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(54) Mounting system and mounting method for a facade panel

Befestigungssystem und Befestigungsverfahren für eine Fassadenplatte

Système de montage et procédé de montage de panneau de façade

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**WO-A1-2004/033927 WO-A1-2009/130720
US-A- 2 065 529**

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Description

[0001] The invention relates to a mounting system for mounting a façade panel to a façade of a building.

[0002] Buildings can be provided with façade cladding. It is known to embellish facades of buildings with, for instance, façade panels. Such façade panels must be mounted to the façade of the building. This attachment must hold out even under relatively bad weather conditions, since it is undesirable that a façade panel should come loose, for instance during a storm. The known mounting systems for façade panels are usually complicated and complex in use, so that the mounting time for the façade panels can be relatively long. Especially with relatively high buildings, a relatively long mounting time is undesired. Also, it is not always possible to fit the known mounting systems out of sight, which can be aesthetically undesirable.

[0003] Patent publication WO 2004/033927 relates to a mounting element for securing two panels to a frame that can be secured against a wall or a roof of a building. The mounting element is secured to the frame with a bolt whereupon two panels, a top and a bottom panel, can be detachably secured to the mounting element.

[0004] Patent publication WO 2009/130720 relates to sound insulating wall cladding panels for walls or ceilings of a room. The mounting system comprises a vertical profile in which mounting plates can be snapped. The mounting plate has two positioning hooks which point away from each other and can hook into grooves of two panels, a top and a bottom panel.

[0005] Patent publication GB 2 065 529 relates to a mounting system for mounting panels as wall covering.

[0006] An object of the invention is to provide a mounting system for mounting a façade panel to a façade which counteracts at least one of the above-mentioned drawbacks. In particular, it is an object of the invention to provide a mounting system which is relatively simple in use and/or relatively reliable and/or can be fitted in an aesthetic manner.

[0007] To this end, the invention provides a mounting system for mounting a façade panel to a façade according to claim 1.

[0008] By providing a mounting system which comprises a façade mounting element and a panel mounting element, the mounting system can relatively easily be mounted stepwise. For instance, first, the façade mounting element can be secured to the façade or the façade element, and thereupon the panel mounting element can be mounted. Such modular mounting has fewer risks, especially with relatively high buildings.

[0009] The panel mounting element according to the invention is designed for connection to one single façade panel. This is in contrast with the known façade panel mounting systems which are usually designed for supporting a top and a bottom panel. By designing the panel mounting element for connection to a single panel, also, a single panel can be removed from the façade, for in-

stance in case of damage.

[0010] Providing a panel mounting element that can be detachably coupled to the façade mounting element provides the possibility that the panel mounting element can also be removed again from the façade mounting element, for instance for maintenance.

[0011] According to the invention, the panel mounting element comprises first cooperating elements for bearing on the façade mounting element, so that after mounting, the panel mounting element is supported in downward direction. As the panel mounting element bears on the façade mounting element, the panel is borne by the façade mounting element. The panel can thus be mounted to the façade, clear of adjacent panels. Optionally, the mounting system can also be used for mounting only one panel to a façade, for instance for promotional purposes, while in time, such a panel can be replaced by another panel. This is in contrast with known mounting elements which are designed for receiving a top and a bottom panel. In such a case, the top panel rests on the bottom panel. Also, in the state of the art, a panel is usually clamped between hooks of two opposite mounting elements, so that such a panel cannot be easily detached from the façade after mounting.

[0012] The panel mounting element further comprises second cooperating elements for forming a detachable coupling with the façade mounting element. The second cooperating elements cooperate with the façade mounting element and ensure, after mounting, a coupling with the façade mounting element in a sideward direction and in a direction away from the façade mounting element.

[0013] By providing the first and the second cooperating elements the panel mounting element can be fitted on the façade mounting element and, after mounting, detachment of the panel mounting element relative to the façade mounting element can be prevented in downward direction, in sideward direction and in a direction away from the façade mounting element. In this manner, a reliable coupling of the panel mounting element to the façade mounting element can be effected.

