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(54) **FRAME STRUCTURE FOR DOORS OR WINDOWS, FOR FURNITURE OR FOR LIGHTINGS,  
HAVING A SURFACE ON A SAME PLANE OF A WALL**

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STRUCTURE DE CADRE POUR PORTES OU FENETRES, POUR MEUBLES OU ECLAIRAGES,  
POSSEDANT UNE SURFACE SUR UN MEME PLAN D'UN MUR

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## Description

### Field of the invention

**[0001]** The present invention relates to the field of doors or windows, furniture and lightings having a surface on a same plane of a wall. In particular, the present invention relates to a combination of a frame, a panel and a wall according to the preamble of claim 1.

### Description of the technical problem

**[0002]** Among the structures of frames for doors or windows having a surface on a same plane of a wall, frames are known defining an aperture for a door in a wall, wherein the frame is embedded within the wall same. Normally, such frames have uprights and crosspieces assembled separately before being mounted in the wall, obtaining a high quality and geometric precision when matching with the leaf panels. The installation of the above described frames provides the step of arranging the frame, previously assembled, within the wall at the aperture, fixing the frame in the wall and then stuccoing and finishing the side slits between frame and wall.

**[0003]** In particular, an Italian utility model, application N°VI2001U000007, describes a frame for doors or windows with a concealed hinge having a surface on a same plane of a wall with one or two pull leaves, having uprights and crosspieces formed with a same profiled element. This profiled element has a box-like substantially rectangular cross section having a substantially triangular protrusion consisting of a first edge perpendicular to a side of the leaf, and a second edge oblique with respect to said first edge, said second oblique edge remaining embedded in the wall.

**[0004]** Such profiled element has the drawback that said oblique edge obstructs the arrangement of a board-wall, for example of plasterboard, thus requiring further work for cutting at an angle the end of the board to match the oblique edge of the profiled element, in such a way that a significant additional working and installation time results, with subsequent higher costs for manual work.

**[0005]** Furthermore, an Italian utility model, application N°BO97U000098, describes a frame structure for doors or windows with concealed hinges and frame having a surface on a same plane of a wall with one or two pull leaves, wherein this frame is obtained with a first extruded profile with shoulders for a second complementary profile suitable for completing to cover the remaining part of the thickness of the wall, at the aperture of the wall. Even in this case the profile that forms the above described frame structure is shaped with concealed edges with oblique face adapted to be overlapped by plaster close to the aperture.

**[0006]** Therefore, also in this case, the known frame structure has the drawback that the concealed edge having oblique faces blocks the arrangement of a board-wall, causing the technical problem of cutting the boards at

the aperture of the wall.

**[0007]** Similarly, Italian utility model N°BO97U000097 describes a combination of a frame structure, a closure panel and a wall according to the preamble of claim 1, comprising a frame structure for doors or windows with concealed hinges and frame having a surface on a same plane of a wall with one or two push leaves, comprising a first extruded profile with a shoulder associated to a second complementary profile suitable for completing to cover the remaining part of the thickness of the wall, at the aperture of the wall. Even in this case the above described first and second profile has an edge with an oblique face, having the same drawbacks as already described.

### Summary of the invention

**[0008]** It is then a feature of the present invention to provide a frame structure for doors or windows for receiving at least one closure panel with at least one face having a surface on a same plane of a board or a wall, wherein said frame is operatively incorporated in said board or wall, where in case of boards the shape of the frame does not require to cut the boards.

**[0009]** Another feature of the present invention is to provide a frame structure for doors or windows adapted to fill modularly the thickness of the wall at the aperture in the wall.

**[0010]** A further feature of the present invention is to provide a frame structure for doors or windows of modular type, implemented at a desired thickness of the wall, which allows obtaining a high finishing quality, and with very low Installation time and cost.

**[0011]** It is still a feature of the invention to provide a frame structure for closure wings having a surface on a same plane of a wall, adapted to be used to form a built-in wardrobe or to close a space.

**[0012]** Another feature of the invention is to provide a frame structure for a closure panel having a surface on a same plane of a fixed wall suitable to form a lighting that has a surface on a same plane of the wall, or of a board or a glass.

**[0013]** Another feature of the invention is to provide a frame, structure having a surface on a same plane of a wall adapted to receive an edge of a sheet or a glass completely concealed under a ground or ceiling surface.

**[0014]** Another feature of the invention is to provide a frame structure for a closure panel having a surface on a same plane of a wall forming an upper crosspiece without shoulder for doors having a central pivot.

**[0015]** These and other objects are achieved by a combination of a frame structure, a panel and a wall according to the preamble of claim 1 further comprising the features of the characterising part of claim 1

**[0016]** In particular, the main section is solid or hollow and can be obtained by extrusion, by metal structural work, or it is a composite section with said support wing embedded in a matrix for example of wood, resin, etc.,

or it can be also obtained with several assembled elements, for example with screws.

**[0017]** In particular, said closure panel is selected from the group comprised of:

- at least one leaf panel;
- at least one sliding panel;
- a bellows like closure,
- a leaf panel with internal pivot,
- a fixed panel.

**[0018]** In particular, said closure panel is obtained with a material selected from the group comprised of:

- an opaque material;
- a transparent material.

**[0019]** This way, if the closure panel is of a transparent material, the frame allows to obtain a lighting simply arranging behind the closure panel a light source, in particular in a recess obtained at the above described aperture wall. Also, if the transparent material is a glass wall, fixed windows can be obtained.

**[0020]** Advantageously, said or each wing at right angles has a knurled inner surface, adapted to keep said frame adherent to a board of said board-wall, for example a sheet of plasterboard, or to the plaster of a brick-wall.

**[0021]** In particular, said first face of the main section can have a thicker portion, having a width substantially equal to the thickness of said closure wing, adapted to allow applying self-threading screws and to provide an enough thick layer for said screws.

**[0022]** Said thicker portion of said first face can be solid or have inner chambers for lightening the section.

**[0023]** Advantageously, said frame comprises at least one concealed hinge that can be fixed between said thicker portion of said first face and said closure wing, said hinge remaining hidden when said closure panel is in closed position.

**[0024]** Advantageously, at least one of said two side faces of said main section is knurled outside.

**[0025]** Advantageously, said or each wing at right angles ends with a protrusion oriented in an opposite direction with respect to said aperture. This protrusion has the function of forming an edge between said wall and said aperture.

