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(54) **Improved panel curtain system with co-acting profiles**

(57) The invention relates to a system for attaching a window covering such as a panel curtain to a rail, which system comprises a first profile which is provided on the upper side with runners adapted to be at least partially received in the rail, and which further comprises means for attaching the window covering. According to the in-

vention the system comprises a second profile which is adapted for releasable attachment to the first profile, wherein the means for attaching the window covering are arranged on the second profile.

The invention also relates to a panel curtain system comprising a rail, one or more panels and one or more of such systems.

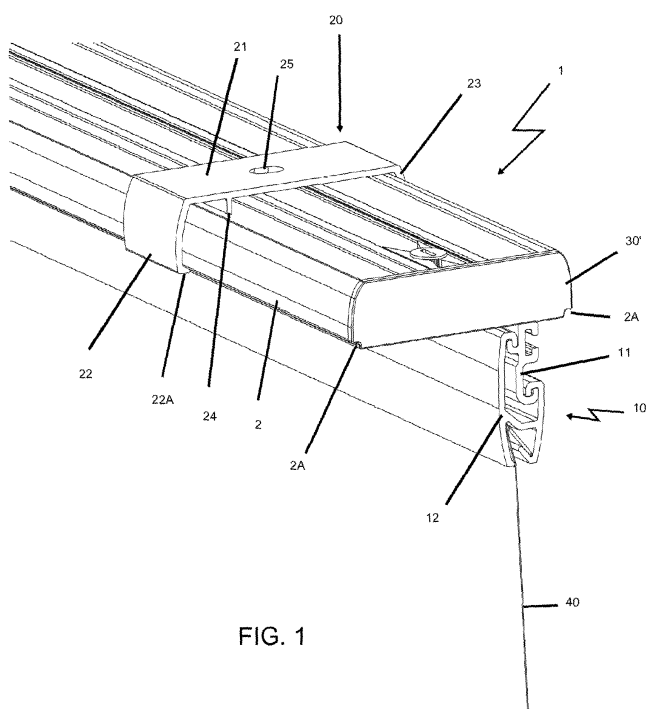


FIG. 1

Description

[0001] The present invention generally relates to an improved panel curtain or panel curtain system.

[0002] The present invention relates to a system for attaching a window covering, such as a panel curtain consisting of one or more panels, to a rail, which system comprises a first profile which is provided on the upper side with runners which are adapted to be at least partially received in the rail, and which system further comprises means for attaching the window covering.

[0003] Such a system is known in practice and has the problem that the attaching of the panel is time-consuming, wherein straight attachment of the panel is not guaranteed.

[0004] The invention has for its object to provide a solution herefor. For this purpose the system according to the invention comprises a second profile which is adapted for releasable attachment on the first profile.

[0005] A system for a panel curtain system with the above described technical measures is known from American patent application US 2004/0244922. In the known panel curtain system a number of T-pieces are received in a rail using runners. A panel consisting of a frame in which the window covering is tensioned can be attached to these T-pieces. The frame consists of two or three parts which can be snap coupled to each other in releasable manner.

[0006] The known panel curtain system has a number of drawbacks. The attachment of the panels to the rail is time-consuming. Each panel must first be assembled by fixing the window covering in the frame, after which the T-pieces must be pushed laterally into the rail. It will not always be possible in practice to do this when a rail is already mounted. In addition, the frame of each panel must be taken apart into its separate components for the purpose of changing the window covering. Only a trained person will be able to do this.

[0007] The system according to the invention has for its object to obviate these drawbacks and has for this purpose the feature that the means for attaching the window covering are arranged only on the second profile.

[0008] The innovative co-acting profiles enable a rapid and reliable attachment of the panels on the rail, wherein each panel can be attached to the second profile in the factory. The profiles can preferably hook into each other.

[0009] According to a first preferred embodiment, the first profile is provided on either side with one or more hooked elements extending in the direction away from the profile, and wherein the second profile is provided on either side with one or more hooked elements extending in the direction toward the profile. This enables a rapid and reliable attachment.

[0010] In an alternative preferred embodiment the first profile is provided on the upper side with a first protruding element, and the second profile is provided on the upper side with a hooked element adapted to engage round the first protruding element. According to a further develop-

ment of this alternative preferred embodiment, the first profile is provided on the underside with at least one compressing member, and the second profile is provided on the underside with a compressible element of resilient material which is adapted to co-act with the compressing member. In coupled situation the system of profiles according to the alternative preferred embodiment takes up less space than the system of profiles according to the first preferred embodiment.

[0011] Further technical measures of the above stated innovation are described in the dependent claims.

[0012] The invention further relates to a panel curtain system comprising a rail, one or more panels and one or more attaching systems according to the invention.

