

(19)



(11)

**EP 2 924 222 A1**

(12)

**EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**30.09.2015 Bulletin 2015/40**

(51) Int Cl.:  
**E06B 3/46 (2006.01)**

(21) Application number: **14195795.1**

(22) Date of filing: **02.12.2014**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
 GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO  
 PL PT RO RS SE SI SK SM TR**  
 Designated Extension States:  
**BA ME**

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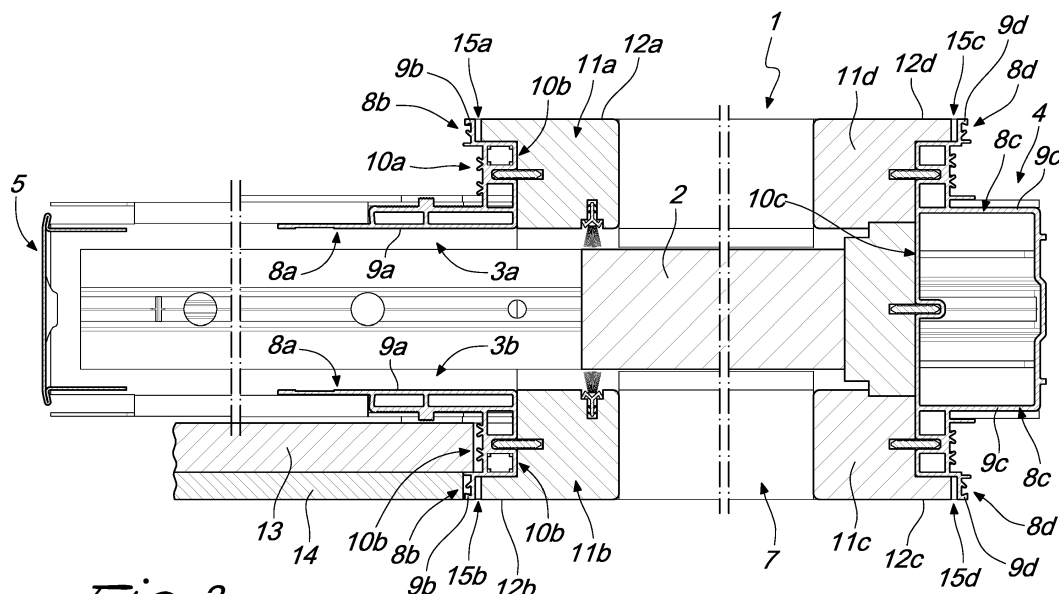
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(30) Priority: **28.03.2014 IT TV20140049**

**(54) In-wall casing for sliding doors**

(57) An in-wall casing for sliding doors which comprises a pair of first, front posts (3a, 3b) and an abutment jamb (4), between which the door (2) slides, a second, rear post (5), for the abutment of the door (2), and an upper lintel (6), all of which define the opening that can be closed by way of the door (2); each one of the first, front posts (3a, 3b) and the abutment jamb (4) have a profile that defines a first wing and a second wing (8a, 8b) and a third wing and a fourth wing (8c, 8d), the perimetric edges (9a, 9b, 9c, 9d) of which lie on mutually parallel planes; furthermore, a first resting base (10a, 10b) is defined, for at least one first jamb (11a, 11b) that

is as wide as the first, front post (3a, 3b); furthermore, a second resting base (10c) is defined for a pair of second jambs (11c, 11d), the outer lateral surface (12c, 12d) of which lies on the plane of arrangement of the perimetric edges (9b, 9d); a plastered plasterboard partition wall or plastered wall is arrangeable flush between the first and second wings (8a, 8b), between the second wing (8b) and the first jamb (11a, 11b) there being a first gap (15a, 15b), and between the abutment jamb (4) and the pair of second jambs (11c, 11d) there being a second gap (15c, 15d).

*Fig. 2***EP 2 924 222 A1**

## Description

**[0001]** The present invention relates to an in-wall casing for sliding doors of the retractable type.

**[0002]** Nowadays it is known to provide door frames which involve the use of an in-wall casing, positioned inside a wall, in which a door or a panel is slideably associated and which is also known as a "retractable door".

**[0003]** Such solution makes it possible to reduce the encumbrances of the door in a room thanks to the possibility of sliding it into the in-wall casing: thus one can use the space adjacent to the door, which would otherwise be occupied by doors of the type that are hinged laterally to a casement.

**[0004]** In the known art the in-wall casing, embedded in the wall or between two plasterboard slabs, defines a containment case for the door and is usually constituted by a framework that comprises a plurality of vertical profiled elements, including a front post and a rear post, between which slides the door, and an upper lintel, all of which define the opening that can be closed by way of the door.

**[0005]** Protruding above the case, along an axis that is longitudinal with respect to the case proper and that extends from the side opposite to that of the containment case, is a rail which is hidden by a horizontal jamb.

**[0006]** Trolleys coupled to the upper edge of the door are slideably integrated in the rail in order to enable the sliding of the door into and out of the in-wall casing.