**[0026]** In a particular exemplary embodiment, said frame comprises uprights and crosspieces obtained with said main section, said uprights and crosspieces being united to each other at an angle, in particular, at 90°, by means of a connecting element.

**[0027]** Said connecting element comprises advantageously a first and a second portion, said first and second portion being connected at an end thereof, in particular at right angles.

**[0028]** Advantageously, said first and second portion of said connecting element have a substantially rectangular cross section.

**[0029]** Advantageously, said extruded main section comprises an a guiding groove adapted to house said first or said second portion of said connecting element.

**[0030]** In particular, said groove is in said extruded main section.

**[0031]** In particular, said groove has a substantially rectangular cross section with an opening at a side.

**[0032]** Advantageously, said main section comprises a shoulder portion for said at least one closure panel.

**[0033]** Advantageously, said main section comprises a groove arranged near said shoulder portion, said groove being adapted to house a seal between said frame and said closure panel when said closure panel is in a closed position.

**[0034]** In a particular exemplary embodiments, said main section comprises a tubular portion adapted to house an adjustable shoe capable of adjusting the position in height of the frame once located in said aperture.

**[0035]** In particular, said tubular portion is adapted to house an adjustable shoe and is arranged within said main profile.

**[0036]** In particular, said tubular portion adapted to house an adjustable shoe has an open circular cross section.

**[0037]** in a particular exemplary embodiment, said main section extends along a curvilinear axis.

**[0038]** Advantageously, said complementary section comprises a complementary wing, extending in a way coplanar with respect to said outer face opposite to said reference face, said complementary wing having a shape equal to said wing at right angles of said main section.

**[0039]** In particular, said engagement portion of said complementary section is conformed in order to reproduce in negative the shape of said wing at right angles of said main section, said engagement portion being adapted to coupling as a dap joint with said wing at square angles.

**[0040]** In particular, said reference face has a notch in intermediate position, adapted to assist cutting an exceeding portion, if required.

**[0041]** In particular, said complementary section has cross section open.

**[0042]** Advantageously, said complementary section comprises a first support portion perpendicular to said complementary wing opposite to said outer face.

**[0043]** Advantageously, said complementary section comprises a second support portion parallel to said first support portion and distant from said reference face of a length substantially equal to the width of said wing at right angles of said main section.

**[0044]** Advantageously, said complementary section comprises a complementary protrusion that protrudes opposite to said outer face at a distance from said second support portion, equal to the width of said wing at right angles of said main section or of said complementary section. The presence of this protrusion allows cutting the complementary section immediately after this protrusion with respect to the above described reference face,

providing a secondary wing protruding at right angles from said second support portion, said secondary wing resulting equal to said complementary wing.

**[0045]** Advantageously, the inner surface opposite to said outer face of said complementary section is knurled.

**[0046]** Advantageously, the surface of said first and/or second support portion, oriented outwards from said reference face, is knurled.

**[0047]** In particular, said main section and said complementary section are obtained in extruded of aluminium.

**[0048]** Advantageously, said or each support wing embedded in said matrix is obtained with at least one metal profile element having a protruding portion forming said wing at right angles and a root portion put in said matrix, or, alternatively, with a metal profile element having two protruding portions forming respective wings at right angles and a fastening portion embedded in said matrix.

**[0049]** In a possible exemplary embodiment, said first face of said main section is plane and said or each support wing extends as an extension from said first face. Such type of main section can be used as crosspiece of the frame structure of a door of the type with a pivot in the middle, where the axis of rotation of the pivot does not coincide with an edge of the door and remains parallel to the same. The uprights, instead, have to be one with a pull-type shoulder and one with a push-type shoulder to allow the rotation of the door about its axis. Furthermore, such a section can be used to be arranged as an aperture on a wall on a ground or a ceiling surface, creating a crosspiece on one or several sides of the aperture.

#### Brief description of the drawings

**[0050]** The invention will be made clearer with the description of some exemplary embodiments, exemplifying but not limitative, with reference to the attached drawings wherein:

- Figure 1 shows a cross sectional view of a main section of a frame for a push-type closure panel;
- Figure 2 shows a cross sectional view of a main section of a frame for a closure with pull-type leaf;
- Figure 3 shows a cross sectional view of a complementary section;
- Figure 4 shows a cross section made with a horizontal plane to a push-type door comprising a frame formed by a main section and a complementary section;
- Figures from 5 to 8 show respectively alternative embodiments suitable for assembling a frame according to the invention for a push-type closure panel;
- Figure 9 shows a cross section made with a horizontal plane for a pull-type leaf comprising a frame formed by a main section and a complementary section;
- Figures from 10 to the 13 show respectively alternative embodiments of assembling steps of a frame

according to the invention for a closure with a pull-type leaf;

- Figures 14 shows an alternative exemplary embodiment of a main section for a pull-type door;
- Figure 15 shows the assembling steps of such a main section in a board-wall or brick-wall for example forming a frame for doors of a built-in wardrobe;

#### Description of preferred exemplary embodiments

**[0051]** In the following description an example will be illustrated of a frame structure for doors or windows for receiving at least one closure wing, said frame being adapted to be incorporated in a board-wall or in a brick-wall, said frame defining an aperture where said closure panel engages, said closure panel having at least one side having a surface on a same plane of said wall.

**[0052]** The frame is obtained starting from a main section 1, 2 or 3, for example an extruded profile of aluminium, with one or more chambers, as described respectively in figures 1, 2, having a first face 31 from the side of the above described aperture and a second opposite face 30, two side faces 15 and 16 substantially parallel to the above described wall, from at least one of said side faces 15 and 16 a support wing 17 protruding at right angles that ends with a protrusion 18, suitable to form an edge about said aperture.

**[0053]** In the examples shown the profiles 1 and 2 (figure 1 and 2) have two support wings 17, which can also have different length from each other.

**[0054]** The above described main section 1, 2 or 3 comprises a inner guide groove 20, adapted to house a connecting element, for two adjacent portions of the above described section 1, 2 or 3, for example an upright and a cross member. Instead of a single connecting element two connecting elements can be provided.

**[0055]** Furthermore, main sections 1, 2 or 3 comprise a groove 25 arranged according to various positions, depending on the case, adapted to house a seal rubber not shown for tightness purposes when the above described closure panel is in the closed position. Groove 25 is obtained at first face 31, where it contacts an abutment surface 14, see figure 1, or on said abutment surface 14, see figure 2.

