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(54) Rear post for in-wall frames of retractable sliding doors

Hinter Pfosten für Wandeinbaurahmen zurückziehbarer Schiebetüren

Poste arrière pour châssis muraux de portes coulissantes rétractables

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(73) Proprietor: **ECLISSE S.R.L.
31053 Pieve di Soligo TV (IT)**

(72) Inventor: **De Faveri, Luigi
31020 Refrontolo TV (IT)**

(74) Representative: **Modiano, Micaela Nadia et al
Modiano & Partners
Via Meravigli, 16
20123 Milano (IT)**

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Description

[0001] The present invention relates to a rear post for in-wall frames of retractable sliding doors.

[0002] Nowadays it is known to provide door frames which involve the use of a 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 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 frame embedded in the wall is usually constituted by a framework which comprises a plurality of vertical profiled elements, a front post and a rear post, which are connected by horizontal cross-members which define a containment casing of the panel or 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 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 post locators is an additional post that acts as a terminal for the abutment of the front edge of the door.

[0008] Such conventional door frames thus use metallic profiles that can be mounted together and are sold for example in kit form for assembly.

[0009] To this end, this applicant is holder of Italian application no. TV2010A000011 in which an in-wall casing is disclosed for retractable sliding doors, which is characterized in that at least the crossbeam, the rail, the cross-members, and the spacer can be cut to measure because reference pre-cuts are provided, and also in which the jambs comprise at least the crossbeam jamb which can be cut to measure so that the in-wall casing can be modified at installation time, in order to obtain various different possibilities for the passage opening, further provided with an adjustable infill jamb with integrated architraves and a door track that can be adjusted for multiple door panel thicknesses.

[0010] Although such solution is valid, it suffers a drawback in that the user has to physically shorten the components in order to adapt them to the dimensions of the spaces.

[0011] This requires time and the use of special tools that require, furthermore, a certain level of skill in the use thereof.

[0012] EP 1 795 686 A1 discloses a counterframe for a concealed sliding door with a leveling device. The leveling device comprises support devices, adjustably connected to a door post of the counterframe and to base of

a casing of the counterframe. The adjustable support devices include an L-shaped bracket provided with a through hole in a lower horizontal portion for the engagement of the bracket by means of a fastening screw to the concrete slabs of a floor. In correspondence with the vertical portion of the bracket there are provided horizontal openings equidistant and parallel to each other constituting seats for engagement through the bolting of an adjustable square that is superimposed and slidable in relation to the bracket providing adjustability both in vertical as well as horizontal direction for levelling fixing. An adjustable support element is equipped with a clamping fork obtained by means of an external folding of a cut portion selectively engageable with one of a plurality of guide openings of a metallic plate bracket.

[0013] 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 hence providing an invention that enables the user to mount components of an in-wall casing of retractable sliding doors rapidly and with great ease, without using special cutting tools.

[0014] Within this aim, an object of the invention is to provide a component of an in-wall casing of retractable sliding doors, whose dimensions adapt to the spaces in which it is to be placed.

[0015] Another object is to obtain a component of an in-wall casing of retractable sliding doors which can be considered universal and thus adaptable on-site on the basis of specific requirements.

[0016] Another object is to provide an invention that is structurally simple, can be provided with conventional systems and machines, and is low cost.

[0017] In accordance with the invention, there is provided a rear post for in-wall frames of retractable sliding doors as defined in the appended claims.

[0018] 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 perspective view of the rear post uncoupled from the extension;

Figure 2 is a front elevation view of the rear post coupled but not locked to the extension;

Figure 3 is a side view of the rear post coupled to the extension;

Figure 4 is a perspective view of the temporary locking means for the rear post and the extension;

Figure 5 is a cross-sectional view taken along the line V-V in Figure 2;

Figure 6 is a perspective view of the rear post locked to the extension by way of the temporary locking means.

[0019] 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.

[0020] With reference to the figures, the reference numeral 1 generally designates a rear post for in-wall frames of retractable sliding doors, which is substantially Ω -shaped so as to define a flat first base 2 from which a pair of first wings 3a, 3b branch off which in cross-section are substantially L-shaped.

[0021] The rear post 1 has axial coupling means that are constituted by the perimetric edge 4 of a first end 5.

[0022] The perimetric edge 4 cooperates with means of engagement and centering 6 which protrude from the flat second base 7 of an extension 8, which is C-shaped.