**[0007]** Usually associated with the end of the rail which is not associated with the vertical posts is an additional element that acts as a terminal for the abutment of the front edge of the door.

**[0008]** A problem that is found in the use of such solutions consists in that the posts or the upper lintel are usually associated with jambs that protrude externally with respect to the finishing of the wall or of the plasterboard.

**[0009]** Conventional in-wall frames in fact are structured so that such points of discontinuity are unavoidable, thus causing further problems given that the definition of steps between the finishing of the wall and the jambs make activities like cleaning more difficult, since the gap of the step is a receptacle for dirt.

**[0010]** Furthermore, in the known art it is not possible to place furniture up against the wall and also in front of the space occupied by the jambs, given that the step present with respect to the wall prevents the placing thereof.

**[0011]** This means that the user has less space for placing furniture against the walls than the space in the doorway.

**[0012]** Furthermore the edges of the jambs can be accidentally struck and thus damaged, at the step that stands proud of the wall, with a blunt body while passing beside the door.

**[0013]** An in-wall casing is also known for retractable sliding doors, which is sold by the same applicant under

the SYNTESIS trademark, called the LINE SCORREV-OLE model (the name translates to "SLIDEABLE LINE"), in which profiles are used whose external perimetric edges are installed flush with the wall, with no jambs; in fact the profiles are provided with grip seats for the plaster.

**[0014]** In such solution, which involves the absence of jambs, owing to the very lack of aesthetic finishings and thus of jambs, there is also the lack, for the user, of any perception of the presence of a door frame around the doorway, the doorway thus appearing bare and aesthetically unadorned.

**[0015]** Furthermore, the edges of the doorway are not easy to provide and they require time and a high level of craftsmanship on the part of the installation technician, who has to apply the plaster carefully; furthermore they become damaged and they can become dirty.

**[0016]** The aim of the present invention is therefore to resolve the above mentioned technical problems, by eliminating the drawbacks in the cited known art and thus devising an in-wall casing for retractable sliding doors in which although there are jambs there are also no elements that protrude proximate to the doorway.

**[0017]** Within this aim, an object of the invention is to provide an in-wall casing for retractable sliding doors which makes it possible to prevent the formation of dust in the areas adjacent to the doorway and thus makes it possible to easily and rapidly carry out the cleaning of such areas.

**[0018]** Another object is to provide an in-wall casing for retractable sliding doors which makes it possible to place furniture against the wall including proximate to the region that is adjacent to the doorway.

**[0019]** Another object of the invention is to provide an in-wall casing for retractable sliding doors in which there are no protrusions at the region that is adjacent to the doorway.

**[0020]** Another object is to provide an in-wall casing for retractable sliding doors which presents a minimalist appearance.

**[0021]** Another object is to provide an in-wall casing for retractable sliding doors that is structurally simple, can be provided with conventional systems and machines, and is low cost.

**[0022]** This aim and these and other objects which will become better apparent hereinafter are achieved by an in-wall casing for sliding doors, comprising a pair of first, front posts and an abutment jamb, between which said door slides, a second, rear post, for the abutment of said door, and an upper lintel, all of which define the opening that can be closed by way of said door, characterized in that each one of said first, front posts and said abutment jamb have a profile that defines a first wing and a second wing and a third wing and a fourth wing, the perimetric edges of which lie on mutually parallel planes, and a first resting base, for at least one first jamb that is as wide as said first, front post, and a second resting base for a pair of second jambs, the outer lateral surface of which lies on the plane of arrangement of said perimetric edges, a

plastered plasterboard partition wall or plastered wall being arrangeable flush between said first and second wings, between said second wing and said first jamb there being a first gap, and between said abutment jamb and each one of said second jambs there being a second gap.

**[0023]** Further characteristics and advantages of the invention will become better apparent from the detailed description of a particular, but not exclusive, embodiment, illustrated by way of non-limiting example in the accompanying drawings wherein:

Figure 1 is a side view of the in-wall casing;

Figure 2 is a sectional view taken along the line II-II in Figure 1;

Figure 3 is a front elevation view of the abutment jamb;

Figure 4 shows the first, front post;

Figure 5 is a three-quarters view from the side of the in-wall casing;

Figures 6 and 7 show a detail of the in-wall casing in the Figure 5.

**[0024]** In the embodiments illustrated, individual characteristics shown in relation to specific examples may in reality be interchanged with other, different characteristics, existing in other embodiments.

**[0025]** Moreover, it should be noted that anything found to be already known during the patenting process is understood not to be claimed and to be the subject of a disclaimer.

**[0026]** With reference to the figures, the reference numeral 1 generally designates an in-wall casing for sliding doors 2, which comprises a pair of first, front posts 3a, 3b and an abutment jamb 4, between which the door 2 slides, a second, rear post 5, for the abutment of the door 2, and an upper lintel 6, all of which define the opening 7 that can be closed by way of the door 2.

**[0027]** Each one of the first front posts 3a, 3b has a profile, which is substantially L-shaped and defines a first wing 8a and a second wing 8b, the respective perimetric edges 9a, 9b of which lie on mutually parallel planes.