[0013] The invention will now be described in more detail with reference to the drawings, in which:

Figure 1 shows a schematic view of a part of a panel curtain system provided with a system of profiles according to the invention;

Figure 2A shows a cross-section of a first embodiment of the system of profiles of figure 1;

Figure 2B shows a cross-section of a second embodiment of the system of profiles of figure 1;

Figures 3A and 3B illustrate the operation of the innovative system of profiles according to the invention;

Figure 4A shows a cross-section of a third embodiment of the system of profiles according to the invention;

Figure 4B shows a cross-section of a fourth embodiment of the system of profiles according to the invention;

Figures 5A and 5B illustrate the operation of the innovative system of profiles of figures 4A and 4B according to the invention; and

Figure 6 shows the embodiment of figure 4A with exploded parts.

[0014] Like components are designated with like reference numerals in the figures.

[0015] Figure 1 shows a schematic view of a part of a panel curtain system 1 according to the invention. Figure 2A shows a cross-section of a first embodiment of the panel curtain system of figure 1. Figure 2B shows a cross-section of a second embodiment of the panel curtain system of figure 1. Figures 3A and 3B illustrate the operation of the innovative system of profiles according to the invention.

[0016] Panel curtain system 1 comprises a rail 2 which can be fixed to a surface suitable for the purpose by means of an innovative fixing element 20. Rail 2 can be closed at the ends by means of an innovative end structure 30. The fixing element and the end structure are described in the priority document for this patent application.

[0017] Panels as desired can be attached to the panel curtain system. Two examples of panels 40, 50 are

shown respectively in figures 2A and 2B. According to the invention a system 10 is provided for attaching the panels to rail 2.

[0018] System 10 comprises a first profile 11 and a second profile 12 which is adapted for releasable attachment to the first profile. In the shown preferred embodiment the profiles can hook into each other.

[0019] First profile 11 is provided on the upper side with runners 13 adapted to be at least partly received in rail 2. First profile 11 is further provided on either side with one or more hooked elements 11A, 11 B which extend in the direction away from profile 11. Hooked elements 11A, 11 B are situated on either side of profile 11 at different heights.

[0020] Second profile 12 is provided on either side with one or more hooked elements 12A, 12B which extend in the direction toward profile 12. Hooked elements 12A, 12B are likewise situated on either side of profile 12 at different heights.

[0021] Elements 11A and 12A, 11B and 12B respectively can be attached releasably to each other by means of a simple hooking movement. This is illustrated in figures 3A and 3B.

[0022] Second profile 12 is further provided with means for attaching the window covering, in this example a panel. In the first embodiment profile 12 is adapted to receive the upper side of the window covering. Panel 40 is provided on the upper side with a strip 41. Second profile 12 is provided with a space 14 for enclosing the strip. Space 14 is partially closed off by tongue 15, behind which strip 14 can be slidably arranged.

[0023] Figure 2B shows an alternative embodiment of the second profile, which is designated with 12'. In the second embodiment profile 12' and panel 50 are provided with co-acting adhesive tape 51, for instance Velcro®. Profile 12' is otherwise the same as profile 12.

[0024] Figure 4A shows a cross-section of a third embodiment of the system of profiles 110 according to the invention. Figure 4B shows a fourth embodiment of the system of profiles 110' according to the invention. Figures 5A and 5B illustrate the operation of the innovative system of profiles 110 on the basis of figure 4A. Figure 6 shows embodiment 110 of figure 4A with exploded parts.

[0025] System 110 comprises a first profile 111 and a second profile 112 adapted for releasable attachment to the first profile. In the shown preferred embodiment the profiles can hook into each other.

[0026] First profile 111 is provided on the upper side with runners 13 adapted to be at least partly received in rail 2. First profile 111 is provided on the upper side with a first protruding element, for instance a projection, 111A. First profile 111 is provided on the underside with at least one compressing member 111 B. Compressing member 111 B is arranged in line with protruding element 111A. Compressing member 111 B can take various forms. An example of a suitable form is a protruding edge. The whole first profile 111 is placed slightly out of the centre of runners 13 by means of an S-bend.

[0027] Second profile 112 is provided on the upper side with a hooked element 112A adapted to engage round the first protruding element 111A of first profile 111. Second profile 112 is provided on the underside with a compressible element 16 of resilient material which is adapted to co-act with compressing member 111 B of first profile 111.

[0028] Compressible element 16 is preferably wedge-shaped. An example of a suitable material is spring steel. Compressible element 16 does not have to extend over the full length of the second profile. It suffices to arrange a compressible element 16 close to each of the two outer ends of second profile 112, as shown in figure 6.

[0029] Elements 111A and 112A, 111B and 112B respectively can be attached releasably to each other by means of a simple hooking movement. This is illustrated in figures 5A and 5B.

[0030] In figure 5A profiles 111 and 112 are not yet attached to each other and compressible element 16 is in the free position, in which it is not compressed. In figure 5B compressible element 16 is in the intermediate position, in which it is fully compressed by compressing member 111 B. In figure 4A the compressible element 16 is in the coupled position, in which it is sufficiently compressed by compressing member 111 B to press projection 111A against hook 112A.

[0031] Second profile 112 is further provided with means for attaching the window covering, in this example a panel. In the shown embodiment profile 112 and panel 50 are provided with co-acting adhesive tape 51, for instance Velcro®. In the alternative embodiment, shown in figure 4B, profile 112' is adapted to receive the upper side of panel 40 of figure 2A and is further provided on the underside for this purpose with the space 114 for enclosing the strip 41.

