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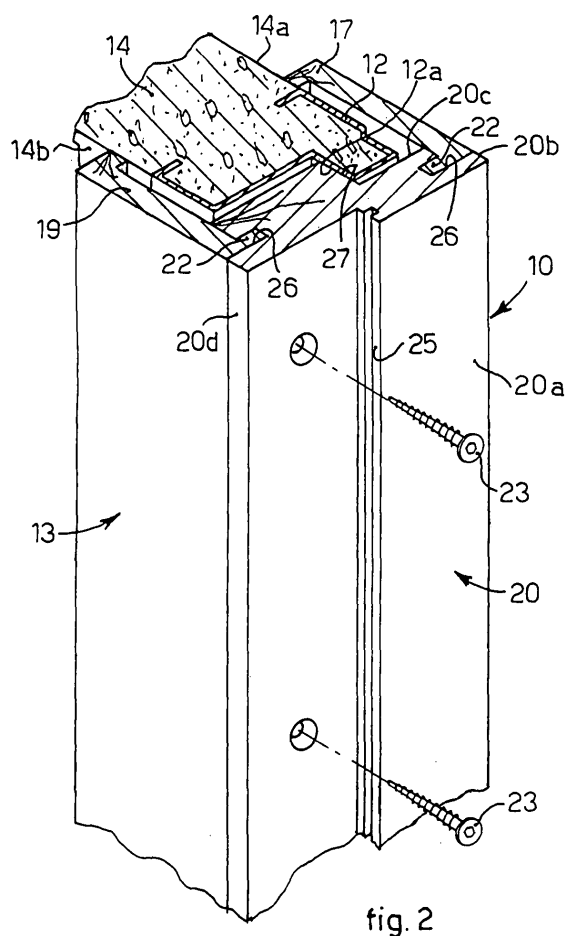
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(54) **Covering frame for a casing and relative assembly method**

(57) Covering frame (10) for a casing (11) arranged on the inner perimeter of an opening of a wall (14), and relative assembly method. The covering frame (10) comprises a central element (20, 120) attached to a central surface (12) of the casing (11), and a pair of lateral elements (17, 19) that are coupled with the central element (20, 120) on opposite sides with respect to the latter, in order to cover corresponding opposite lateral surfaces (14a, 14b) of the wall (14) on which the casing (11) is mounted.



Description

FIELD OF THE INVENTION

[0001] The present invention concerns a covering frame for a casing, such as for example a door, a window or suchlike, and the relative assembly method. To be more exact, the frame according to the present invention is applied advantageously but not exclusively for covering an already existing frame, so as to restructure and/or restore the casing, without totally removing the already existing frame.

BACKGROUND OF THE INVENTION

[0002] Casings are known, intended to close the compartments of doors or windows and substantially consisting of a frame attached to a wall and made of metal, wood, or mixed material, on which one or more corresponding wings are pivoted or able to slide.

[0003] Usually, known frames are stably attached to the wall by means of attachment techniques and elements that are also known, for example snap-in, gluing, or partly incorporated into the wall itself. Although they guarantee optimum stability and duration of the coupling of the frame and the wall, such known attachment techniques have the disadvantage that they do not allow a simple and rapid removal of the frame, in order to perform operations to restore or replace said frame. In fact, removing these frames normally requires long and complex building operations which, at times, even entail the demolition of the brick surround to which such frames are attached.

[0004] It is also well-known that, to avoid said demolition operations, the old frames are covered with enhancing frames, made of metal, wood, mixed wood and metal material, or otherwise, so as to renew the aesthetics of the casing.

[0005] Enhancing or covering frames of a known type are normally provided with a plurality of snap-in and coupling elements, which allow them to be attached either to the underlying old frame, or to the wall.

[0006] In order to assemble such known covering frames, however, it is necessary to adapt the old frame and the wall to the snap-in elements of the new covering frame, which entails long working times, the intervention of a specialized work force, and also considerable problems for the customer.

[0007] Moreover, such known covering frames, in most cases, are made according to the specific size and/or shape of the old frame that has to be covered, with a considerable increase in the costs of design, production and installation.

[0008] Another disadvantage of known covering frames is the presence of the snap-in elements which, when in use, are located between the old frame and the new frame, considerably reducing the usable gap of the casing, even by several tens of millimeters.

[0009] Known covering frames also have the disadvantage that they are not reversible, that is, they are specifically made and assembled so as to define a determinate opening side of the wing, which cannot be modified afterwards.

