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(54) **Fastening system for one or more staves, in particular for covering external building walls, and related process for fastening staves**

Befestigungssystem für eine oder mehrere Wandplatten, insbesondere zum Abdecken externer Gebäudewände und zugehöriges Verfahren zum Befestigen der Wandplatten

Système de fixation pour une ou plusieurs douves, en particulier pour recouvrir des murs de construction externes et procédé associé pour fixer des douves

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DescriptionField of the invention

[0001] The present invention relates to a fastening system for one or more staves, in particular for covering external building walls, and related process for fastening staves.

State of the art

[0002] The covering of the external building walls has always been of great interest for the architectural field. According to the climate of the country, covering may protect insulation materials from inclement weather, or may shield the building from solar radiation or also serve a mere aesthetic function.

[0003] A type of covering provides for using staves, typically made of wood, arranged parallel to one another on walls of diverse nature, whereon they are overlapped.

[0004] The operation of fastening staves is not particularly smooth, as care must be spent towards the parallelism between the staves, the evenness of the distance between the staves, the centering of the screws so as to give an even appearance. Risk factors which, to be reduced, require long assembly times.

[0005] Another vital issue is the duration of a wooden façade to inclement weather.

[0006] The "façade system" consisting of profiles and fastening systems should avoid water stagnation which could deteriorate the wood.

[0007] EP-1621697-A2 shows a supporting frame for covering elements like bricks, panels, plates or tiles, where the covering elements have an upper profile with slots where the water can stagnate.

Summary of the invention

[0008] It is the object of the present invention to provide a fastening system for a stave, in particular for covering external building walls, and the related process for fastening staves in order to solve the above-described problems.

[0009] According to a main aspect of the present invention, the system for fastening one or more staves to building walls comprises one or more supporting profiles adapted to be directly or indirectly fastened to the wall, and plaques adapted to fasten the staves on the supporting profiles, said staves being fastened in a direction substantially perpendicular to the profiles, according to claim 1.

[0010] Therefore, the present invention aims at achieving the above-discussed objects by providing a fastening system for staves, in particular for covering the external building walls, and the related process for fastening staves, as described in the claims which form an integral part of the present description.

Brief description of the drawings

[0011] Further features and advantages of the invention will become more apparent in the light of the detailed description of preferred, but not exclusive, embodiments thereof, disclosed by way of non-limiting example, with the aid of the accompanying drawings, in which:

figures 1A, 1B and 3 show the fastening system in the case of staves fastened in horizontal direction, in perspective, side and frontal views, respectively; figures 2A, 2B and 4 show the fastening system in the case of staves fastened in vertical direction, in perspective, side and frontal views, respectively; figures 1C and 2C show various possible shapes of plaques for fastening the staves on the profiles; figure 5 shows the shape of the profiles in a perspective, side section view; figures 6A and 6B show two variants of the systems for fastening the profiles to the walls; figures 7A and 7B show two embodiments of templates for drilling holes on the profiles.

Detailed description of preferred embodiments of the invention

[0012] A system for fastening one or more staves to building walls in accordance with the invention substantially comprises one or more supporting profiles 2 directly or indirectly fastened to the wall, and plaques 3...8 adapted to fasten the staves on the profiles.

[0013] The profiles may be installed on the wall in succession and parallel to one another, and may take any orientation. In a preferred embodiment, which will be described hereinafter, they are installed in vertical direction, but any other orientation is possible.

[0014] Accordingly, the same considerations apply to the staves, which have a substantially perpendicular arrangement lengthwise with respect to the profiles.

[0015] In the specific case described below, the staves are substantially horizontally installed on the walls lengthwise, while they may take a cantilever orientation of the section (horizontal direction), preferably slightly forward inclined, (figures 1A, 1B, 3), or bonded to the profiles (vertical direction) (figures 2A, 2B, 4). In any case, the orientation taken should ensure the drainage of rainwater.

[0016] The plaques for fastening the staves may have different shapes, some examples of which are illustrated in figures 1C and 2C and numbered from 3 to 8.

[0017] They generally comprise a central part 3.3,8.3 which, in use, will take a substantially vertical orientation, and one or two upper and/or lower fastening ends. The central part 3.3,3.8 is provided with a hole 10.3.... 10.8 for inserting a screw or the like for fastening it to the profile.

[0018] One fastening end is hook-shaped. In use, this end may be in an upper position 4.1, 5.1, 7.1, 8.1 and/or

in a lower position 6.2, 7.2.

[0019] The other fastening end may also be hook-shaped on the same plaque (7.1 and 7.2) or clip-shaped, so as to have a tab 3.2, 4.2 adapted to keep the stave.

[0020] The central part 3.3,3.8 is adapted to mutually bind said fastening ends.

[0021] A suitable kind of stave to be used in said system may include two simple longitudinal slots, one for each fastening end to the profiles through the plaques.

[0022] Avoiding the use of slots in the upper surface of the stave is preferred in order to avoid the permanence of meteoric water and the consequential deterioration of the stave. Whereby, it is preferred that the stave has an upper expansion area 111, in the part which is closer to or in contact with profile 2, adapted to engage the lower fastening end of the plaques (3.2 7.2). At the bottom, where water stagnation risk does not occur, the stave has a longitudinal slot 112, adapted to be engaged with the upper fastening end of the plaques (4.1, 5.1, 7.1, 8.1).

[0023] With reference to figure 5, the supporting profile has a preferably flattened base 20 and a perpendicular rise 21 provided with a hollow space 22. The upper end of the rise has a series of holes 23 at a certain predetermined distance apart from one another, for screwing the fastening screws of the plaques. The profile is preferably made of aluminium and the screws may be of the self-tapping type.

