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(71) Applicant: ECLISSE SRL

I-31020 Sernaglia Della Battaglia (TV) (IT)

(72) Inventor: De Faveri, Luigi

I-31020 Sernaglia della Battaglia (TV) (IT)

(74) Representative: D'Agostini, Giovanni, Dr.

D'AGOSTINI ORGANIZZAZIONE

Via G. Giusti 17

33100 Udine (IT)

(54) **Further modifications to profiles even vertical, in the counter-frames for sliding doors, of the type for the support of plasterboard panels**

(57) A pocket door comprising: a containing structure; defined respectively from symmetric and parallel panellings (C) which could be held in position by a series of spacing cross-members one above and parallel to the other, engaged on one side to at least one monolithic vertical profile (A), of head to said largecase, on the other to staves (5'), that provide the containing seats of the vertical edge of the respective panel and support from the opposite side a guide-support crosspiece; a base cross-piece and an outer-casing profile, which support means of the large case, being that the lower extremities of said largecase engage to the outer-casing profile; an eventual upper guide-support crosspiece, supported on the side by a pier which jamb opposite to the staves, on the other side being supported by staves and from the vertical profile of the largecase.

The monolithic vertical profile (A), of head to said largecase is hollow and providing seats for the screw means along the rib protruding longitudinally on the side turned towards the inside of the largecase. At least one stave (5'), also having a box shape, that essentially recalls an "L", and from which a containing wall of the corresponding plasterboard panel (C) protracts perpendicularly, has on the opposite side, corresponding to the door jamb, a protruding rib for the longitudinal anchorage of a covering listel (7) preferably of wood.

Eventual vertical profiles of the variable pitch type, provided on one side with reciprocal hooking longitudinal means the one insertable within the other, defining the width of the largecase desired, on the other with seats also obtained longitudinally for the screw means anchorage.

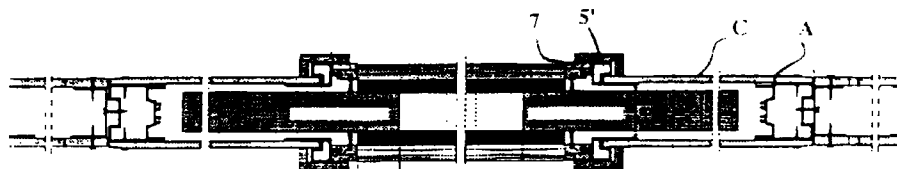


Fig. 5

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Description

This invention has as object further modifications to profiles even vertical, in the counterframes for sliding doors, of the type for the support of plasterboard panels.

The innovation finds special even if not exclusive, application in the sector of casings for window and door frames.

In prior art, casings to allow the installation of respective frames in buildings are known. In particular counterframes to integrate into the brickwork structures are known, which realize a means of support and anchorage for frame of said door frame. In this case sliding doors are also known, which can be of different types. A first application, certainly more traditional, provides a wall in which an interstice is obtained as a longitudinal seat for the fitted reception of a door, of the sliding type, by means of a couple of upper and/or lower guides, joined to the loadbearing structure. This and other assimilable solutions, also being on the whole valid, involve various problems, firstly the fact that they require a long realization time and a certain installation difficulty. Additionally concurring high realization costs, sometimes with the use of particularly complex components which are not always suitable because of the absence of space.

To partially avoid the above-mentioned problems, counterframes to integrate into brickwork structures have been proposed, which provide the use of elements in preformed metal-sheet variedly associated between themselves, in particular comprising : a largecase to be associated to the wall, provided on the opposite side with a stanchion which delimits the opening or the so-called light, and in which at the top is engaged a longitudinal slide-way being screwed to said loadbearing structure. Laterally to said largecase, depending on the destination, a net may be associated in a subsequent phase, and on both sides, which fixing means of the final coating, composed of plaster, or alternatively, providing the particular conformations of the profiles to hold plasterboard panellings. As an example, the engagement of the net to the largecase is made possible by means of vertical staves on which it anchors, obtained directly from the metal-sheet for moulding of the sides, a kind of fret of the largecase. The noticeable drawbacks consist in the fact that they require a long installation time.