[0023] The means of engagement and centering 6 are arranged proximate to a second end 9 of the extension 8 and are constituted by at least one, preferably two, flaps 10a, 10b, which are substantially L-shaped, are obtained by punching the flat second base 7, and protrude from the latter and have the larger, free wing 11a, 11b directed toward the second end 9.

[0024] The distance between the flaps 10a, 10b is substantially equal to the thickness of the perimetric edge 4.

[0025] The rear post 1 and the extension 8 are selectively lockable in position by way of temporary locking means that are constituted by at least one threaded screw 12a, 12b whose shank can be screwed in at adapted first holes 13a, 13b that are defined on the flat second base 7 of the extension 8.

[0026] The shank of the screws 12a, 12b thus can be screwed in at a pair of second holes 14a, 14b that are defined on the flat first base 2 of the rear post 1 at a distance equal to that existing between the first holes 13a, 13b.

[0027] This makes it possible, once the perimetric edge 4 is positioned inside the flaps 10a, 10b, to stably lock together the extension 8 and the rear post 1 by way of the screws 12a, 12b.

[0028] Thus it has been found that the invention fully achieves the intended aim and objects, a rear post being devised for in-wall frames of retractable sliding doors which can be mounted rapidly and with ease by the user on the basis of measurements taken on-site, without using special cutting tools, it being sufficient to arrange extensions at different heights.

[0029] Thus it is possible to easily adapt the post to the spaces in which the in-wall casing is to be placed, thus obtaining a post that can be considered universal and thus adaptable on-site on the basis of specific requirements.

[0030] The invention is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0031] The materials used as well as the dimensions of the individual components of the invention may be more pertinent according to specific requirements.

[0032] The various means of achieving certain different functions certainly need not coexist only in the embodiment shown, but may be present in many embodi-

ments, 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.

[0033] The disclosures in Italian Utility Model Application No. TV2013U000056 from which this application claims priority are incorporated herein by reference.

[0034] 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. A rear post (1) and an extension (8) for in-wall frames of retractable sliding doors, said rear post (1) being substantially Ω -shaped, so as to define a first base (2), and there being provided axial coupling means (4) that cooperate with means of engagement and centering (6) which protrude from a flat second base (7) of said extension (8) which is C-shaped, said rear post (1) and extension (8) being selectively lockable in position by way of temporary locking means (12a, 12b) said axial coupling means being constituted by the perimetric edge (4) of a first end (5) of said rear post (1), said perimetric edge (4) cooperating with said means of engagement and centering (6) that protrude from said flat second base (7) of said extension (8), said means of engagement and centering (6) being arranged proximate to a second end (9) of said extension (8) and being constituted by two flaps (10a, 10b), each substantially L-shaped, obtained by punching said flat second base (7), and protruding from the latter and having the larger, free wing (11a, 11b) directed toward said second end (9), the distance that lies between said flaps (10a, 10b) being substantially equal to the thickness of said perimetric edge (4), said rear post (1) and said extension (8) being selectively locked in position by way of temporary locking means that are constituted by two threaded screws (12a, 12b), each one of said two threaded screws (12a, 12b) being screwed in first holes (13a, 13b) that are defined on said flat second base (7) of said extension (8), the shank of each one of said threaded screws (12a, 12b) being screwed in at a pair of second holes (14a, 14b) that are defined on said flat first base (2) of said rear post (1) at a distance equal to that existing between said first holes (13a, 13b).
2. The rear post (1) and extension (8) according to claim 1, wherein said rear post (1) is substantially Ω -shaped so as to define a flat first base (2) from which a pair of first wings (3a, 3b) branch off which in cross-

section are substantially L-shaped.