[0032] An example of a suitable material for the first profile is plastic. An example of a suitable material for the second profile is aluminium.

[0033] The invention is of course not limited to the described and shown preferred embodiments, but extends to any embodiment falling within the scope of protection as defined in the claims, as seen in the light of the foregoing description and accompanying drawings.

Claims

1. System for attaching a window covering such as a panel curtain to a rail, which system comprises a first profile which is provided on the upper side with runners which are adapted to be at least partially received in the rail, and which system further comprises means for attaching the window covering, wherein the system comprises a second profile which is adapted for releasable attachment on the first profile, **characterized in that** the means for attaching the window covering are arranged only on the second profile.

2. System as claimed in claim 1, wherein the profiles can hook into each other.
3. System as claimed in claim 2, wherein the first profile is provided on either side with one or more hooked elements extending in the direction away from the profile, and wherein the second profile is provided on either side with one or more hooked elements extending in the direction toward the profile. 5
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4. System as claimed in claim 3, wherein the hooked elements are situated on either side of each profile at different heights.
5. System as claimed in claim 1 or 2, wherein the first profile is provided on the upper side with a first protruding element, and wherein the second profile is provided on the upper side with a hooked element adapted to engage round the first protruding element. 15
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6. System as claimed in claim 5, wherein the first profile is provided on the underside with at least one compressing member, and wherein the second profile is provided on the underside with a compressible element of resilient material which is adapted to co-act with the compressing member. 25
7. System as claimed in claim 5 or 6, wherein the first protruding element is a projection. 30
8. System as claimed in claim 6 or 7, wherein the compressing member is a protruding edge.
9. System as claimed in claim 6, 7 or 8, wherein the compressible element is a wedge. 35
10. Panel curtain system, comprising a rail, one or more panels and one or more systems as described in any of the foregoing claims. 40

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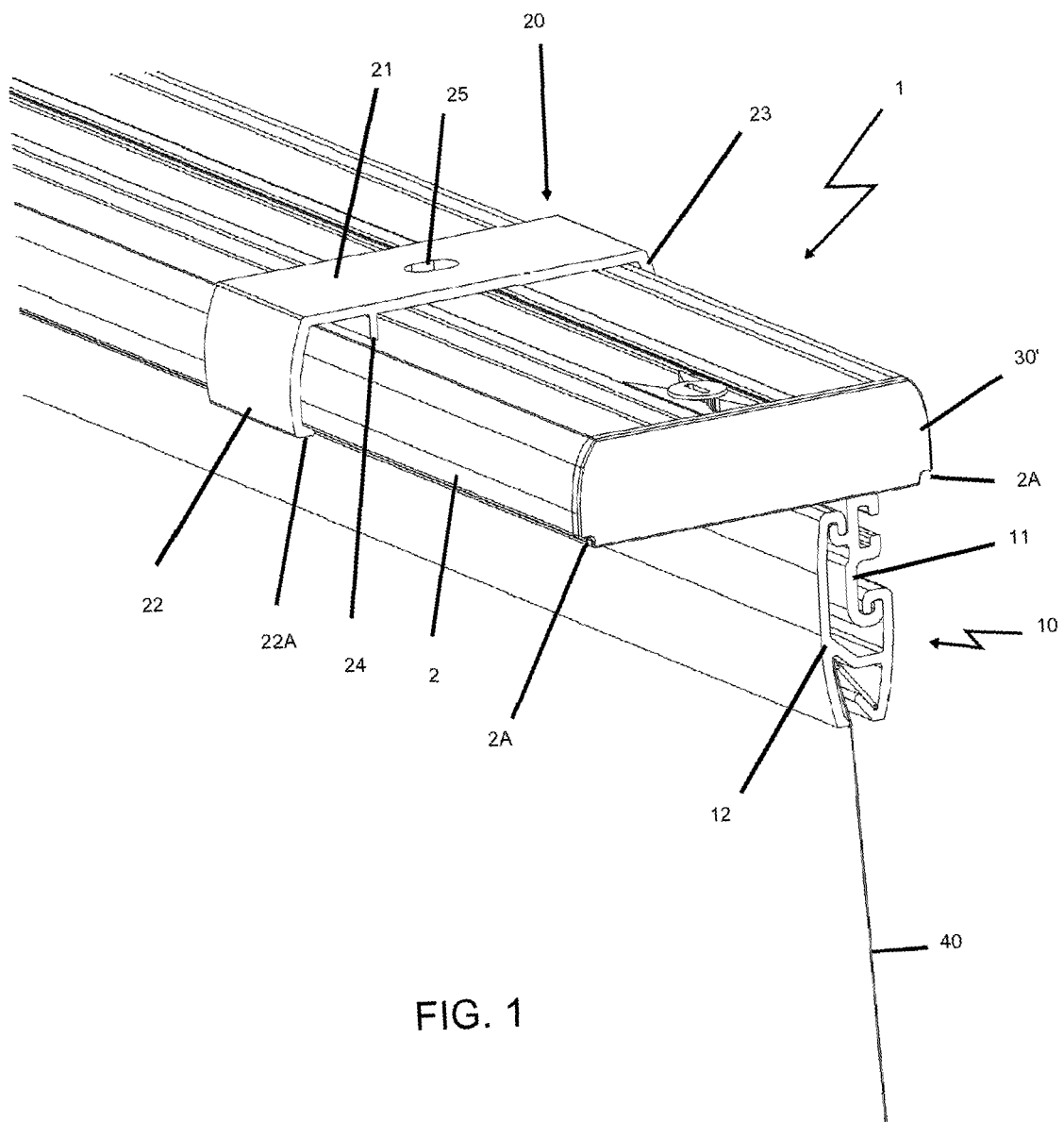