A solution to the above-mentioned problems, also with the intent to supply a do-it-yourself counterframe proposed in assembly kit, has been given by the patent application having as object a counterframe improved for sliding doors particularly of the disappearing type, in which the loadbearing structure comprises:

- a largecase obtained by means of the coupling of two preshaped metal-sheets associated between them along the vertical profile;
- a base crosspiece and an outer-casing profile which support base of said largecase, being that the lower

extremities of said largecase engage to the outer-casing profile;

- an upper crosspiece longitudinal guide support associable to said largecase being supported on the opposite side by at least one stanchion;
- at least one stanchion, determining the width of the door, on one side bearing said longitudinal guide, on the other anchored to the base crosspiece;
- anchorage transverse means of at least one net to the largecase being associated to it by means of riveting.

In this case, drawbacks have been observed that concern firstly the upper crosspiece longitudinal guide support associable to said largecase as well as the guide itself. In fact it frequently happens, for various reasons, that one has to resort to the extraction of the guide to replace or even just clean it, a very complex and laborious operation. Secondly anchorage transverse means of the net to the largecase are provided that require the use:

- firstly of rivets or of other equivalent means for the corresponding fixing of said crosspiece and,
- then resorting to the folding of the single holding tabs for fixing the net on the respective crosspiece.

A wasteful and very complex realization both in terms of money and time immediately appears, additionally, not guaranteeing in time a safe hold of the crosspiece to the large case also being able to undergo the detachment with the obvious repercussions on the uniformity of the façade plaster.

Consequently a perfecting to the cited counterframe has been proposed, which has substantially provided:

- a largecase obtained from at least one preshaped metal-sheet;
- a base crosspiece and an outer-casing profile which support base of the largecase, being that the lower extremities of said large case engage to the outer-casing profile;
- an upper guide-support crosspiece placed longitudinally being engaged on one side to the large case, on the other supported by at least one stanchion, and providing the dissociable track from said crosspiece, along which raised seats for the clutch of corresponding slides as reference means obtained protruding from the guide track, are obtained;
- at least one stanchion which jamb of the door, on one side bearing the extremity of said longitudinal crosspiece, on the other anchored to the base crosspiece;
- anchorage transverse means of at least one net to the largecase being associated to it, providing, on the surface of the largecase, foldable tabs, to be inserted in corresponding equidistant fissures, made on the staves, and subsequently, protruding

from these, turned up to anchor the respective stave and the eventual net in contact with this.

Even if it offers high performance, in the preceding solution regarding the only upper support crosspiece of the guide, slight drawbacks are noticeable deriving from the complexity realizable in the assembly phase to the counterframe and vice versa. To these storing and transport problems due to the particular encumbrance can be joined, but above all even more relevant are those tied to the difficulty to intervene rapidly and without serious charges during the maintenance, as for example in the case of replacement of the track.

A perfecting to the crosspiece, sustained on one side by a stanchion which door jamb on the other side being engaged to the large case, resulted in being subdivided into two parts associable one with the other by engaging means, each part being provided with raised seats for the clutch of corresponding slides as protruding reference means obtained by a guide track.

Another counterframe solution for sliding doors, particularly for plasterboard walls, resulted in providing:

- a containing largecase; defined respectively by symmetric and parallel panellings held in position by a series of spacing cross-members one above and parallel to the other, engaged on one side to vertical profiles associated in head contraposition to said large case, on the other to staves which provide the containing seats of the vertical edge of the respective panel;
- a base crosspiece and an outer-casing profile, which support means of the largecase, being that the lower extremities of said largecase engage to the outer-casing profile;
- an eventual upper guide-support crosspiece, sustained on one side by a stanchion which door jamb on the other side being engaged to the largecase, and subdivided into two parts associable one with the other by engaging means, each part being provided with raised seats for the engagement of corresponding slides as protruding reference means obtained by a guide track;
- as well as at least one stanchion which door jamb, on one side bearing the extremity of a connection upper crosspiece to the largecase, on the other eventually anchored to the base crosspiece.