[0024] With reference to figures 6A, 6B, the supporting profile may be fastened to the wall in a direct manner or through a spacer 31 having a certain fixed thickness, possibly comprising two side wings housing the profile base 20 (fig. 6A); or it may be fastened to the wall by means of spacers 32, 33 possibly depth-regulated squares with respect to the wall (fig. 2B) to which said profile base is fastened. Figures 7A, 7B show templates specifically arranged for the possibility that the distance between the holes 23 on the upper side are to be varied, forming additional holes during the installation step.

[0025] Figure 7A shows a first embodiment of the template consisting of a fixed part 41 provided with a central hole in which an element 42 adapted to drill the profile and to be fixed in a point may be inserted and glide. The fixed part comprises an extension 43 in which a second part 44 may glide, which is fixable at a varying distance on the extension itself. The second part has a tip 45 adapted to drill the profile in a second point: thereby, holes placed at different distances on the profile may be obtained, if a variation of the stave pitch is required.

[0026] Figure 7B shows a second embodiment of the template which, in comparison with the first embodiment, has a further tip 46 in the fixed part, instead of the hole to house the element adapted to drill the profile, which tip 46 is adapted to penetrate an existing hole in the profile and to form a reference for gliding then the fixable part at a varying distance substantially equal to the previous distance.

[0027] Referring to the process of fastening the staves to the walls, the following steps are included.

- The profiles are fastened to the walls at a certain distance from one another, possibly by means of spacers.
- The initial plaques are positioned and screwed to the profiles: these may be in the upper or lower position on the profiles. Plaques provided with a single fastening end are preferably used: the lower end (3.2, 6.2) if in the upper position, or the upper end (5.1, 8.1) if in the lower position. A plaque will be placed on each profile, in corresponding positions in the horizontal direction (see figures 3 and 4).
- The initial stave is laid by framing it in the fastening end of the plaques.
- Staves and intermediate plaques are positioned and screwed in sequence. The latter are of the type provided with two fastening ends (4, 7).
- The final plaques are positioned and screwed to the opposed end.
- If a variation of the stave pitch is needed, the appropriate templates are used as described above.

[0028] The advantages deriving from the present invention are apparent.

[0029] Using the fastening system allows the covering of the building façades to be quickly assembled, thus achieving:

- a long durability due to the elimination of damp stagnations;
- a quick and accurate installation;
- a fastening capable of absorbing the wind forces and the snow load;
- a predetermined stave spacing on the profile and not by means of a spacer between the staves;
- the absence of completely exposed fastening on the staves;
- a fastening which may be completely performed from the front side;
- the aeration between the staves.

[0030] In addition, pre-drilling the profiles makes the stave pitch completely independent from their thickness which, due to processing and shrinking tolerances, may vary by some tenth of mm from one another. No spacers between the staves are therefore needed which, summing the error, cause the staves to be not perfectly aligned.

[0031] The assembly simplicity and the possibility of using moderately specialized work-force lead to a significant reduction in time and cost of installation, thus providing instead a higher quality than that provided by known fastening systems.

[0032] The fastening is very firm and durable, and therefore it may also be used on buildings of a considerable height.

[0033] The system integrates with the fastening systems and the substructures currently used to build wooden façades.

[0034] The particular embodiments described herein do not limit the content of this application, which covers all the variants of the invention defined in the claims.

[0035] For example, the orientation of the series of staves as installed may be other than horizontal and may take other angles, as correspondingly varying the orientation of the profile installation may suffice.

[0036] By applying light modifications achievable by a person skilled in the art, a series of staves installed in a non-parallel, mutual position but having a different mutual angulation may be obtained.

Claims

1. Fastening system of one or more wooden staves to building walls, comprising one or more supporting profiles (2) to be directly or indirectly fastened to the wall, and plaques to fasten the wooden staves on the supporting profiles, said wooden staves being fastened in a direction substantially perpendicular to the profiles, each of said plaques comprising a central part to be fastened to one of said profiles, one or two upper and/or lower fastening ends for fastening said wooden staves, **characterized in that** said one or more wooden staves have an upper expansion area (111), in the part closer or in contact with the profile (2), to be engaged with the lower fastening end of the plaques (3.2, ... 7.2), and said one or more wooden staves have at the bottom a longitudinal slot (112) to be engaged with the upper fastening end of the plaques (4.1, 5.1, 7.1, 8.1), to ensure the drainage of rainwater.
2. Fastening system of one or more wooden staves to building walls, according to Claim 1, wherein said supporting profile comprises a base (20) and a rise (21) perpendicular to the base provided with a hollow space (22), the upper side of the rise showing one or more holes (23), placed at a certain predetermined distance, for fastening the plaques by fastening means.
3. Fastening system of one or more wooden staves to building walls, according to Claim 2, wherein said central part (3.3, ... 8.3) of the plaque is provided with a hole (10.3, ... 10.8) for inserting said fastening means for fastening it to the profile.
4. Fastening system of one or more wooden staves to building walls, according to Claim 3, wherein in said plaques one fastening end is hook-shaped and can be installed in an upper position (4.1, 5.1, 7.1, 8.1) and/or in a lower position (6.2, 7.2); the other fastening end in hook-shaped on the same plaque (7.1 and 7.2), or clip-shaped, so that it has a tab (3.2, 4.2) to keep the stave.
5. Fastening system of one or more wooden staves to building walls, according to Claim 2, comprising spacers (32, 33), possibly squares, depth-regulated with regard to the wall, for said indirect fastening of said supporting profile to the wall.
6. Fastening system of one or more wooden staves to building walls, according to Claim 2, comprising a spacer (31) having a fixed thickness, possibly comprising two side wings housing the base 20 of the profile, for said direct fastening of said supporting profile to the wall.
7. Fastening system of one or more wooden staves to building walls, according to Claim 2, further comprising at least a template to produce further holes on said upper side of the profile rise, in case it is necessary to change the distance between the holes (23) already formed on said upper side, in the installation step.
8. Fastening system of one or more wooden staves to building walls, according to Claim 7, wherein said template comprises a fixed part (41) provided with a central hole wherein an element (42) can be inserted and glide, said element being able to drill the profile and to be fixed in a point, said fixed part comprising an extension (43) wherein a second part (44) can glide, said part (44) being fixable at a varying distance on said extension; said second part having a tip (45) to drill the profile in a second point.
9. Fastening system of one or more wooden staves to building walls, according to Claim 7, wherein said template comprises a fixed part (41), a further tip (46) to penetrate in a hole existing in the profile and to form a reference; said fixed part comprising an extension (43) wherein a second part (44) can glide, said part being fixable at a varying distance on said extension; said second part having a tip (45) to drill the profile in a second point.
10. Fastening system of one or more wooden staves to building walls, according to Claim 1, wherein said one or more supporting profiles are fastened to the walls, parallelly to each other and in a substantially vertical direction.
11. Wooden stave, suitable to be used in a fastening system according to any one of the preceding claims, said wooden stave having an upper expansion area (111), in the part closer or in contact with the profile (2), to be engaged with the lower fastening end of the plaques (3.2, ... 7.2), said wooden stave having, also at the bottom a longitudinal slot (112) to be engaged with the upper fastening end of the plaques (4.1, 5.1, 7.1, 8.1), to ensure the drainage of rainwater.