**[0056]** In particular, figures 1 and 2 show two examples of main section 1 and 2 for making the uprights of a frame obtained according to the invention, respectively for at least one push-type closure panel 60, shown in figures 4 and 5, or for at least one closure with pull-type leaf 61, shown in figures 10 and 11. The above described first face 31 has a thicker portion 32, having a width substantially equal to the thickness of the above described closure wing, consisting of an inner wall 22 and an external wall 23, with interposition of a chamber 24. Alternatively, the chamber 24 can be absent, and the thicker portion 32 is solid. In the example described in figure 1, the main section 1 comprises a main chamber 10 and an adjacent chamber 11, whereas in the example 2 of figure 2 the

main section 2 comprises a chamber 12 having a substantially rectangular cross section to support abutment surface 14.

**[0057]** Figure 3 shows a complementary extruded section 4 associable to the above described main section 1 and 2 described in figures 1 and 2, suitable for completing to cover the thickness of said wall at the aperture (for example in figure 5-9 and 11-15). This complementary section 4 has a reference face 41 adapted to operatively contact one of said side faces 1.5 of said main section 1 or 2, and an outer face 40 adapted to remain visible in the aperture defined by the frame on said wall.

**[0058]** On complementary section 4, furthermore, a complementary wing 45 can be provided, having a shape equal to wing 17 of main sections 1, 2 and 3 of figures 1, 2. The complementary wing 45 extends from said outer face 40 at the opposite ends with respect to said reference face 41. Furthermore, an engagement portion 42 is provided adapted to couple with said wing 17 of said main section 1 or 2 or to said complementary wing 45 of another complementary section 4. In particular, the above described engagement portion 42 is conformed in order to reproduce in negative the shape of the wing 17 of a main section 1 or 2, this engagement portion 42 being adapted to couple to wing 17 of a section 1 or 2 as above described or to a wing 45 of a next complementary section 4 mounted. In the example described, the outer face 40 and the reference face 41 are arranged substantially at an L configuration. The above described section 4 can have then a notch 44 in an intermediate position of the above described reference surface 41, adapted to assist cutting an exceeding portion, if required. The complementary section 4 of the example of figure 3 comprises a first support portion 47 parallel to the wall 50, shown in figures 4, 5 and 10, 11, which extends opposite to the outer face 40. From the first support portion 47 wing 45 protrudes at right angles. Furthermore, a second support portion 48 can be provided, parallel to said first support portion 47 and distant from said reference face 41 of the same length as the width of the wing 17 of a main section 1 or 2. Finally, the complementary section 4 has a complementary protrusion 55, equal to the protrusion 49 and the protrusion 18 of the main section opposite to the outer face 40 and at a distance from the second support portion 48 equal to the width of the wing 17 of the main section 1 or 2 or the wing 45 of section 4 same. This way, by eliminating the part exceeding protrusion 55, opposite to reference face 41, a wing 46 remains, substantially equal to wing 45. The inner surface opposite to the outer face 40 is knurled, as also the surface of the above described first and/or second portion of reference is knurled, and oriented outwards with respect to reference face 41.

**[0059]** Figure 4 shows a cross sectional view of an embodiment of a frame for doors or windows for receiving at least one push-type closure panel 60 having a surface on a same plane of a wall, mounted on a wall 50 having a thickness equal to the total width of a main section 1 and of a complementary section 4 associated. Obviously,

alternatively, the invention can be fixed to a wall brick-wall 51. In figures 8 and 9, on the right side, a wall is shown obtained from boards 52, for example of plaster-board, without showing the relative support structure. Instead, on the left side a brick-wall 51 is shown,

**[0060]** Figures from 5 to 8, show alternative assembling embodiments of a main section 1 for a push-type closure panel 60 (figure 4) associated respectively to a complementary section 4, a partial complementary section 4', a complementary section 4 with a partial complementary section 4', two complementary profiles 4 in series, according to the thickness of the wall.

**[0061]** Similarly, figure 9 shows a cross sectional view of an embodiment of a frame for doors or windows for receiving at least one closure panel having a surface on a same plane of a wall for a pull-type door 61, for a board-wall 50 of thickness equal to the width total of a main section 2 and of an associated complementary section 4. Obviously, like in figure 4, alternatively, the invention can be fixed to a brick-wall 51 (shown at the left).

**[0062]** Figures from 10 to 13, show alternative embodiments of assembling a main section 2 for a closure with pull-type leaf associated respectively to a complementary section 4, a partial complementary section 4', a complementary section 4 with a partial complementary section 4', two complementary profiles 4 in series, depending the thickness of the wall.

**[0063]** The examples of closure panels and walls are not limitative, being various other solutions possible according to the shape and the arrangements of the walls.

**[0064]** Figure 14 shows an alternative exemplary embodiment of a main section 3, as already shown in figure 16, but with two support wings 17 at opposite sides. Such a section 3 can be used for the frame of a door for access to a recess, for example a built-in wardrobe as shown in figure 27. More in the detail the section 3 has both side faces knurled and wings 17 protrude from such faces. The first face 31 from the side of the aperture comprises an enlarged portion 110 with a bevelled portion 111 to assist centring screws for fastening a hinge. The inner sides can comprise respective channels 112 for assembling the head of more profiles in turn.

**[0065]** Figure 15 shows possible assembling configurations of such a section 3 for a board-wall 52. Section 3 is mounted with a complementary section 4 in case of a wall of width higher than section 3. In case of a board-wall, section 3 can be mounted through a bracket 120.

