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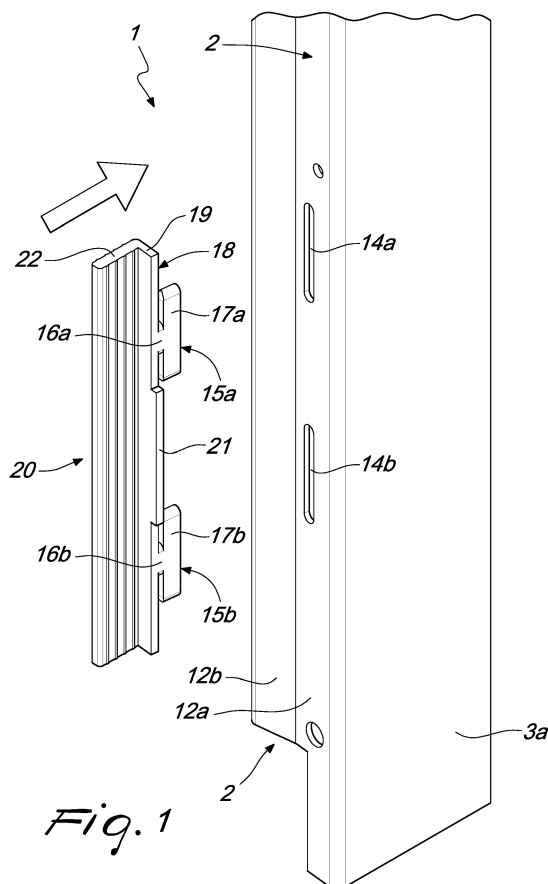
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(54) **Centering element, particularly for front posts for in-wall frames of retractable sliding doors**

(57) A front post (1) for in-wall frames of retractable sliding doors, which has a substantially C-shaped shape structure so as to define a base (2) and a first pair of lateral wings (3a, 3b), one or more seats (14a, 14b) being provided on the base (2) for the removable coupling of one or more flaps (15a, 15b) which protrude at right angles from a first tab (19) of an L-shaped fin (20) whose second tab (22) can be coupled to a surface of a covering (23).



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Description

[0001] The present invention relates to a centering element, particularly for front posts 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] At the front post, which is usually C-shaped in transverse cross-section, it is known to attach a covering, which is usually constituted by a wooden jamb, in order to render the door or window frame more aesthetically pleasing.

[0010] Thus it is known to use adhesive to bond a surface of the covering, which is usually rectangular in plan view, directly to the flat base of the front post.

[0011] Such solution suffers drawbacks, mainly the possibility that the two components might detach, not least because of the fact that the adhesive is coupling products made of different materials that react differently for example to the temperature and to the humidity present in the environment in which the in-wall frame for the sliding door is installed.

[0012] In a partial solution to such drawback, it is known to provide the front post adding, at the flat base thereof, a flap protruding therefrom which is to be accommodated in a complementarily shaped seat defined on the surface of the covering.

[0013] Such solution also suffers a drawback, which is due to the fact that more operations and processes are required, which increase the overall costs.

[0014] Furthermore the manufacturer of the posts necessarily must maintain stocks both of the version of the C-shaped post with the flat base and of the version of the C-shaped post with the base from which the flap protrudes, which will be used according to the choice made regarding the form that the covering is to take.

[0015] 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 a front post that can be used in combination with coverings that may or may not have a recess or seat on a surface for their coupling to such post.

[0016] Within this aim, an object of the invention is to provide a front post in which the coupling to the covering occurs rapidly and with great ease irrespective of whether or not there is a recess or seat on a surface for their coupling to such post.

[0017] Another object is to provide a front post that is structurally simple, can be provided with conventional systems and machines, and is low cost.

[0018] This aim and these and other objects which will become better apparent hereinafter, are achieved by a front post for in-wall frames of retractable sliding doors, which is substantially C-shaped so as to define a base and a first pair of lateral wings characterized in that one or more seats are provided on said base for the removable coupling of one or more flaps which protrude at right angles from a first tab of an L-shaped fin whose second tab can be coupled to a surface of a covering.

[0019] Advantageously, the one or more flaps can be coupled by way of an initial insertion according to an axis that is perpendicular to the base and a subsequent sliding according to an axis that is longitudinal to the base.

[0020] 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 fin, not yet associated with the front post;

Figure 2 shows the first step of coupling the fin to the front post;

Figure 3 shows the fin coupled to the front post;

Figure 4 shows, in a sectional view taken along a sectional plane that is transverse to the front post, the fin and a covering which are not coupled together; Figure 5 is a similar view to Figure 4 of the front post coupled to the fin;

Figures 6 and 7 are three-quarters side views of the fin;

Figure 8 is a three-quarters side view of the front post.