12. Process for fastening one or more wooden staves to building walls, able to use a fastening system according to any one of the preceding Claims, comprising the following steps:

- fastening the profiles on the walls at a determined distance from each other;
- positioning and screwing the initial plaque profiles, a plaque on each profile, in corresponding positions in a horizontal direction, in the upper or in the lower position on the profiles;
- lying the initial wooden stave by framing it in the fastening end of the plaques;
- positioning and screwing in succession wooden staves and intermediate plaques; said intermediate plaques being of the type provided with two fastening ends (4, 7);
- positioning and screwing the final plaques to the opposed end.

13. Process for fastening one or more wooden staves to building walls according to Claim 12, wherein said initial plaques are provided with a single fastening end, the lower end (3.2, 6.2) if it is in the upper position, or the upper end (5.1, 8.1) if it is in the lower position on the profile.

14. Process for fastening one or more wooden staves to building walls according to Claim 12 or 13, comprising the further step of use of said at least one template, in case a variation of the stave pitch is needed.

15. Process for fastening one or more wooden staves to building walls according to Claim 12, wherein said profiles are fastened on the walls in a substantially vertical direction and parallelly to each other.

Patentansprüche

1. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, umfassend ein oder mehrere Stützprofile (2), die direkt oder indirekt an der Wand zu befestigen sind, und Beschläge zum Befestigen der hölzernen Latten an den Stützprofilen, wobei die hölzernen Latten in einer Richtung befestigt werden, die im Wesentlichen senkrecht zu den Profilen ist, wobei jeder der Beschläge einen zentralen Teil, der an einem der Profile zu befestigen ist, und ein oder zwei obere und/oder untere Befestigungsenden zum Befestigen der hölzernen Latten umfasst, **dadurch gekennzeichnet, dass** die eine oder mehreren hölzernen Latten einen oberen Expansionsbereich (111) aufweisen, in dem Teil, der näher zu oder in Kontakt mit dem Profil (2) ist, der mit dem unteren Befestigungsende der Beschläge (3.2, ... 7.2) in Eingriff zu bringen ist, und die eine

oder mehreren hölzernen Latten an der Unterseite einen längslaufenden Schlitz (112) aufweisen, der mit dem oberen Befestigungsende der Beschläge (4.1, 5.1, 7.1, 8.1) in Eingriff zu bringen ist, um den Abfluss von Regenwasser zu gewährleisten.

2. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 1, wobei das Stützprofil eine Basis (20) und eine Erhöhung (21) senkrecht zu der Basis, die mit einem Hohlraum (22) versehen ist, umfasst, wobei die obere Seite der Erhöhung ein oder mehrere Löcher (23) zeigt, die in einem gewissen vorbestimmten Abstand platziert sind, zum Befestigen der Beschläge durch Befestigungsmittel.

3. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 2, wobei der zentrale Teil (3.3, ... 8.3) des Beschlags mit einem Loch (10.3, ... 10.8) zum Einbringen des Befestigungsmittels versehen ist, um es an dem Profil zu befestigen.

4. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 3, wobei bei den Beschlägen ein Befestigungsende hakenförmig ist und in einer oberen Position (4.1, 5.1, 7.1, 8.1) und/oder in einer unteren Position (6.2, 7.2) installiert werden kann, wobei das andere Befestigungsende an demselben Beschlag (7.1 und 7.2) hakenförmig ist, oder klammerförmig ist, so dass es einen Tab (3.2, 4.2) aufweist, um die Latte zu halten.

5. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 2, umfassend Abstandshalter (32, 33), möglicherweise Vierkante, die in Bezug auf die Wand tiefenreguliert sind, für das indirekte Befestigen des Stützprofils an der Wand.

6. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 2, umfassend einen Abstandshalter (31), der eine festgelegte Dicke aufweist, möglicherweise umfassend zwei Seitenflügel, die die Basis (20) des Profils beherbergen, für das direkte Befestigen des Stützprofils an der Wand.

7. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 2, des Weiteren umfassend zumindest eine Schablone, um weitere Löcher an der oberen Seite der Profilerhöhung zu erzeugen, im Fall, dass es notwendig ist, den Abstand zwischen den bereits an der oberen Seite gebildeten Löchern (23) zu verändern, in dem Installationsschritt.

8. Befestigungssystem einer oder mehrerer hölzerner

Latten an Gebäudewänden, gemäß Anspruch 7, wobei die Schablone einen festgelegten Teil (41) umfasst, der mit einem zentralen Loch versehen ist, in welches ein Element (42) eingebracht werden und gleiten kann, wobei das Element in der Lage ist, das Profil zu bohren und in einem Punkt festgelegt zu werden, wobei der festgelegte Teil eine Erstreckung (43) umfasst, entlang derer ein zweiter Teil (44) gleiten kann, wobei der Teil (44) in einem veränderlichen Abstand an der Erstreckung festlegbar ist, wobei der zweite Teil eine Spitze (45) aufweist, um das Profil in einem zweiten Punkt zu bohren.

9. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 7, wobei die Schablone einen festgelegten Teil (41) und eine weitere Spitze (46), um in ein in dem Profil existierendes Loch einzudringen und eine Referenz zu bilden, umfasst, wobei der festgelegte Teil einer Erstreckung (43) umfasst, entlang derer ein zweiter Teil (44) verschoben werden kann, wobei der Teil in einem veränderlichen Abstand an der Erstreckung befestigbar ist, wobei der zweite Teil eine Spitze (45) aufweist, um das Profil in einem zweiten Punkt bohren.

10. Befestigungssystem einer oder mehrerer hölzerner Latten an Gebäudewänden, gemäß Anspruch 1, wobei die ein oder mehreren Stützprofile an den Wänden befestigt sind, parallel zueinander und in einer im Wesentlichen senkrechten Richtung.

11. Hölzerne Latte, die geeignet ist, in einem Befestigungssystem gemäß irgendeinem der vorangegangenen Ansprüche genutzt zu werden, wobei die hölzerne Latte einen oberen Expansionsbereich (111) aufweist, in dem Teil, der näher zu oder in Kontakt mit dem Profil (2) ist, der mit dem unteren Befestigungsende der Anschläge (3.2, ... 7.2) in Eingriff zu bringen ist, wobei die hölzerne Latte an der Unterseite auch einen längsverlaufenden Schlitz (112) aufweist, der mit dem oberen Befestigungsende der Beschläge (4.1, 5.1, 7.1, 8.1) in Eingriff zu bringen ist, um den Abfluss vom Regenwasser zu gewährleisten.

12. Verfahren zum Befestigen einer oder mehrerer hölzerner Latten an Gebäudewänden, das in der Lage ist, ein Befestigungssystem nach irgendeinem der vorangegangenen Ansprüche zu nutzen, umfassend die folgenden Schritte:

- Befestigen der Profile an den Wänden in einem bestimmten Abstand voneinander;
- Positionieren und Verschrauben der ersten Beschlagsprofile, ein Beschlag an jedem Profil, in korrespondierenden Positionen in einer horizontalen Richtung, in der oberen oder in der un-

teren Position der Profile;

- Verlegen der ersten Latte durch Einlegen derselben in das Befestigungsende der Beschläge;
- Positionieren und Verschrauben, in Folge, hölzerner Latten und dazwischenliegender Beschläge, wobei die dazwischenliegenden Beschläge von dem Typ sind, der mit zwei Befestigungsenden (4, 7) versehen ist;
- Positionieren und Verschrauben der abschließenden Beschläge an dem gegenüberliegenden Ende.

13. Verfahren zum Befestigen einer oder mehrerer hölzerner Latten an Gebäudewänden gemäß Anspruch 12, wobei die ersten Beschläge mit einem einzelnen Befestigungsende versehen sind, dem unteren Ende (3.2, 6.2), falls es in der oberen Position ist, oder dem oberen Ende (5.1, 8.1), falls es in der unteren Position des Profils ist.

14. Verfahren zum Befestigen einer oder mehrerer hölzerner Latten an Gebäudewänden gemäß Anspruch 12 oder 13, umfassend den weiteren Schritt des Nutzens der zumindest einen Schablone, im Fall, dass eine Variation des Lattenabstands nötig ist.

15. Verfahren zum Befestigen einer oder mehrerer hölzerner Latten an Gebäudewänden gemäß Anspruch 12, wobei die Profile an den Wänden in einer im Wesentlichen senkrechten Richtung und parallel zueinander befestigt werden.

Revendications

1. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment, comportant un ou plusieurs profilé(s) de support (2) destiné(s) à être fixé(s) directement ou indirectement sur la paroi, et des plaques pour fixer les douves de bois sur les profilés de support, lesdites douves de bois étant fixées dans une direction essentiellement perpendiculaire aux profilés, chacune desdites plaques comportant une partie centrale à fixer sur l'un desdits profilés, une ou deux extrémité(s) de fixation supérieure(s) et/ou inférieure(s) pour fixer lesdites douves de bois, **caractérisé en ce que** ladite une ou lesdites plusieurs douve(s) de bois présente(nt) une zone d'extension supérieure (111), dans la partie la plus proche du, ou en contact avec, le profilé (2), afin d'être engagée avec l'extrémité inférieure de fixation des plaques (3.2 ... 7.2), et ladite (lesdites) une ou plusieurs douve(s) de bois présente(nt) au niveau de la partie inférieure une fente longitudinale (112) à engager avec l'extrémité de fixation supérieure des plaques (4.1, 5.1, 7.1, 8.1) afin d'assurer le drainage de l'eau de pluie.

2. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 1, dans lequel ledit profilé de support comporte une base (20) et un montant (21) perpendiculaire à la base doté d'un espace creux (22), le côté supérieur du montant présentant un ou plusieurs trou(s) (23) placé(s) à une certaine distance prédéterminée en vue de fixer les plaques par des moyens de fixation. 5
3. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 2, dans lequel ladite partie centrale (3.3 ... 8.3) de la plaque est pourvue d'un trou (10.3 ... 10.8) pour insérer lesdits moyens de fixation en vue de les fixer au profilé. 10
4. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 3, dans lequel, dans lesdites plaques, une extrémité de fixation est configurée en forme de crochet et peut être installée dans une position supérieure (4.1, 5.1, 7.1, 8.1) et/ou dans une position inférieure (6.2, 7.2) ; l'autre extrémité de fixation est configurée en forme de crochet sur la même plaque (7.1 et 7.2), ou configurée sous forme d'étrier, de sorte qu'elle présente une patte (3.2, 4.2) pour maintenir la douve. 20 25
5. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 2, comportant des pièces d'écartement (32, 33) possiblement des pièces carrées, à épaisseur ajustée par rapport à la paroi, en vue de ladite fixation indirecte dudit profilé de support sur la paroi. 30 35
6. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 2, comportant une pièce d'écartement (31) présentant une épaisseur fixe, comprenant possiblement deux ailes latérales logeant la base 20 du profilé, en vue de fixer directement ledit profilé de support sur la paroi. 40
7. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 2, comportant, de plus, au moins un gabarit pour produire des trous supplémentaires sur ledit côté supérieur du montant de profilé, dans le cas où il est nécessaire de modifier la distance entre les trous (23) déjà formés sur ledit côté supérieur, lors de l'étape d'installation. 45 50
8. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 7, dans lequel ledit gabarit comporte une partie fixe (41) dotée d'un trou central dans lequel un élément (42) peut être inséré et coulisser, ledit élément pouvant percer le profilé et être fixé en un point, ladite partie fixe comportant une extension (43) dans laquelle une seconde partie (44) peut coulisser, ladite partie (44) pouvant être fixée à une distance variable sur ladite extension, ladite seconde partie comportant une pointe (45) pour percer le profilé en un second point. 55
9. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 7, dans lequel ledit gabarit comporte une partie fixe (41), une pointe supplémentaire (46) pour pénétrer dans un trou existant dans le profilé et pour former un point de référence ; ladite partie fixe comportant une extension (43) sur laquelle une seconde partie (44) peut coulisser, ladite partie pouvant être fixée à une distance variable sur ladite extension ; ladite seconde partie comportant une pointe (45) pour percer le profilé en un second point.
10. Système de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 1, dans lequel ledit ou lesdits profilé(s) de support est (sont) fixé(s) sur les parois, parallèlement l'un à l'autre et suivant une direction essentiellement verticale.
11. Douve de bois appropriée pour être utilisée dans un système de fixation selon l'une quelconque des revendications précédentes, ladite douve de bois comportant une surface d'extension supérieure (111), dans la partie la plus proche du, ou en contact avec, le profilé (2), afin de s'engager avec l'extrémité de fixation inférieure des plaques (3.2, ... 7.2), ladite douve de bois comportant également au niveau de partie inférieure une fente longitudinale (112) à engager avec l'extrémité de fixation supérieure des plaques (4.1, 5.1, 7.1, 8.1) afin d'assurer le drainage de l'eau de pluie.
12. Procédé de fixation d'une ou de plusieurs douve(s) de bois sur des parois de bâtiment, permettant d'utiliser un système de fixation selon l'une quelconque des revendications précédentes, comprenant les étapes suivantes :
 - fixer les profilés sur les parois à une distance déterminée les uns des autres ;
 - positionner et visser les profilés avec plaques initiales, une plaque sur chaque profilé, dans des positions correspondantes suivant une direction horizontale, dans la position supérieure ou dans la position inférieure sur les profilés ;
 - déposer la douve de bois initiale en la cadrant dans l'extrémité de fixation des plaques ;
 - positionner et visser successivement les douves de bois et les plaques intermédiaires ; lesdites plaques intermédiaires étant du type fourni avec deux extrémités de fixation (4, 7) ;

- positionner et visser les plaques finales sur l'extrémité opposée.

13. Procédé pour fixer une ou plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 12, dans lequel lesdites plaques initiales sont dotées d'une seule extrémité de fixation, l'extrémité inférieure (3.2, 6.2) si elle se trouve dans la position supérieure, ou l'extrémité inférieure (5.1, 8.1) si elle se trouve dans la position inférieure sur le profilé. 5 10
14. Procédé pour fixer une ou plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 12 ou 13, comportant l'étape supplémentaire consistant à utiliser ledit au moins un gabarit, dans le cas où un changement du pas des douves est nécessaire. 15
15. Procédé pour fixer une ou plusieurs douve(s) de bois sur des parois de bâtiment selon la revendication 12, dans lequel lesdits profilés sont fixés sur les parois suivant une direction essentiellement verticale et parallèlement les uns aux autres. 20

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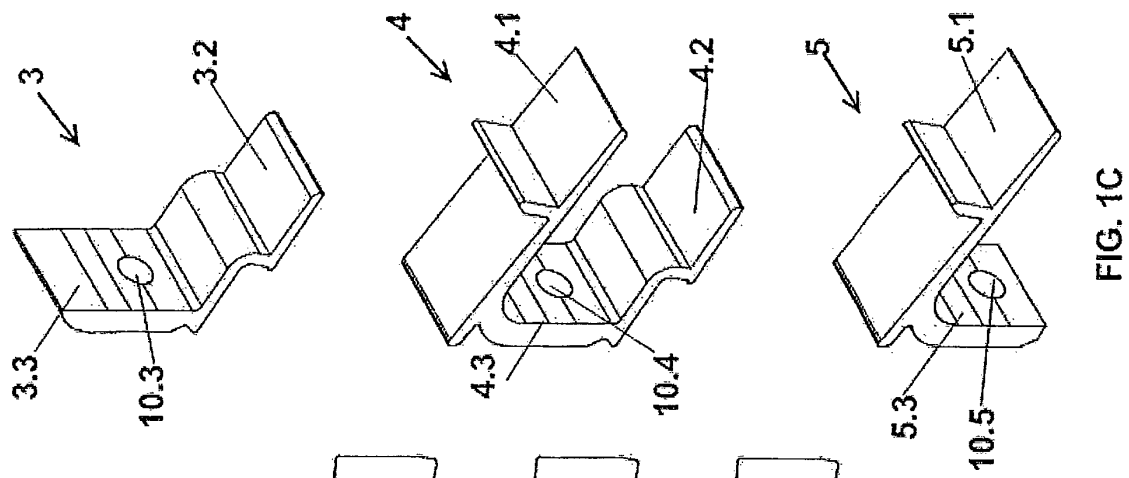