The optimization of the latter solution has allowed to achieve a modular counterframe for sliding doors, particularly for plasterboard walls, in which:

- the vertical profiles have a variable pitch, associated in head contraposition to said large containing case being provided with reciprocal hooking longitudinal means the one insertable within the other, defining the width of the desired largecase;

- while the staves that provide the containing seats of the vertical edge of the respective panel, are obtained with a variation of thickness,
- and finally, providing the vertical support spacing cross-members of the plasterboard panels, which are obtained with at least one roughened and/or knurled surface.

One of the recurring characteristics that join the aforementioned solutions is given by the structure of the vertical profile, closing of the side of the largecase opposite the door jamb. In all the solutions cited, it is obtained by the integral association or not of at least two elements, more generally "L" shaped, initially stapled longitudinally, then according to the last teachings engaged one within the other. The problems of this structure would consist consequently in the fact that they would not be adaptable for counterframes which internal wheelbase is at least of 50 mm. The reduced size, with the eventuality of a rapid assembly offered as a finished product to be introduced on the market, has required a different profile particularly suitable for such type of counterframe.

A perfecting to the preceding counterframe has regarded vertical profiles in the counterframes for sliding doors, of the types for the support of plasterboard panels, comprising:

- a containing structure; defined respectively by symmetric and parallel panellings eventually held in position by a series of spacing cross-members one above and parallel to the other, engaged on one side to vertical profiles associated in head contraposition to said largecase, on the other to staves, of the types obtained with a thickness variation, which provide the containing seats of the vertical edge of the respective panel;
- a base crosspiece and an outer-casing profile, which support means of the largecase, being that the lower extremities of said largecase engage to the outer-casing profile;
- an eventual upper guide-support crosspiece, sustained on the side by a pier which jamb opposite to the staves, on the other side being supported by staves and from the vertical profile of the largecase, subdivided into two parts associable one with the other by engaging means, each part being provided with raised seats for the engaging of corresponding slides as protruding reference means obtained by a guide track; in which the vertical profile is monolithic, obtained with two opposite "C" shaped sections, where the common side has a rib made longitudinally which allows the support of a guide-support crosspiece, and in which the lathes provide on the corresponding end a perpendicular fin to the side of the same, protruding internally to the largecase that holds up from the opposite side always the same guide-support crosspiece.

The aim of this invention is to supply a better solution in respect to the preceding, allowing in an easier way the use of a counterframe for plasterboard walls. This and other aims are reached with the present innovation according to the characteristics as in included claims solving the arising problems by means of further modifications to the profiles even vertical, in the counterframes for sliding doors, of the types for the support of plasterboard panels, comprising:

- a containing structure; defined respectively by symmetric and parallel panellings eventually held in position by a series of spacing cross-members one above and parallel to the other, engaged on one side to at least one monolithic vertical profile, at the head of said largecase, on the other to staves, that provide the containing seats of the vertical edge of the respective panel and sustain from the opposite side a guide-support crosspiece;
- a base crosspiece and an outer-casing profile, which support means of the largecase, being that the lower extremities of said largecase engage to the outer-casing profile;
- an eventual upper guide-support crosspiece, sustained on the side by a pier which jamb is opposite the staves, on the other side being supported by staves and by the vertical profile of the largecase, subdivided into two parts associable one with the other by engaging means, each part being provided with raised seats for the engaging of corresponding slides which protruding reference means obtained by a guide track;
in which said improvements regard:
- a monolithic vertical profile, at the head of said largecase, which being boxed is closed peripherically, providing seats for the fixing screw means obtained along the ribbing longitudinally protruding on the side turned towards the inside of the largecase;
- at least one stave, this also obtained with a box shape, that essentially resembles an "L", and from which a containing wall of the corresponding plasterboard panel perpendicularly protracts, while on the opposite side, corresponding to the door jamb, a protruding pin for the longitudinal anchorage of a covering listel preferably in wood, is obtained;
- eventual vertical profiles of the variable pitch type, provided on one side with longitudinal means of reciprocal hooking one insertable within the other, defining the width of the large case desired, on the other of seats also obtained longitudinally for the anchorage screw means.