[0010] One purpose of the present invention is to achieve a covering frame for an already installed casing which does not require any adaptation to the wall and/or old frame to be covered.

[0011] Another purpose of the present invention is to achieve a covering frame whose components can easily be adapted to any shape or size of the wall or frame to be covered, or at least the most common and standard ones.

[0012] Another purpose of the present invention is to achieve a covering frame which can be installed without requiring the intervention of a specialized work force and which, once assembled, does not significantly reduce the gap of the casing with respect to the original gap.

[0013] Another purpose of the present invention is to achieve a covering frame for a casing that is of the reversible type, with regard to the opening side of the relative wing.

[0014] Applicant has designed, tested and embodied the present invention to overcome the shortcomings of the state of the art and to obtain these and other purposes and advantages.

SUMMARY OF THE INVENTION

[0015] The present invention is set forth and characterized in the main claim, while the dependent claims describe other characteristics of the present invention or variants to the main inventive idea.

[0016] In accordance with the above purposes, a covering frame according to the present invention is able to be applied on a casing arranged on the inner perimeter of an opening in a wall.

[0017] According to a characteristic feature of the present invention, the covering frame comprises a central element able to be attached to a central surface of the casing, and a pair of lateral elements able to be coupled with said central element on opposite sides with respect to the latter, in order to cover corresponding opposite lateral surfaces of the wall on which said casing is mounted.

[0018] The central element is able to be attached to the casing by means of attachment means of a known type, such as for example self-threading screws or suchlike, so that it can be dismantled if necessary from the casing without needing to intervene on the wall. Moreover, the necessary attachment means are easy to find and simple to use, so that installation of the frame according to the invention does not necessarily require the intervention of a specialized work force.

[0019] Each lateral element comprises first coupling means able to be coupled with mating second coupling means made on the central element.

[0020] According to a first embodiment, the first coupling means comprise a longitudinal ridge for each of the lateral elements, while the second coupling means comprise two mating longitudinal seatings made laterally on the central element and each able to accommodate a corresponding longitudinal ridge.

[0021] According to a variant, the first coupling means comprise a longitudinal seating for every lateral element, while the second coupling means comprise two mating longitudinal ridges arranged laterally to the central element and each able to be inserted into the corresponding longitudinal seating.

[0022] The central element and the lateral elements advantageously have a substantially constant cross section along the whole inner perimeter of the casing. Therefore, even in the event that the frame consists of three different parts, two vertical and one horizontal, each one formed by two lateral elements and a central element, these can be made from a single specific bar of profiled material.

[0023] This advantage leads to a considerable reduction in the costs of production and allows to size the various elements directly on-site, hence without needing long and costly steps to design and prepare the parts, far from the place of installation.

[0024] According to a variant, between the first and second coupling means auxiliary coupling means can be interposed, which allow to adapt the width of the central element according to the thickness of the wall.

[0025] In this way, it is sufficient to provide a limited series of central elements, with different widths, so that said central elements can be assembled and adapted substantially on any type of wall or frame that is already installed and has to be covered.

[0026] The covering frame according to the present invention can be advantageously applied in covering and enhancing old frames for already mounted casings, since the two lateral parts and the central part of which it consists have a shape and size such as to cover the old frame completely, changing the aesthetic appearance of the casing, without intervening on the old frame or the wall, in order to allow the covering frame to be attached.

[0027] In this application, the central part has a positioning step along one inner surface, able to be arranged in contact with the abutment of the old frame, whatever the shape or type of the old frame may be.

[0028] The central element is attached to the old frame by means of suitable clamping and adjustment systems of a known type which can be easily found on the market.

[0029] In this way, the operation to cover and enhance the old frame does not require any steps to adapt the old frame, or the wall on which it is attached, nor snap-in elements with the old frame, or with the wall; this simplifies to the utmost the installation operations and limits to a minimum the reduction in the gap of the original casing.