**[0066]** The foregoing description of a specific embodiment will so fully reveal the invention according to as defined by the claims so that others, by applying current knowledge, will be able to modify and/or adapt for various applications such an embodiment without further research and without parting from the invention as defined by the claims, and it is therefore to be understood that such adaptations and modifications will have to be considered as equivalent to the specific embodiment. The means and the materials to realise the different functions described herein could have a different nature without,

for this reason, departing from the field of the invention as defined by the claims. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

## Claims

1. A combination of a frame structure (1,2,3,4,4'), a closure panel (60,61,70) and a wall (50,51,52), said frame structure being for doors and windows, for furniture or for lightings, for receiving at least one fixed or mobile closure panel (60,61,70), said frame structure (1,2,3,4,4') being incorporated in said wall (50,51,52) being a board-wall or a brick-wall, said frame structure (1,2,3,4,4') defining an aperture where said closure panel (60,61,70) engages, said aperture of said frame structure (1,2,3,4,4') being such that in closed position said closure panel (60,61,70) has at least one side having a surface on a same plane of said wall (50,51,52), said frame structure (1,2,3,4,4') is adapted to fill modularly the thickness of the wall at the aperture in said wall and comprises a main section (1,2,3) and a complementary section (4,4'), said main section having a first face (31) at the same side of said aperture, said first face (31) being visible at the reveal side of said aperture, a second face (30) opposite to said aperture, two side faces (15,16) and a first support wing (17) protruding from a first side face (16), a board of said board-wall or the plaster of said brick-wall being supported on at least one of said side faces (15,16) and on said first support wing (17), said main section (1,2,3) being associated to said complementary section (4,4') suitable for completing to cover the whole thickness of said wall (50,51,52) at said aperture so that the overall thickness of the frame structure (1,2,3,4,4'), comprising the main section (1,2,3) and the complementary section (4,4') is equal to the thickness of said wall (50, 51, 52), said complementary section (4,4') having a reference face (41) operatively parallel to one of said side faces (15,16) of said main section (1,2,3), an outer face (40) adapted to remain visible in said aperture and being aligned to the first face (31) of the main section (1,2,3), lengthening said first face (31) of the main section (1) to a desired length required to cover the whole thickness of the wall (50,51,52) and engagement portion (42) for positively engaging said complementary section (4,4') with said main section (1,2,3),  
**characterised in that**  
 said two side faces (15,16) of the main section (1,2,3) are substantially parallel to said wall (50, 51,52), said first support wing (17) protrudes at right angles from said first side face (16) such that said support wing is orthogonal to said wall (50,51,52) and forms an edge at right angles with

respect to said first side face (16), and such that a board of said board-wall or the plaster of said brick-wall is supported at a right angle between said first side face (16) and said first support wing (17) and **in that** a second wing (17) is protruding at right angles from the second side face (15) of the main section (1,2,3), said second wing (17) being aligned with said first face (31), and said engagement portion (42) of said complementary section (4,4') positively engages with said second wing (17) of said main section (1,2,3) so that the outer face (40) of the complementary section (4,4') and the first face (31) of the main section (1,2,3) are aligned in the same plan.

2. A combination, according to claim 1, wherein said or each wing at right angles (17) has a knurled inner surface, adapted to keep said frame adherent to a board of a board-wall or to the plaster of a brick-wall.
3. A combination, according to claim 1, wherein at least one of said two side faces (15,16) is knurled outside.
4. A combination, according to claim 1, wherein said or each wing at right angles (17) ends with a protrusion (18) oriented according to an opposite direction with respect to said aperture, this protrusion having the function of forming an edge between said wall (50,51,52) and said aperture.
5. A combination, according to claim 1, wherein said complementary section (4,4') comprises a complementary wing (45), extending in a way coplanar with respect to said outer face (40) at an end opposite to said reference face (41), said complementary wing (45) having a shape alike to said wing (17) at right angles of said main section (1,2,3).
6. A combination, according to claim 1, wherein said engagement portion (42) of said complementary section (4,4') is conformed in order to reproduce in negative the shape of said wing (17) at right angles of said main section (1,2,3), said engagement portion (42) being adapted to positively engage with said wing (17) at square angles.

## Patentansprüche

1. Kombination einer Rahmenstruktur (1, 2, 3, 4, 4'), einer Verschlussplatte (60, 61, 70) und einer Wand (50, 51, 52), wobei die Rahmenstruktur für Türen und Fenster, für Möbel oder Beleuchtungen, zur Aufnahme mindestens einer festen oder beweglichen Verschlussplatte (60, 61, 70) dient, wobei die Struktur (1, 2, 3, 4, 4') in der Wand (50, 51, 52) enthalten ist, die eine Holztrennwand oder eine Ziegelwand ist, wobei die Rahmenstruktur (1, 2, 3, 4, 4') eine Öffnung definiert, wo die Verschlussplatte (60, 61,

70) in Eingriff ist, wobei die Öffnung der Rahmenstruktur (1, 2, 3, 4, 4') derart ist, dass die Verschlussplatte (60, 61, 70) in der geschlossenen Stellung mindestens eine Seite mit einer Oberfläche in einer selben Ebene wie die Wand (50, 51, 52) aufweist, wobei die Rahmenstruktur (1, 2, 3, 4, 4') dafür ausgelegt ist, die Dicke der Wand bei der Öffnung in der Wand modular zu füllen und einen Hauptabschnitt (1, 2, 3) und einen Ergänzungsabschnitt (4, 4') umfasst, wobei der Hauptabschnitt eine erste Fläche (31) auf derselben Seite der Öffnung, wobei die erste Fläche (31) auf der Leibungsseite der Öffnung sichtbar ist, eine zweite Fläche (30), die der Öffnung gegenüberliegt, aufweist, wobei von einer ersten Seitenfläche (16) zwei Seitenflächen (15, 16) und ein erster Stützflügel (17) vorstehen, wobei eine Platte der Holztrennwand oder des Putzes der Ziegelwand mindestens an einer der Seitenflächen (15, 16) und an dem ersten Stützflügel (17) gestützt sind, wobei der Hauptabschnitt (1, 2, 3), der dem Ergänzungsabschnitt (4, 4') zugeordnet ist, für den schluss der Abdeckung der gesamten Dicke der Wand (50, 51, 52) bei der Öffnung in der Weise geeignet ist, dass die Gesamtdicke der Rahmenstruktur (1, 2, 3, 4, 4'), die den Hauptabschnitt (1, 2, 3) und den Ergänzungsabschnitt (4, 4') umfasst, gleich der Dicke der Wand (50, 51, 52) ist, wobei der Ergänzungsabschnitt (4, 4') eine Referenzfläche (41), die funktional parallel zu einer der Seitenflächen (15, 16) des Hauptabschnitts (1, 2, 3) ist, eine Außenfläche (40), die dafür ausgelegt ist, in der Öffnung sichtbar zu bleiben und die auf die erste Fläche (31) des Hauptabschnitts (1, 2, 3) ausgerichtet ist, wobei sie die erste Fläche (31) des Hauptabschnitts (1) auf eine gewünschte Länge verlängert, die erforderlich ist, um die gesamte Dicke der Wand (50, 51, 52) zu bedecken, und einen Eingriffsabschnitt (42) für den kraftschlüssigen Eingriff des Ergänzungsabschnitts (4, 4') mit dem Hauptabschnitt (1, 2, 3) aufweist, **dadurch gekennzeichnet, dass** die zwei Seitenflächen (15, 16) des Hauptabschnitts (1, 2, 3) im Wesentlichen parallel zu der Wand (50, 51, 52) sind, wobei der erste Stützflügel (17) rechtwinklig von der ersten Seitenfläche (16) so vorsteht, dass der Stützflügel orthogonal zu der Wand (50, 51, 52) ist und eine rechtwinklige Kante in Bezug auf die erste Seitenflächen (16) bildet, und so, dass eine Platte der Holztrennwand oder des Putzes der Ziegelwand rechtwinklig zwischen der ersten Seitenfläche (16) und dem ersten Stützflügel (17) gestützt ist, und dass ein zweiter Flügel (17) rechtwinklig von der zweiten Seitenfläche (15) des Hauptabschnitts (1, 2, 3) vorsteht, wobei der zweite Flügel (17) auf die erste Fläche (31) ausgerichtet ist, und wobei der Eingriffsabschnitt (42) des Ergänzungsabschnitts (4, 4') mit dem zweiten Flügel (17) des Hauptabschnitts (1, 2, 3) in der Weise kraftschlüssig in Eingriff ist, dass die Außenfläche (40) des Ergänzungsabschnitts (4,

