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(54) A MOUNTING ASSEMBLY FOR MOUNTING SLIDING DOORS TO A SUBSTRATE

(57) A mounting assembly for mounting sliding doors to a substrate, the assembly comprising:
- a mounting profile designed to be secured to the substrate and comprising a base defining a surface for abutting the substrate and at least four rims extending lengthwise along the entire length of the mounting profile from a surface opposite to the surface for abutting the substrate, two central rims of the mounting profile defining a fixation channel comprising screw holes for fixation of the mounting profile to the substrate;
- a sliding door track comprising an elongated profile having a base configured to cooperate with the mounting profile and defining at least one running rail for accommodating a sliding door panel thereon.

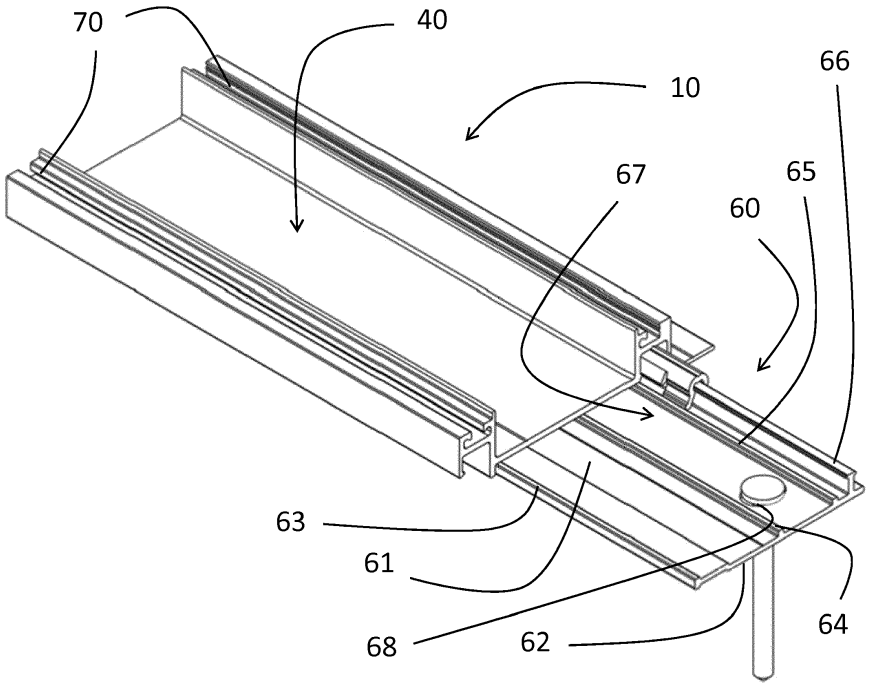

FIG 1

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Description

FIELD OF THE INVENTION

[0001] This invention relates to an auxiliary profile for attaching elongated objects to mounting surfaces. In particular, the present invention relates to a concealed mechanism for mounting a track section for sliding terrace or garden doors.

BACKGROUND TO THE INVENTION

[0002] Sliding panel doors, such as those used in closets, are constructed from thin panels that gain rigidity from the application of a perimeter frame formed by two side, one top, and one bottom roll formed or extruded metal sections that are mechanically joined at each corner by means of a metal or plastic joining bracket. The weight of the panel door is typically supported by a bottom track, and the door is provided with wheels or other slidable elements that can slide or roll within the bottom track. The top portion of the door is often retained and guided in a top "E" section track, which provides downwardly depending leg portions defining vertical surfaces in which the upper portion of the panel door is retained and guided. One such conventional sliding door is disclosed in U.S. Pat. No. 6,449,906.

[0003] The bottom and top track sections are typically mounted to mounting substrates (e.g., the floor and ceiling) using screws that extend through the tracks and into the mounting substrate. Unfortunately, the heads of the screws remain exposed and are unsightly. Furthermore, if the screw is not properly installed, it may extend into the channel in the track section and interfere with the movement of the sliding door within the channel.

[0004] Sliding terrace or garden doors are constructed in a rather similar way, yet have far more demanding requirements in terms of weight support and equally important insulation and water barrier requirements.