In this case, through the notable creative contribution, which effect realizes an immediate technical progress, various advantages are achieved. First of all the fact that the structure of the 50 mm counterframe for plasterboard walls is strengthened in considerable measures. Secondly lower execution times are obtained above all deriving from a certain easiness and precision

of assembly, not excluding a further reduction of the realization costs.

These and other advantages appear from the subsequent specific description of preferential solutions of realization with the help of the enclosed drawings the details of which preferably are not to be considered limitative.

Figures 1. and 1A. represent sectional views of a vertical profile and of a relative variation, for counterframe for plasterboard walls.

Figures 2. and 2A. represent a cross sectional view of a stave and of a corresponding variation for counterframe for plasterboard walls.

Figure 3., represents a view still in cross section of one of the two elements for profiles of the variable pitch type.

Figures 4. and 5., represent respectively a side and sectional view of a counterframe.

Finally, figures 6. and 7., represent a side and sectional view of a variation to the counterframe, of the continuous panel type.

Also making reference to the figures, it is disclosed that a counterframe (D) for sliding doors, of the type for the support of plasterboard panellings (C), provides a first vertical profile (A) of closure of a side of the largecase defining the depth, and of at least one couple of vertical profiles i.e. staves (B), from the opposite side that delimit the entry of the casing. More in particular, the vertical profile (A) is monolithic, being obtained in extruded aluminium, and which, seen in any cross section (Fig. 1), recalls a box shape, or peripherically closed. In more detail, the profile (A) provides two parallel sides (1), with the roughened or knurled surface, respectively right and left, along which the panel corresponding plasterboard (C) coating rests directly in contact. Said sides protract on one side, towards the inside of the counterframe, and beyond the box shape, obtaining two perpendicular symmetric and protrusive walls (1'). In a first hypothesis, said walls (1') are slightly more reentrant if compared to the sides (1) of the profile (A) providing a lower wheelbase, in a second (Fig. 2) being vice versa coplanar if compared to said sides (1).

On the opposite side, realizing the head of the largecase, the sides (1) are attached by a third side (2) at right angles to the same, which viewed in section essentially recalls an omega. The characteristic of such side, is essentially given by the fact that it provides a longitudinal rib, in an intermediate position, also having the purpose to confer greater structural rigidity to the counterframe ensemble (A). A fourth side (3), always at right angles to the sides (1) joining them to the opposite extremities, also provides a longitudinal rib, turned towards the inside of the largecase in practice with a section essentially "U" shaped divergent, as the walls (3') of the same are slightly divaricate. On the side turned towards the inside, a rib therefore appears, in positive, that being protrusive recalls, as the preceding side, a typical omega shape. Further characteristic that distinguishes such profile from the preceding, is given by the fact that it provides

along the side (3) turned towards the inside of the large-case, circular seats (4), obtained longitudinally, which allow the fixing the upper guide-support crosspiece and/or of the outer-casing lower crosspiece.

