



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
14.11.2018 Bulletin 2018/46

(51) Int Cl.:
E04G 21/18 (2006.01)

(21) Application number: **17170706.0**

(22) Date of filing: **11.05.2017**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
MA MD

(72) Inventors:
• **VAN DEN HEUVEL, Bastian**
LITH 5397 GJ (NL)
• **VAN DEN HEUVEL, Petrus**
SCHIJNDEL 5482 ZP (NL)
• **HUYMANS, Bas**
STERKSEL 6029 PH (NL)

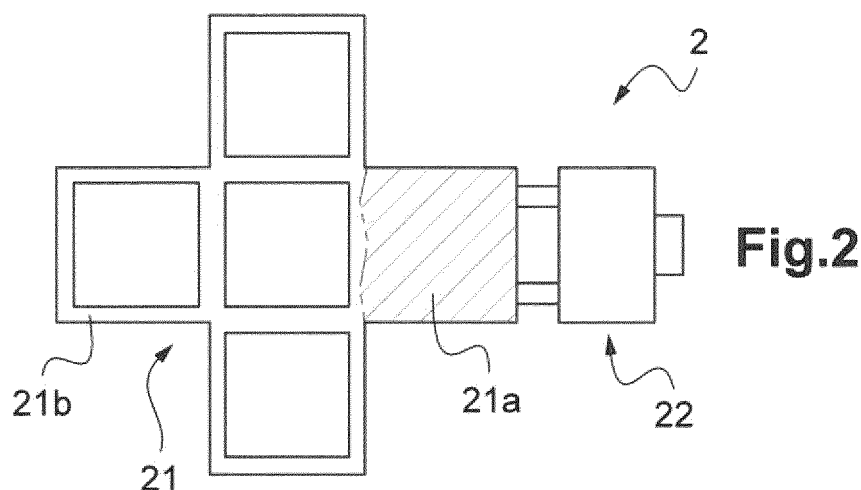
(71) Applicant: **Saint-Gobain Weber Beamix B.V.**
5605 SH Eindhoven (NL)

(74) Representative: **Saint-Gobain Recherche**
Département Propriété Industrielle
39 Quai Lucien Lefranc
93300 Aubervilliers (FR)

(54) **SYSTEM FOR A MASONRY GUIDE**

(57) The present invention concerns a joint body (2) for supporting a masonry guide (1) relative to a brick wall to be laid, said joint body being configured to be received in a joint (122) of the wall, wherein the joint body comprises two parts (21, 22) connected together, character-

ized in that the first part (21) comprises female connecting means (210) and the second part (22) comprises male connecting means (220) allowing the two parts to be connected slideably to each other in a position of use.



Description

[0001] The present invention relates to a system for adjusting a masonry guide relative to a brick wall to be laid, comprising a joint body configured to be received in a joint of the wall, and first masonry guide attaching means to be connected to the joint body and configured for attachment to the masonry guide.

PRIOR ART

[0002] It is known from the prior art a system for adjusting a masonry guide relative to a brick wall to be laid. Said system comprises a joint body configured to be received in a joint of the wall, and first masonry guide attaching means to be connected to the joint body and configured for attachment to the masonry guide. This system is characterized in that the joint body comprises two parts slidable into each other, the parts being releasably connected to each other in a position of use.

[0003] In the known system, the parts of the joint body are mutually connected by means of a breakable connection or by means of a snap connection.

[0004] It is also known from the prior art the document NL2004502. This document NL2004502 discloses a system comprising a joint body with two parts slideable into each other. In the known system, the two parts of the joint body are not mutually fixed in the position of use. The known joint body is moreover configured such that in the position of use one of the parts can be slid sufficiently far out of the joint to attach the masonry guide thereto. This can result in stability problems which can have adverse consequences for the quality of the brickwork.

[0005] The known systems have the disadvantages to be complex because these systems need to be designed so as to permit to said second part to slide in said first part.

[0006] Thus, it is necessary to design a joint body having connection means between the first part and the second part. The connection means must be efficient so as to have a reliable position of use. But, the connection means must be designed to be broken/disengaged after use to allow the second part to slide in the first part.

[0007] Thus, there is a need for a joint body being reliable and simply to use.