Patentansprüche

1. Hinterer Pfosten (1) und eine Verlängerung (8) für Wandeinbaurahmen zurückziehbarer Schiebetüren, welcher hintere Pfosten (1) im wesentlichen Ω -förmig ist, um so eine erste Basis (2) zu definieren, und wobei axiale Verbindungsmittel (4) bereitgestellt werden, die mit Mitteln zum Eingriff und Zentrieren (6) zusammenwirken, die aus einer ebenen zweiten Basis (7) der genannten Verlängerung (8), die C-förmig ist, herausragen, wobei der genannte hintere Pfosten (1) und die Verlängerung (8) mittels temporärer Verriegelungsmittel (12a, 12b) selektiv in ihrer Position verriegelbar sind, wobei die genannten Verbindungsmittel durch die Umfangskante (4) eines ersten Endes (5) des hinteren Pfostens (1) gebildet sind, wobei die Umfangskante (4) mit den Mitteln zum Eingriff und Zentrieren (6) zusammenwirkt, die von der genannten flachen zweiten Basis (7) der genannten Verlängerung (8) vorstehen, wobei die genannten Mittel zum Eingreifen und Zentrieren (6) in der Nähe eines zweiten Endes (9) der genannten Verlängerung (8) angeordnet sind und von wenigstens zwei Klappen (10a, 10b) gebildet werden, die jeweils im wesentlichen L-förmig sind, die durch Stanzen der genannten flachen zweiten Basis (7) erhalten werden, und aus der letztgenannten herausragen und welche mit dem größeren freien Flügel (11a, 11b) hin auf das genannte zweite Ende (9) gerichtet sind, wobei der Abstand, der zwischen den genannten Klappen (10a, 10b) liegt, im wesentlichen gleich der Dicke der Umfangskante (4) ist, wobei der genannte hintere Pfosten (1) und die genannte Verlängerung (8) selektiv in ihrer Position mittels temporärer Verriegelungsmittel verriegelbar sind, die durch mindestens zwei Gewindeschrauben (12a, 12b) gebildet werden, wobei jede der genannten zwei Gewindeschrauben (12a, 12b) in erste Löcher (13a, 13b) eingeschraubt ist, die an der genannten flachen zweiten Basis (7) der genannten Verlängerung (8) ausgebildet sind, wobei der Schaft jeder der genannten Gewindeschrauben (12a, 12b) in ein Paar zweiter Löcher (14a, 14b) eingeschraubt ist, die auf der genannten flachen ersten Basis (2) des hinteren Pfostens (1) definiert sind, in einem Abstand, der gleich dem ist, der zwischen den genannten ersten Löchern (13a, 13b) besteht.
2. Hinterer Pfosten (1) und eine Verlängerung (8) nach Anspruch 1, wobei der genannte hintere Pfosten im Wesentlichen Ω -förmig ist, um so eine flache erste Basis (2) zu definieren, von der ein Paar erster Flügel (3a, 3b) abzweigt, die im Querschnitt im Wesentlichen L-förmig sind.

Revendications

1. Montant arrière (1) et extension (8) pour des encadrements muraux de portes coulissantes rétractables, ledit montant arrière (1) étant sensiblement en forme de Ω , de manière à définir une première base (2), et des moyens de couplage axial (4) étant prévus qui coopèrent avec des moyens de prise et de centrage (6) qui font saillie à partir d'une seconde base plate (7) de ladite extension (8) qui est en forme de C, ledit montant arrière (1) et ladite extension (8) pouvant être sélectivement bloqués en position par des moyens de blocage temporaire (12a, 12b), lesdits moyens de couplage axial étant constitués du bord périmétrique (4) d'une première extrémité (5) dudit montant arrière (1), ledit bord périmétrique (4) coopérant avec lesdits moyens de prise et de centrage (6) qui font saillie à partir de ladite seconde base plate (7) de ladite extension (8), lesdits moyens de prise et de centrage (6) étant agencés à proximité d'une seconde extrémité (9) de ladite extension (8) et étant constitués de deux pattes (10a, 10b), chacune étant sensiblement en forme de L, obtenues en poinçonnant ladite seconde base plate (7), et faisant saillie à partir de cette dernière et ayant la plus grande aile libre (11a, 11b) dirigée vers ladite seconde extrémité (9), la distance qui existe entre lesdites pattes (10a, 10b) étant sensiblement égale à l'épaisseur dudit bord périmétrique (4), ledit montant arrière (1) et ladite extension (8) étant sélectivement bloqués en position par des moyens de blocage temporaire qui sont constitués de deux vis filetées (12a, 12b), chacune desdites deux vis filetées (12a, 12b) étant vissée dans des premiers trous (13a, 13b) qui sont définis sur ladite seconde base plate (7) de ladite extension (8), la tige de chacune desdites vis filetées (12a, 12b) étant vissée dans une paire de seconds trous (14a, 14b) qui sont définis sur ladite première base plate (2) dudit montant arrière (1) à une distance égale à celle existant entre lesdits premiers trous (13a, 13b).
2. Montant arrière (1) et extension (8) selon la revendication 1, dans lesquels ledit montant arrière (1) est sensiblement en forme de Ω de manière à définir une première base plate (2) à partir de laquelle bifurque une paire de premières ailes (3a, 3b) qui, en coupe transversale, sont sensiblement en forme de L.