[0021] 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.

[0022] 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.

[0023] With reference to the figures, the reference numeral 1 generally designates a front post for in-wall frames of retractable sliding doors, which is substantially C-shaped so as to define a base 2, and a first pair of lateral wings 3a, 3b.

[0024] Each front post 1 has, proximate to a lower end 4 of the respective base 2 and preferably adjacent to the lateral wing 3a, at least one hole 5 for coupling, by way of temporary locking means constituted by a screw 6, to the end 7 of a linear cross-member 8.

[0025] The end 7 that arranges itself against the base 2 is, at least for part of its length, W-shaped, a seat 10 for the threaded shank of the screw 6 being provided at its vertex 9.

[0026] The seat 10 is obtained preferably by deforming multiple portions 11, which are defined so as to be adjacent to each other but not contiguous along the same axis, of the material that constitutes the cross-member 8, the portions 11 being V-shaped and being directed in the opposite direction from the direction of the vertex 9.

[0027] The seat 10 is arranged at a height that corresponds to the placement of the axis of the hole 5 once the edge 12 of the cross-member 8 has been rested against the base 2.

[0028] The coupling of the front post 1 with the cross-member 8 occurs by way of the screw 6.

[0029] The base 2 has an inclined surface 12 that is adapted to force, upon tightening the locking means 6, the cross-member 8 against one of the first pair of lateral wings 3a, 3b of the front post 1.

[0030] In the particular embodiment illustrated, the surface 12 is V-shaped so as to define a first inclined portion 12a, which is adjacent to the lateral wing 3a, and a second inclined portion 12b, which is adjacent to the lateral wing 3b, the vertex 13 being directed toward the front post 1.

[0031] One or more seats 14a, 14b are provided on the base 2, in particular on the first inclined portion 12a, and are slot-shaped with their axis parallel to the longitudinal axis of the front post 1, and are adapted to enable the removable coupling of one or more flaps 15a, 15b.

[0032] The latter are T-shaped, so as to define a shank 16a, 16b and a head 17a, 17b which protrude on a same plane at right angles to the end 18 of a first tab 19 of an L-shaped fin 20.

[0033] The length and the width of each one of the heads 17a, 17b is substantially equal to the width and to the height of each one of the one or more seats 14a, 14b.

[0034] However, the height of each shank 16a, 16b is substantially equal to the thickness of the base 2.

[0035] Advantageously, a protrusion 21 protrudes from the end 18, in the space between the one or more flaps 15a, 15b and according to a plane that is perpendicular thereto, and is adapted to rest on the base 2 once the fin 20 has been coupled thereto.

[0036] Each fin 20 has a second tab 22 that can be coupled to a covering 23, preferably but not exclusively made of wood, on a surface 24 of which a recess or seat 25 is provided, which is adapted to firmly accommodate the second tab 22, and an undercut 26 of material that is adapted to accommodate the first tab 19.

[0037] The one or more flaps 15a, 15b can be coupled, as illustrated in Figure 1, by way of an initial insertion thereof according to an axis that is perpendicular to the base 2, so as to position the one or more flaps 15a, 15b inside the one or more seats 14a, 14b; then follows, as illustrated in Figure 2, a subsequent sliding imposed on the one or more flaps 15a, 15b according to an axis that is longitudinal to the base 2, so as to bring the shanks 16a, 16b into abutment with an end of the one or more seats 14a, 14b and position part of the heads 17a, 17b beyond the, overlying, end of the one or more seats 14a, 14b and adjacent to the inner lateral surface 27 of the base 2.

[0038] Thus it has been found that the invention fully achieves the intended aim and objects, a front post being devised for in-wall frames of retractable sliding doors which can be used in combination with coverings that may or may not have a recess or seat on a surface for their coupling to such post; in fact if the recess is present it is sufficient to apply the fin 20 to the post; otherwise it is sufficient not to apply the fin 20 to the post.

[0039] The coupling to the covering occurs rapidly and with great ease irrespective of whether or not the latter has a recess or seat.

[0040] The invention is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0041] The materials used as well as the dimensions of the individual components of the invention may be more pertinent according to specific requirements.

[0042] 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.