From the opposite part of the counterframe (D), each panel (C) is held along the edge by a corresponding vertical stave (B). The section of each stave (B) is such to include a side (5) which, being constituted by a perfectly flat vertical surface extends in depth towards the inside of the largecase defining the width of the opening. Instead, laterally towards the exterior, the stave (B) provides a shape (5') even this tubular recalling an "L" shape. In more detail, adjacent to the side (5) or between the same and the tube (5'), the realization of a longitudinal seat (5'') is provided, which can house the head of a panel (C). In an alternative solution said seat (5'') is able to contain the head of a crosspiece of the omega (8) type, and fixed here by known screw means, while on the opposite end, in correspondence to the vertical profile (A), the use of a small holding-plate essentially rectangular (11) is required. In the opposite way at the side (5), and in an intermediate position, in respect to the tubular element (5'), a monolithic pin (6) is extended longitudinally as much as the height of the stave (B), provided with a plurality of hooks (6') on both sides, to simplify the anchorage of a wooden strip (7), which door jamb, previously milled in logic correspondence.

A third and last aspect of the improvements, regards the use of the variable pitch vertical profiles. These, for example, can find application in counterframes of the type for the support of continuous plasterboard panels (C). Said profiles, are made up essentially of two elements (9) provided on one side with longitudinal means, male and female, of reciprocal hooking the one insertable within the other, defining the width of the largecase desired. From the opposite side, in this case of the only element (9) provided with male hooking means (9'), seats are obtained (10), semicircular, being open on one side, which ensure the clamping of the screws of head to said bar, particularly for the assurance of the guide-support crosspiece and of the outer-casing profile.

Claims

1. Modifications to the profiles even vertical, in the counterframes for sliding doors, of the type for the support of plasterboard panels, comprising:

- a containing structure; defined respectively from symmetric and parallel panellings which could be held in position by a series of spacing cross-members one above and parallel to the other, engaged on one side to at least one monolithic vertical profile, of head to said largecase, on the other to staves, that provide the containing seats of the vertical edge of the respective panel and support from the opposite side a guide-support crosspiece;

- a base crosspiece and an outer-casing profile, which support means of the large case, being that the lower extremities of said largecase engage to the outer-casing profile;
- an eventual upper guide-support crosspiece, supported on the side by a pier which jamb opposite to the staves, on the other side being supported by staves and from the vertical profile of the largecase, subdivided into two parts associable one with the other by engaging means, each part being provided with raised seats for the engagement of corresponding slides as protruding reference means obtained by a guide track;

characterized by the fact that it consist of

- a monolithic vertical profile, of head to said largecase, which being boxed is closed peripherically, providing seats for the obtained screw means clamping along the rib protruding longitudinally on the side turned towards the inside of the largecase;
- at least one stave, also having a box shape, that essentially recalls an "L", and from which a containing wall of the corresponding plasterboard panel protracts perpendicularly, while on the opposite side, corresponding to the door jamb, a protruding pin for the longitudinal anchorage of a covering listel preferably of wood; is obtained;
- eventual vertical profiles of the variable pitch type, provided on one side with reciprocal hooking longitudinal means the one insertable within the other, defining the width of the largecase desired, on the other with seats also obtained longitudinally for the screw means anchorage.

2. Vertical profiles according to claim 1., characterized by the fact that each stave (B) comprising a side (5), on the side of this turned towards the outside, adjacent to the side (5) or between the same and the tube (5'), the realization of a longitudinal seat (5'') is provided, which receives the head of a panel (C), or contains the head of a crosspiece of the omega type (8).