[0014] Owing to the first and second cooperating elements, the panel mounting element can be coupled to the façade mounting element without use of other fastening means, for instance bolts or screws. As a result, a detachable coupling between the panel mounting element and the façade mounting element can be relatively rapidly and readily effected. In particular when mounting panels at a relatively great height or at difficultly accessible locations, it is of advantage to relatively rapidly and readily couple the panel mounting element, with panel, to the façade mounting element without the necessity of carrying out additional operations such as, for instance, tightening of screws. As an alternative, the panel mounting element can be pre-mounted to the façade mounting element, whereupon they can be secured to the façade of a building. Then, the panel can be clamped to the panel mounting element.

[0015] The panel mounting element further comprises

at least one clamping element for a clamped connection with the façade panel. By means of the clamped connection, a form-locked and/or force-locked connection can be effected between the panel mounting element and the panel. Once the panel is clamped on the panel mounting element a basically undetachable connection between the panel and the panel mounting element has been effected.

[0016] Through the form-locked and/or force-locked connection of the panel mounting element with the panel and through the simple detachable coupling of the panel mounting element to the façade mounting element, the panel can be detached from the façade in a simple manner, but another, optionally different panel can also be simply attached to the façade. An optionally different panel only has to be provided with the panel mounting element and can then simply be coupled to the façade mounting element. Or, after the panel mounting element has been mounted against the façade mounting element beforehand, an optionally different panel can be fitted on the panel mounting element.

[0017] With a relatively large and/or relatively heavy panel, several panel mounting elements can be provided per panel, preferably side by side, optionally also one above the other. In use, first, the façade mounting element can be secured against the façade or a façade element. The façade mounting element can be fitted directly against the constructional façade of the building or can first be mounted on a carrier whereupon the carrier can be secured against the constructional façade. Then, the panel mounting element can be coupled to the façade mounting element. Thereupon, the façade panel can be clamped on the panel mounting element.

[0018] Through, inter alia, the simple detachable coupling of the panel mounting element to the façade mounting element, the mounting system according to the invention can be suitably utilised for partial assembly in a controlled environment, for instance a workshop. In the workshop, for instance, the panel mounting elements can already be coupled to the façade mounting elements. Also, the façade mounting elements can already be fitted to a carrier. The pre-assembled carrier with façade mounting element and panel mounting element can then be secured to the façade of a building. Then, the panels can be clamped with the panel mounting elements. When mounting the panels, no further operations need to be carried out. A panel can simply be removed by uncoupling the panel with the at least one panel mounting element clamped therein from the façade mounting element, without influencing adjacent panels.

[0019] The first cooperating elements are designed as a lip which bears on a side of a recess in the façade mounting element. The façade mounting element can be provided with a recess in which the first and/or the second cooperating elements can be received. The recess is provided with a bottom side on which the lip can bear to thus prevent detachment in downward direction when the façade mounting element is fitted on a façade.

[0020] The second cooperating elements comprise a bridge part which can at least partly surround a flange part of the façade mounting element to thus prevent the panel mounting element from coming loose during use in sideward direction and in a direction away from the façade mounting element. During assembly, the bridge element can for instance be passed through the recess around the flange of the façade mounting element to thus at least partly surround the flange of the façade mounting element. Upon further upward movement of the panel mounting element relative to the façade mounting element, the panel mounting element can be moved upwards so far until the lips bear on the bottom side of the recess. The panel mounting element is thus reliably detachably coupled to the façade mounting element.

[0021] For the connection to the façade panel, the panel mounting element is provided with clamping elements. On both sides of the panel mounting element, for instance at a top side and bottom side, at least two clamping elements may be provided for forming a clamped connection with the façade panel. The clamped connection forms a force-locked and/or form-locked connection so that the façade panel can be reliably connected with the panel mounting element. Preferably, the clamped connection with the façade panel is not detachable. When demounting the façade panel, the façade panel including the panel mounting element can be detached from the façade mounting element.

[0022] Preferably, the clamping elements comprise hook elements for hooking into a groove of the façade panel. The façade panel is advantageously provided with a groove at the rear side, not being the visible side after mounting, of the façade panel. It is preferred that the groove runs over the width direction of the rear side of the façade panel, for instance, after mounting, the groove runs from one upstanding side to an opposite upstanding side. The groove can be situated approximately in the middle of the height of the façade panel, or can be situated in a top half of the façade panel, or can be situated in a lower half of the façade panel. The hook elements are configured to hook into the groove and thus form a force-locked connection. In an advantageous manner, hook elements are provided which hook into both sides of the groove to thus effect a reliable clamped connection. Optionally, the hook elements are designed for hooking into a recess at the rear side of the panel so that a form-locked connection can be effected, by means of, for instance, a dovetail recess.