**[0028]** The abutment jamb 4, which is box-shaped, has a substantially T-shaped profile that defines a third wing 8c and a fourth wing 8d, the perimetric edges 9c, 9d of which lie on mutually parallel planes.

**[0029]** A first resting base 10a, 10b is defined on each one of the first, front posts 3a, 3b, together with the first and second wings 8a, 8b, for at least one first jamb 11a, 11b, which is substantially L-shaped.

**[0030]** The width of each one of the at least one first jamb 11a, 11b is such that their outer lateral surface 12a, 12b lies on a same plane as the perimetric edges 9b, 9d.

**[0031]** Furthermore defined at the abutment jamb 4 is a head or second resting base 10c for a pair of second jambs 11c, 11d, the outer lateral surface 12c, 12d of which lies on the plane of arrangement of the perimetric edges 9b, 9d and of the lateral surfaces 12a, 12b.

**[0032]** A wall or a plasterboard partition wall 13, on which a suitable layer of plaster 14 can be applied, can be arranged flush between the first and second wings 8a, 8b.

**[0033]** A first gap 15a, 15b is defined between the second wing 8b and the pair of second jambs 11a, 11b.

**[0034]** A second gap 15c, 15d is present between the abutment jamb 4 and the pair of second jambs 11c, 11d.

**[0035]** Thus it has been found that the invention fully achieves the intended aim and objects, an in-wall casing for retractable sliding doors having been devised in which, although jambs are used, their presence is aesthetically perceived without their protruding from the wall.

**[0036]** In fact the presence of the first and second gaps 15a, 15b, 15c, 15d, which are defined between the first jambs 11a, 11b, 11c, 11d and the perimetric edges 9c, 9d, makes it possible to render the presence evident of the jambs which, at the same time, are flush with the finishing of the wall or of the plasterboard.

**[0037]** Furthermore the in-wall casing for retractable sliding doors makes it possible to prevent the formation of dust in the areas adjacent to the doorway and thus makes it possible to easily and rapidly carry out the cleaning of such areas given the absence of protruding elements at the first jambs.

**[0038]** The in-wall casing for retractable sliding doors thus provided furthermore makes it possible to place furniture against the wall including proximate to the region that is adjacent to the doorway, there being no protrusion even though there are jambs that frame the doorway.

**[0039]** Obviously, the invention is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

**[0040]** The materials used as well as the dimensions of the individual components of the invention may be more pertinent according to specific requirements.

**[0041]** The various means of achieving certain different functions certainly need not coexist only in the embodiment shown, but may be present in many embodiments, even if they are not shown. The characteristics indicated above as advantageous, convenient or the like, may also be missing or be substituted by equivalent characteristics.

**[0042]** Thus, for example, the shape and the dimensions of the at least one first jamb 11a, 11b and of the pair of second jambs 11c, 11d can be more pertinent according to specific requirements.

**[0043]** The disclosures in Italian Patent Application No. TV2014A000049 from which this application claims priority are incorporated herein by reference.

**[0044]** Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

## Claims

1. An in-wall casing (1) for sliding doors (2), comprising a pair of first, front posts (3a, 3b) and an abutment jamb (4), between which said door (2) slides, a second, rear post (5), for the abutment of said door (2), and an upper lintel (6), all of which define the opening that can be closed by way of said door (2), **characterized in that** each one of said first, front posts (3a, 3b) and said abutment jamb (4) have a profile that defines a first wing and a second wing (8a, 8b) and a third wing and a fourth wing (8c, 8d), the perimetric edges (9a, 9b, 9c, 9d) of which lie on mutually parallel planes, and a first resting base (10a, 10b), for at least one first jamb (11a, 11b) that is as wide as said first, front post (3a, 3b), and a second resting base (10c) for a pair of second jambs (11c, 11d), the outer lateral surface (12c, 12d) of which lies on the plane of arrangement of said perimetric edges (9b, 9d), a plastered plasterboard partition wall or plastered wall being arrangeable flush between said first and second wings (8a, 8b), between said second wing (8b) and said first jamb (11a, 11b) there being a first gap (15a, 15b), and between said abutment jamb (4) and each one of said second jambs (11c, 11d) there being a second gap (15c, 15d).
 

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2. The in-wall casing according to claim 1, **characterized in that** each one of said first, front posts (3a, 3b), which are substantially L-shaped, has a profile that defines a first wing and a second wing (8a, 8b), the respective perimetric edges (9a, 9b) of which lie on mutually parallel planes, said abutment jamb (4) having a profile that defines a third wing and a fourth wing (8c, 8d), the perimetric edges (9c, 9d) of which lie on mutually parallel planes.
 

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3. The in-wall casing according to claim 1, **characterized in that** each one of said first, front posts (3a, 3b) has a first resting base (10a, 10b), together with said first and second wings (8a, 8b), for at least one first jamb (11a, 11b), which is substantially L-shaped, the width of each one of said at least one first jamb (11a, 11b) being such that their outer lateral surface (12a, 12b) lies on a same plane as said perimetric edges (9b, 9d).
 