[0030] Another advantage of the present invention is that, since all the central elements are made from a same bar of profiled material, the covering frame thus assembled is of the reversible type in order to assemble a possible wing to close the casing, without needing to provide a priori the opening side of the wing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] These and other characteristics of the present invention will become clear from the following description of some preferential forms of embodiment, given as a non-restrictive example, with reference to the attached drawings wherein:

- fig. 1 is a three-dimensional view of a casing to which a covering frame according to the present invention is applied;
- fig. 2 shows a partly sectioned enlarged detail of the frame in fig. 1;
- fig. 3 shows a first variant of the covering frame in fig. 2;
- fig. 4 shows a second variant of the covering frame in fig. 2;
- fig. 5 shows a cross section of a casing to which the covering frame in fig. 1 is applied according to a third variant;
- fig. 6 shows a cross section of a casing to which the covering frame in fig. 1 is applied according to a fourth variant.

DETAILED DESCRIPTION OF SOME PREFERENTIAL FORMS OF EMBODIMENT

[0032] With reference to fig. 1, a covering frame 10 according to the present invention is shown mounted on a casing 11, installed on a wall 14, of a standard thickness variable from about 70 mm to about 100 mm.

[0033] The casing 11 to be covered comprises in turn an old frame 12, for example made of metal, previously attached fixedly to the wall 14. It comes within the field of the present invention to provide that the covering frame 10 can be installed directly on the wall 14, without having to remove the old frame 12.

[0034] The covering frame 10 according to the invention can be made of any material, such as wood, metal or otherwise, even though the type of material is not an essential characteristic.

[0035] The covering frame 10 comprises (fig. 1) two first parts 13 and 15, arranged substantially vertical, and a third part 16, arranged substantially horizontal and functioning as an upper cross-piece to connect the two vertical parts 13 and 15.

[0036] Each of the three parts 13, 15 and 16 substantially consists of two lateral elements 17 and 19 and of a central element 20 functioning as a jamb, connected together by means of coupling profiles that will be described in detail later.

[0037] The central element 20 is attached to the central surface of the old frame 12 by means of known attachment systems, such as for example attachment screws 23, advantageously of the self-threading type, able to be screwed directly onto the old frame 12.

[0038] The two lateral elements 17 and 19 (fig. 2) are attached to respective lateral surfaces 14a and 14b of the wall 14 and have a substantially C-shaped or L-shaped cross section, so that each defines a longitudinal ridge 22 facing towards the central element 20. The lateral elements 17 and 19 are attached by inserting the corresponding longitudinal ridge 22 inside housing seatings 26 made on the central element 20.

[0039] Covering elements are advantageously provided, of a known type and not shown in the drawings, arranged in cooperation with the head of each attachment screw 23.

[0040] The central element 20 is able to be mounted between the lateral elements 17 and 19, so as to cover the casing 11 completely. The central element 20 has a cross section that comprises a front surface 20a, a first lateral surface 20b, on the right in fig. 2, an inner surface 20c and a second lateral surface 20d, on the left in fig. 2.

[0041] The front surface 20a comprises a stopping step 25 able to define the abutment of a door 18, pivoted on the frame 10. Moreover, workings are made on the front surface 20a, according to the assembly position of the central element 20, in order to position the hinges, or closing members of the door 18.

[0042] The lateral surface 20b comprises a housing seating 26 made longitudinally on the central element 20, of a shape and size mating with those of the longitudinal ridge 22, and able to accommodate the latter in order to determine the coupling of the central element 20 and the lateral element 17. It comes within the field of the present invention to use glues, nails or otherwise, to guarantee greater solidity to this coupling.

[0043] The inner surface 20c comprises a positioning step 27 able to be positioned, in use, in contact with an abutment surface 12a of the old frame 12, so that the covering frame 10 is centered according to the position of the old frame 12 below.

[0044] The lateral surface 20d is substantially equal to the aforesaid lateral surface 20b and also has a housing seating 26 which, in this case, is able to house the longitudinal ridge 22 of the lateral element 19.

[0045] Both the central element 20 and the lateral elements 17 and 19 have equivalent respective cross sections, irrespective of their assembly position, that is, whether they constitute the first vertical parts 13 and 15 or the second horizontal part 16 of the frame 10.

[0046] In this way, all the elements 17, 19 and 20 can be made, directly during the installation steps, from specific profiled bars.

[0047] In the case shown in fig. 2, the old frame 12 to be covered is of the type having some of its lateral parts incorporated into the wall 14, and is substantially as wide as the wall 14. In this case, the central element 20

has a standard width equal to about the thickness of the wall 14.

[0048] In the embodiment shown in fig. 3, the old frame 12 is of the type attached to the wall 14 by bending its parts near the profile of the wall 14. In this case, the old frame 12 protrudes laterally with respect to the wall 14 and consequently a central element 120 is used with a width greater than that of the central element 20 used in the embodiment shown in fig. 2, but substantially of an equivalent shape.