[0023] The façade panel is preferably manufactured from wood or a composite material in which, at the rear side, with the aid of, for instance, a milling machine, a groove can be milled. Many materials can be utilized.

[0024] Provision of a mounting system according to the invention provides an advantage in production and/or assembly, in that assembly can partly take place in advance in a protected environment such as a workshop. As a result, the assembly time on the building site can be strongly reduced. The production of the façade panels

too can be simpler and/or more efficient in that the grooves in the façade panel can be provided in a computer controlled manner in the factory so that a favorable tolerance and/or accuracy can be achieved.

[0025] Further advantageous embodiments are represented in the subclaims.

[0026] The invention further relates to a façade element, a façade panel, a building and a method for mounting a façade panel.

[0027] The invention will be further elucidated on the basis of an exemplary embodiment which is represented in the drawing. In the drawing:

Fig. 1 shows a schematic perspective front view of a mounting system according to the invention;
 Fig. 2 shows a schematic perspective rear view of the mounting system according to the invention;
 Fig. 3 shows a schematic perspective view of a panel mounting element according to the invention; and
 Fig. 4 shows a schematic front view of a façade mounting element according to the invention.

[0028] It is noted that the figures are only schematic representations of a preferred embodiment of the invention and should not be understood to be limiting in any manner. In the figures, identical parts are represented with identical reference numerals.

[0029] Fig. 1 shows a mounting system 1 for mounting a single façade panel to a façade, comprising a façade mounting element 2 and a panel mounting element 3.

[0030] The façade mounting element 2, also shown in Fig. 4, is here designed as an elongate profile 4 that can be secured by a rear side 5 against a carrier or façade or a façade element. The profile 4 can be designed as an extrusion profile, from metal or plastic. The profile 4 is usually secured against a façade or a façade element by means of a bolt or screw connection, optionally via a carrier. Other connections are possible, for instance a clamped connection or a glue connection. Instead of a profile, the façade mounting element 2 can also be designed as a separate part that is configured for coupling to a single panel mounting element 3. A profile 4 can be designed to receive a number of panel mounting elements 3.

[0031] The panel mounting element 3 is detachably couplable to the façade mounting element 2. As a result, the panel mounting element 3 can be coupled to the façade mounting element 2 without the use of further fastening means.

[0032] The panel mounting element 3 is provided with first cooperating elements 5 for cooperation with the façade mounting element 2 and second cooperating elements 7 for cooperation with the façade mounting element 2.

[0033] The first cooperating elements 5 are here designed as a lip 8 which bears on a bottom side 9 of a recess 10 in the façade mounting element 2. Due to the bearing-on, the panel can be borne in vertical direction

by the façade mounting element 2. Thus, the panel with panel mounting element 3 can be independently borne by just the façade mounting element 2.

[0034] The second cooperating elements 7 are here designed as a bridge element 11 which is configured for cooperation with the façade mounting element 2. In Fig. 1 and Fig. 2 it can be seen that the bridge element 11 is slid at least partly over a flange 12 of the profile 4.

[0035] The panel mounting element 3 is further provided with clamping elements 13. The clamping elements 13 are shown in Fig. 3, but are left out in Fig. 1 and Fig. 2 for the sake of clarity. The clamping elements 13 are provided with hook elements 14 for hooking into a rear side of a façade panel and thus effecting a force-locked connection with the rear side of a façade panel. Owing to the force-locked connection, the panel mounting element 3 remains connected to the façade panel. The façade panel with panel mounting element 3 can be detached from the façade in a simple manner via the detachable coupling of the panel mounting element 3 with the façade mounting element 2. This can be done while influencing adjacent facade panels only minimally as the panel mounting element 3 is designed for coupling to one single façade panel. Depending on the size and/or the weight of the façade panel, the façade panel can be provided with several panel mounting elements, for instance side by side or one below the other.

[0036] The panel mounting element 3 is here designed as a substantially plate-shaped base part 15 which is provided with the first cooperating elements 5, the second cooperating elements 7 and the clamping elements 13. The base part 15 is further provided with stiffening ribs 16 for stiffening the base part 15.