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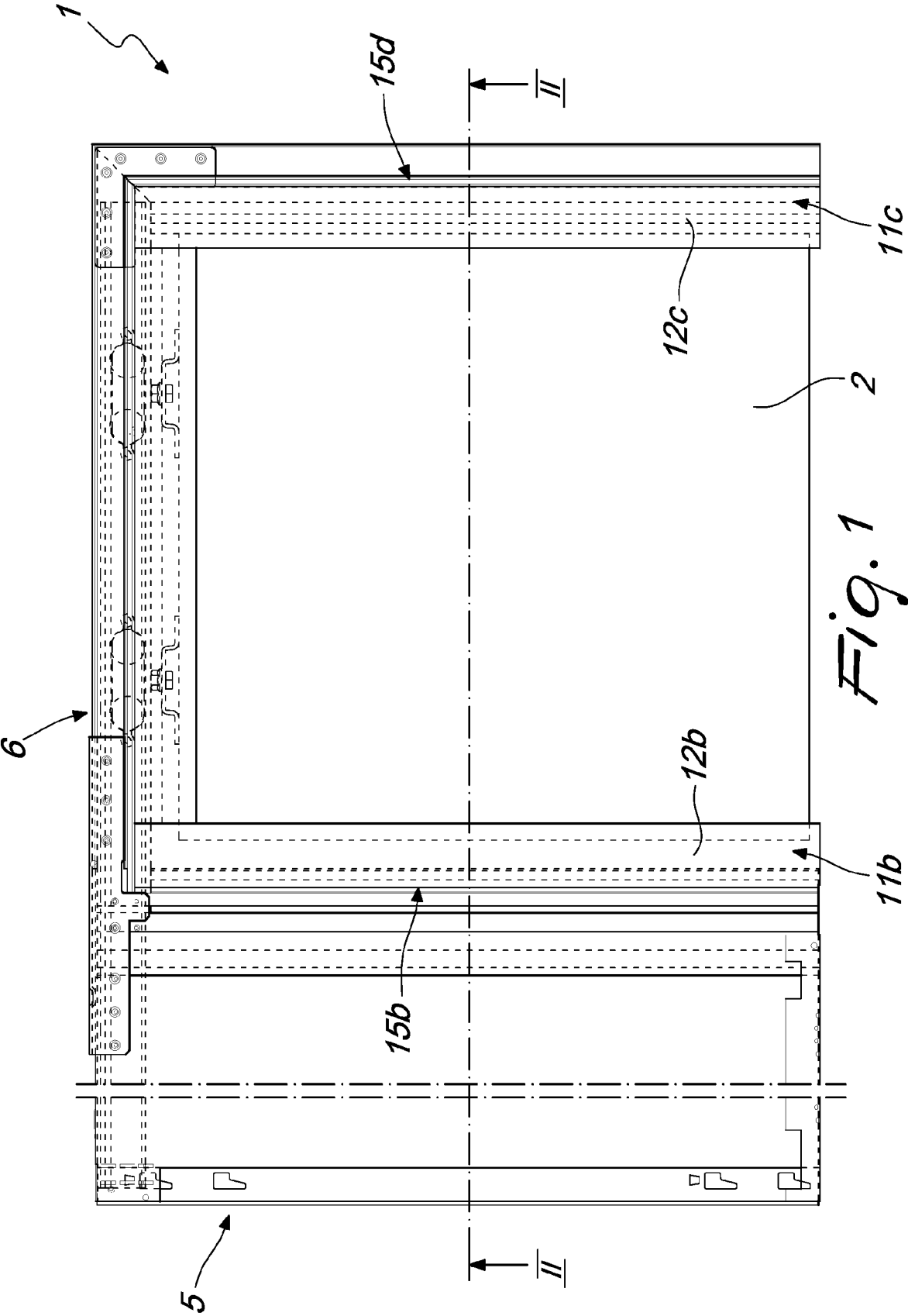
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4. The in-wall casing according to claim 1, **characterized in that** said abutment jamb (4) is box-shaped and has a substantially T-shaped profile, said abutment jamb (4) comprising a head or second resting base (10c) for said pair of second jambs (11c, 11d), the outer lateral surface (12c, 12d) of which lies on the plane of arrangement of said perimetric edges (9b, 9d) and of said lateral surfaces (12a, 12b).
 

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5. The in-wall casing according to claim 1, **characterized in that** a wall or plasterboard partition wall (13), on which a layer of plaster (14) can be applied, can be arranged flush between said first and second wings (8a, 8b), a first gap (15a, 15b) being defined between said second wing (8b) and said first jamb (11a, 11b).
 

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6. The in-wall casing according to claim 5, **characterized in that** a second gap (15c, 15d) is provided between said abutment jamb (4) and said pair of second jambs (11c, 11d).
 