FIG. 1

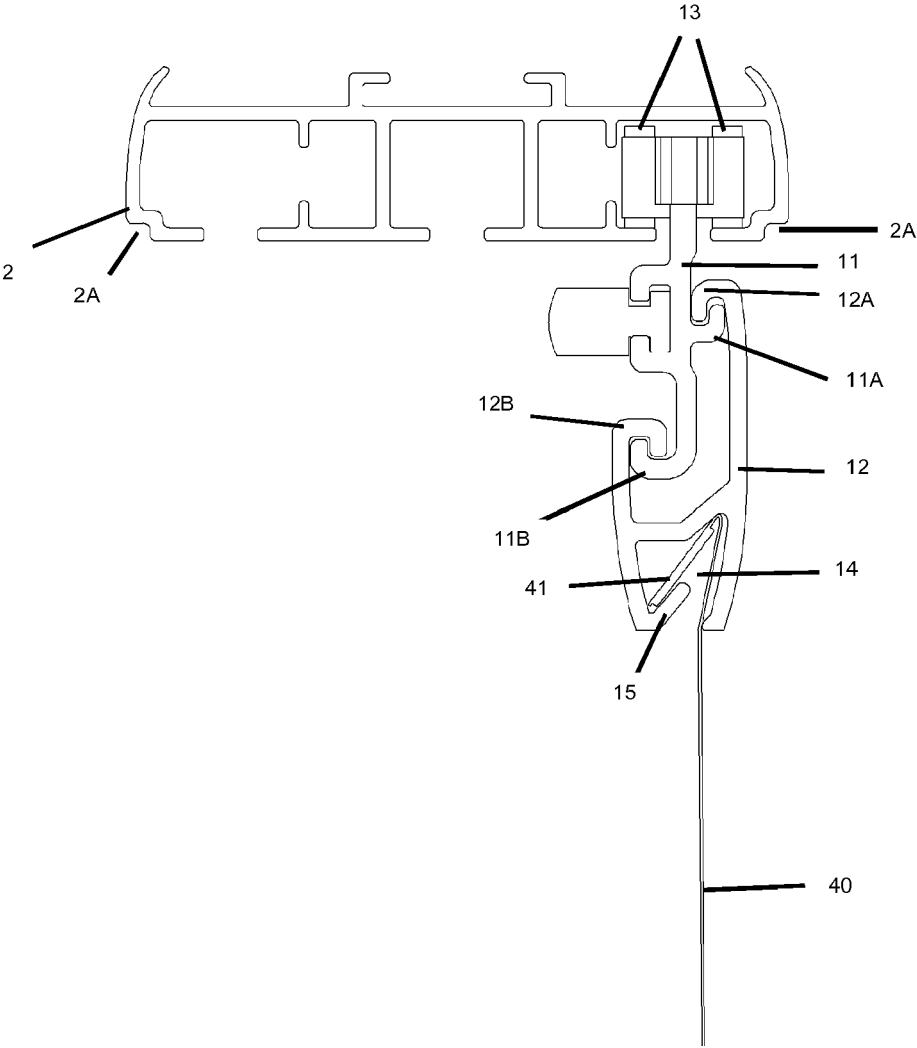


FIG. 2A

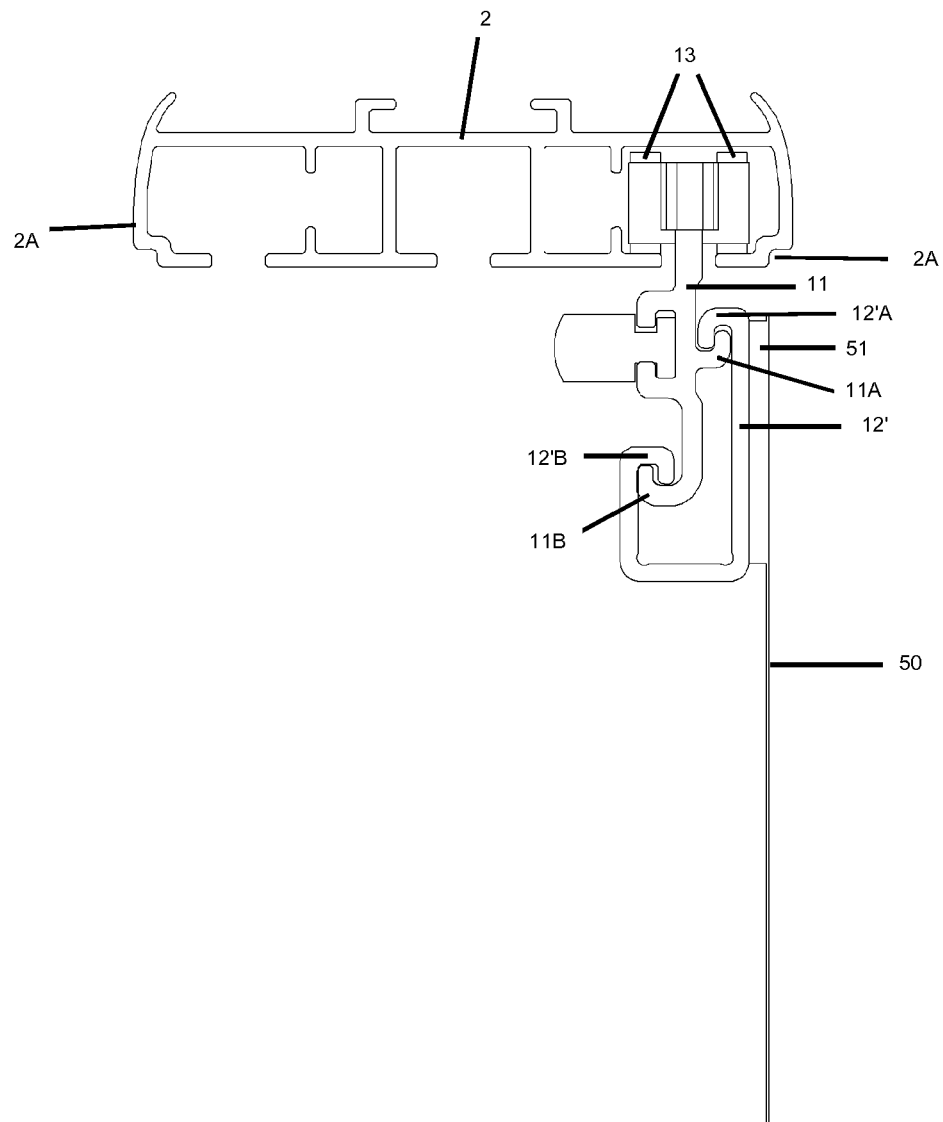