[0037] In this exemplary embodiment, the clamping elements 13 are provided on both sides of the base part 15 of the panel mounting element 3, in this case at a top side and a bottom side. Each side is provided with at least two clamping elements 13, here, three clamping elements 13 are provided. The clamping elements 13 are provided with hook elements 14 which are configured for hooking into a groove at a rear side of a façade panel. Through the clamping elements 13, a force-locked connection between the panel mounting element 3 and the façade panel can be effected, which connection is essentially undetachable.

[0038] Preferably, a configuration with hook elements 14 which engage in both sides of such a groove is provided. For instance, in Fig. 3, hook elements 14a can be seen which are directed towards one side and hook elements 14b which are directed towards an opposite side, so that in both sides of such a groove, a hooking connection can be effected. As the hook elements 14 hook into a groove at the rear side of the façade panel, a force-locked connection can be effected which is hidden from view. The facade panel is then aesthetically fixedly connected to the panel mounting element 3.

[0039] In order to mount a façade panel to a façade of a building, first, the façade mounting element 2 is secured

against the façade. Then, the panel mounting element 3 can be detachably coupled to the façade mounting element 2. The bridge element 11 can be passed through the recess 10 to thus be slid over the flange 12. The panel mounting element 3 can be slid further upward until a stop element 17 of the bridge element 11 abuts against a top side 18 of the recess 10. The panel mounting element 3 can be brought further towards the façade mounting element 2 until the lip 8 is in the recess 10 and rests on the bottom side 9 of the recess 10. To simplify insertion of the bridge element 11 in the recess 10 and sliding it over the flange 12, the bridge element 11 is provided with an obliquely projecting insertion lip 19.

[0040] Alternatively, the panel mounting element 3 can be coupled in advance to the façade mounting element 2. This pre-assembly can be carried out, for instance, in a closed space, for instance a factory, free of the influences of wind and weather. The façade mounting element 2 with the fitted panel mounting element 3 can then be secured against the façade of a building. Thereupon, a façade panel can be pressed against the panel mounting element 3 to effect a form-locked and/or force-locked connection via the clamping elements 13.

[0041] Owing to the bridge element 11, during use, the panel mounting element 3 is secured against detaching in sideward direction and in a direction away from the façade mounting element 2. Through the lip 8 which bears on the bottom side 9 of the recess 10, during use, the panel mounting element 3 is secured against detaching in downward direction. Thus, a reliable coupling of the panel mounting element 3 to the façade mounting element 2 is realized.

[0042] For detaching the panel mounting element 3 from the façade mounting element 2, the above-mentioned operations can be carried out in reverse order. The panel mounting element 3 can be pivoted forward, in a direction away from the building, so that the lip 8 detaches from the side 9. Then, the panel mounting element 3 can be slid downwards so that the bridge element 11 comes clear of the flange 12 and can be passed through the recess 10.

[0043] Through the force-locked connection with the hook elements 14, the façade panel remains fixedly connected to the panel mounting element 3. The façade panel can thus be elegantly detached from the facade, for instance for maintenance, without damages occurring to the façade panel. A façade panel can then for instance be painted in weather-independent surroundings, instead of on the outer façade of a building. After servicing, the façade panel can simply be coupled to the façade mounting element.

[0044] Advantageously, the façade panel is designed in wood or a wood-like or composite material. The façade panel can for instance be designed in a fiber composite material comprising plastic fibers and/or wood fibers. In such a wood, wood-like or composite material, a force-locked connection can be favorably effected.

[0045] Advantageously, the façade panel is provided

at the rear side with a groove into which the hook element 14 can hook. The groove can be provided over the width direction of the façade panel, for instance, the groove, after mounting, runs from a left hand side to a right hand side of the façade panel.

[0046] To a façade of a building, different façade mounting elements 2 can be secured, for instance different elongated profiles 4 can be attached in upward direction against a façade. By mounting at least two elongated profiles 4 side by side at a distance from each other against the façade, a façade panel can be mounted against the façade with the aid of two panel mounting elements 3. Optionally, adjusting possibilities can be provided for setting the façade panel virtually horizontally after mounting. The adjusting elements can be provided in the panel mounting element, or in the façade mounting element or in both. For instance, the bridge element 11 and/or the profile 12 can be provided with adjusting ridges to achieve a virtually horizontal position of the façade panel after mounting.