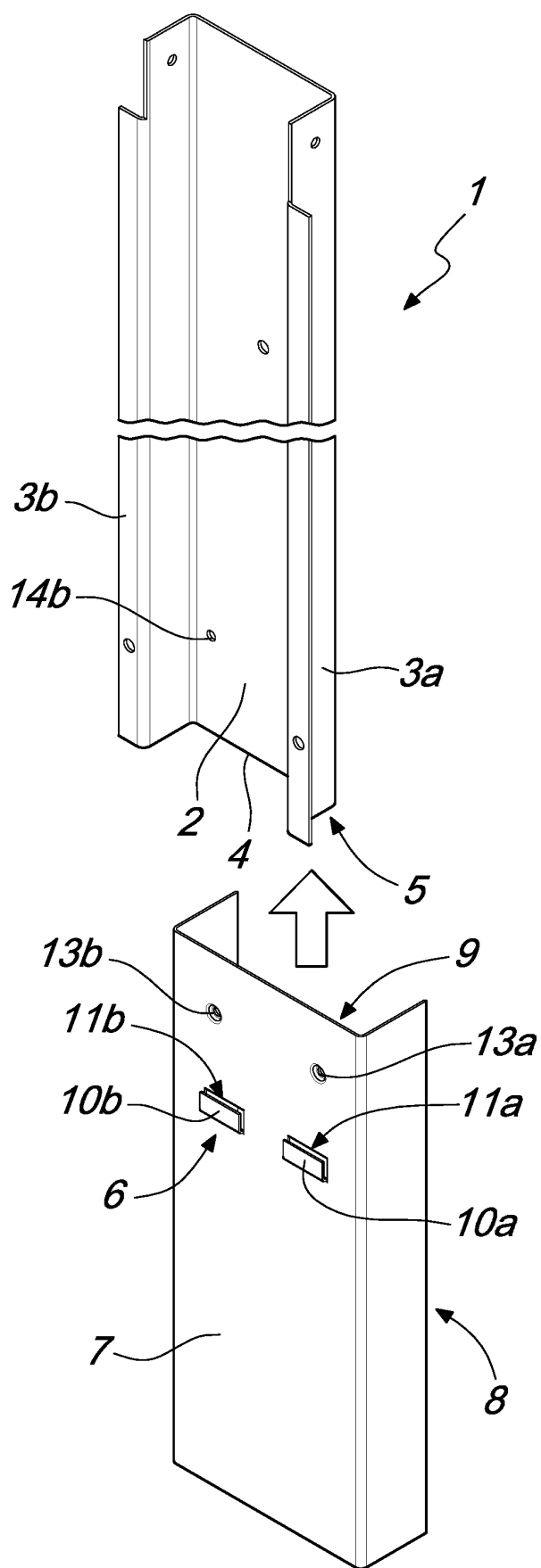


Fig. 1