[0043] The disclosures in Italian Utility Model Application No. TV2013U000058 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. A front post (1) for in-wall frames of retractable sliding

- doors, which is substantially C-shaped so as to define a base (2) and a first pair of lateral wings (3a, 3b), **characterized in that** one or more seats (14a, 14b) are provided on said base (2) for the removable coupling of one or more flaps (15a, 15b) which protrude at right angles from a first tab (19) of an L-shaped fin (20) whose second tab (22) can be coupled to a surface of a covering (23).
2. The front post according to claim 1, **characterized in that** said one or more flaps (15a, 15b) can be coupled by way of an initial insertion according to an axis that is perpendicular to said base (2) and a subsequent sliding according to an axis that is longitudinal to said base (2).
 3. The front post according to claims 1 and 2, **characterized in that** one or more seats (14a, 14b) are provided on said base (2) and are slot-shaped with their axis parallel to the longitudinal axis of said front post (1), and are adapted to enable the removable coupling of one or more flaps (15a, 15b).
 4. The front post according to one or more of the preceding claims, **characterized in that** said one or more flaps (15a, 15b) are T-shaped, so as to define a shank (16a, 16b) and a head (17a, 17b) which protrude on a same plane at right angles to the end (18) of a first tab (19) of an L-shaped fin (20).
 5. The front post according to one or more of the preceding claims, **characterized in that** the length and the width of each one of said heads (17a, 17b) is substantially equal to the width and to the height of each one of said one or more seats (14a, 14b).
 6. The front post according to one or more of the preceding claims, **characterized in that** the height of each one of said shanks (16a, 16b) is substantially equal to the thickness of said base (2).
 7. The front post according to one or more of the preceding claims, **characterized in that** a protrusion (21) protrudes from said end (18), in the space between said one or more flaps (15a, 15b) and according to a plane that is perpendicular thereto, and is adapted to rest on said base (2) once said fin (20) has been coupled thereto.
 8. The front post according to one or more of the preceding claims, **characterized in that** said fin (20) has a second tab (22) that can be coupled to a covering (23), on a surface (24) of which a recess or seat (25) is provided, which is adapted to firmly accommodate said second tab (22), and an undercut (26) of material that is adapted to accommodate said first tab (19).
 9. The front post according to one or more of the preceding claims, **characterized in that** said one or more flaps (15a, 15b) can be coupled, by way of an initial insertion thereof according to an axis that is perpendicular to said base (2), so as to position said one or more flaps (15a, 15b) inside said one or more seats (14a, 14b).
 10. The front post according to one or more of the preceding claims, **characterized in that** said one or more flaps (15a, 15b) can be coupled by way of a subsequent sliding imposed on said one or more flaps (15a, 15b) according to an axis that is longitudinal to said base (2), so as to bring said shanks (16a, 16b) into abutment with an end of said one or more seats (14a, 14b) and position part of said heads (17a, 17b) beyond the, overlying, end of said one or more seats (14a, 14b) and adjacent to the internal lateral surface (27) of said base (2).
 11. The front post according to one or more of the preceding claims, **characterized in that** said base (2) is V-shaped so as to define a first inclined portion (12a), which is adjacent to said lateral wing (3a), and a second inclined portion (12b), which is adjacent to said lateral wing (3b), the vertex (13) being directed toward said front post (1).
 12. The front post according to one or more of the preceding claims, **characterized in that** it has, proximate to the lower end (4) of said base (2) and adjacent to said lateral wing (3a), at least one hole (5) for coupling, by temporary locking means constituted by a screw (6), to the end (7) of a linear cross-member (8).
 13. The front post according to one or more of the preceding claims, **characterized in that** said end (7) that arranges itself against said base (2) is, at least for part of its length, W-shaped, a seat (10) for the threaded shank of said screw (6) being provided at its vertex (9).
 14. The front post according to one or more of the preceding claims, **characterized in that** said seat (10) is obtained by deforming multiple portions (11), which are defined so as to be adjacent to each other but not contiguous along the same axis, of the material that constitutes said cross-member (8), said portions (11) being V-shaped and being directed in the opposite direction from the direction of said vertex (9).