[0047] Depending on the size and/or the weight of a façade panel and/or the height of mounting and/or the expected weather conditions, a façade panel can be attached with two or more panel mounting elements which engage in the groove at the rear side of the façade panel. Advantageously, the panel mounting elements are in a virtually horizontal line at the rear side of the façade panel in the middle or in a top half of the façade panel, so that the façade panel is, as it were, suspended from the façade.

[0048] The invention is not limited to the exemplary embodiments represented here. The mounting system can be used for mounting a façade panel to an outside façade of a building or an inside façade of a building. Also inside walls can be covered with façade panels by means of the mounting system according to the invention. Diverse variants fall within the scope of the following claims.

Claims

1. A mounting system (1) for mounting a façade panel to a façade, comprising a façade mounting element (2) and a panel mounting element (3) which is designed for detachable coupling to the façade mounting element (2), **characterized in that** the panel mounting element (3) comprises first cooperating elements (5) for bearing on the façade mounting element (2), and comprises second cooperating elements (7) for a detachable coupling to the façade mounting element (2), wherein the panel mounting element (3) further comprises clamping elements (13) for connection to the façade panel, **characterised in that** the first cooperating elements (5) comprise a lip (8) for bearing on a side (9) of a recess (10) in the façade mounting element (2), so that after mounting, the panel mounting element is supported

in downward direction, and **in that** the second cooperating elements (7) comprise a bridge element (11) for detachable coupling to the façade mounting element (2), so that after mounting, a coupling with the façade mounting element in a sideward direction and in a direction away from the façade mounting element is ensured.

2. A mounting system according to any one of the preceding claims, wherein the panel mounting element (3) comprises at both sides at least two clamping elements (13) for forming a clamped connection with the façade panel. 10
3. A mounting system according to claim 2, wherein the clamping elements (13) comprise at least one hook element (14) for hooking into a groove of the façade panel for forming the clamped connection. 15
4. A mounting system according to claim 2 and 3, wherein the at least two clamping elements (13) are provided with hook elements (14) for hooking in both sides of the groove of the façade panel. 20
5. A mounting system according to any one of the preceding claims, wherein the panel mounting element (3) is provided with stiffening ribs (16). 25
6. A mounting system according to any one of the preceding claims, wherein the façade mounting element (2) is provided with a number of recesses (10) for receiving panel mounting elements (3). 30
7. A façade element coupled to a façade mounting element (2) of the mounting system according to any of the claims 1 - 6. 35
8. A façade panel connected to a panel mounting element (3) of the mounting system according to any of the claims 1 - 6. 40
9. A building whose façade is provided with a façade element according to claim 7.
10. A building according to claim 9, further comprising a façade panel according to claim 8. 45
11. A method for mounting a façade panel to a façade comprising providing a mounting system (1) according to any one of claims 1 - 6, further comprising mounting the façade mounting element (2) to the façade, coupling the panel mounting element (3) to the façade mounting element (2) and connecting the façade panel to the panel mounting element (3). 50