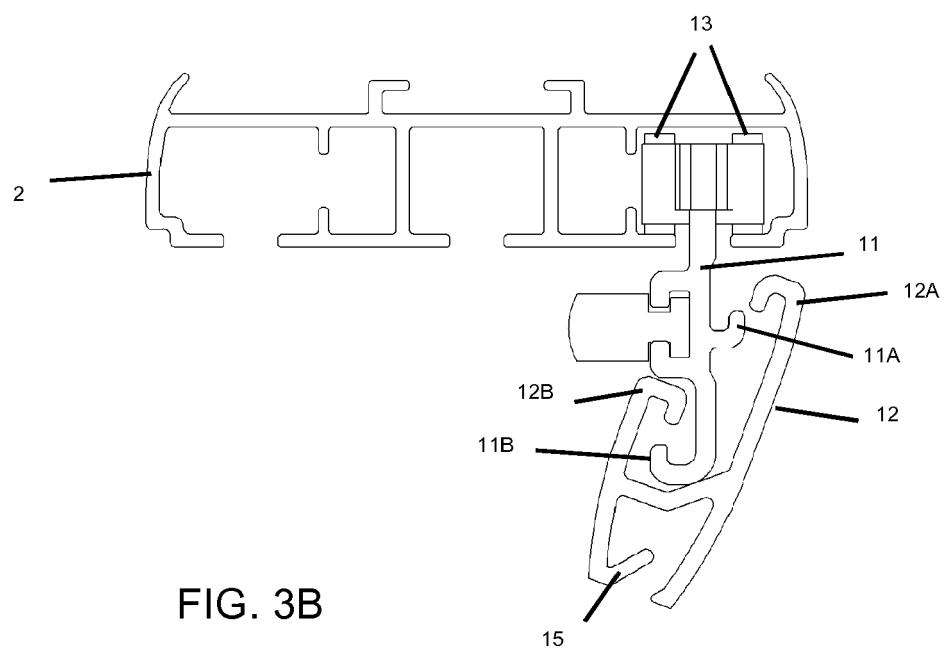
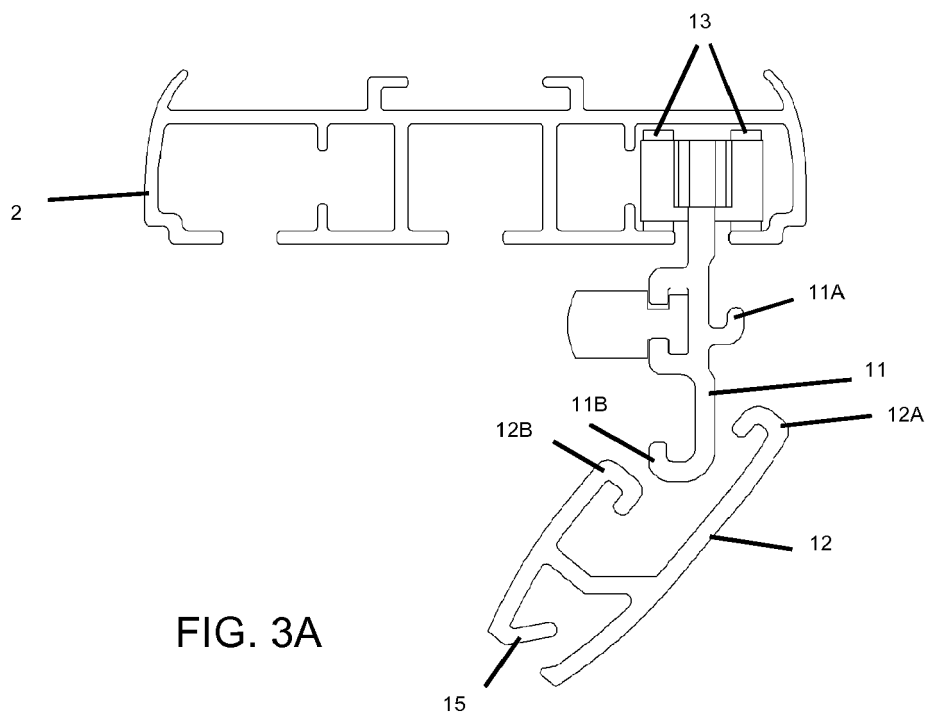