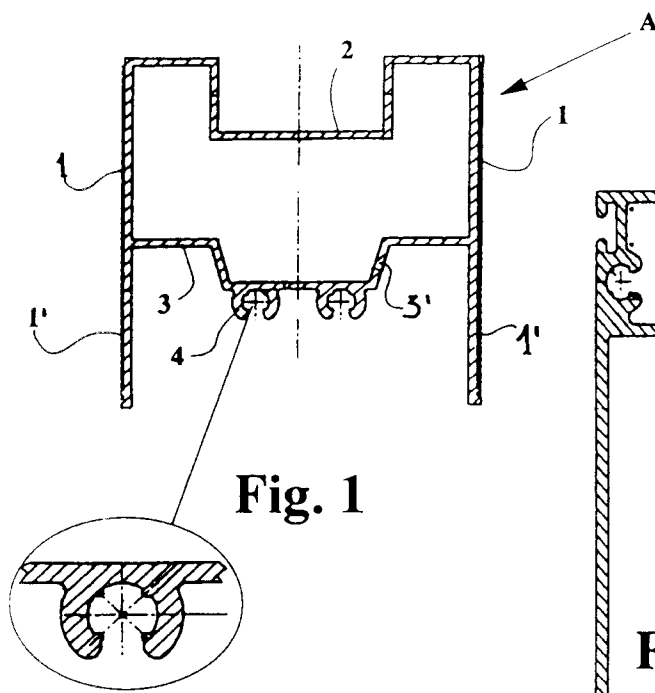


Fig. 1

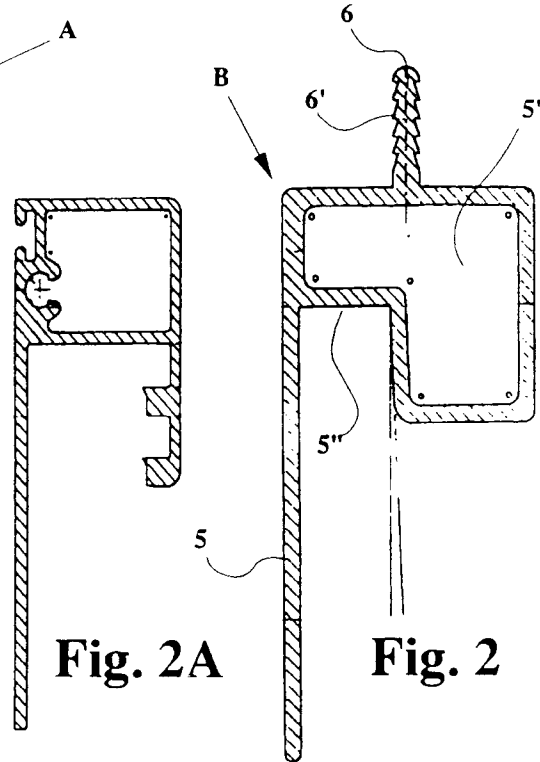


Fig. 2A

Fig. 2

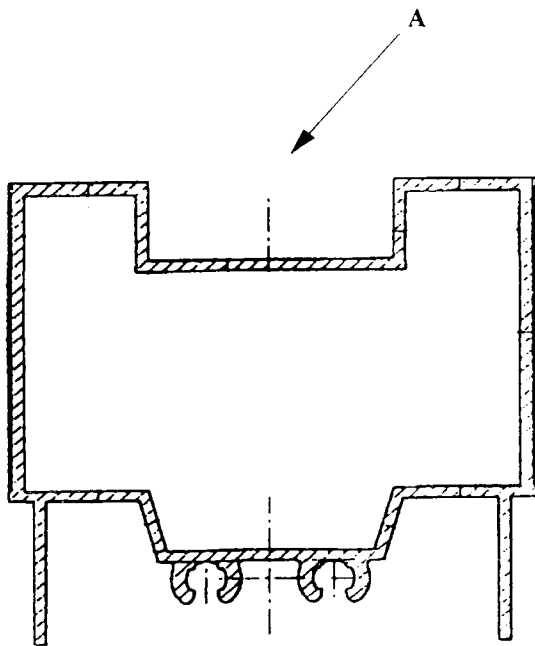


Fig. 1A

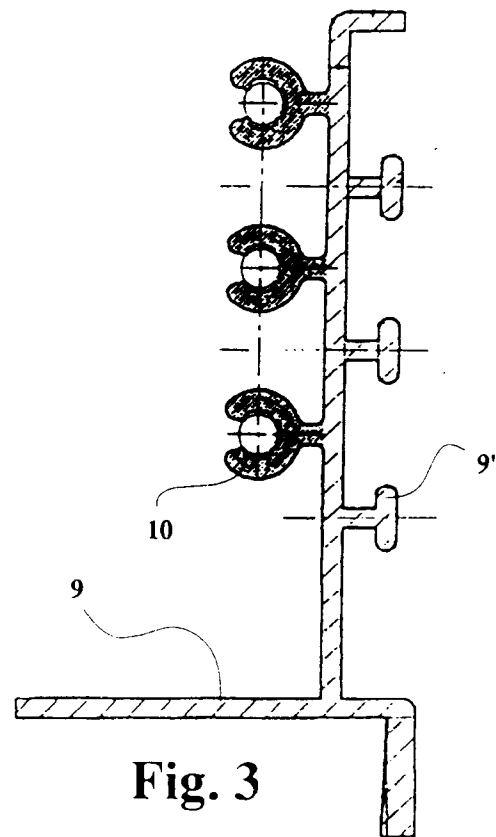
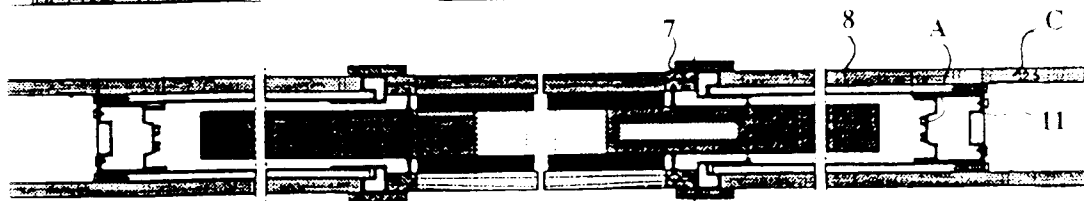
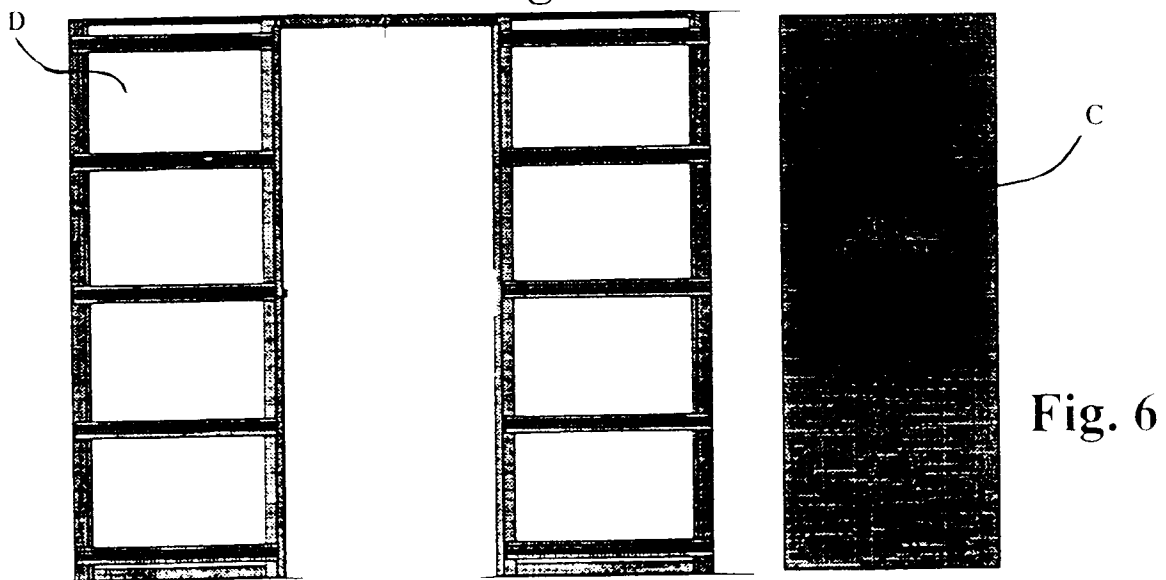
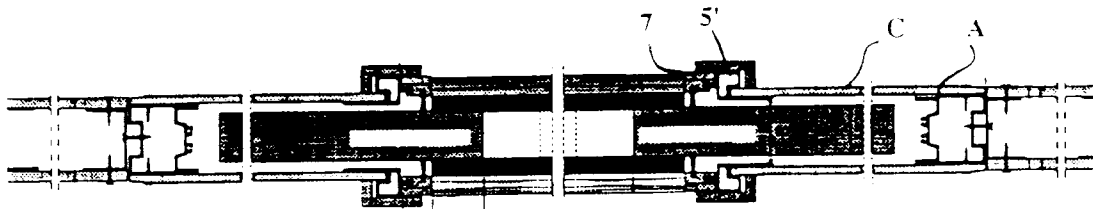
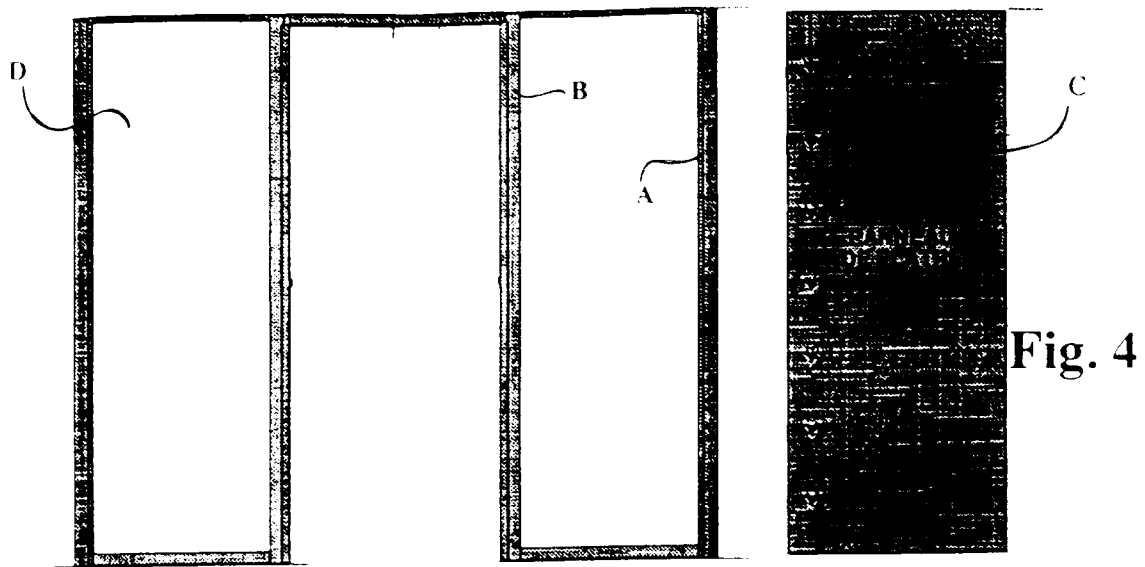


Fig. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 95 11 9531

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	WO-A-90 13725 (ROSENBORG) * page 2, line 20 - page 5, line 16; figures *	1,2	E06B3/46
A	US-A-4 561 210 (KVAS) * the whole document *	1,2	
A	EP-A-0 594 545 (SCRIGNO) * the whole document *	1,2	
A	US-A-4 219 971 (MAURONER) * column 5, line 10 - column 17, line 36; figures *	1,2	
A	FR-A-2 328 094 (AUBIN) * page 2, line 35 - page 5, line 39; figures *	1	
A	US-A-3 494 076 (TODD) * the whole document *	1	
A	DE-C-36 44 123 (EBERHARD) * column 5, line 3 - line 21; figures 1,2 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) E06B
A	EP-A-0 505 614 (DE FAVERI)		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 March 1996	Examiner Depoorter, F
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