SUMMARY OF THE INVENTION

[0008] The present invention has for its object to improve the known system by increasing the facility of use and preventing extension of mortar in unwished portions.

[0009] The present invention thus concerns a joint body for supporting a masonry guide relative to a brick wall to be laid, said joint body being configured to be received in a joint of the wall, wherein the joint body comprises two parts connected together, characterized in that the first part comprises female connecting means and the second part comprises male connecting means al-

lowing the two parts to be connected slideably to each other in a position of use.

[0010] In a first example, female connecting means comprises at least one housing and the male connecting means comprises at least one stud arranged to be inserted in said at least one housing.

[0011] In a second example, the housing and the stud are arranged to have, respectively, a depth and a length allowing the second part to be slid relative to the first part in a plurality of position of use.

[0012] In a third example, the first part further includes at least one hole for fixing first attaching means supporting the masonry guide.

[0013] In a fourth example, the at least one hole for fixing first attaching means and the female connecting means are the same.

[0014] In a fifth example, the first part comprises two or more holes.

[0015] In a sixth example, the first part is designed to have a cross shaped comprising five portions, four portions being a frame and one portion being a base wherein female connecting means are arranged.

[0016] In a seventh example, the second part is a cap having parallelepiped shape from which the male connection means extend.

[0017] In an eighth example, the joint body comprises a peripheral rim extending from the cap so as to be parallel to the edge of the wall.

[0018] In a ninth example, the first part and the second part are made in a material chosen in the list comprising: metal, metallic alloy, ceramic, plastic, polymer, composite material.

[0019] In a tenth example, the first part and the second part are made in a different material.

[0020] In another example, the second part comprises holes for fixing the masonry guide, the second part further comprises a membrane arranged in front of the second part so as to prevent the mortar from filling in the holes.

[0021] In another example, the membrane is made in one piece with the second part.

[0022] In another example, the membrane is a separate piece from the second part, said membrane being fixed to said second part.

[0023] The invention also concerns a system for supporting a masonry guide relative to a brick wall to be laid, comprising a joint body according to the invention configured to be received in a joint of the wall, first attaching means and second attaching means arranged to be connected to the joint body and supporting the masonry guide.

[0024] In a first example, the first attaching means being a bracket comprising a vertical side and a horizontal side perpendicularly arranged with respect to each other, said vertical side being the side used for fixing said bracket to the joint body, the horizontal side is the side used for fixing said bracket to the masonry guide.

[0025] In a second example, the first attaching means further comprising adjusting system comprising a plate

arranged between said bracket and said masonry guide and designed to be able to translate according to two axes (X, Y). The invention further concerns a method for using a system for supporting a masonry guide relative to a brick wall to be laid, said system comprising a joint body according to the invention, said method comprising the following steps:

- taking the first part and the second part and connect them together
- placing said joint body on a surface of a brick so that the second part extends from the brick wall;
- extending a bed of mortar/adhesive/Polymere or other adhesives on the surface of the bricks, said mortar/adhesive/Polymere or other adhesives covering the first part and depositing another bricks level;
- after mortar hardened, pull the second part out to disconnect said second part from the first part;
- fixing first attaching means to said first part, said first attaching means supporting the masonry guide

DISCLOSURE OF THE DRAWINGS

[0026] The invention also relates to a joint body as described as component of the system according to the invention. The invention will now be described in more detail with reference to the figures.

Figure 1 illustrates schematically the application of the system according to the invention;

Figures 2 to 4 show a joint body according to a first embodiment the invention in more detail;

Figure 5 shows a schematic exploded view of the joint body and the bracket according to the present invention;

Figure 6 and 8 shows a schematic exploded view of the masonry guide and the bracket according to the present invention;

Figure 7 shows a joint body according to a first variant of the first embodiment of the invention;

Figure 9 shows an exploded view of the joint body according to a second embodiment of the invention;

Figures 10a and 10b shows a schematic view of the joint body according to a first variant of the second embodiment of the invention;

Figures 11 a and 11 b shows an schematic view of the joint body according to a second variant of the second embodiment of the invention;

DISCLOSURE OF THE INVENTION

[0027] The figures 1 to 8 illustrate the application of the system according to the invention for adjusting a masonry guide 1 relative to a brick (cavity) wall to be laid. Figure 1 shows schematically diverse components of the system according to the invention in a position of use. Wall 110 forms the outer leaf of a cavity wall and is referred to in the field as facing brickwork. As is usual, the

cavity wall further comprises an inner leaf 120. The cavity wall is arranged on a ground surface 100.