4') und die erste Fläche (31) des Hauptabschnitts (1, 2, 3) in derselben Ebene ausgerichtet sind.

2. Kombination nach Anspruch 1, bei der der oder jeder rechtwinklige Flügel (17) eine geriffelte Innenoberfläche aufweist, die dafür ausgelegt ist, den Rahmen an einer Platte einer Holztrennwand oder an dem Putz einer Ziegelwand haftend zu halten.
3. Kombination nach Anspruch 1, bei der mindestens eine der zwei Seitenflächen (15, 16) auf der Außenseite geriffelt ist.
4. Kombination nach Anspruch 1, bei der der oder jeder rechtwinklige Flügel (17) mit einem Vorsprung (18) endet, der in Übereinstimmung mit einer entgegengesetzten Richtung in Bezug auf die Öffnung orientiert ist, wobei dieser Vorsprung die Funktion aufweist, eine Kante zwischen der Wand (50, 51, 52) und der Öffnung zu bilden.
5. Kombination nach Anspruch 1, bei der der Ergänzungsabschnitt (4, 4') einen Ergänzungsflügel (45) umfasst, der in einer Weise an einem der Referenzfläche (41) gegenüberliegenden Ende koplanar in Bezug auf die Außenfläche (40) verläuft, dass der Ergänzungsflügel (45) eine ähnliche Form wie der zu dem Hauptabschnitt (1, 2, 3) rechtwinklige Flügel (17) aufweist.
6. Kombination nach Anspruch 1, bei der der Eingriffsabschnitt (42) des Ergänzungsabschnitts (4, 4') so angepasst ist, dass er die Form des zu dem Hauptabschnitt (1, 2, 3) rechtwinkligen Flügels (17) negativ reproduziert, wobei der Eingriffsabschnitt (42) dafür ausgelegt ist, mit dem rechtwinkligen Flügel (17) kraftschlüssig in Eingriff zu gelangen.

#### 40 Revendications

1. Combinaison d'une structure de cadre (1, 2, 3, 4, 4'), d'un panneau de fermeture (60, 61, 70) et d'une paroi (50, 51, 52), ladite structure de cadre étant pour des portes et des fenêtres, pour des meubles ou pour des éclairages, pour recevoir au moins un panneau de fermeture fixe ou mobile (60, 61, 70), ladite structure de cadre (1, 2, 3, 4, 4') incorporée dans ladite paroi (50, 51, 52) étant une paroi en carton ou une paroi en brique, ladite structure de cadre (1, 2, 3, 4, 4') définissant une ouverture dans laquelle ledit panneau de fermeture (60, 61, 70) s'engage, ladite ouverture de ladite structure de cadre (1, 2, 3, 4, 4') étant telle qu'en position fermée, ledit panneau de fermeture (60, 61, 70) possède au moins un côté ayant une surface sur un même plan de ladite paroi (50, 51, 52), ladite structure de cadre (1, 2, 3, 4, 4') est apte à remplir d'une manière modulaire l'épais-

seur de la paroi à l'ouverture dans ladite paroi et comprend une section principale (1, 2, 3) et une section complémentaire (4, 4'), ladite section principale ayant une première face (31) au même côté de ladite ouverture, ladite première face (31) étant visible au côté listel de ladite ouverture, une seconde face (30) opposée à ladite ouverture, deux faces latérales (15, 16) et une première ailette de support (17) faisant saillie d'une première face latérale (16), un carton de ladite paroi en carton ou le plâtre de ladite paroi en brique étant supporté sur au moins une desdites faces latérales (15, 16) et sur ladite première ailette de support (17), ladite section principale (1, 2, 3) étant associée à ladite section complémentaire (4, 4') apte à compléter pour couvrir toutes l'épaisseur de ladite paroi (50, 51, 52) à ladite ouverture de sorte que l'épaisseur totale de la structure de cadre (1, 2, 3, 4, 4'), comprenant la section principale (1, 2, 3) et la section complémentaire (4, 4'), est égale à l'épaisseur de ladite paroi (50, 51, 52), ladite section complémentaire (4, 4') ayant une face de référence (41) fonctionnellement parallèle à l'une desdites faces latérales (15, 16) de ladite section principale (1, 2, 3), une face extérieure (40) apte à rester visible dans ladite ouverture et alignée avec la première face (31) de la section principale (1, 2, 3), en allongeant ladite première face (31) de ladite section principale (1) à une longueur recherchée requise pour couvrir toute l'épaisseur de la paroi (50, 51, 52) et la portion d'engagement (42) pour mettre positivement en prise ladite section complémentaire (4, 4') avec ladite section principale (1, 2, 3),

