixed frame (1) is peripheral and consists of a rigid aluminium frame, preferably rectangular or square. All sides of the fixed frame (1) are formed by the same profile, and are joined together by any means known in the art.

[0007] In any of these cases it is always used the same fixed frame profile (1).

[0008] The sash (3) has a peripheral profile (7) which is attached to glass by a gluing process or any other known in the art, in which this profile has a structural function and allows fitting the profiles of the handle (4) and of the post (5) by means of cleavage or by gluing. This profile can be made of aluminium or polyamide.

[0009] The sash (3) can have glass thicknesses ranging from 34mm to 60mm, for which it is only necessary to replace the peripheral profile (7) with an equivalent one.

[0010] The sashes (3) can be operated by hand or automatically. The profiles forming the fixed frame (1) have been developed in order to allow the automation of the sashes (3) movement without needing to add more profiles to the system.

[0011] The locking system (6) of the movable sashes is integrated in the aluminium profiles of the fixed frame (1) and allows adjusting the number of locking points to the size of the movable sashes. The locking system (6) is multipoint, the number of locking points being adjusted according to the height and weight of the sashes (3).

Brief description of the figures

List of reference numbers

[0012]

- fixed frame (1);
- lower/upper profile (2);
- movable/fixed sashes (3);
- handle (4);
- central post (5);

- locking system (6) of the movable sashes.

Figure 1 - Graphical representation of the frames - vertical section.

Figure 2 - Graphic representation of the frames - horizontal section.

Figure 3 - Graphical representation of the sashes (3) that compose the vertical section system.

Figure 4 - Graphical representation of the sashes (3) that compose the horizontal section system.

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP2853674A [0003]

Patentkrav

1. Rammer til fremstilling af døre eller vinduer, omfattende:

- 5 a) mindst én perifer, fast ramme (1), som omfatter en stiv aluminiumsramme, i hvilken alle sider er bygget med samme profil;
 b) mindst én eller fast eller bevægelig fløj (3), som er indsat i den faste ramme (1), og som bevæger sig sideværts i parallelle eller vinkelrette planer;
 c) et låsesystem (6) for fløjene (3), og som er integreret i den faste rammes (1)
 10 aluminiumsprofiler, hvilket låsesystem (6) er et flerpunkts låsesystem;

hvorved hver fløj (3) omfatter:

- d) i den ene ende en midterstolpe (5);
 15 e) et øvre profil (2) og et nedre profil (2);
 f) i den anden ende et håndgreb (4);

kendetegnet ved, at

- 20 g) midterstolpen (5) har 1 mm til 5 mm synligt aluminium;
 h) håndgrebet (4) omfatter 1 mm til 5 mm synligt aluminium;
 i) der er ikke nogen synlige aluminiumsprofiler ved gulvet eller på loftet; og
 j) en perifer profil (7) er koblet til fløjene (3) og fastgjort til en rude af glas eller anden type materiale.

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2. Rammer ifølge krav 1, **kendetegnet ved, at** fløjen (3) består af enkelte, dobbelte eller tredobbelte ruder af glas eller anden type materiale.

3. Rammer ifølge et af de foregående krav, **kendetegnet ved, at** fløjen (3) har
 30 glastykker mellem 34 mm og 60 mm.

4. Rammer ifølge et af de foregående krav, **kendetegnet ved, at** det perifere profil (7) er af aluminium eller polyamid.