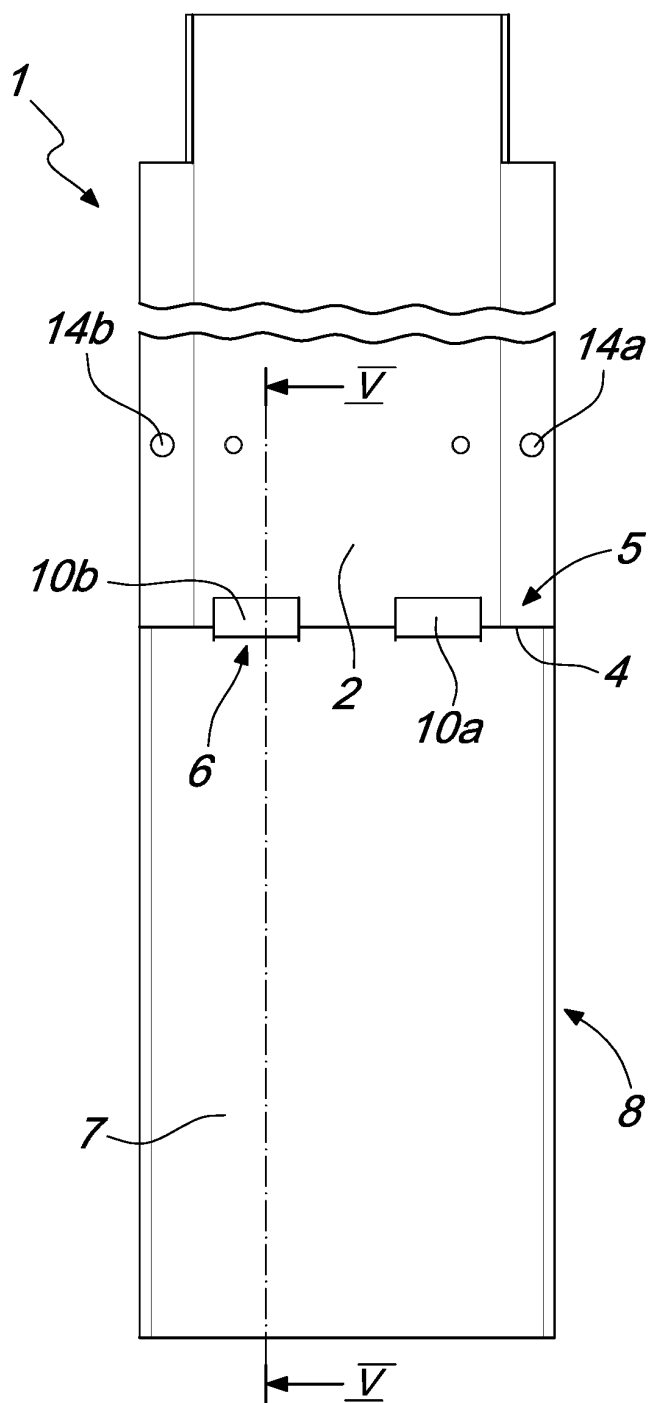


Fig. 2

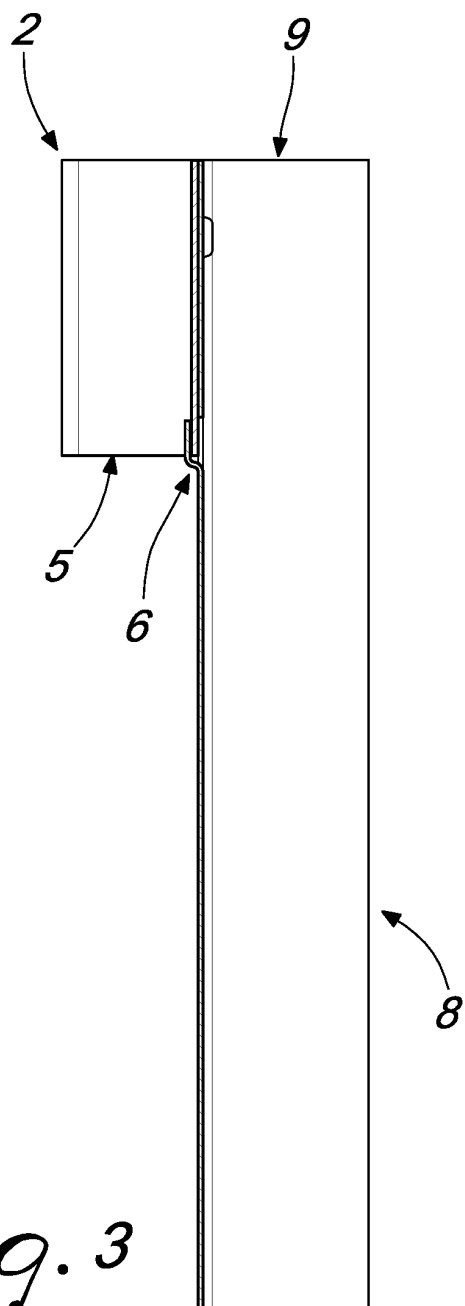