FIG. 1C

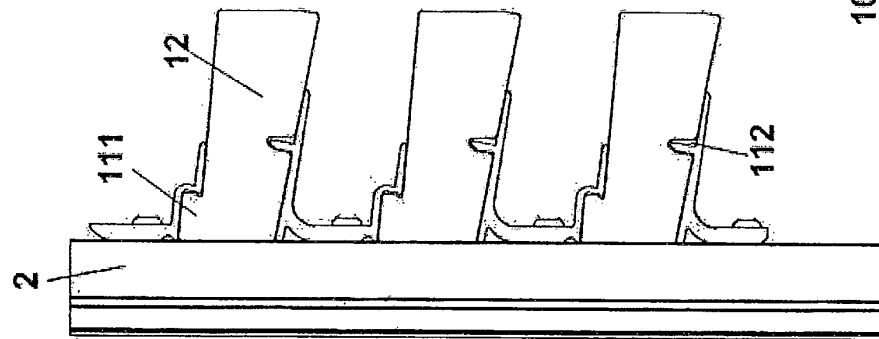


FIG. 1B

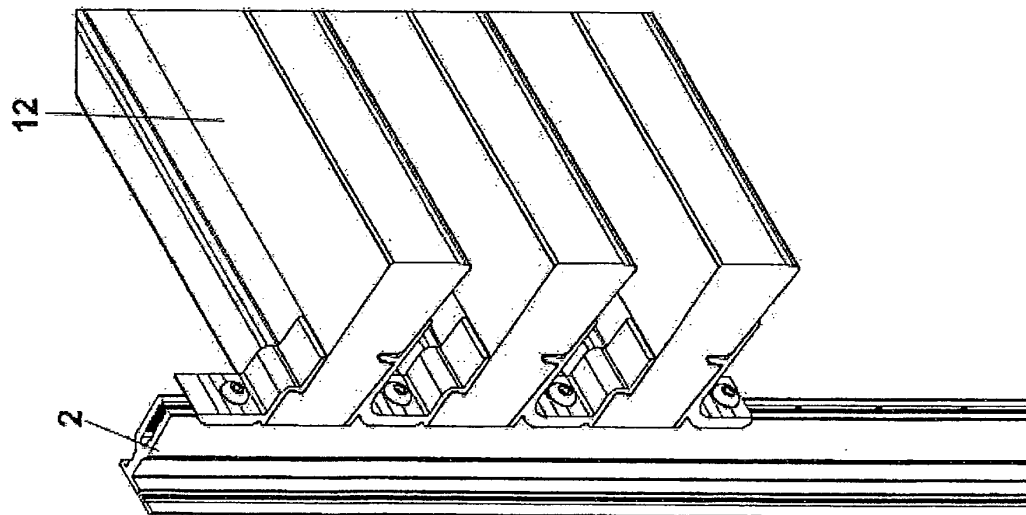
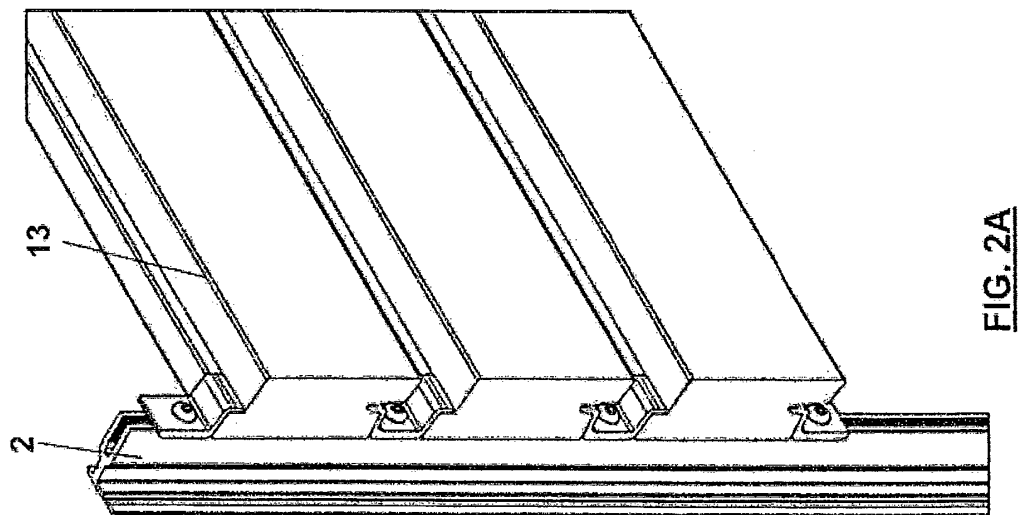