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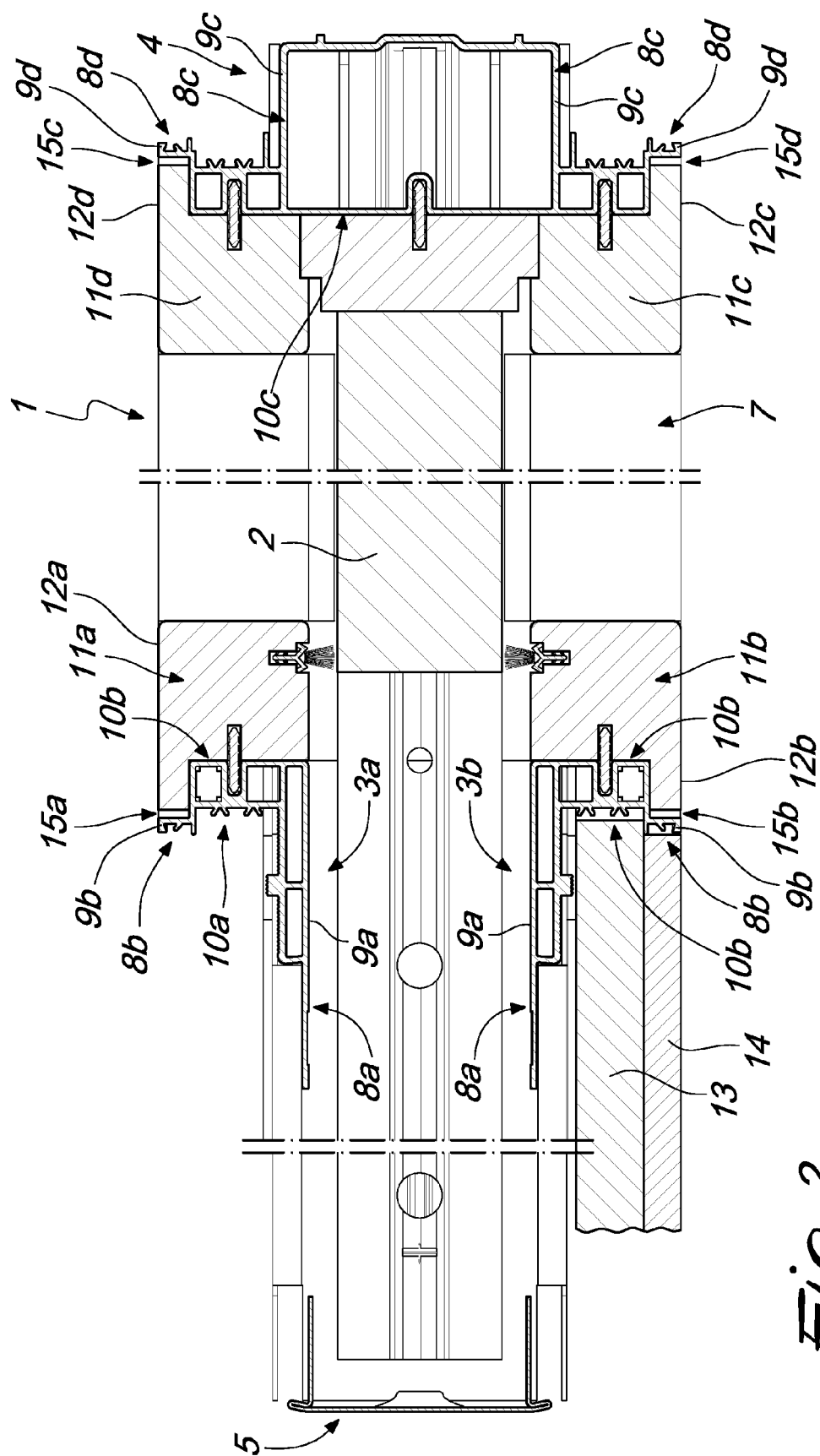