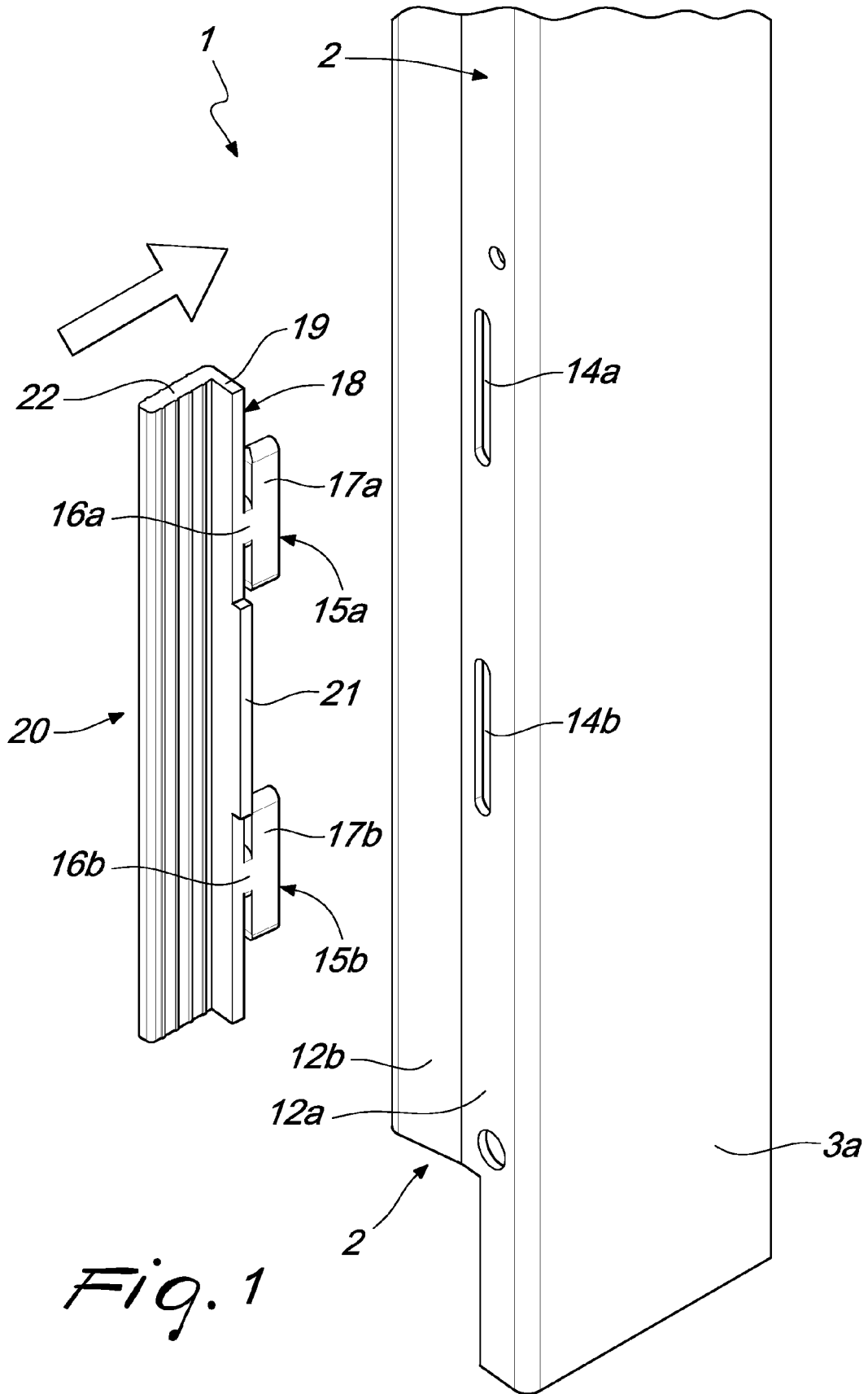


Fig. 1

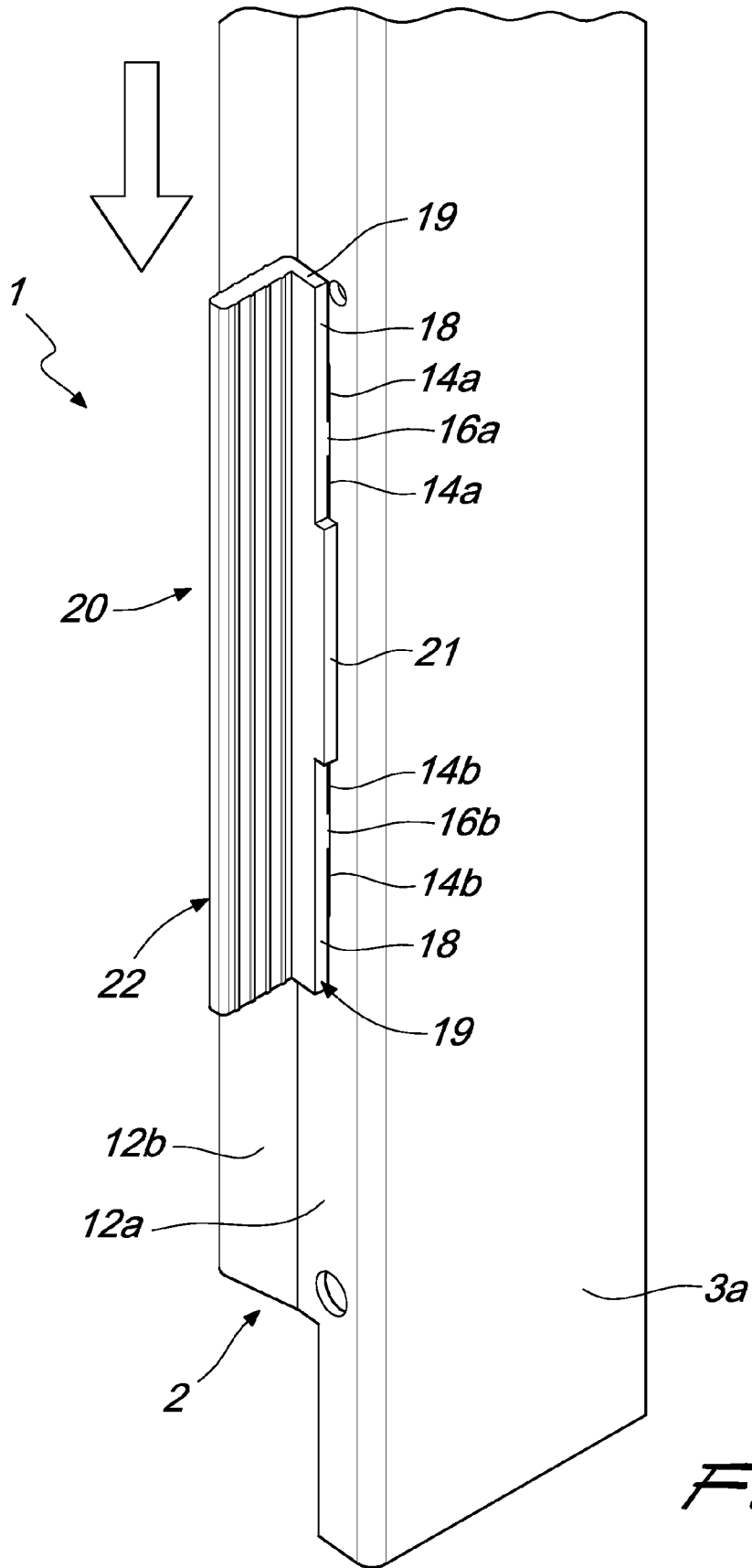


Fig. 2