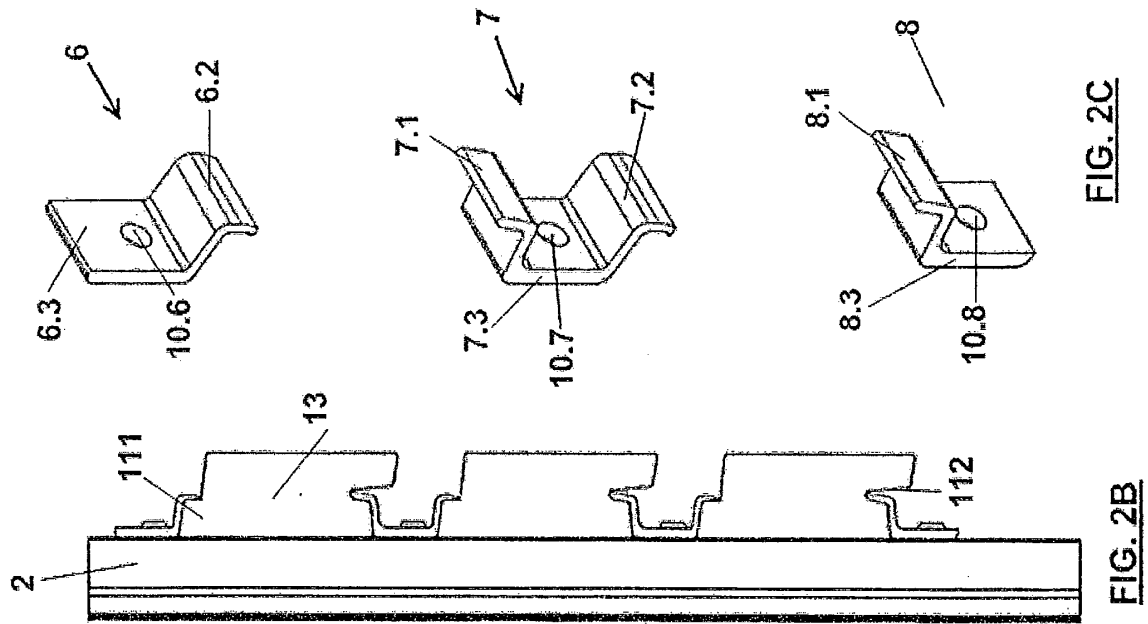
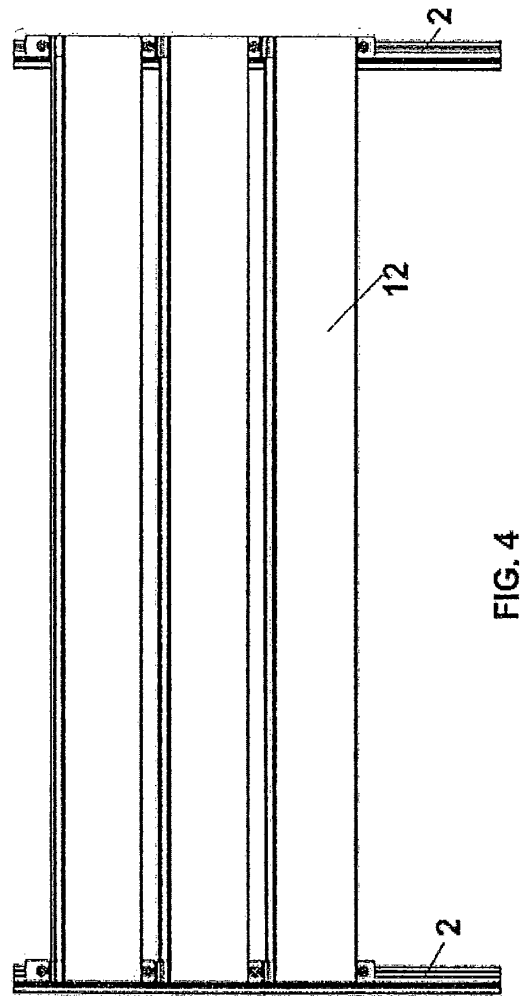
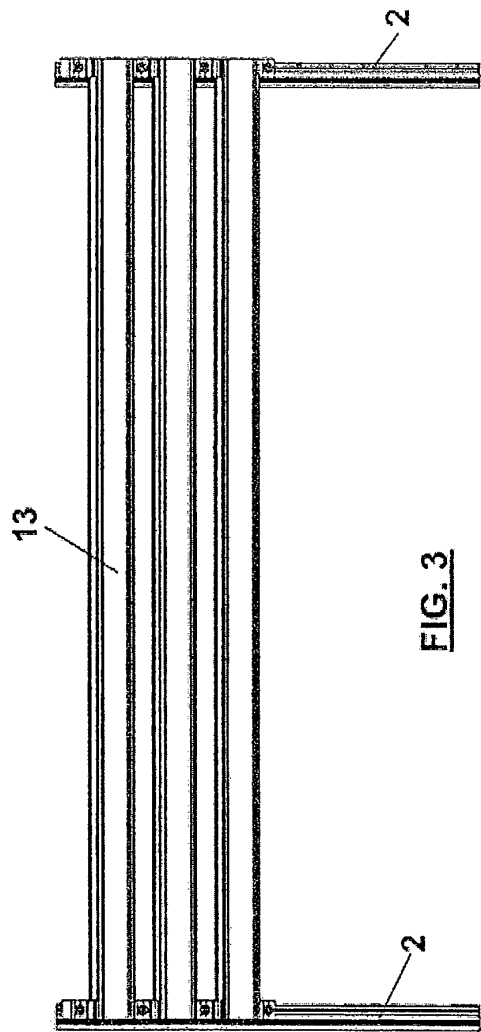