[0049] In the embodiment shown in fig. 5, wherein the old frame 12 is partly incorporated inside a very wide wall 14, the central element is not made to measure, but one of those indicated by the numbers 20 or 120 as previously described is used, since the present invention provides to use auxiliary coupling elements 29, interposed between the longitudinal ridges 22 of the lateral elements 17 and 19 and the housing seatings 26 of the central element 20, or 120, in such a manner as to compensate the difference in width of the central element 20, or 120, with respect to the thickness of the wall 14.

[0050] In this way, with a limited number of profiled bars of different sizes, it is possible to make central elements 20, 120, that can be used for walls 14 of any thickness, or at least most common and standard ones.

[0051] This advantage leads to a reduction in production costs and installation costs of the frame 10 and also allows a greater personalization in the installation of the covering frame 10.

[0052] It is clear that, as shown in fig. 6, in the event that the size of the wall 14 and/or the positioning of the old frame 12 with respect to the wall 14 require it, a single auxiliary coupling element 29 can be used, arranged on one side with respect to the central element 20.

[0053] It comes within the field of the present invention to provide to use two or more auxiliary coupling elements 29 arranged in sequence, and positioned on the same side, or on opposite sides, with respect to the central element 20.

[0054] The embodiment shown in fig. 4 shows the case where the old frame 12 is made of wood, instead of metal. In this case, it can be seen how the lateral elements 17 and 19 and the central element 20 of the covering frame 10 have a size and shape substantially equal to the embodiment shown in fig. 2.

[0055] The covering frame 10 as described heretofore is assembled as follows.

[0056] First of all, from a single profiled bar, the three central elements 20, or 120, are made, for the respective parts 13, 15 and 16. In the same way, all the lateral elements 17 and 19 of the three parts 13, 15 and 16 of the frame 10 are made from a single profiled bar.

[0057] Subsequently, on the front surfaces 20a, or 120a, of the central elements 20, or 120, which form the first parts 13 and 15, positioning seatings are made for the mechanical members that close and move the door 18. In this step the seatings for the attachment screws 23 are also made on the central element 20, or 120.

[0058] The central elements 20, 120 thus prepared are positioned against the central surface of the old frame 12, so that the positioning step 27 is in contact with the abutment 12a of the old frame 12.

[0059] Subsequently, also the respective lateral elements 17, 19 are assembled to said central elements 20, 120, so as to define the three parts 13, 15 and 16, coupling the longitudinal ridges 22 of the lateral elements 17 and 19 to the respective housing seatings 26 of the central elements 20, 120.

[0060] Should it be necessary, during this assembly step, also the auxiliary coupling elements 29 are pre-assembled together with the lateral elements 17 and 19 and with the central element 20, or 120.

[0061] Then, the positioning of the three parts 13, 15 and 16 thus formed is regulated with respect to the old frame 12, and said three parts 13, 15 and 16 are attached to the old frame 12 by means of the screws 23.

[0062] The covering frame 10 is removed, if necessary, from the casing 11 simply by unscrewing the attachment screws 23 and separating the lateral elements 17 and 19 from the respective central elements 20, 120.

[0063] The covering frame 10 according to the present invention is thus attached and, if necessary, removed from the casing 11 in a simple and rapid manner, without the intervention of a specialized work force and without needing to perform any demolition, even partial, of the wall 14.

[0064] Moreover, it is possible to replace even just one of the elements that constitute the frame 10, in the event that it deteriorates.

[0065] It is clear, however, that modifications and/or additions of parts can be made to the covering frame 10 as described heretofore, without departing from the field and scope of the present invention.

[0066] For example, the longitudinal ridges could be arranged in correspondence with the lateral surfaces 20b and 20d of the central element 20, while the mating housing seatings 26 could be made on every lateral element 17 and 19.

[0067] According to another variant, the housing seatings 26 could provide trigger-type clamping elements, such as teeth, ribs or suchlike, able to cooperate with mating hollows made on the ridges 22.

[0068] It is also clear that, although the present invention has been described with reference to specific examples, a person of skill in the art shall certainly be able to achieve many other equivalent forms of covering frame for a casing and relative assembly method, all of which shall come within the field and scope of the present invention.