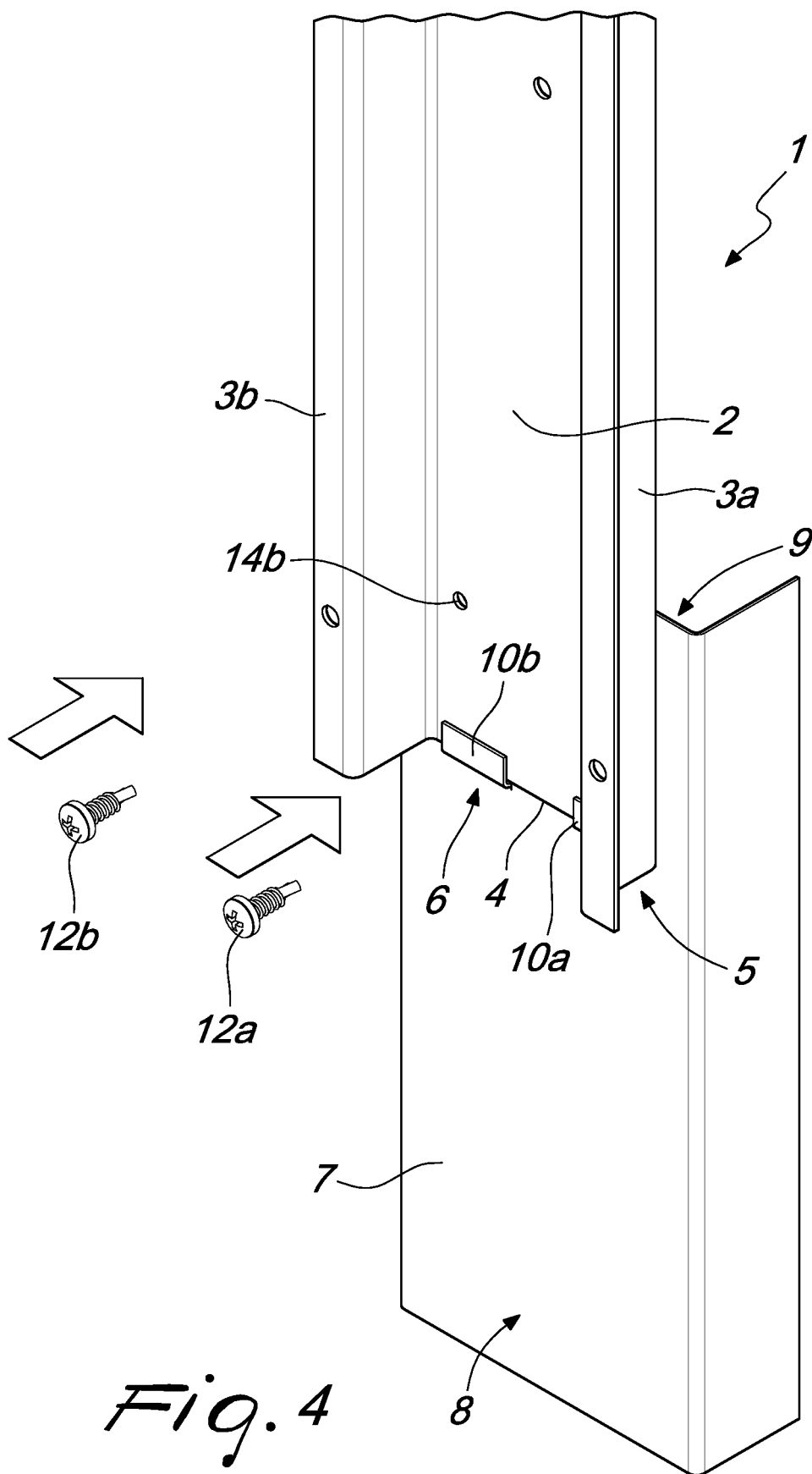