[0028] As is usual, a means like string or wire are tensioned between two masonry guides 1 just above the brickwork in progress such that the brick wall 110 to be laid can be laid level.

[0029] Figure 1 shows a schematic view of further components of the system according to the invention. In said view, we can see a brick 121 on which a joint body 2 is arranged. Said joint body 2 is incorporated in a joint 122 between two bricks 121 lying one above the other. Joint body 2 serves to connect first attaching means 3 to the wall. The masonry guide 1 is fixed to the first attaching means 3.

[0030] For a stable vertical position, second attaching means 4 for the masonry guide are provided for attaching masonry guide 1 to inner leaf 120 of the cavity wall. Said second attaching means are used to cooperate with first attaching means to maintain the masonry guide 1 to a desired position. Preferably, the first attaching means and the second attaching means are fixed at the ends of the masonry guide 1.

[0031] Figures 2 and 3 shows a joint body 2 according to a first embodiment of the invention in more detail. The joint body comprises two parts 21 and 22, the two parts 21 and 22 being arranged to be connected together.

[0032] Joint body 2 is preferably manufactured from plastic, in particular a hard plastic. But, joint body 2 could be manufactured in metal or alloy or in ceramic or in plastic or in polymer or in a composite material or wood/wood fiber or secondary materials or in a combination of these materials. For example, the first part 21 could be manufactured in metal and the second part 22 in plastic.

[0033] The first part 21 also called main part comprises a base 21 a and a frame 21 b, said base 21 a and frame 21 b could be in one-piece or not. This configuration advantageously permits to the first part 21 to be firmly attached between two bricks 121, the mortar being able to expend in the frame 21 b. The base 21 a is the functional portion of said first part 21. The base 21 a and the frame 21 b could be in one piece or not, if not, the frame 21 b and the base 21 a are connected together by clipping or soldering or gluing or fixating with screw/bolt.

[0034] In figure 2, the first part 21 is, for example, designed to have a cross shaped, said cross shape comprising five portions. The five portions have the same dimensions, the base 21 a being one of the 4 branch of said cross.

[0035] Thus, the first part 21 is designed to have any shape enabling the joint body 2 to be anchored in the wall. The first part 21 has a variety of shapes like, for example, a T-shape or a U-shape.

[0036] Said first part 21 is used so as to support the masonry guide 1. To do that, first attaching means 3, shown in figure 5, are used. Said first attaching means 3 are used to be fixed to the joint body 2 but also to the masonry guide 1. The first attaching means 3 are advantageously manufactured to taking the form of a bracket

30. The bracket 30 comprises a vertical side 31 and a horizontal side 32 perpendicularly arranged with respect to each other. The vertical side 31 is the side used for fixing said bracket 30 to the joint body 2, the horizontal side is the side used for fixing said bracket 30 to the masonry guide 1.

[0037] The vertical side is fixed to the joint body 2 via fixation means. In one embodiment, the fixation means comprises at least one hole 23 arranged on said joint body 2, at least one opening 33 arranged on said vertical side 31 of the bracket 30 and screws 34. Preferably, the fixation means comprises two or more holes 23. In case of compressible materials used, no holes could be used, screws would enter directly in the material.

[0038] Particularly, the holes 23 of the first parts 21 are arranged on the edge of the base 21 a facing the bracket once the first part 21 is inserted between bricks 121, screws being inserted in said holes 23 through the openings of the vertical side 31.

[0039] To connect the second part 22, the first part 21 includes female connecting means 210, the second part 22 having male connecting means 220. Male connecting means 220 cooperate with female connecting means 210 so as to connect second part 22 to first part 21. In a first embodiment, female connecting means 210 comprises at least one housing 211 wherein a stud 221 forming the male connecting means 220 are inserted by sliding.