Patentansprüche

1. Befestigungssystem (1) zum Befestigen einer Fassadenplatte an einer Fassade, umfassend ein Fassadenbefestigungselement (2) und ein Plattenbefestigungselement (3), das zum lösbaren Koppeln an dem Fassadenbefestigungselement (2) konzipiert ist, **dadurch gekennzeichnet, dass** das Plattenbefestigungselement (3) erste zusammenarbeitende Elemente (5) zum Tragen auf dem Fassadenbefestigungselement (2) umfasst und zweite zusammenarbeitende Elemente (7) für eine lösbare Kopplung an dem Fassadenbefestigungselement (2) umfasst, wobei das Plattenbefestigungselement (3) ferner Klemmelemente (13) zum Verbinden mit der Fassadenplatte umfasst, **dadurch gekennzeichnet, dass** die ersten zusammenarbeitenden Elemente (5) eine Lippe (8) zum Tragen an einer Seite (9) einer Vertiefung (10) in dem Fassadenbefestigungselement (2) umfassen, sodass nach der Befestigung das Plattenbefestigungselement in Abwärtsrichtung getragen wird und dass die zweiten zusammenarbeitenden Elemente (7) ein Brückenelement (11) für lösbares Koppeln an dem Fassadenbefestigungselement (2) umfassen, sodass nach der Befestigung eine Kopplung mit dem Fassadenbefestigungselement in einer Seitwärtsrichtung und in einer Richtung weg von dem Fassadenbefestigungselement sichergestellt ist.
2. Befestigungssystem nach einem der vorhergehenden Ansprüche, wobei das Plattenbefestigungselement (3) an beiden Seiten mindestens zwei Klemmelemente (13) umfasst, um eine Klemmverbindung mit der Fassadenplatte zu bilden.
3. Befestigungssystem nach Anspruch 2, wobei die Klemmelemente (13) mindestens ein Hakenelement (14) zum Einhängen in eine Rille auf der Fassadenplatte umfassen, um die Klemmverbindung zu bilden.
4. Befestigungssystem nach Anspruch 2 und 3, wobei die mindestens zwei Klemmelemente (13) mit Hakenelementen (14) zum Einhängen in beide Seiten der Rille der Fassadenplatte versehen sind.
5. Befestigungssystem nach einem der vorhergehenden Ansprüche, wobei das Plattenbefestigungssystem (3) mit Versteifungsrippen (16) versehen ist.
6. Befestigungssystem nach einem der vorhergehenden Ansprüche, wobei das Fassadenbefestigungselement (2) mit einer Anzahl Vertiefungen (10) zum Aufnehmen von Plattenbefestigungselementen (3) versehen sind.
7. Fassadenelement, gekoppelt an ein Fassadenbe-

festigungselement (2) des Befestigungssystems nach einem der Ansprüche 1-6.

8. Fassadenplatte, verbunden mit einem Plattenbefestigungselement (3) des Befestigungssystems nach einem der Ansprüche 1 - 6.
9. Gebäude, dessen Fassade mit einem Fassadenelement nach Anspruch 7 versehen ist.
10. Gebäude nach Anspruch 9, ferner umfassend eine Fassadenplatte nach Anspruch 8.
11. Verfahren zur Befestigung einer Fassadenplatte an einer Fassade, umfassend die Bereitstellung eines Befestigungssystems (1) nach einem der Ansprüche 1 - 6, ferner umfassend die Befestigung des Fassadenbefestigungselements (2) an der Fassade, koppeln das Plattenbefestigungselement (3) an dem Fassadenbefestigungselement (2) und Verbinden der Fassadenplatte mit dem Plattenbefestigungselement (3).

Revendications

1. Système de montage (1) pour monter un panneau de façade sur une façade, comprenant un élément de montage de façade (2) et un élément de montage de panneau (3) qui est conçu pour se coupler, de manière détachable, à l'élément de montage de façade (2), **caractérisé en ce que** l'élément de montage de panneau (3) comprend des premiers éléments coopératifs (5) pour s'appuyer sur l'élément de montage de façade (2), et comprend des seconds éléments coopératifs (7) pour un couplage détachable avec l'élément de montage de façade (2), dans lequel l'élément de montage de panneau (3) comprend en outre des éléments de serrage (13) pour le raccordement au panneau de façade, **caractérisé en ce que :**
les premiers éléments coopératifs (5) comprennent une lèvre (8) pour s'appuyer sur un côté (9) d'un évidement (10) dans l'élément de montage de façade (2), de sorte qu'après le montage, l'élément de montage de panneau est supporté dans la direction descendante, et **en ce que** les seconds éléments coopératifs (7) comprennent un élément de pont (11) pour le couplage détachable avec l'élément de montage de façade (2), de sorte qu'après le montage, un couplage avec l'élément de montage de façade dans une direction latérale et dans une direction à distance de l'élément de montage de façade, est garanti.
2. Système de montage selon l'une quelconque des revendications précédentes, dans lequel l'élément de montage de panneau (3) comprend, au niveau

des deux côtés, au moins deux éléments de serrage (13) pour former un raccordement serré avec le panneau de façade.