Fig. 3



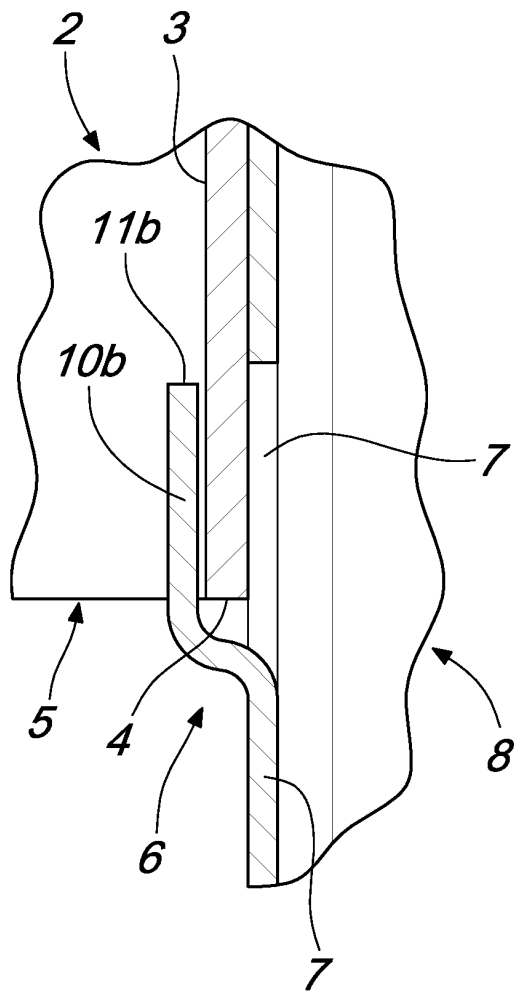


Fig. 5

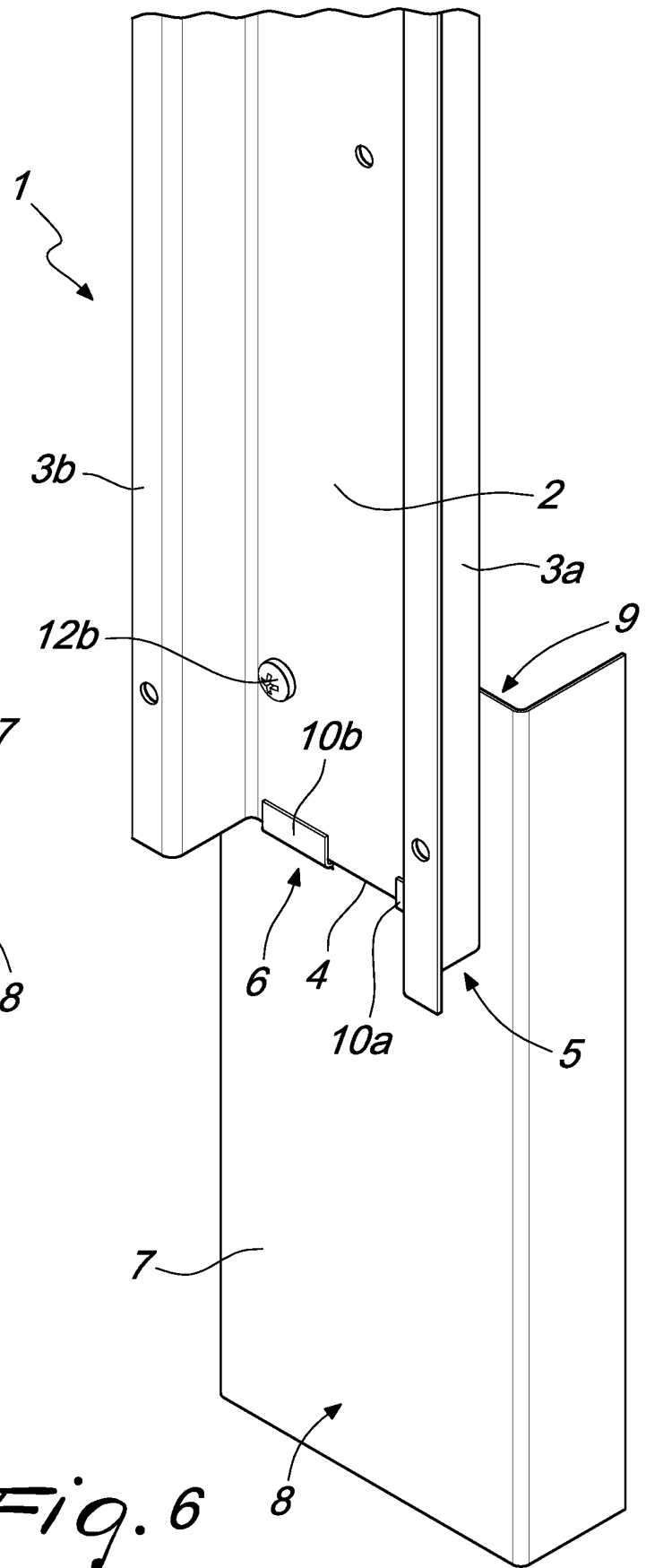


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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