Claims

1. Covering frame for a casing (11) arranged on the inner perimeter of an opening of a wall (14), **characterized in that** it comprises a central element

(20, 120) able to be attached to a central surface (12) of said casing (11), and a pair of lateral elements (17, 19) able to be coupled with said central element (20, 120) on opposite sides with respect to said central element (20, 120), in order to cover corresponding opposite lateral surfaces (14a, 14b) of said wall (14) on which said casing (11) is mounted.

2. Frame as in claim 1, **characterized in that** each of said lateral elements (17, 19) comprises first coupling means (22, 26), able to be coupled with mating second coupling means (26, 22) made on said central element (20).

3. Frame as in claim 2, **characterized in that**, for each of said lateral elements (17, 19), said first coupling means comprise a longitudinal ridge (22), and **in that** said second coupling means comprise two housing seatings (26) made laterally on said central element (20) and each able to accommodate a corresponding longitudinal ridge (22).

4. Frame as in claim 2, **characterized in that**, for each of said lateral elements (17, 19), said first coupling means comprise a housing seating (26), and **in that** said second coupling means comprise two longitudinal ridges (22) arranged laterally with respect to said central element (20) and each able to be inserted in a corresponding housing seating (26).

5. Frame as in claim 1, **characterized in that** it also comprises two substantially vertical parts (13, 15) connected at the upper part by a substantially horizontal third part (16), and **in that** each of said three parts (13, 15, 16) consists of said pair of lateral elements (17, 19) and said central element (20).

6. Frame as in claim 5, **characterized in that** the respective cross sections of said lateral elements (17, 19) are substantially equal.

7. Frame as in claim 6, **characterized in that** said central element (20) has a substantially equal cross section both in correspondence with said two substantially vertical parts (13, 15) and also in correspondence with said third part (16).

8. Frame as in any claim hereinbefore, wherein said wall (14) has a determinate thickness, **characterized in that** it also comprises auxiliary coupling means (29) interposed between said first coupling means (22, 26) and said second coupling means (26, 22) and able to adapt the width of said central element (20) to the thickness of said wall (14).

9. Frame as in any claim hereinbefore, **characterized in that** said central element (20, 120) is able to be attached to said wall (14) by means of attachment

means (23).

10. Frame as in any claim hereinbefore, wherein said casing (11) comprises an old frame (12) attached to said wall (14), **characterized in that** said central element (20) comprises at least an inner surface (20c) provided with a positioning step (27) able to be positioned in contact with an abutment surface (12a) of said old frame (12). 5 10
11. Frame as in any claim hereinbefore, **characterized in that** said central element (20) comprises at least a front surface (20a) provided with a stopping step (25) able to define an abutment in order to stop the movement of a wing (18) of said casing (11). 15
12. Method to assemble a covering frame for a casing (11) arranged on the inner perimeter of an opening of a wall (14), **characterized in that** it provides at least a first step wherein a central element (20, 120) is attached to a central surface (12) of said casing (11), and a second step wherein a pair of lateral elements (17, 19) are coupled on opposite sides with respect to said central element (20, 120) in order to cover respective opposite lateral surfaces (14a, 14b) of said wall (14). 20 25