3. Système de montage selon la revendication 2, dans lequel les éléments de serrage (13) comprennent au moins un élément de crochet (14) pour s'accrocher dans une rainure du panneau de façade afin de former le raccordement serré.
4. Système de montage selon les revendications 2 et 3, dans lequel les au moins deux éléments de serrage (13) sont prévus avec des éléments de crochet (14) pour s'accrocher dans deux côtés de la rainure du panneau de façade.
5. Système de montage selon l'une quelconque des revendications précédentes, dans lequel l'élément de montage de panneau (3) est prévu avec des nervures de renforcement (16).
6. Système de montage selon l'une quelconque des revendications précédentes, dans lequel l'élément de montage de façade (2) est prévu avec un certain nombre d'évidements (10) pour recevoir les éléments de montage de panneau (3).
7. Élément de façade couplé à un élément de montage de façade (2) du système de montage selon l'une quelconque des revendications 1 à 6.
8. Panneau de façade raccordé à un élément de montage de panneau (3) du système de montage selon l'une quelconque des revendications 1 à 6.
9. Bâtiment dont la façade est prévue avec un élément de façade selon la revendication 7.
10. Bâtiment selon la revendication 9, comprenant en outre un panneau de façade selon la revendication 8.
11. Procédé pour monter un panneau de façade sur une façade comprenant l'étape consistant à prévoir un système de montage (1) selon l'une quelconque des revendications 1 à 6, comprenant en outre les étapes consistant à monter l'élément de montage de façade (2) sur la façade, coupler l'élément de montage de panneau (3) avec l'élément de montage de façade (2) et raccorder le panneau de façade à l'élément de montage de panneau (3).