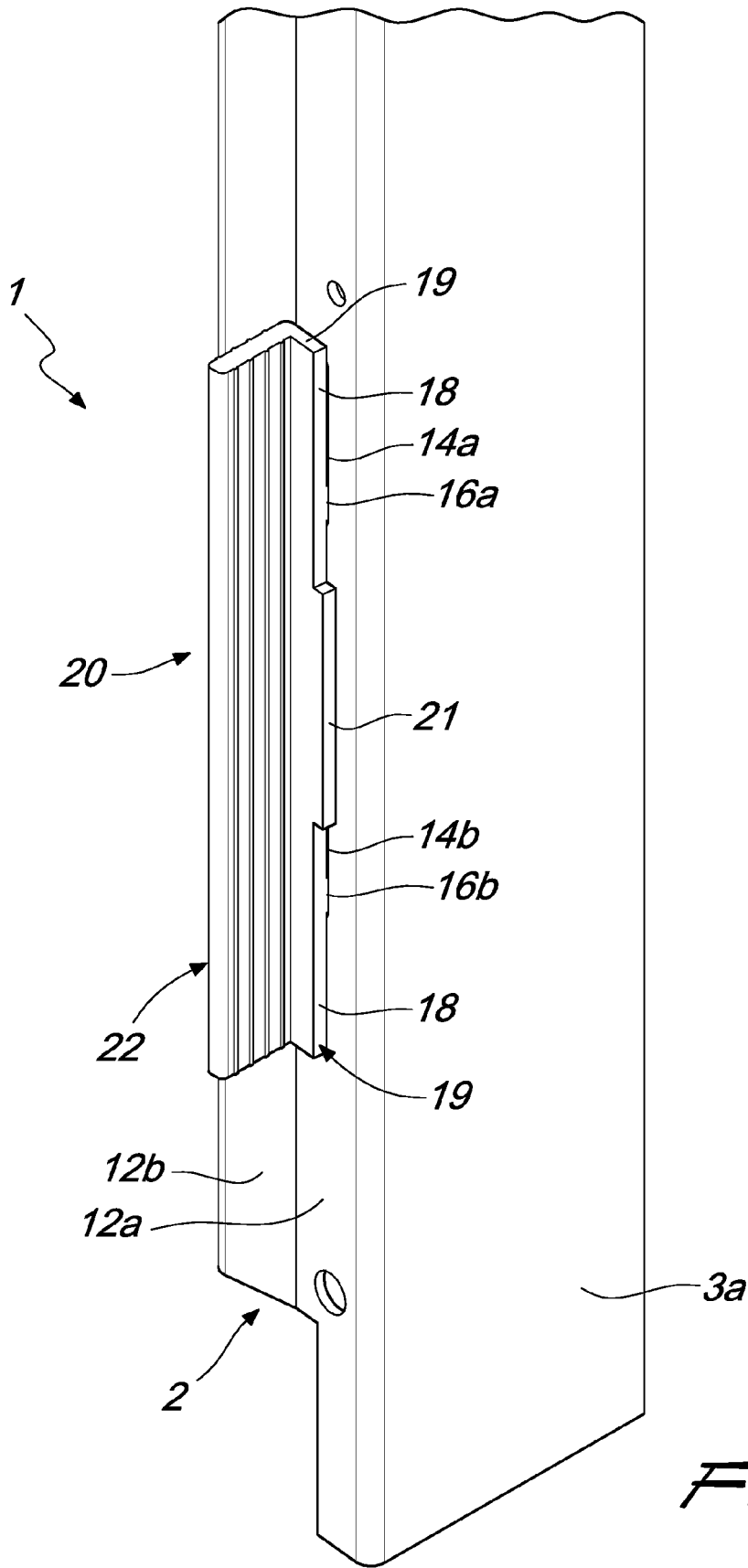


Fig. 3

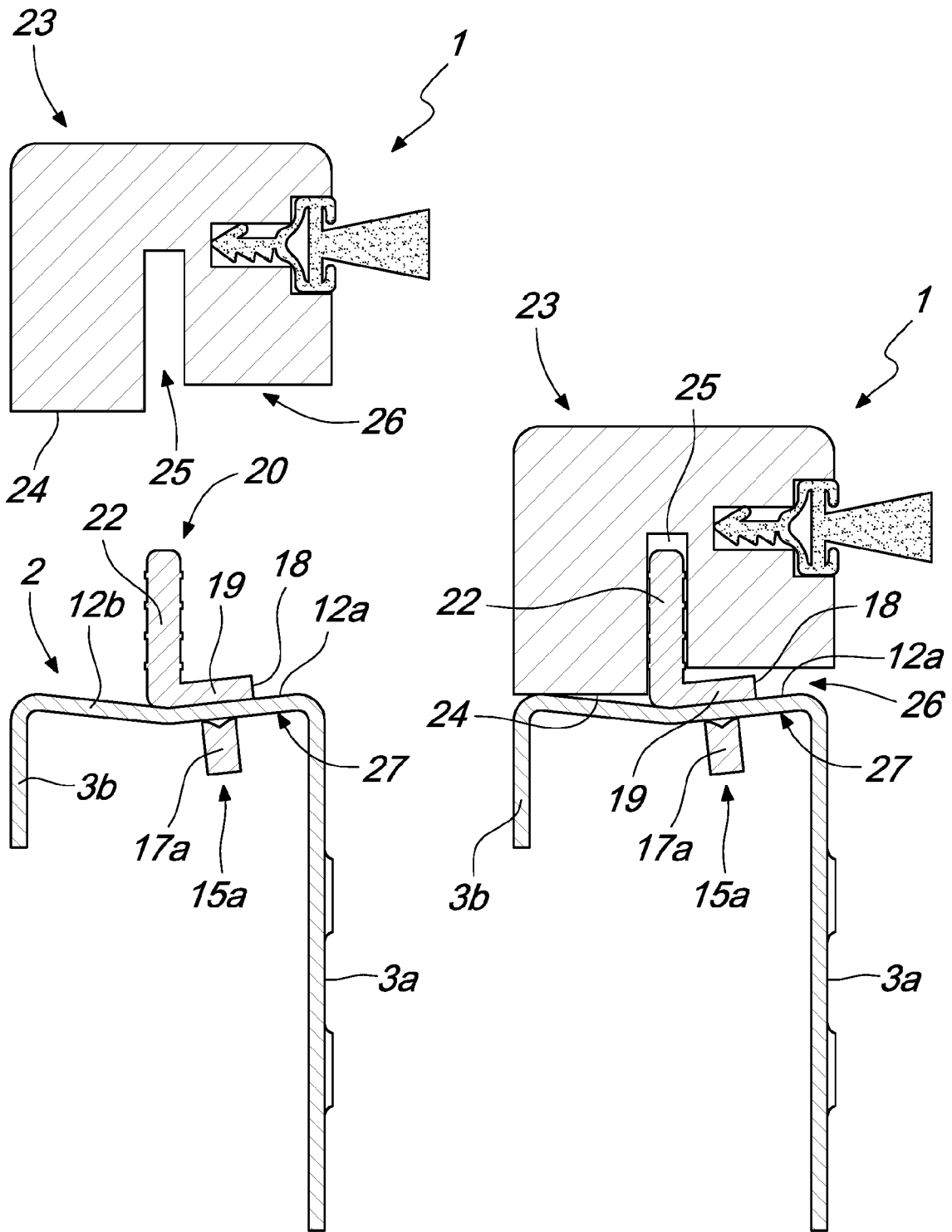


Fig. 4

Fig. 5