BRIEF SUMMARY OF THE INVENTION

[0005] The present invention addresses the above needs by providing a mounting assembly for mounting sliding doors to a substrate, the assembly comprising:

- a mounting profile designed to be secured to the substrate and comprising a base defining a surface for abutting the substrate and at least four rims extending lengthwise along the entire length of the mounting profile from a surface opposite to the surface for abutting the substrate, two central rims of the mounting profile defining a fixation channel comprising screw holes for fixation of the mounting profile to the substrate;
- a sliding door track comprising an elongated profile having a base configured to cooperate with the mounting profile and defining at least one running rail for accommodating a sliding door panel thereon.

DETAILED SUMMARY OF THE INVENTION

[0006] According to a preferred embodiment of the mounting assembly of the invention, the sliding door track base abuts the central rims of the mounting profile, thereby closing the fixation channel. In this case a sealant may be provided between the central rims of the mounting profile and the base of the sliding door track.

[0007] Preferably the mounting profile comprises one or more guide rims allowing correct positioning of the sliding door track on the mounting profile.

[0008] The mounting assembly preferably comprises a running rail for accommodating a sliding door panel, the running rail extending parallel to and at a distance of the fixation channel.

[0009] The mounting profile may comprising lateral edge portions that gradually increase in height from the outer edge towards the running rails provided on the sliding door track accommodated on the mounting profile.

[0010] The mounting assembly of the present invention is preferably installed in an architectural opening of a building, in particular in an architectural opening in an outer wall of a building.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Referring now to the drawings, which from a part of this disclosure:

FIG. 1 is a partial cross-sectional view of a sliding door mounting assembly according to one embodiment of the present invention;

FIG. 2 is a cross-sectional view of the mounting assembly in FIG. 1, as viewed along the axis II-II in FIG 1;

FIG. 3 is a same cross-sectional view as FIG 2, yet of an alternative embodiment of the present invention; and

FIG. 4 & 5 illustrate further embodiments of the present invention in a same cross-sectional view as in FIG2, yet with sliding doors mounted to the mounting assembly.

DETAILED DESCRIPTION OF SOME PREFERRED EMBODIMENTS

[0012] FIG. 1 shows a mounting assembly 10 for mounting one or more sliding doors 20 (FIG. 4, 5) on a substrate 30. The substrate 30 may include a ceiling, a floor, walls, etc. of a house or other structure. The mounting assembly 10 includes a sliding door track 40 and a mounting profile 60 for securing the sliding door track 40 to the substrate 30.

[0013] The sliding door track 40 is an elongated structure that has the cross-section illustrated in FIG. 1. The track 40 has one or more elongated running rails 70 extending from a track base, the running rails are designed to guide wheels or other sliding elements that are mounted to the sliding doors 20. As shown, a pair of elongated door running rails 70 are provided. It is contemplated that three or more rails 70 can be provided in each the track depending on the number of sliding doors 20.

[0014] As shown in FIG. 1, the illustrated track 40 comprises an extruded material such as aluminum or a polymer such as PVC.

[0015] As shown in FIGS. 1 and 2, the mounting profile 60 comprises an elongated profile extending over the entire length along the corresponding sliding door track 40. The mounting profile 60 essentially comprises a base 61 defining a surface 62 for abutting the substrate 30. Opposite said surface, at least four elongated rims 63, 64, 65 & 66 extend from the base. These elongated rims extend parallel to one another over the entire length of the mounting profile 60. The two centrally positioned rims 64 & 65 defining a fixation channel 67 comprising screw holes 68 in the base of the mounting profile for fixation of the mounting profile on the substrate.

[0016] The mounting profile comprises an extruded material, preferably aluminum or a reinforced polymer material such as fibre reinforced PVC.

[0017] The two central rims 64 & 65 delimiting the fixation channel 67 are designed to prevent water entering into the fixation channel and as such prevent water entering the screw holes once the sliding door is correctly installed in a building. The mounting profile cross-section therefor is designed to match the cross-section of the sliding door track 40, such that a track base 41 extending parallel to and at a distance of the mounting profile's base, abuts the central rims 64 & 65 of the mounting profile to close-off the fixation channel 67 from the ambient. If desired, a sealant (not shown) can be applied between the central rims of the mounting profile base 61 and the base 41 of the mounting track 40, thereby closing off the fixation channel in a water-tight manner. The track 40 hereby also hides the fixation channel from being viewed after installation of the mounting assembly.

[0018] Apart from the central rims 64 & 65, the mounting profile illustrated in FIG. 1 & 2 comprises a positioning rim 66 configured to fit behind one of the running rails 70 of the slide door track. Optionally, this rim is capped with a clips member 90 to provide a clamping fit between the mounting profile and the track 40. The positioning rim 66 is provided on one side of the central rims, in this case the right-hand side.