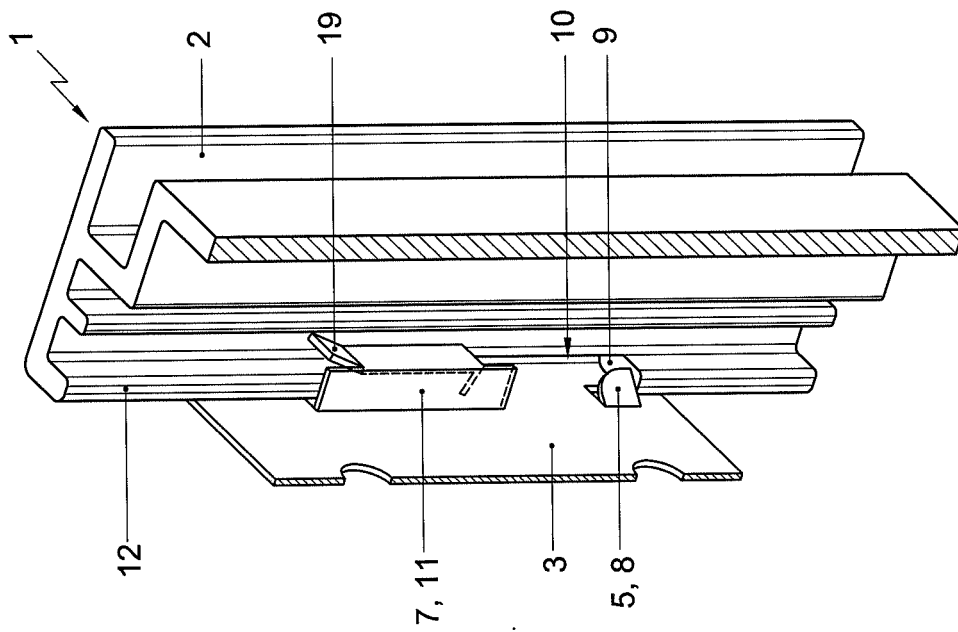


Fig. 1

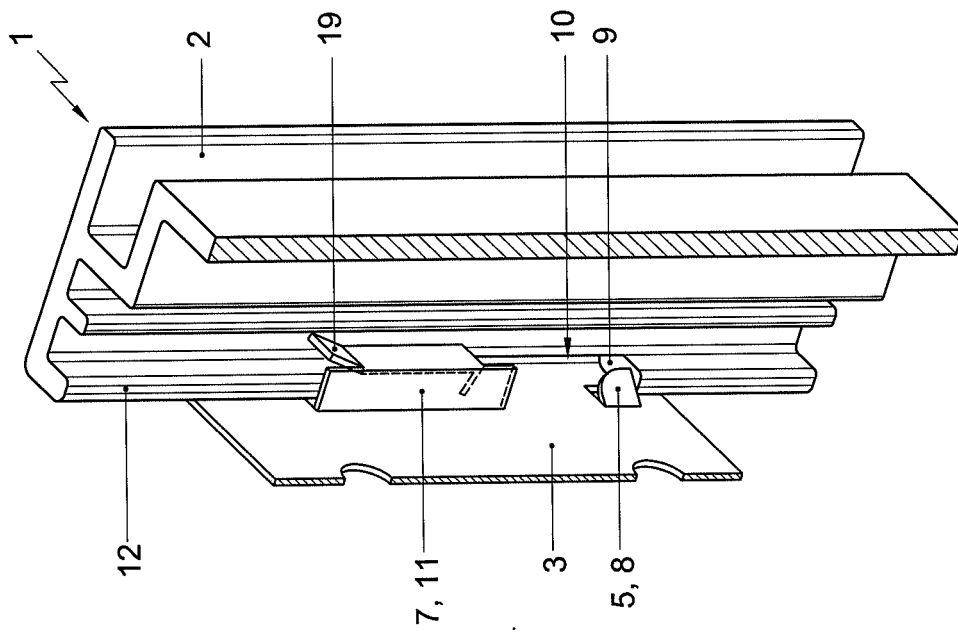


Fig. 2

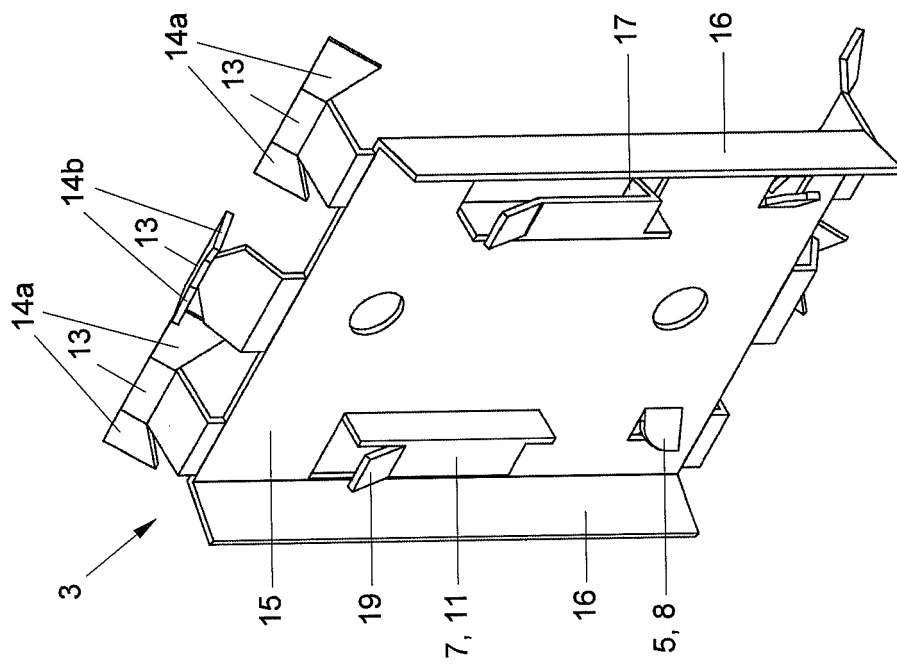


Fig. 3

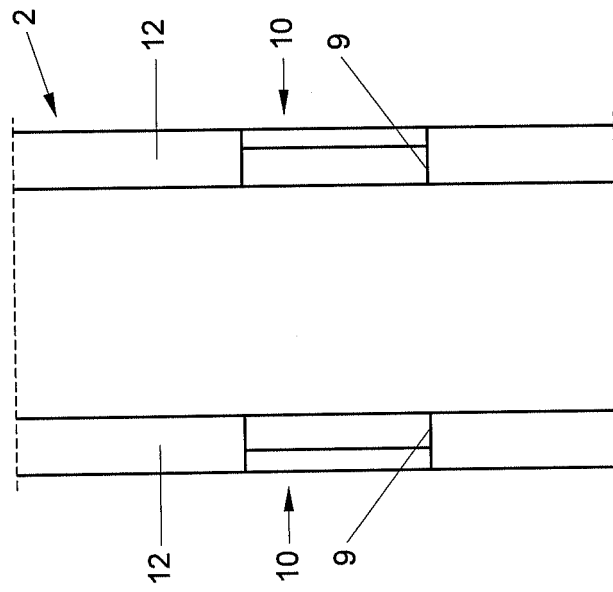


Fig. 4

REFERENCES CITED IN THE DESCRIPTION

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