[0040] The second part 22 can be considered as a cap. This second part 22 has, for example, a parallelepiped shape from which the male connection means 220 extend. This cap advantageously has a function of positioning the joint body 2. Indeed, it may be advantageous for the joint body not to be too far from the edge of the brick wall. For this purpose, the cap forming the second part 22 comprises a peripheral rim 24. This peripheral rim 24 extends from the cap so as to be parallel to the edge of the wall as shown in figure 4.

[0041] When the bricklaying operations begin, a first level of bricks 121 is arranged on said ground surface 100. In a second step, the bricklayer takes the joint body 2. Particularly, the bricklayer brings the first part 21 and connects the second part 22 to said first part 21.

[0042] Once the joint body 2 is assembled, said joint body 2 is placed on a brick 121 in a third step. The joint body 2 is placed so that the rim 24 of the second part 22 is in contact with the edge of the brick 121 on which the joint body 2 is placed. A bed of mortar/adhesive/polymere etc.... is then extended on the surface of the bricks 121, said mortar expending in the frame 21 b.

[0043] In a fourth step, a second level of bricks 121 is posed. Thus, the joint body 2 is inserted in the joint 122 between two levels of bricks 121.

[0044] In a fifth step, when the mortar has hardened, the bracket 31 forming the first attaching means 3 is connected to the joint body 2 and particularly to the first part 21. To do this, the bricklayer pulls the second part 22 out. The bricklayer uses his hand or a tool to clamp the second part 22 and he exerts a pulling force on said second part.

As the first part 21 is anchored in the wall, the force exerted by the bricklayer allows the second portion to slide and makes it possible to disconnect the second part 22 from the first part 21. The second part 22 could comprises a grip element 22a facilitating the disconnection between the first part 21 and the second part 22. An alternative to said grip element 22a could be the use of the peripheral rim 24 for pulling out the second part 22. Said peripheral rim 24 is thin and flexible to permit the application of a tensile force to the second part. This step allows the bricklayer to have access to the holes 23, said holes being used to fix said bracket 30.

[0045] In a sixth step shown in figure 5, the bracket 30 is attached to said first part 21 by screwing and the masonry guide 1 is fixed to said bracket. The masonry guide 1 is also attached to the inner leaf 120 of the wall cavity by means of second attaching means 4. The masonry guide 1 is attached to the wall so as to be perfectly vertical so that the wall could be mounted correctly.

[0046] In figure 6, it is possible that first and second attaching means 3, 4 are equipped with an adjusting system 5 allowing the masonry guide 1 to be perfectly vertical. Indeed, it is possible that the joint body 2 or first attaching means 3 or second attaching means 4 are not perfectly fixed or placed so that a gap appears between the desired position and the measured position. With an adjusting system 5, it is possible to adjust the position of the masonry guide 1. For example, an interface plate 50 could be arranged between the bracket 30 and the masonry guide 1 and between the masonry guide 1 and the second attaching means 4. This plate 50 could be designed to be able to translate according to two axes X, Y. For example, the plate 50 comprises a first adjusting opening 51 extending according a first direction and the bracket 30 comprises a second adjusting opening 52 extending according a second direction perpendicular over the first direction. A bolt 53 including a screw and a nut is used to lock the position of each plate 50.

[0047] Said plate 50 further comprises means for connecting and maintaining the masonry guide 1. Said means are for example a pyramidal stud 54 arranged to cooperate with a pyramidal housing. The pyramidal stud 54 could be arranged on said plate 50 and the pyramidal housing could be arranged on said masonry guide 1.

[0048] So, when the masonry guide 1 is mounted and attached by means of the first attaching means 3 and second attaching means 4, each bolt 53 is released so that each plate 50 could be manually translated by the bricklayer. When the masonry guide 1 is perfectly perpendicular to the ground 100, the bolts 53 are tightened to lock the position of the plates 50.

[0049] In a first variant shown in figure 7, the housing 211 and the stud 221 forming respectively the female connecting means 210 and the male connecting means 220 are designed so that the position of the second part 22 of the joint body 2 could be adjust.

[0050] In fact, the walls 110 have not the same thickness. Thus, there is a need to have a joint body 2 which

can be adapted to a large range of bricks.