[0019] On the left-hand side of the mounting profile is provided a fourth rim that is configured to abut the base of the track 40 and again may be provided with a sealant tape or with a glue tape 91 for securing the track 40 to the mounting profile. With both the glue tape 91 and the clamping member 90 in place, a rigid fixation of the track 40 on the mounting base 60. A channel 68 is defined between this fourth rim 63 and one of the central rims 64, which channel, optionally can be used for fixation of the mounting profile to the substrate by means of screws 100.

[0020] FIG 3 illustrates an alternative embodiment of the mounting assembly of the present invention. In this embodiment, the mounting profile is similar to the one described in relation to FIG 1 & 2, but the sliding track is of a type having three parallel running rails 71.

[0021] FIG 4 illustrates another alternative embodiment, again providing three distinct running rails 71. In this case two running rails are provided on the sliding door track, whilst a third running rail is provided on the mounting profile. As illustrated, the third running rail is provided as a lateral extension of the mounting profile, and hence distant from the fixation channel(s) defined by the mounting profile which fixation channels are still covered by the sliding door track. In this embodiment, the positioning rim on the mounting profile is configured to provide support for a side edge of the track rather than to extend behind one of the running rails therein.

[0022] FIG 5 illustrates yet another embodiment of a mounting assembly of the present invention, wherein the mounting profile is provided with slanting side edge portions 69 providing a gradual step-up towards the running rails of the sliding door tracks. These slanting side edges can be even more elevated in case provided a further lateral distance of the sliding door running rails to provide a step-less cross-section, allowing e.g. wheel chairs to pass over the mounting assembly without damaging the running rails.

[0023] It is clear that in all of the above described embodiments of a mounting assembly according to the present invention, the screws 100, screw holes 71 and fixation means (such as the clamping clips 90 and tape 91) are concealed in an assembled state of the mounting assembly, offering a aesthetically pleasant mounting assembly to an end consumer, whilst guaranteeing water tightness and secure mounting of the sliding door running rails on a substrate, even if installed during a renovation process, wherein the mounting assembly is fixed on top of a floor.

[0024] The foregoing description is included to illustrate the operation of the preferred embodiments and is not meant to limit the scope of the invention. To the contrary, those skilled in the art should appreciate that varieties may be constructed and employed without departing from the scope of the invention, aspects of which are recited by the claims appended hereto. For example, the mounting assembly may be used with objects other than sliding door tracks. Specifically, the above-described mounting assembly may be used in any suitable application where an object is to be discretely and attractively secured to a substrate.

Claims

1. A mounting assembly for mounting sliding doors to a substrate, the assembly comprising:

   - a mounting profile designed to be secured to the substrate and comprising a base defining a surface for abutting the substrate and at least four rims extending lengthwise along the entire length of the mounting profile from a surface opposite to the surface for abutting the substrate, two central rims of the mounting profile defining a fixation channel comprising screw holes for fixation of the mounting profile to the substrate;
   - a sliding door track comprising an elongated profile having a base configured to cooperate with the mounting profile and defining at least one running rail for accommodating a sliding door panel thereon.

2. The mounting assembly according to claim 1, the sliding door track base abutting the central rims of the mounting profile, thereby closing the fixation channel.

3. The mounting assembly according to claim 2, comprising a sealant provided between the central rims of the mounting profile and the base of the sliding door track.

4. The mounting assembly according to claim 1, the mounting profile comprising one or more guide rims allowing correct positioning of the sliding door track on the mounting profile.

5. The mounting assembly according to claim 1, the mounting profile comprising a running rail for accommodating a sliding door panel, the running rail extending parallel to and at a distance of the fixation channel.

6. The mounting assembly according to claim 1, the mounting profile comprising lateral edge portions that gradually increase in height from the outer edge towards the running rails provided on the sliding door track accommodated on the mounting profile.