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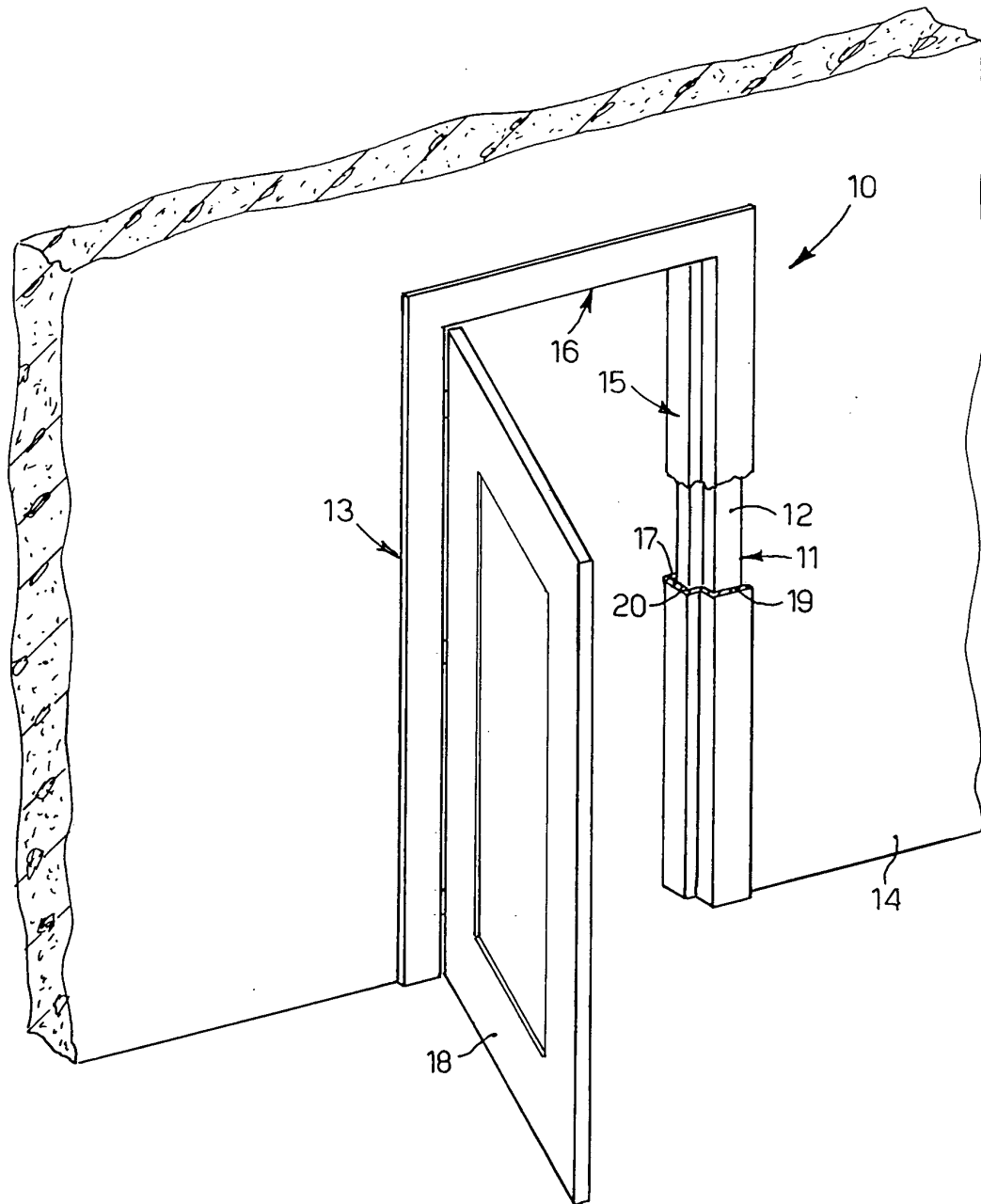