[0051] To this end, the first variant proposed to develop the housing 211 and the stud 221 to increase the depth of the housing 211 and the length of the stud 221. With this set-up, it is possible for the second part 2 to slide in the first part 1. The housing 211 and of the stud 221 are dimensioned to permit the second part 22 to slide in the first part 21 but also to maintain the position of the second part 22 relative to the first part 21. The friction between the surfaces of the stud 221 and the housing 211 must be sufficiently high so that the second part does not move freely.

[0052] Nevertheless, it could be possible to have indexing means between studs and holes. Said indexing means could be for example some toothed means so as to lock the position between the studs and the holes.

[0053] Thus, the bricklayer using the joint body 2 according to this first alternative embodiment is able to perform an adjusting step. This adjusting step is performed after the step consisting in connecting second part to first part.

[0054] In a preferred variant shown in figure 8, the holes 23 for attaching the bracket 30 and the housing 211 forming the female connecting means 210 are the same. So, the holes 23 of the first parts 21 are arranged on the edge of the base 21 a facing the bracket are, firstly, used to permit the fixing of the second part 2. Secondly, said holes 23 are used for fixing the bracket 30 once the joint body 2 is inserted in the joint 122 between bricks.

[0055] This preferred variant has the advantage of protecting said holes 23. In fact, during the step of extending the mortar, the mortar extends in all the cavities. If said cavities are not protected, the mortar can block the cavities. Said cavities become unusable. Thus, if the mortar fills in the holes 23, it becomes impossible to fix the first attaching means 3 to said joint body 2.

[0056] In a second embodiment shown in figure 9, the second part 22 is connected to the first part 21 with screws. The second part comprises through holes 22b. Said holes 22b could be arranged to be faced to the holes 23 of the first part 21. This alignment of holes 22b with holes 23 allows the bricklayer to insert screws 25 into said holes 22b, 23 so as to connect the adjusting system to the first and second parts. Nevertheless, it is not necessary that the holes 22b are arranged to be faced to the holes 23 of the first part 21, only the holes 22b could be used for fixing the adjustable masonry system.

[0057] Nevertheless, the through holes 22b are exposed to the mortar when the bricklayer works on the wall. If said holes 22b are filled in with mortar, the bricklayer is not able to use a screwdriver to disconnect the second part from the first part.

[0058] To overcome these risks, the present embodiment proposed to add at least one membrane 30 to the second part. This membrane takes place in the front of said second part. Said membrane is arranged to prevent the mortar from filling in the holes.

[0059] In a first variant of this second embodiment

shown in figures 10a and 10b, the membrane is directly formed in the second part. Indeed, said second part is preferably made of plastics, said plastic is easy to cast. So, it is possible to design the mold to add this membrane.

[0060] In this first variant of this second embodiment, the membrane is designed so that a gap is present between said membrane and the front of the second part. During the assembly of the wall, When spreading the mortar, the membrane is deformed. This deformation permits to said membrane to enter in contact with the front face of the second part. It becomes impossible for the mortar to fill in the holes 22b. This solution can also be adapted to part 21 a directly in case no 22a is used In a second variant of this second embodiment shown in figures 11 a and 11 b, the membrane is a separate element, said separate element being fixed to said second part. In this second variant, the membrane is made separately its own material. This possibility permits to the manufacturer to use a specific material having better mechanical characteristics for this specific application.

[0061] Said membrane is fixed to said second part, particularly to the front face of said second part. This fixation is made by gluing, soldering, brazing or the like. So, it is not possible for the mortar to fill in the holes.

[0062] After the assembly of the wall, the bricklayer pierces said membrane to have access to the holes. This piercing allows the bricklayer to use a screwdriver to fix the adjustable masonry system to the joint 2.

[0063] In the first variant, it is possible to set the thickness of the membrane so as to increase or decrease its mechanical strength.

[0064] In the second variant, the mechanical strength could be set by modifying the thickness and/or changing the material of said membrane.

[0065] In another variant, it is possible to have a number of membranes equal to the number of holes.

[0066] The invention is of course not limited to the described and shown preferred embodiment but extends to any embodiment falling within the scope of protection as defined in the claims and as seen in the light of the foregoing description and accompanying drawings.