7. The mounting assembly according to any of claims 1 to 6, installed in an architectural opening of a building.

8. The mounting assembly according to any of claims 1 to 6, installed in an architectural opening in an outer wall of a building

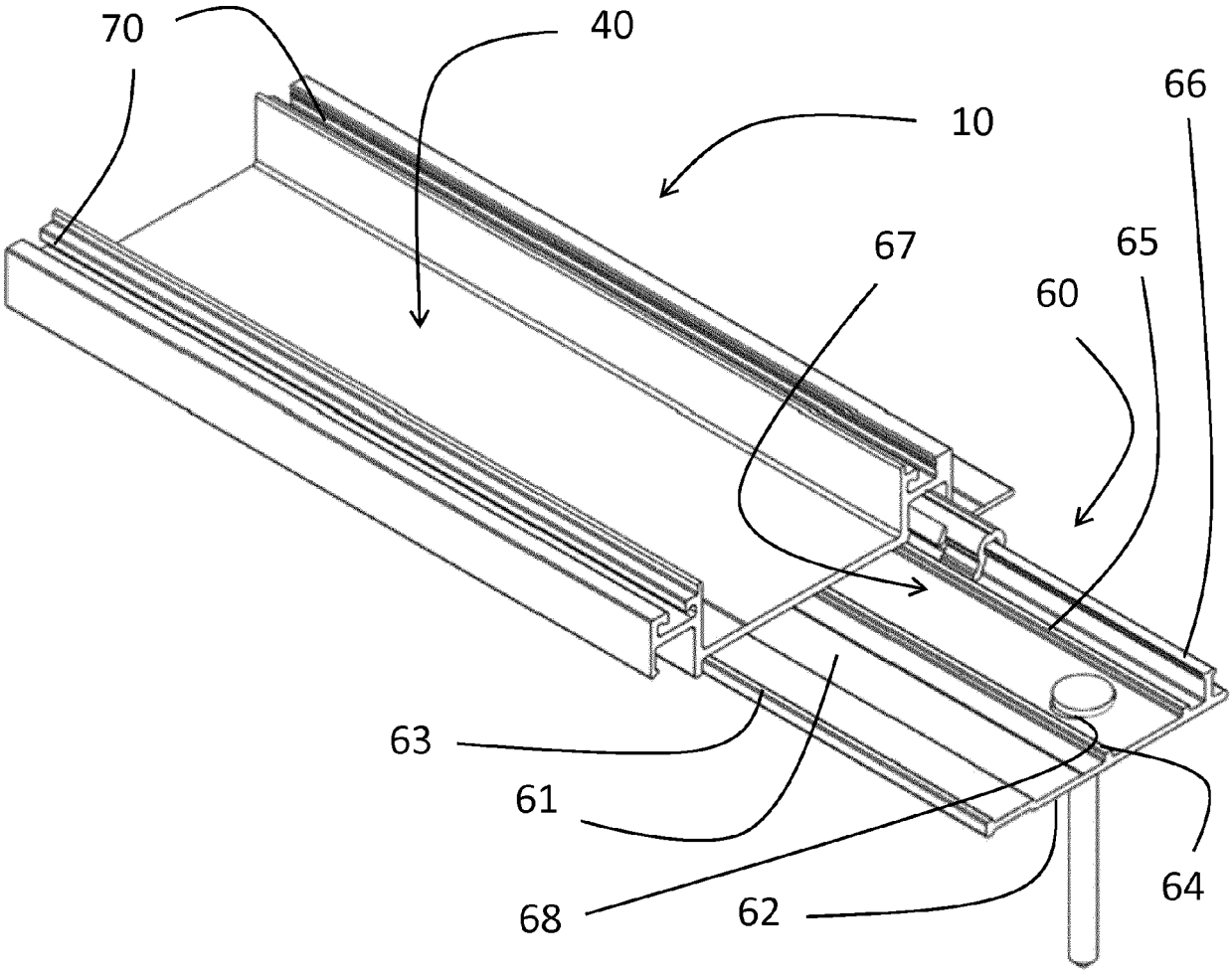

FIG 1

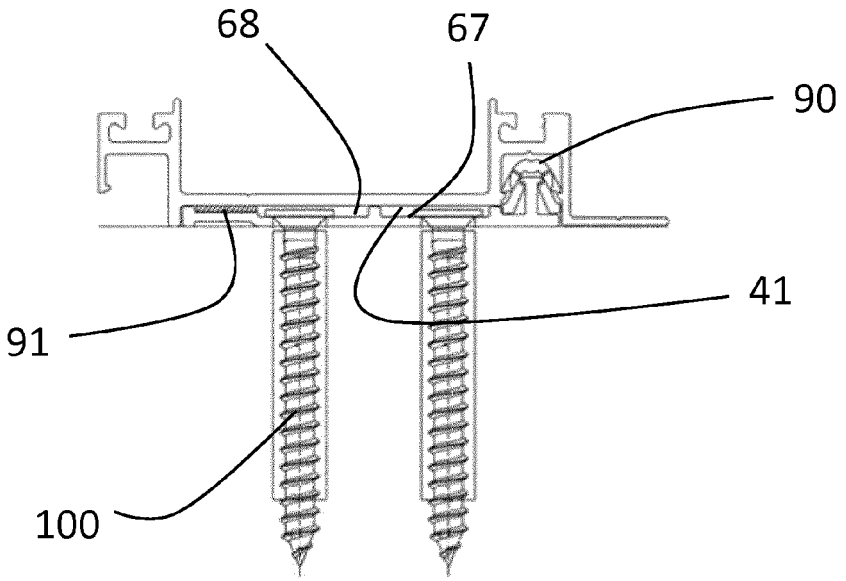

FIG 2

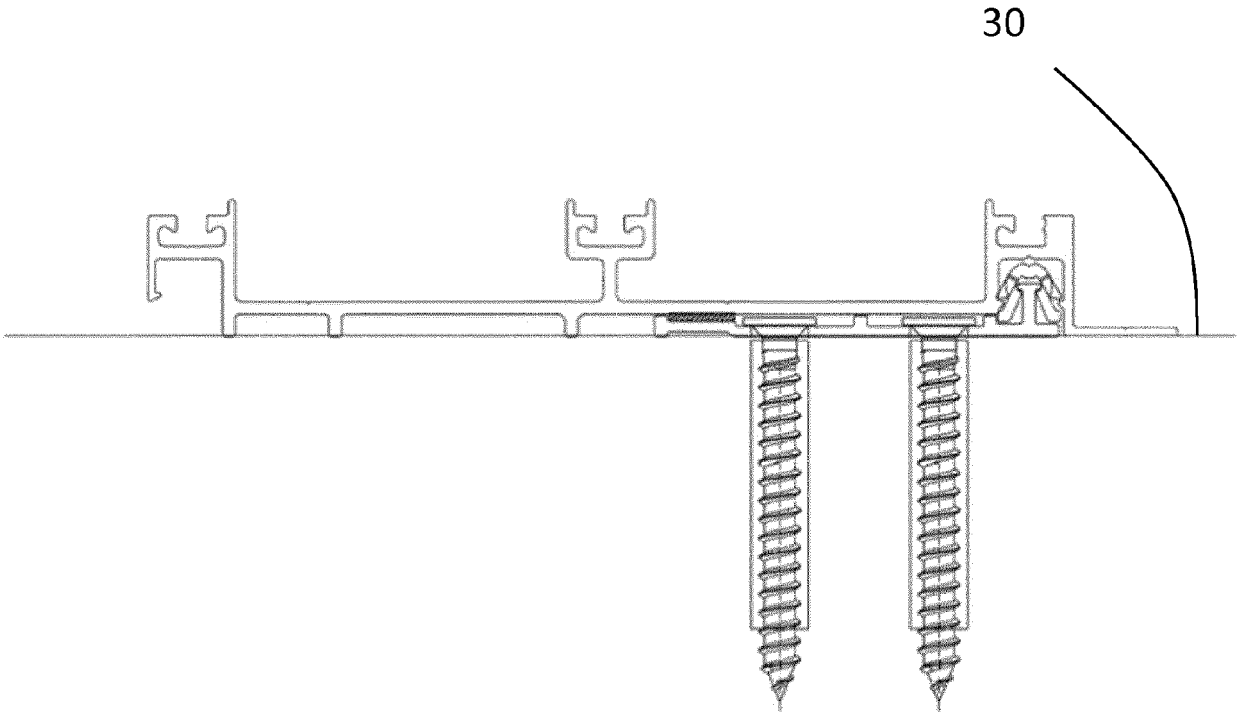

FIG 3

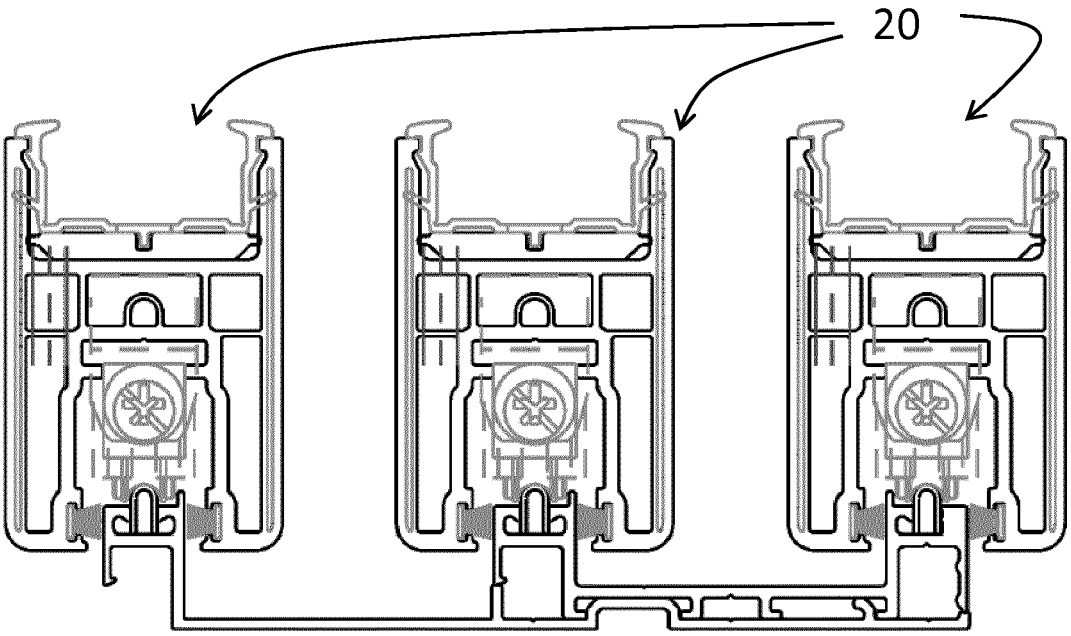

FIG 4

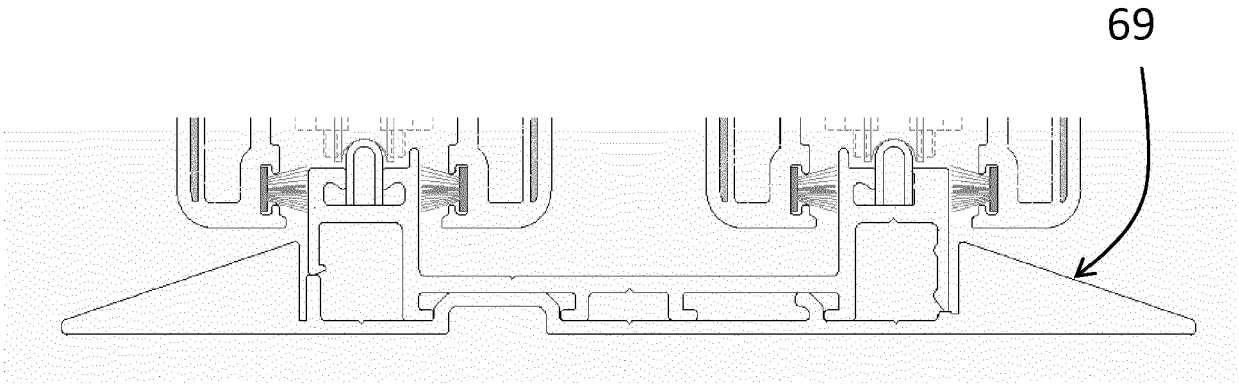

FIG 5

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EUROPEAN SEARCH REPORT

Application Number
EP 17 19 4940

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 067 754 A (BELLART THOMAS A [US]) 30 May 2000 (2000-05-30) * the whole document *	1,4,7,8	INV. E06B1/60 E06B1/70 E06B3/46
X	EP 0 016 957 A1 (GRETSCH UNITAS GMBH [DE]) 15 October 1980 (1980-10-15) * figure 1 * * page 5, line 18 - page 8, line 22 *	1,4,7,8	
X	DE 10 2005 035220 A1 (FREY INGE [DE]) 1 June 2006 (2006-06-01) * figure 13 * * paragraph [0126] - paragraph [0140] *	1-4,6-8	
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TECHNICAL FIELDS SEARCHED (IPC)

E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	15 February 2018	Blancquaert, Katleen

CATEGORY OF CITED DOCUMENTS

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15-02-2018

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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