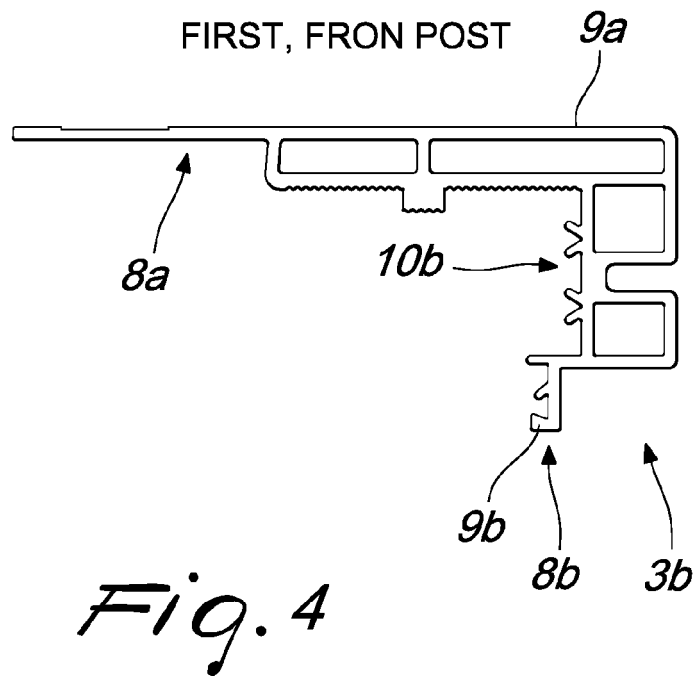
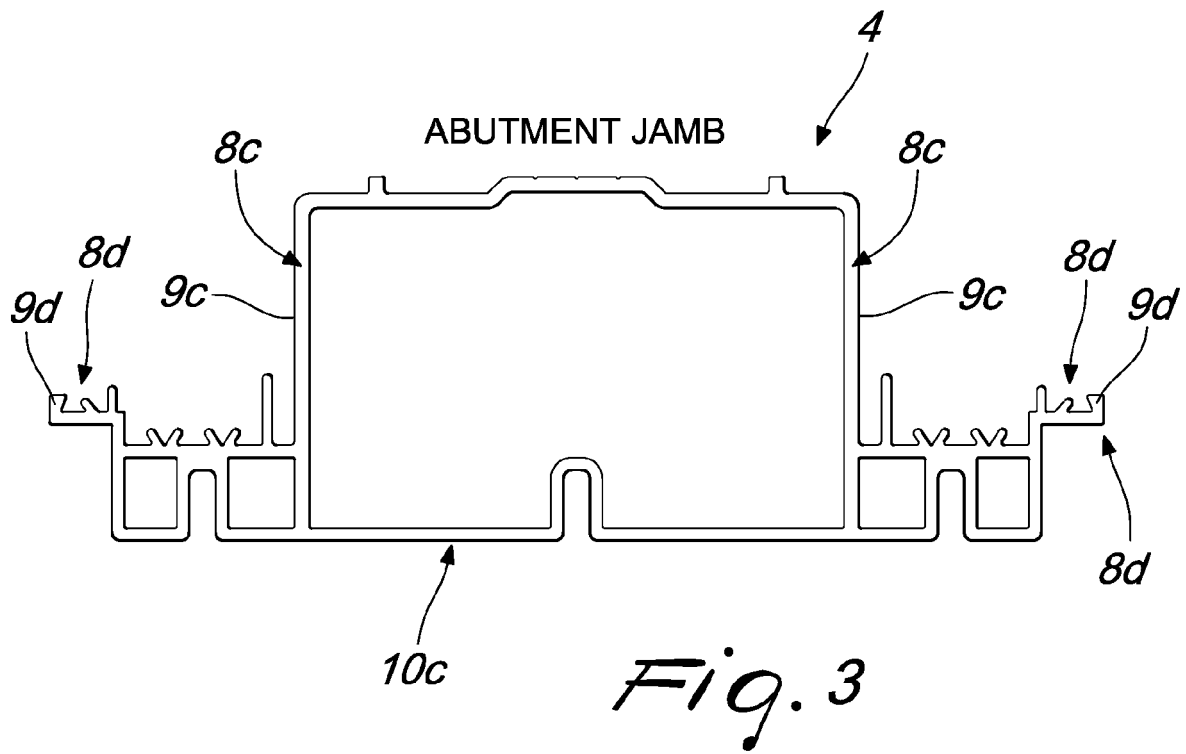