FIG. 2B



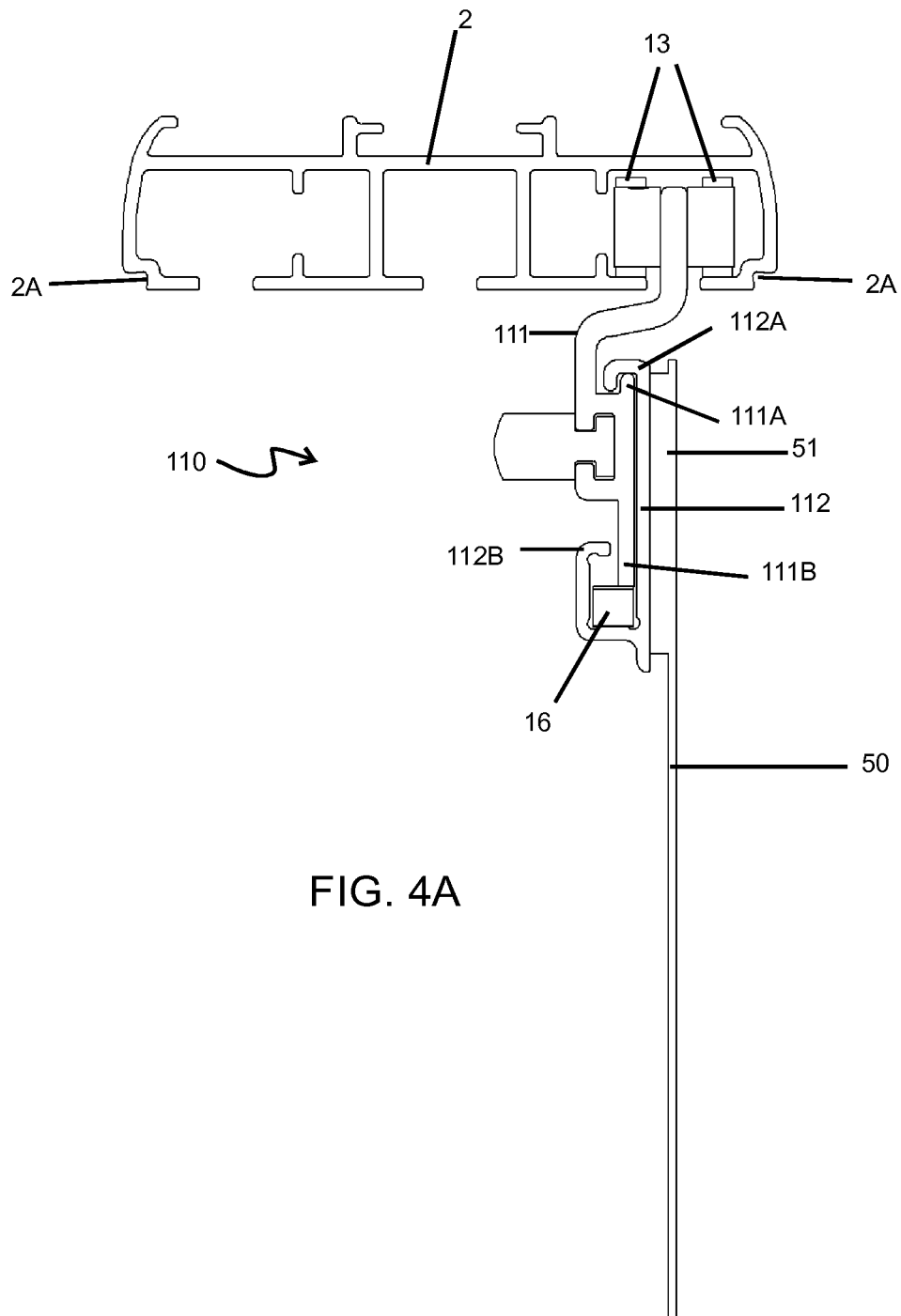


FIG. 4A

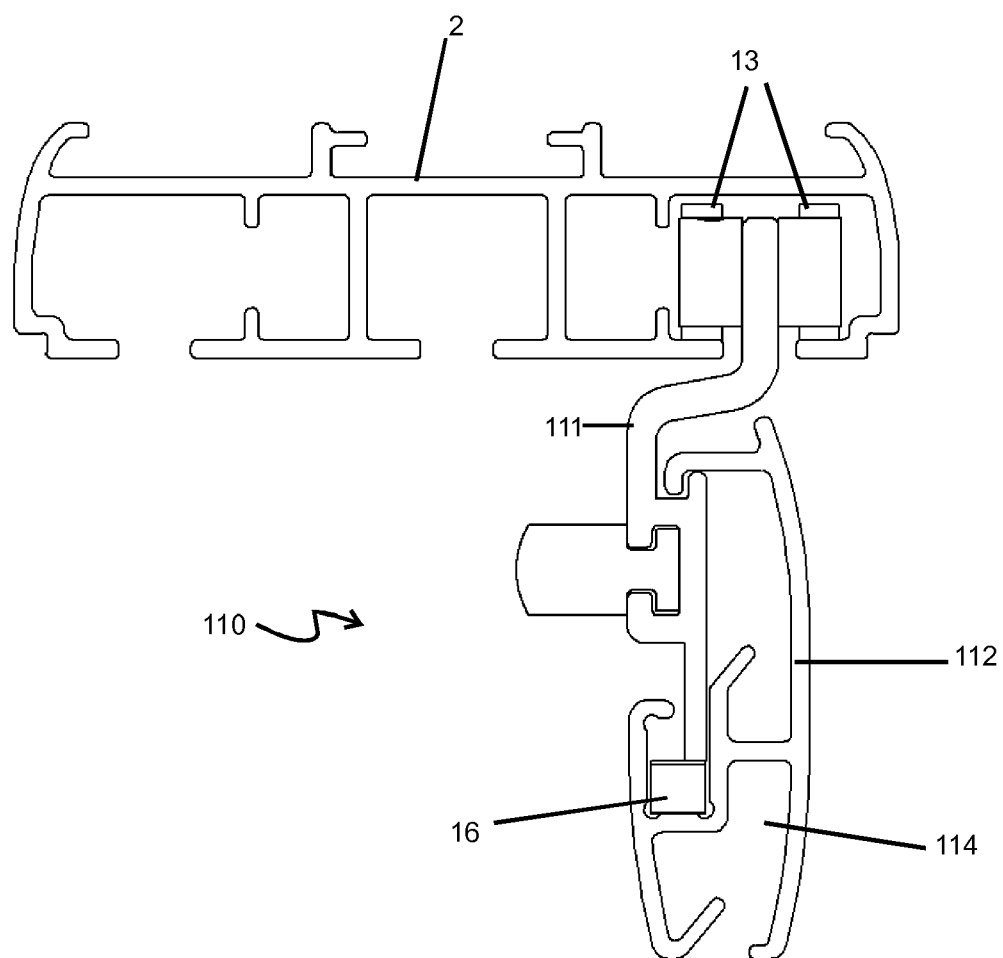