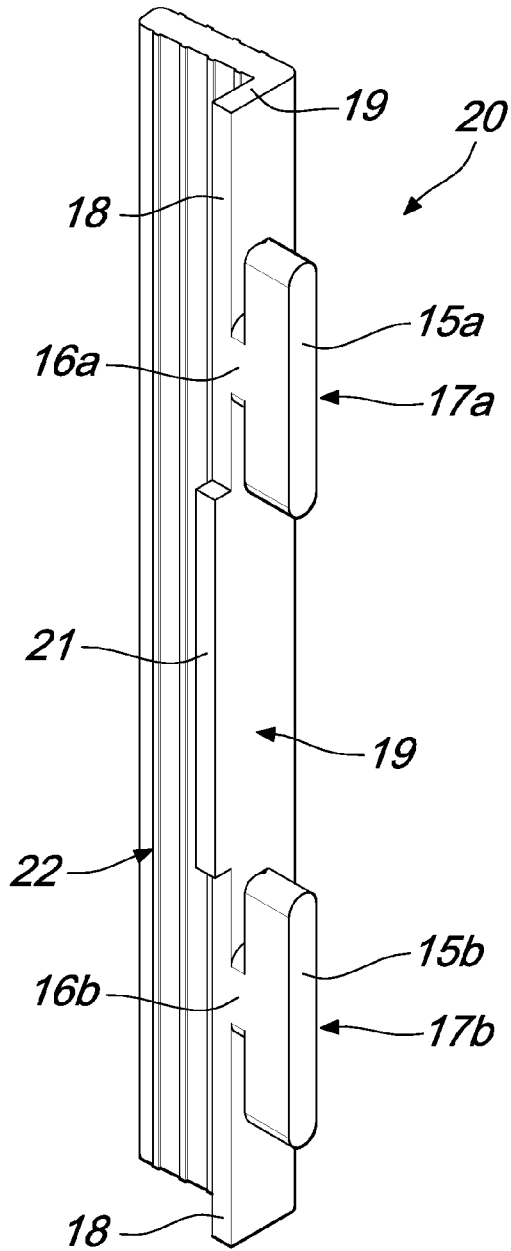


Fig. 6

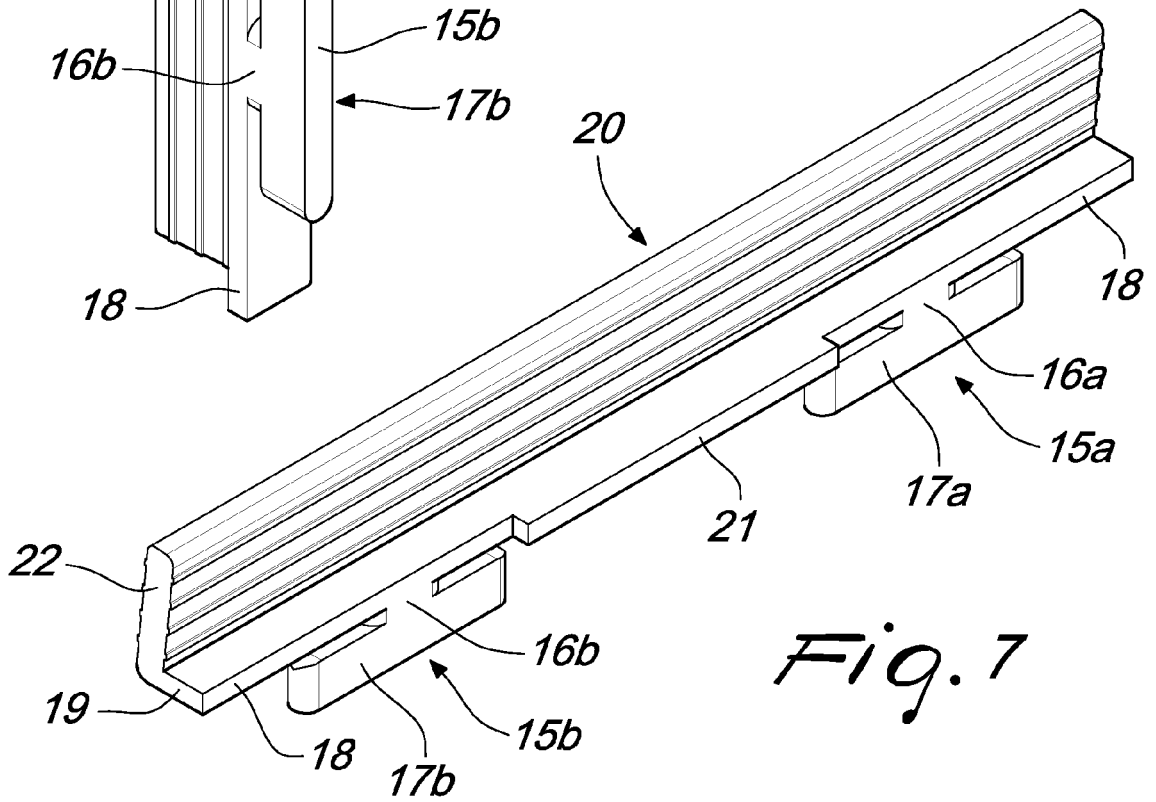


Fig. 7

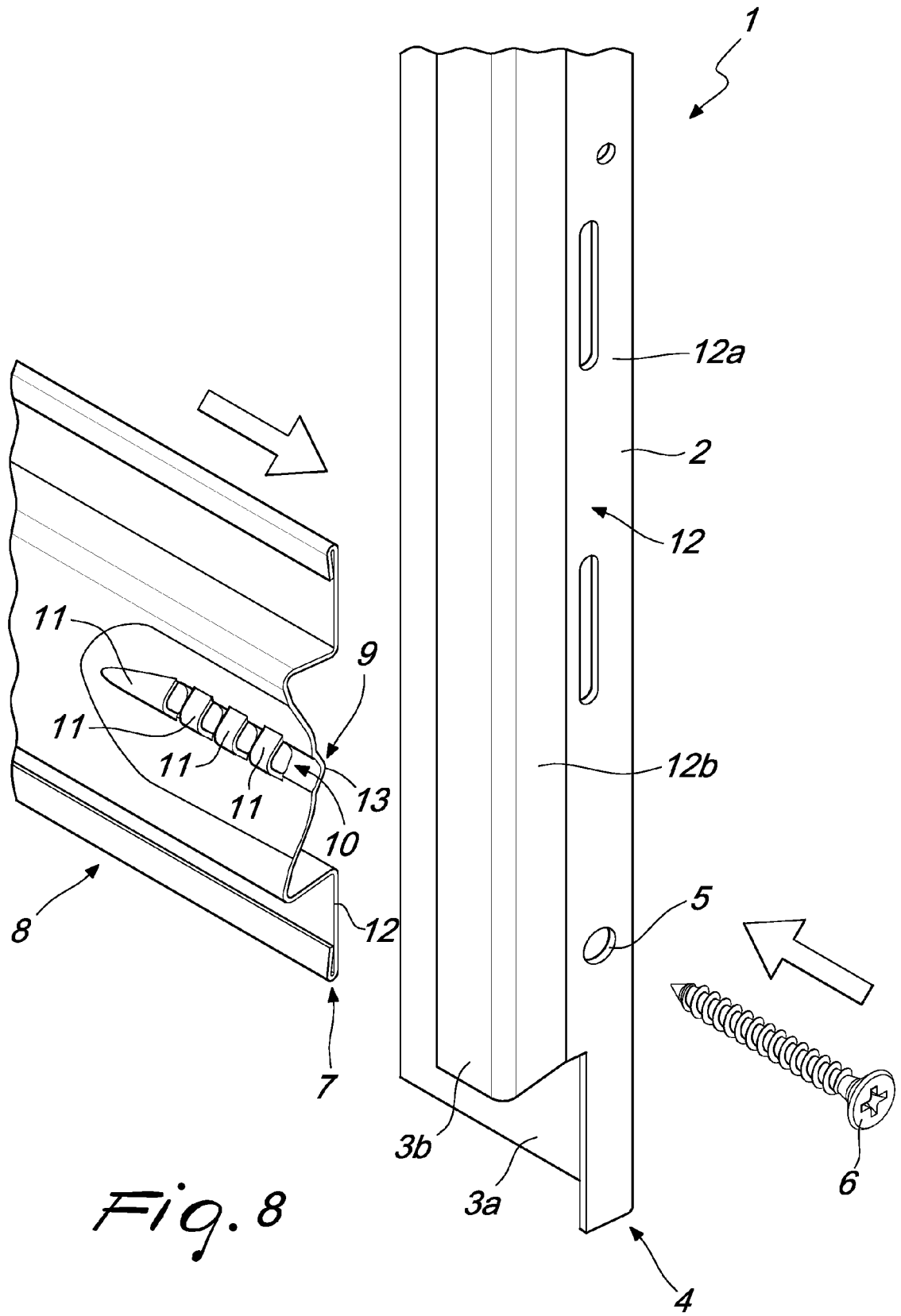


Fig. 8



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Place of search The Hague		Date of completion of the search 15 April 2015	Examiner Gallego, Adoración
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