Claims

1. Joint body (2) for supporting a masonry guide (1) relative to a brick wall to be laid, said joint body being configured to be received in a joint (122) of the wall, wherein the joint body comprises two parts (21, 22) connected together, **characterized in that** the first part (21) comprises female connecting means (210) and the second part (22) comprises male connecting means (220) allowing the two parts to be connected slideably to each other in a position of use.
2. Joint body according to claim 1, wherein female connecting means (210) comprises at least one housing (211) and the male connecting means (220) com-

- prises at least one stud (221) arranged to be inserted in said at least one housing.
3. Joint body according to claim 2, wherein the housing (211) and the stud (221) are arranged to have, respectively, a depth and a length allowing the second part to be slid relative to the first part in a plurality of position of use.
 4. Joint body according to any of claims 1 to 3, wherein the first part further includes at least one hole (23) for fixing first attaching means (3) supporting the masonry guide (1).
 5. Joint body according to claim 4, wherein the at least one hole (23) for fixing first attaching means (3) and the female connecting means (210) are the same.
 6. Joint body according to claim 5, wherein the first part comprises two or more holes.
 7. Joint body according to any of the preceding claims, wherein the first part (21) is designed to have a cross shaped comprising five portions, four portions being a frame (21 b) and one portion being a the base (21 a) wherein female connecting means are arranged.
 8. Joint body according to any of the preceding claims, wherein the second part (22) is a cap having parallelepiped shape from which the male connection means (220) extend. This I don't understand.
 9. Joint body according to any of the preceding claims, wherein it comprises a peripheral rim (24) extending from the cap so as to be parallel to the edge of the wall.
 10. Joint body according to any of the preceding claims, wherein the first part and the second part are made in a material chosen in the list comprising: metal, metallic alloy, ceramic, plastic, polymer, composite material.
 11. Joint body according to any of the preceding claims, wherein the first part and the second part are made in a different material.
 12. Joint body according to any of the preceding claims, wherein the second part comprises holes 22b for fixing the masonry guide, the second part further comprises a membrane arranged in front of the second part so as to prevent the mortar from filling in the holes.
 13. Joint body according to the preceding claim, wherein the membrane is made in one piece with the second part.
 14. Joint body according to claim 12, wherein the membrane is a separate piece from the second part, said membrane being fixed to said second part.
 15. System for supporting a masonry guide relative to a brick wall to be laid, comprising a joint body (2) according to one of the preceding claims configured to be received in a joint of the wall, first attaching means (3) and second attaching means (4) arranged to be connected to the joint body (2) and supporting the masonry guide.
 16. System according to claim 15, wherein the first attaching means being a bracket (30) comprising a vertical side (31) and a horizontal side (32) perpendicularly arranged with respect to each other, said vertical side (31) being the side used for fixing said bracket (30) to the joint body (2), the horizontal side is the side used for fixing said bracket (30) to the masonry guide (1).
 17. System according to claim 16, wherein the first attaching means further comprising adjusting system (5) comprising a plate (50) arranged between said bracket (30) and said masonry guide (1) and designed to be able to translate according to two axes (X, Y).
 18. Method for using a system for supporting a masonry guide (1) relative to a brick wall to be laid, said system comprising a joint body (2) according to the any one of the claims 1 to 14, said method comprising the following steps:
 - taking the first part (21) and the second part (22) and connect them together
 - placing said joint body (2) on a surface of a brick so that the second part extends from the brick wall;
 - extending a bed of mortar/adhesive/polymere etc. on the surface of the bricks, said mortar covering the first part and depositing another bricks (121) level;
 - after mortar hardened, pull the second part out to disconnect said second part from the first part;
 - fixing first attaching means (3) to said first part, said first attaching means supporting the masonry guide (1).