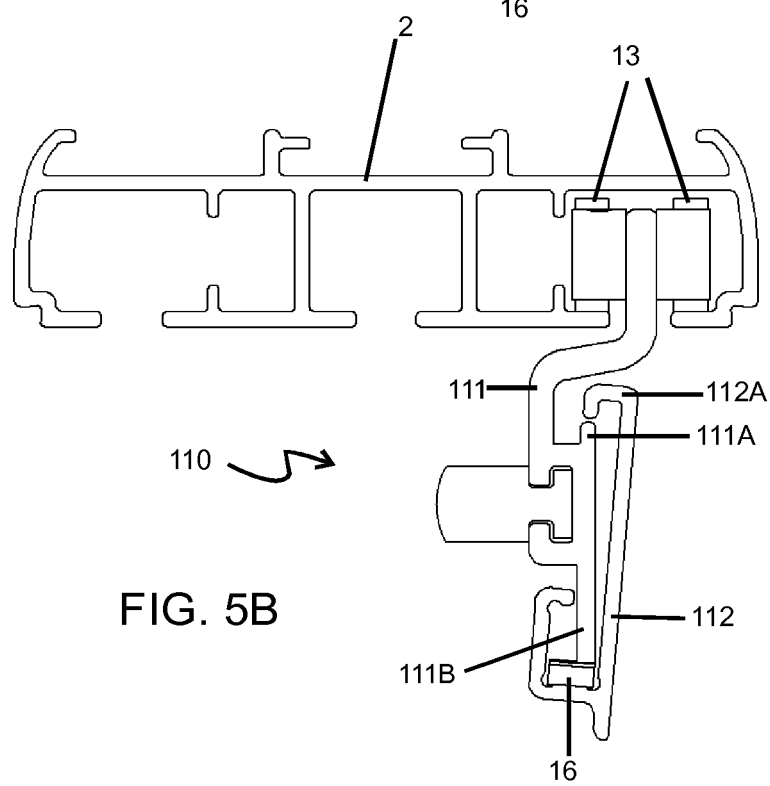
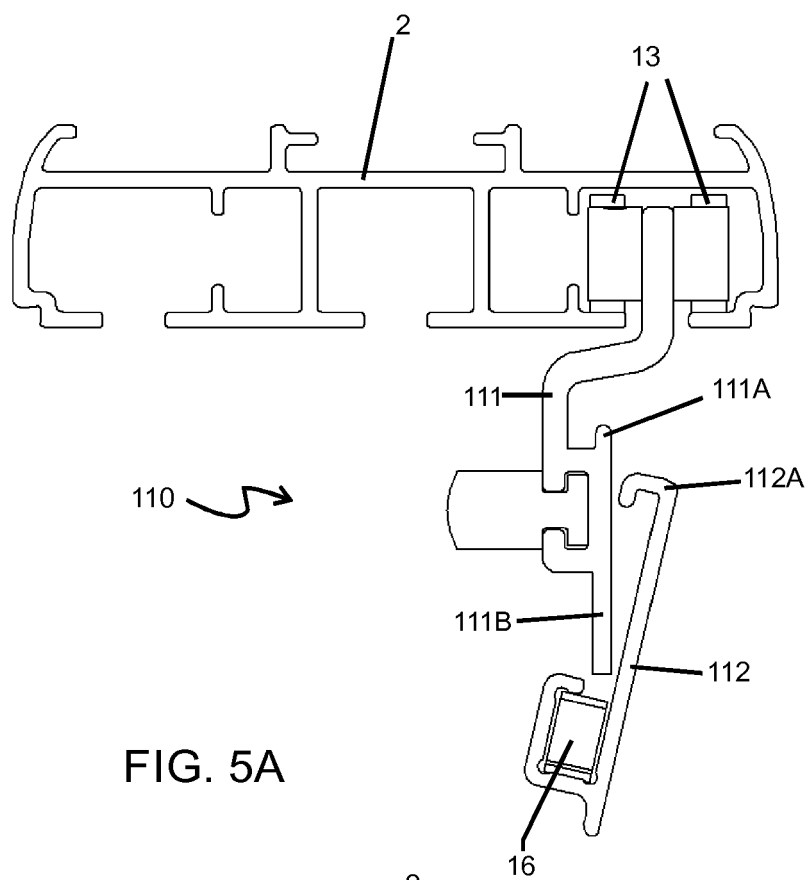