DRAWINGS

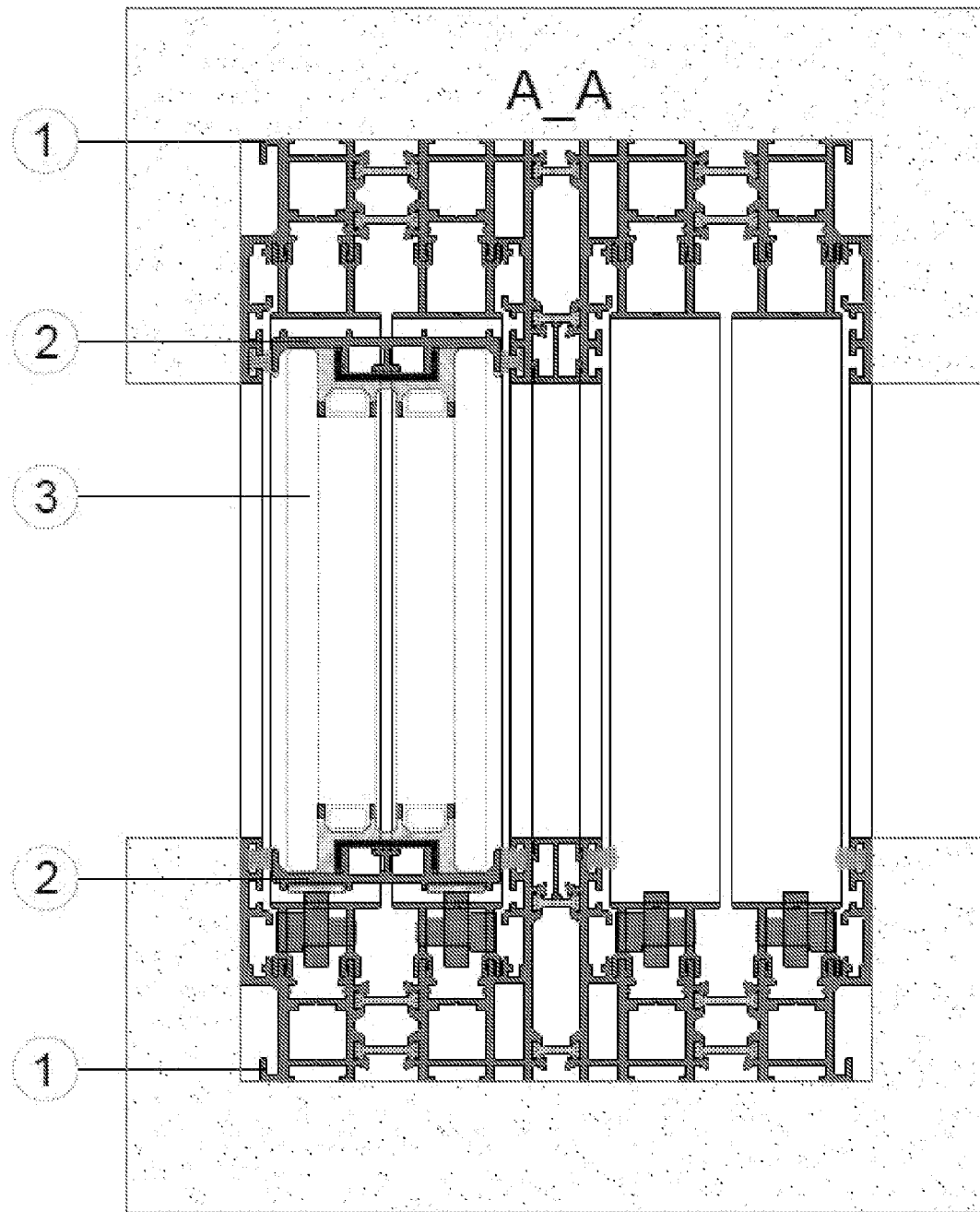


Fig. 1

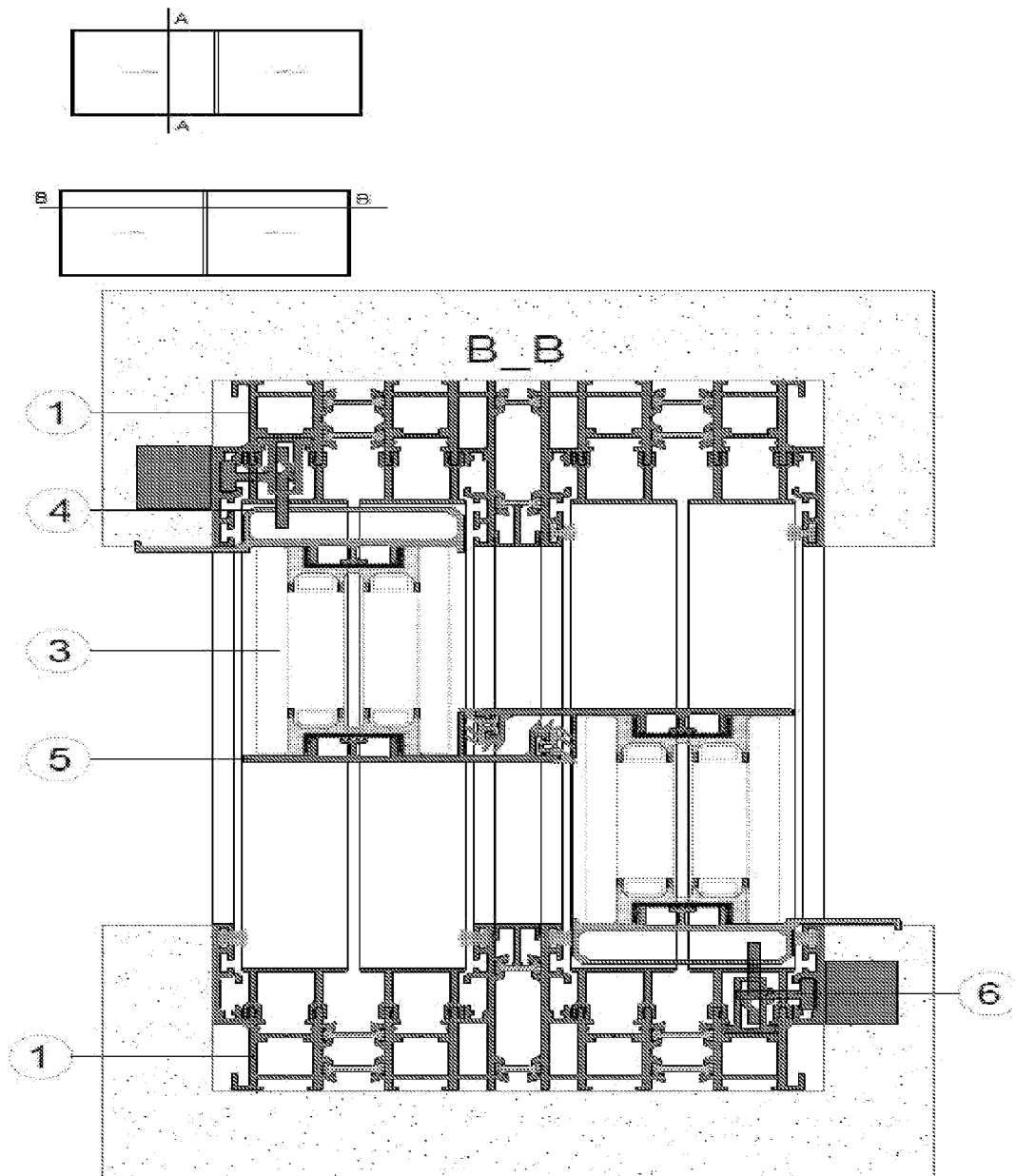