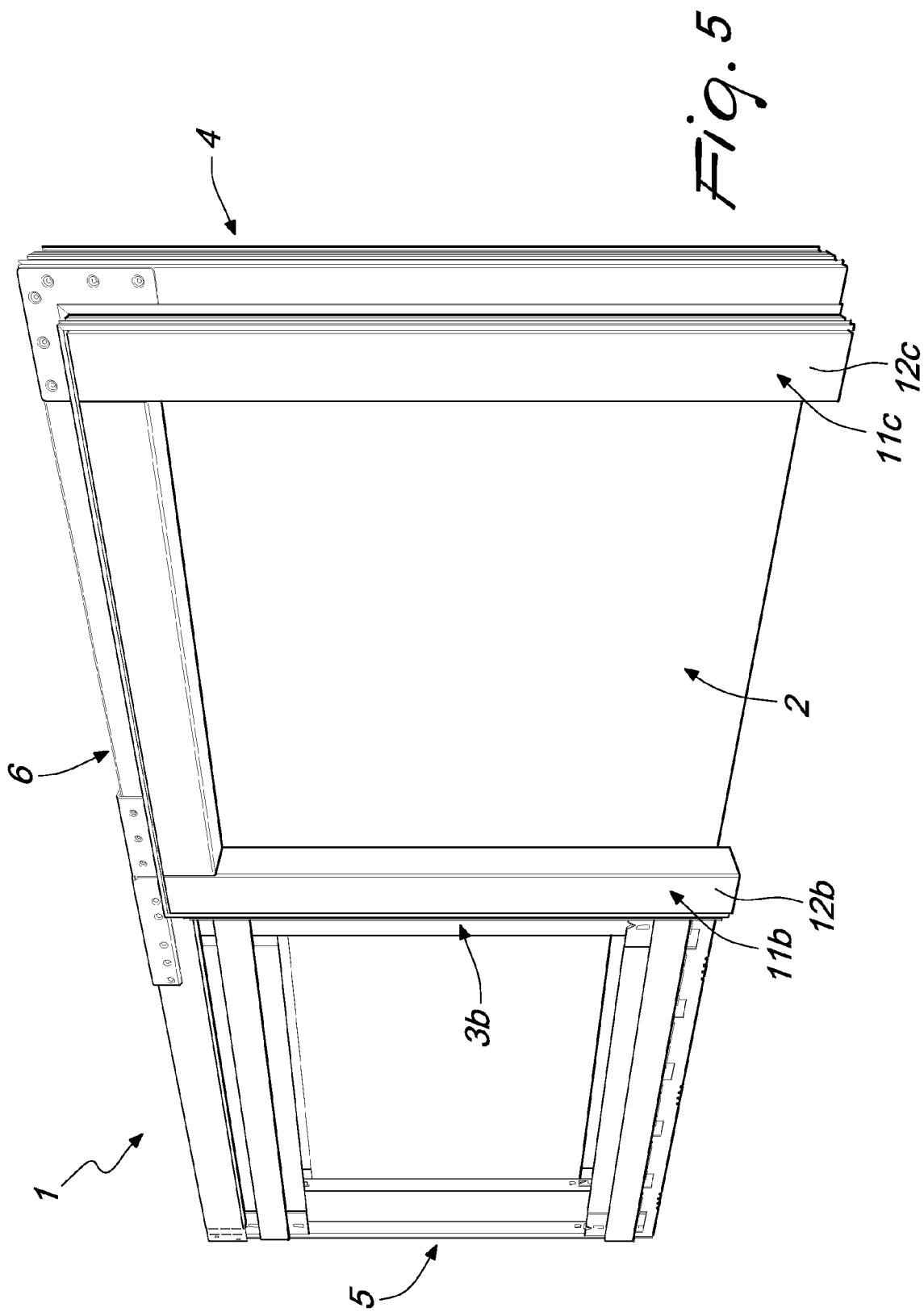
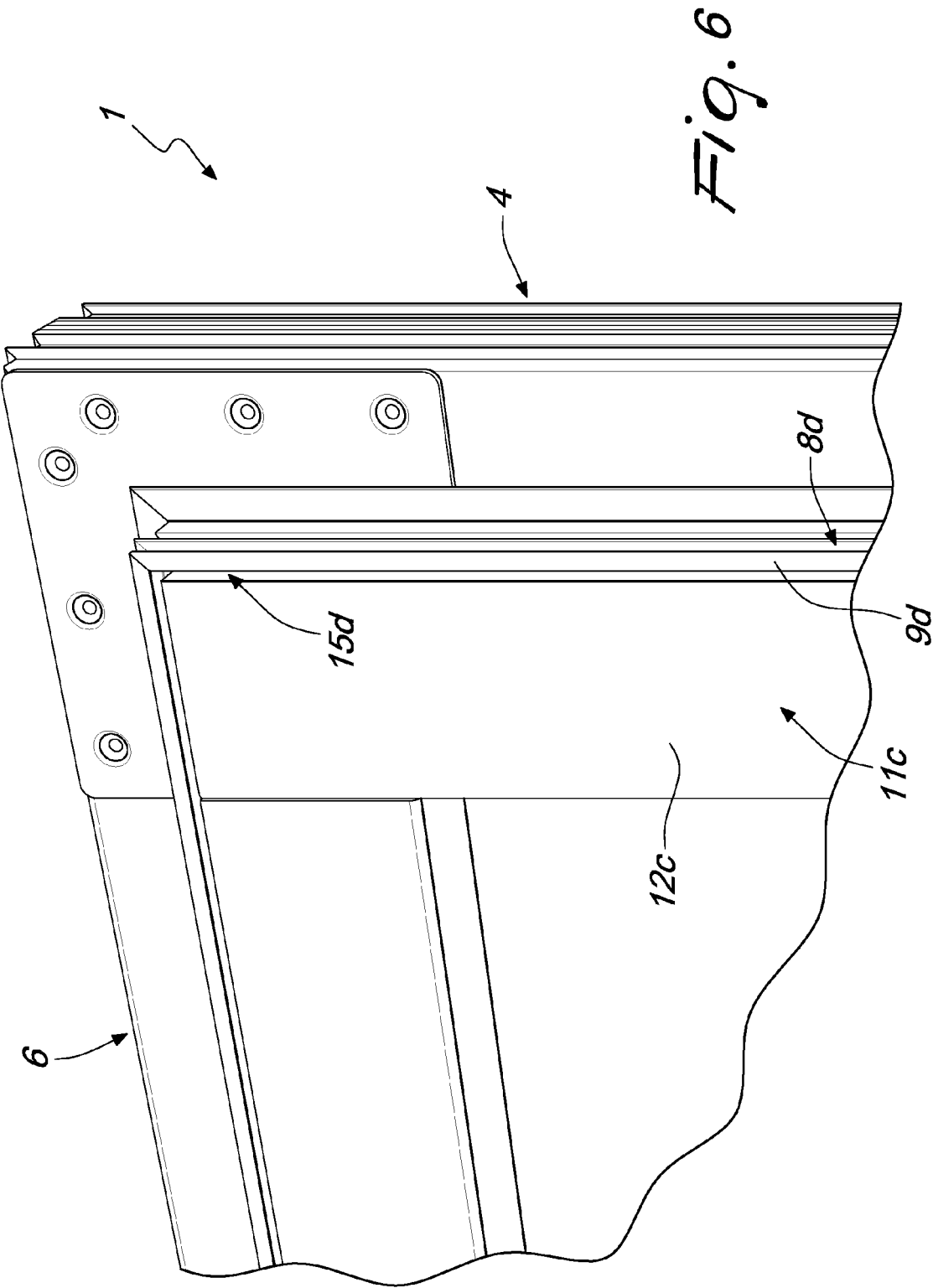