FIG. 1A





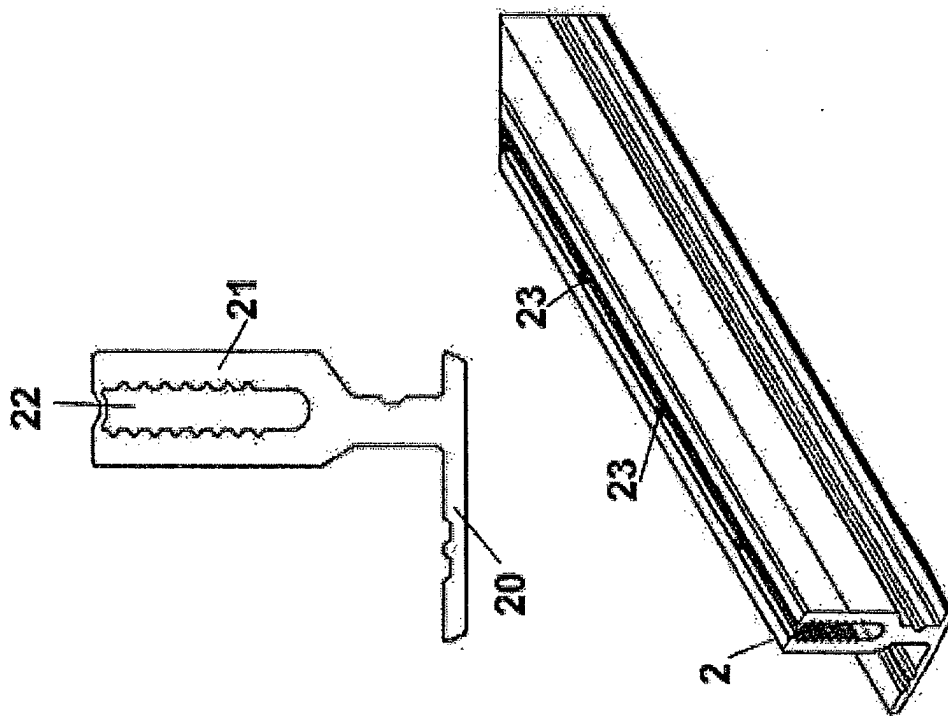


FIG. 5

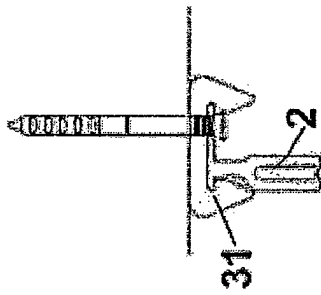


FIG. 6A

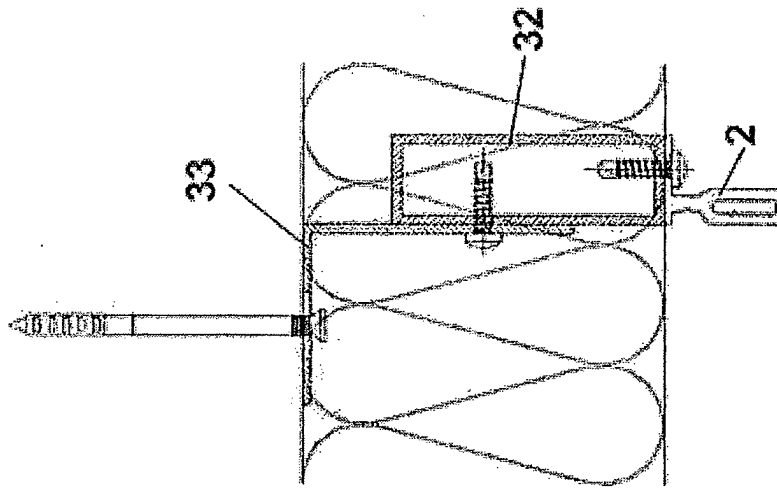


FIG. 6B

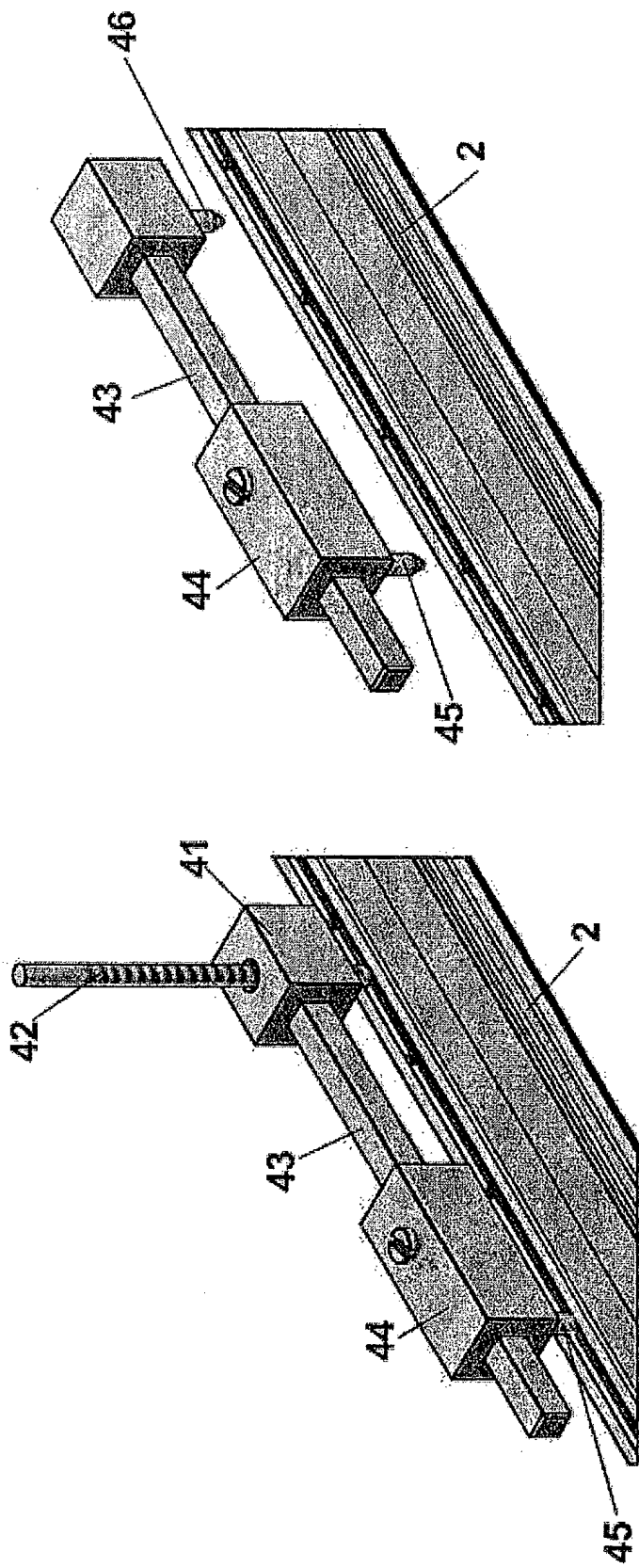


FIG. 7B

FIG. 7A

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 1621697 A2 [0007]