Fig. 2

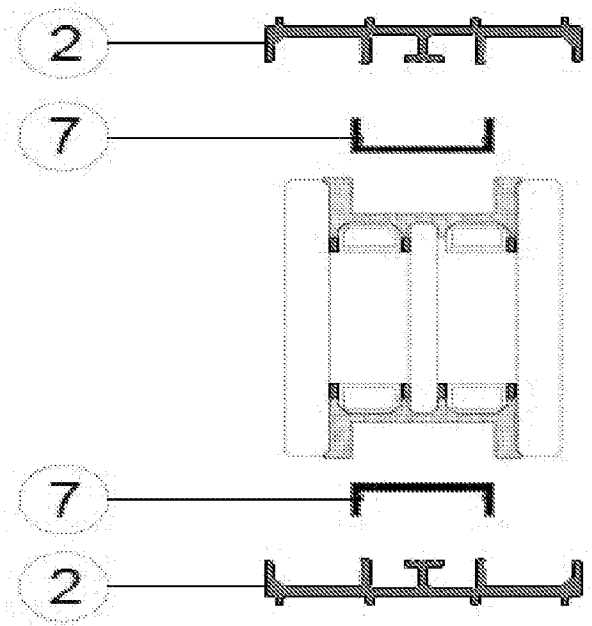


Fig. 3

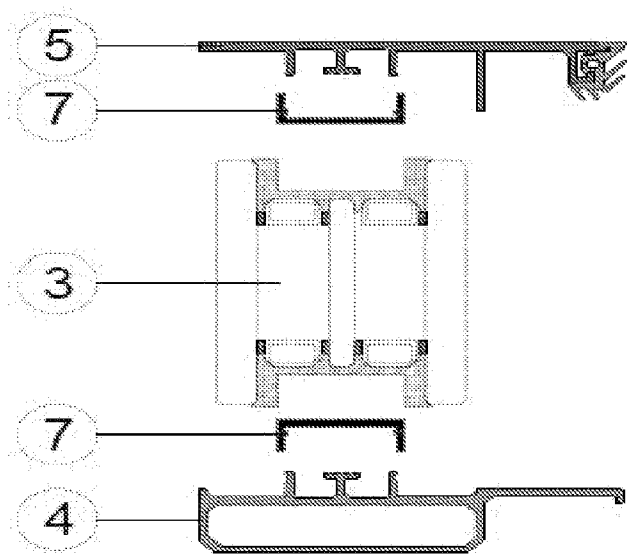


Fig. 4