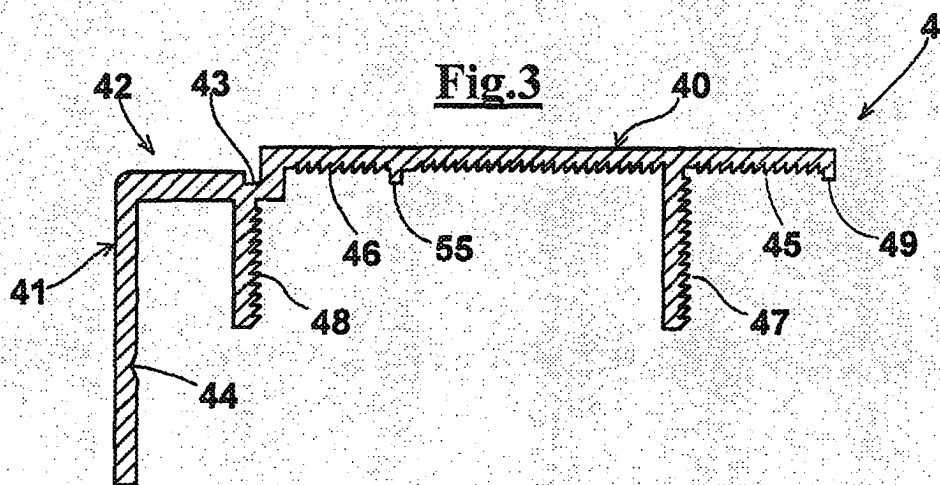
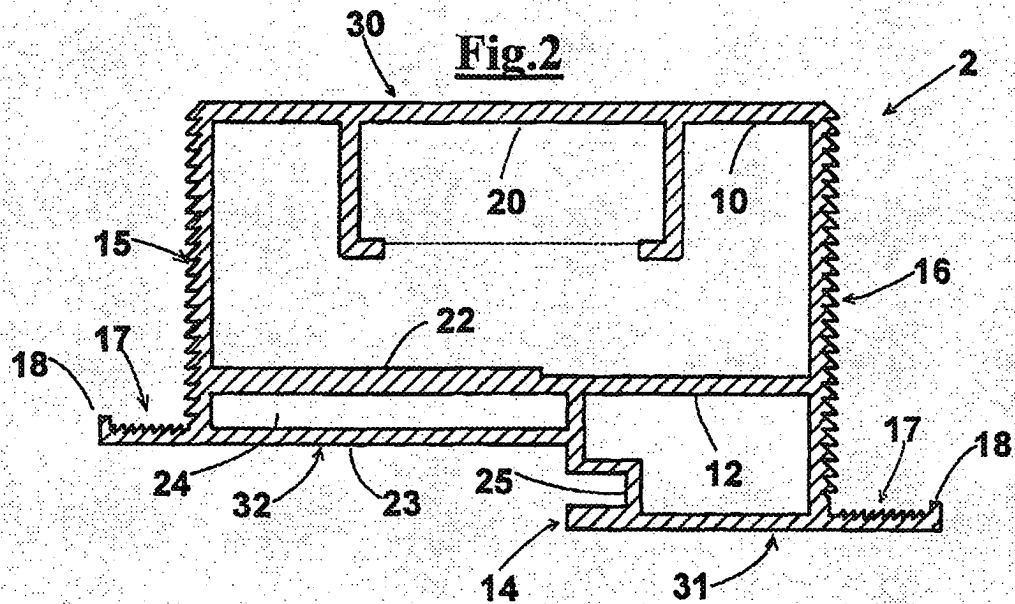
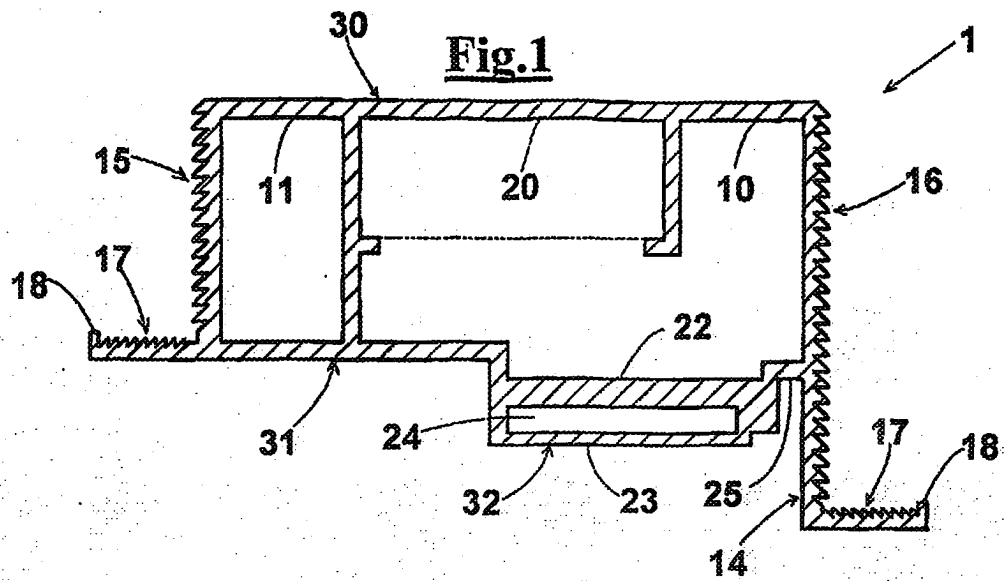
**caractérisée en ce que** lesdites deux faces latérales (15, 16) de la section principale (1, 2, 3) sont sensiblement parallèles à ladite paroi (50, 51, 52), ladite première ailette de support (17) fait saillie selon des angles droits depuis ladite première face latérale (16) de sorte que ladite ailette de support est orthogonale à ladite paroi (50, 51, 52) et forme un bord à angles droits relativement à ladite première face latérale (16) et de telle sorte qu'un carton de ladite paroi en carton ou le plâtre de ladite paroi en brique est supporté à un angle droit entre ladite première face latérale (16) et ladite première ailette de support (17), et **en ce qu'**une deuxième ailette (17) fait saillie selon des angles droits de la seconde face latérale (15) de la section principale (1, 2, 3), ladite deuxième ailette (17) étant alignée avec ladite première face (31), et ladite portion d'engagement (42) de ladite section complémentaire (4, 4') vient positivement en prise avec ladite deuxième ailette (17) de ladite section principale (1, 2, 3) de sorte que la face extérieure (40) de la section complémentaire (4, 4') et la première face (31) de la section principale (1, 2, 3) sont alignées dans le même plan.