fig. 1

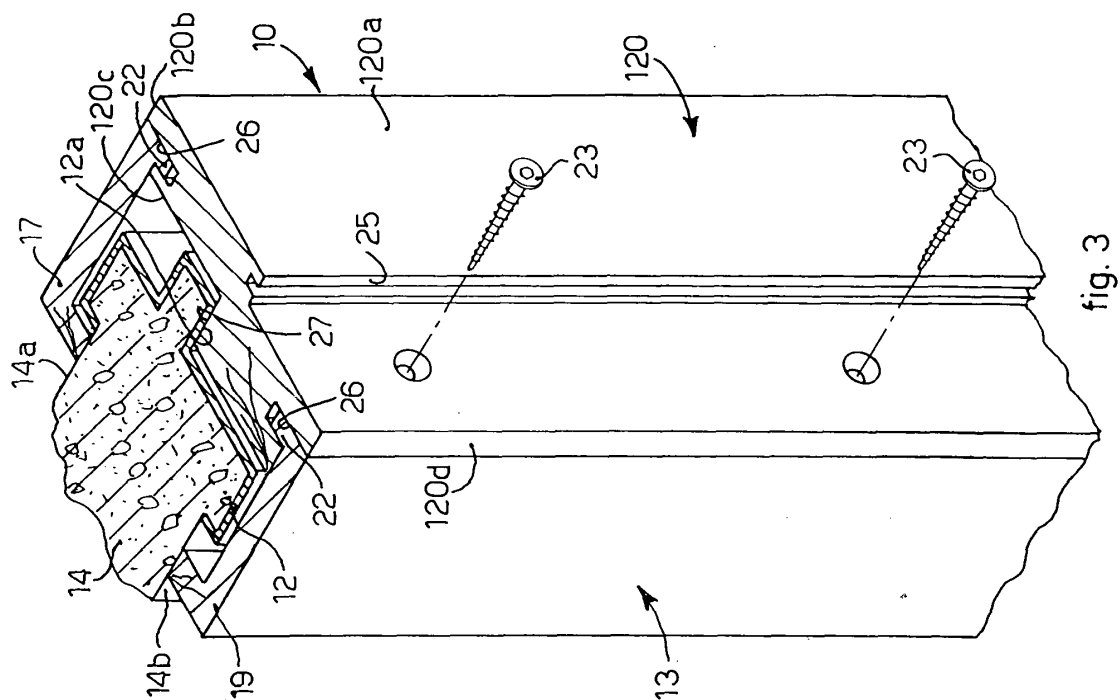


fig. 3

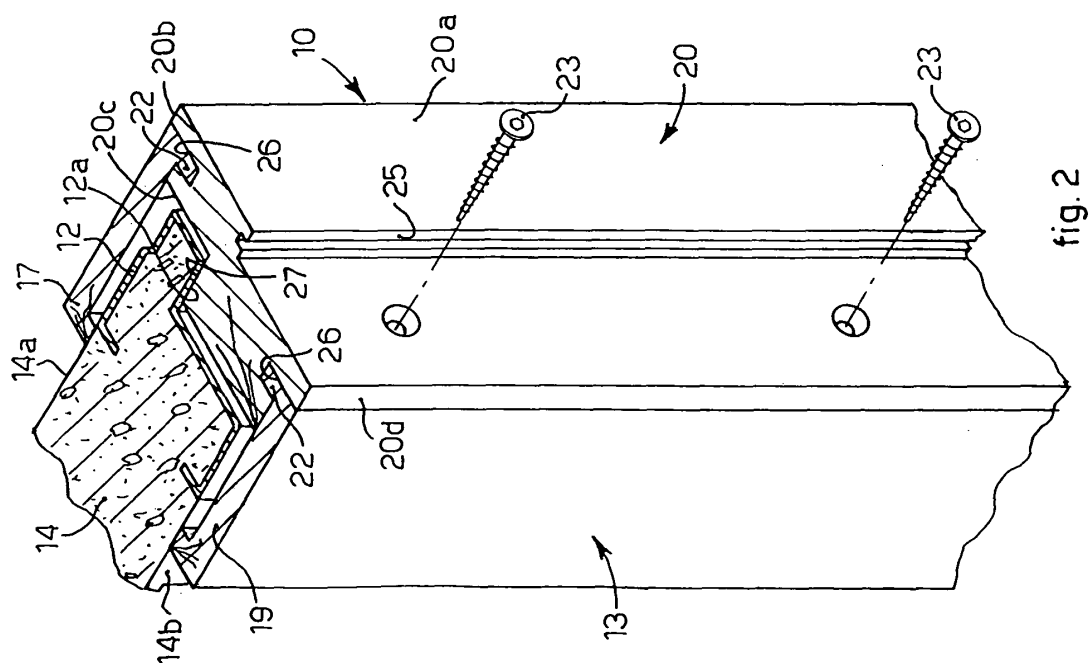


fig. 2

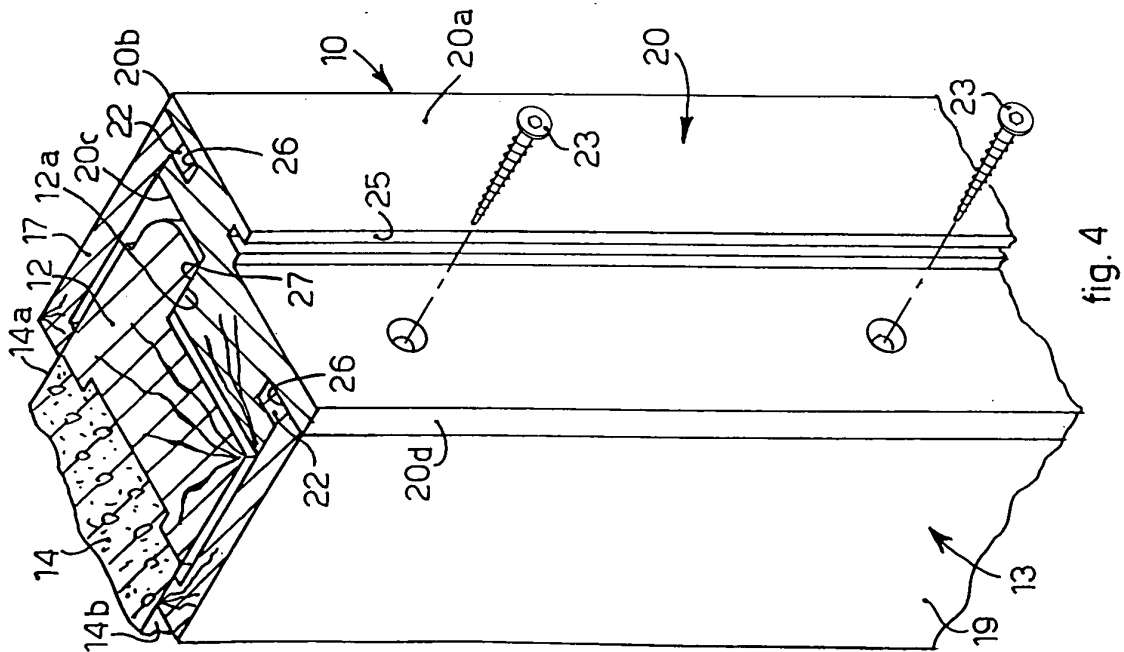


fig. 4

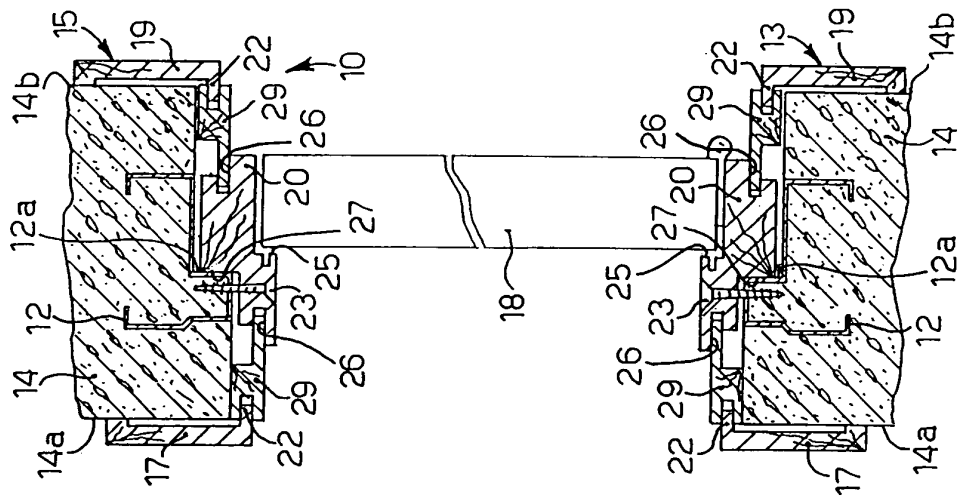


fig. 5

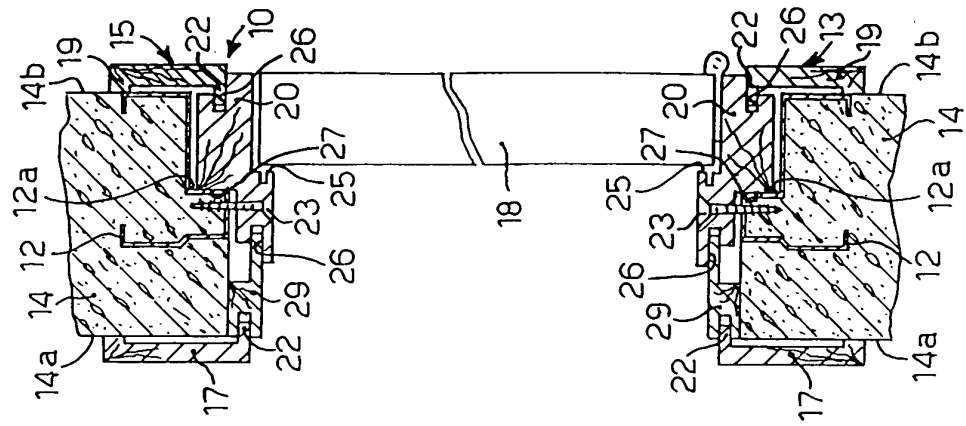


fig. 6



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 03 42 5692

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 March 2004	Examiner Verdonck, B
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 03 42 5692

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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