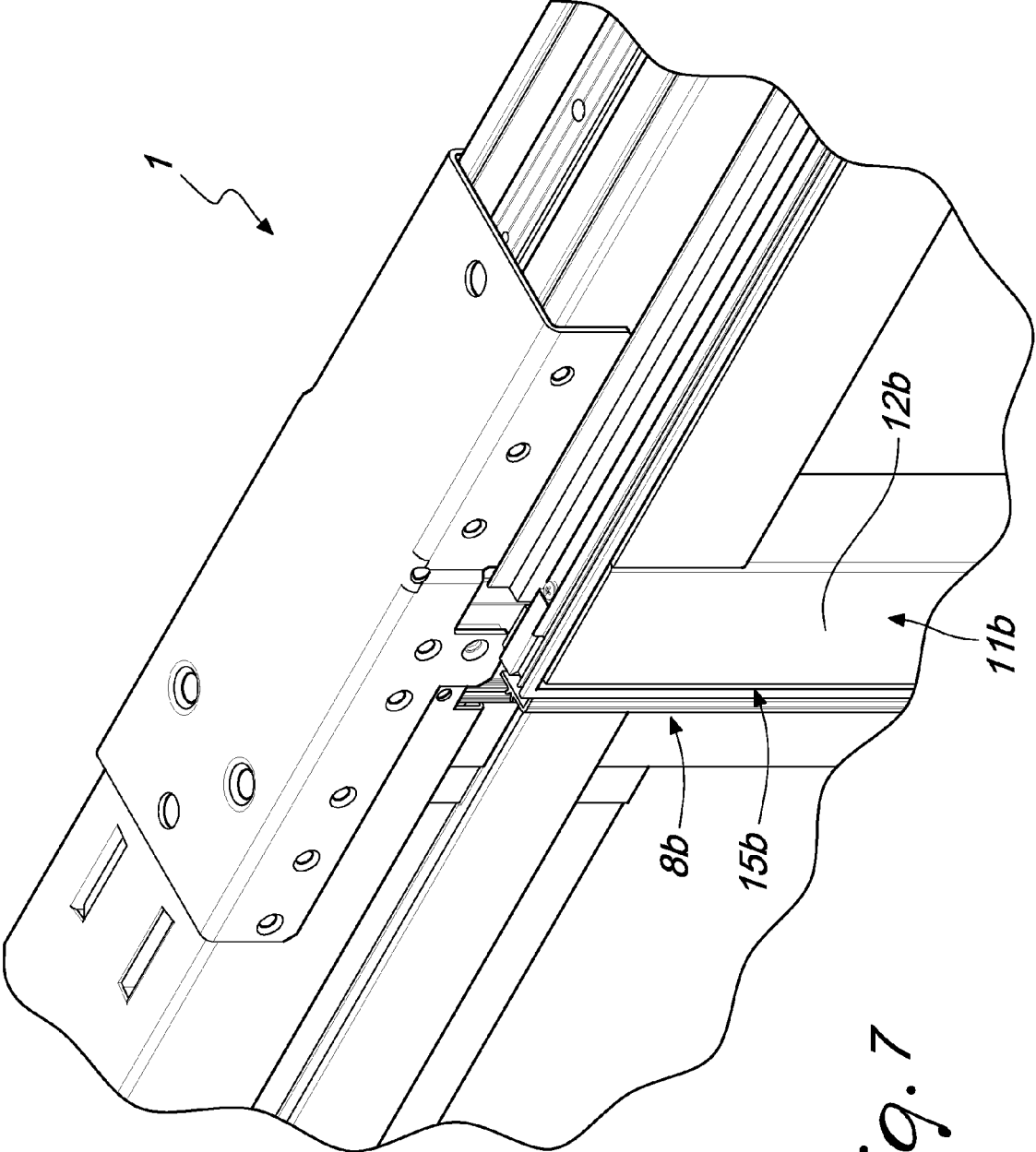
Fig. 2













## EUROPEAN SEARCH REPORT

Application Number  
EP 14 19 5795

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 10 July 2015	Examiner Verdonck, Benoit
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**REFERENCES CITED IN THE DESCRIPTION**

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