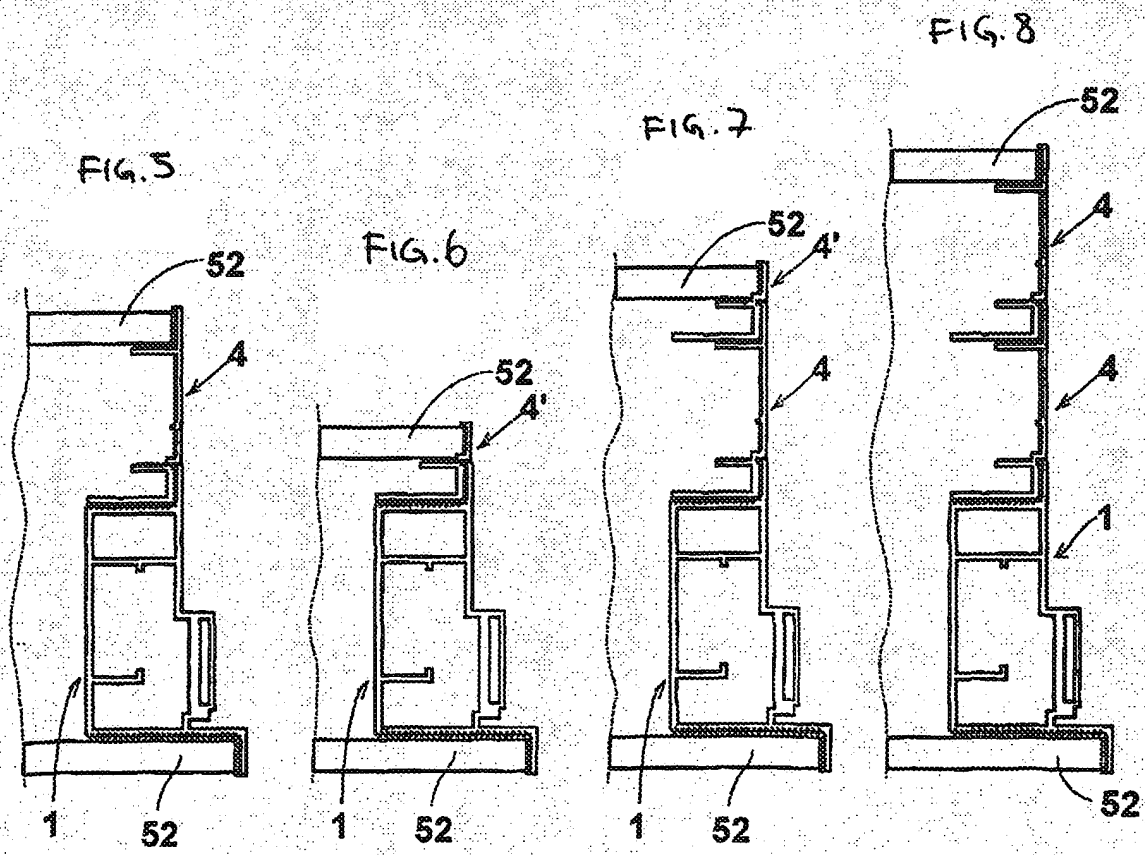
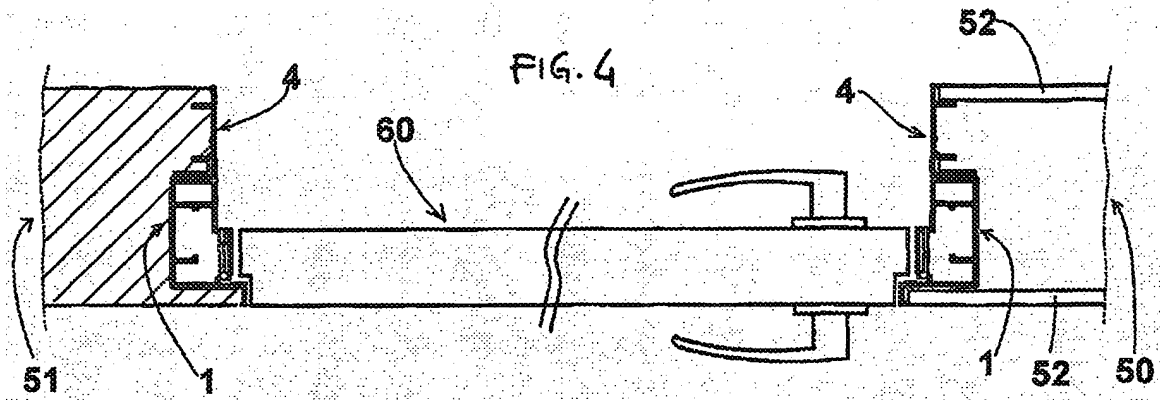
2. Combinaison selon la revendication 1, dans laquelle ladite ou chaque ailette à angles droits (17) possède