FIG. 4B



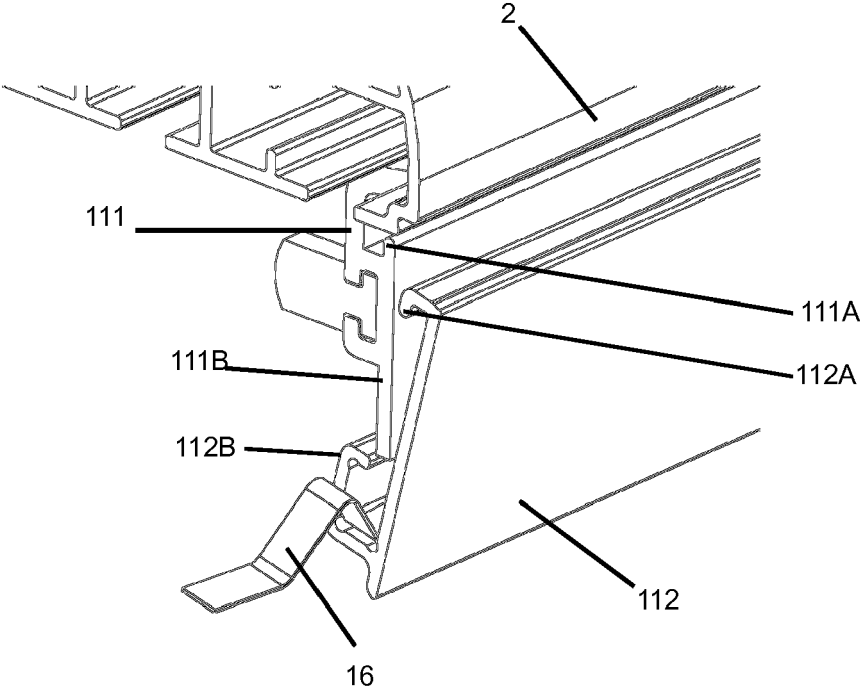


FIG. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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