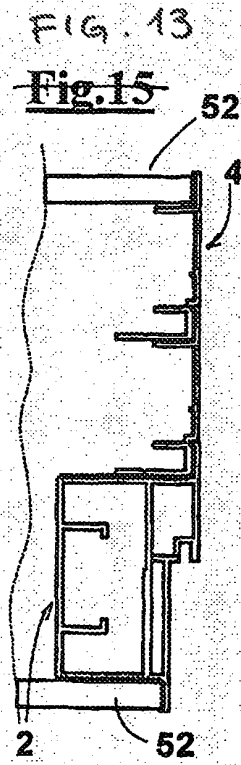
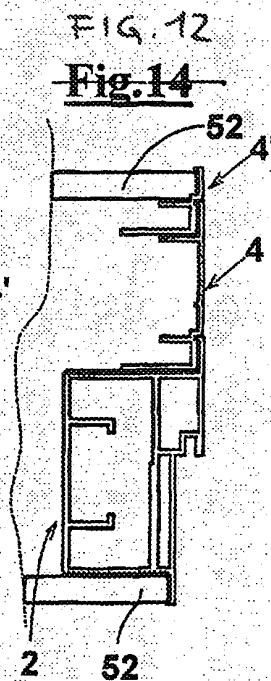
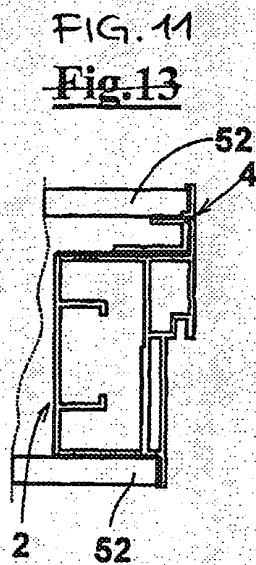
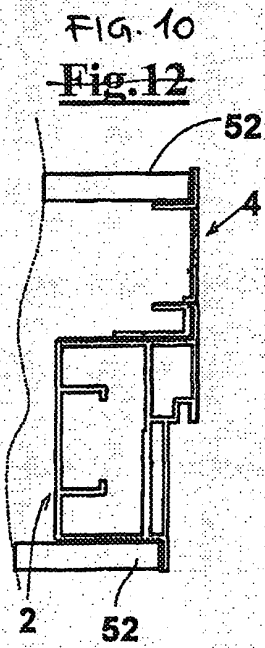
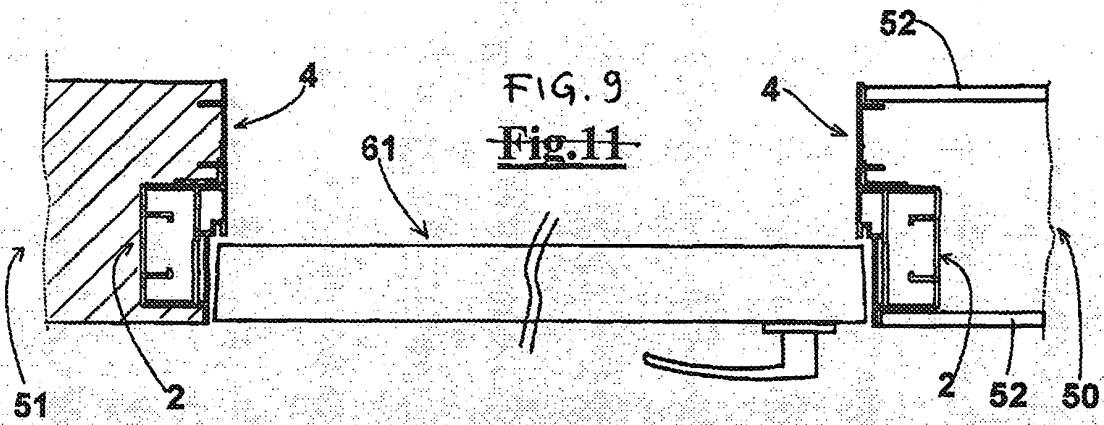
une surface intérieure moletée, apte à maintenir ledit cadre en adhérence à un carton de la paroi en carton ou au plâtre du mur en brique.

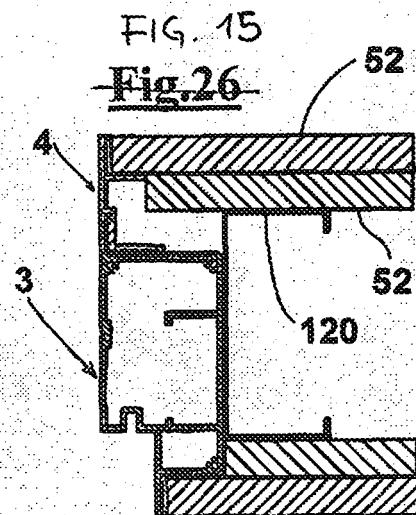
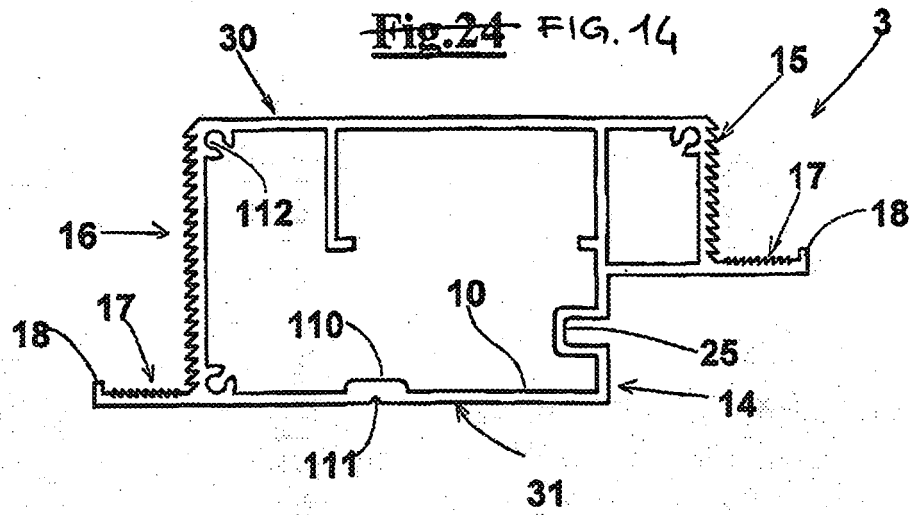
3. Combinaison selon la revendication 1, dans laquelle au moins une desdites deux faces latérales (15, 16) est moletée à l'extérieur.
4. Combinaison selon la revendication 1, dans laquelle ladite ou chaque ailette à angles droits (17) se termine par une saillie (18) orientée selon une direction opposée relativement à ladite ouverture, cette saillie ayant la fonction de former un bord entre ladite paroi (50, 51, 52) et ladite ouverture.
5. Combinaison selon la revendication 1, dans laquelle ladite section complémentaire (4, 4') comprend une ailette complémentaire (45) s'étendant de manière coplanaire relativement à ladite face extérieure (40) à une extrémité opposée à ladite face de référence (41), ladite ailette complémentaire (45) ayant une forme semblable à ladite ailette (17) à angles droits de ladite section principale (1, 2, 3).
6. Combinaison selon la revendication 1, dans laquelle ladite portion d'engagement (42) de ladite section complémentaire (4, 4') est configurée pour reproduire en négatif la forme de ladite ailette (17) à angles droits de ladite section principale (1, 2, 3), ladite portion d'engagement (42) étant apte à venir positivement en prise avec ladite ailette (17) à angles carrés.











**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- IT VI20010007 U [0003]
- IT BO970098 U [0005]
- IT BO970097 U [0007]