Fig.1

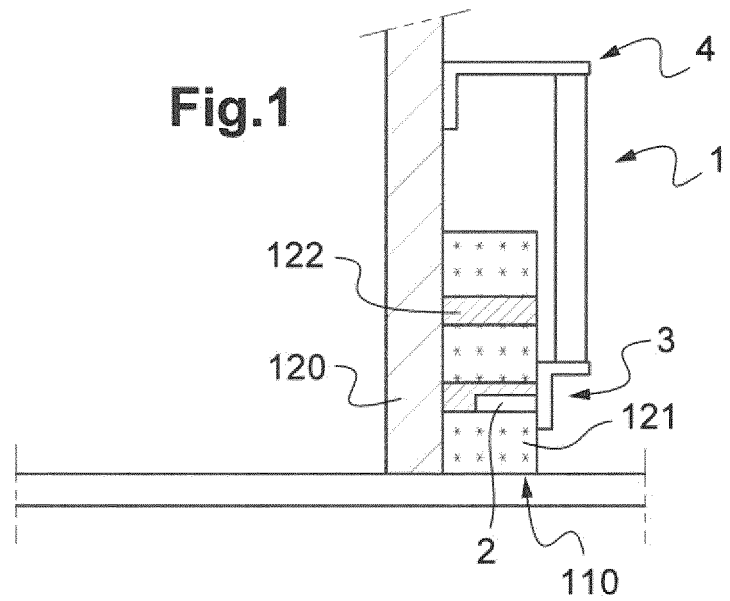


Fig.2

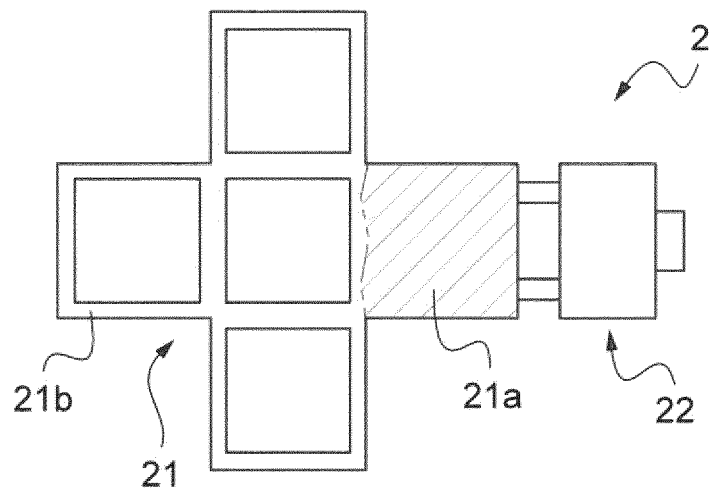


Fig.3

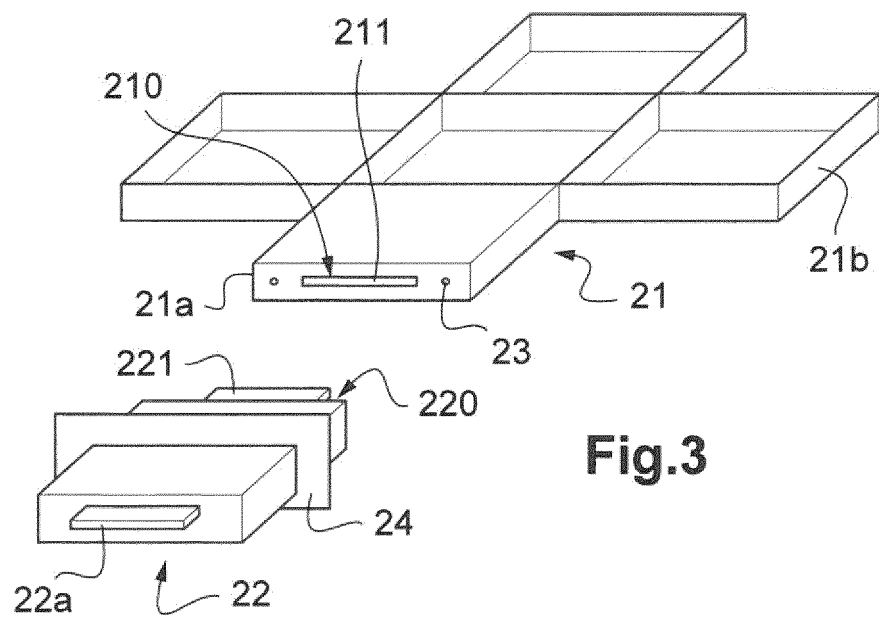


Fig.4

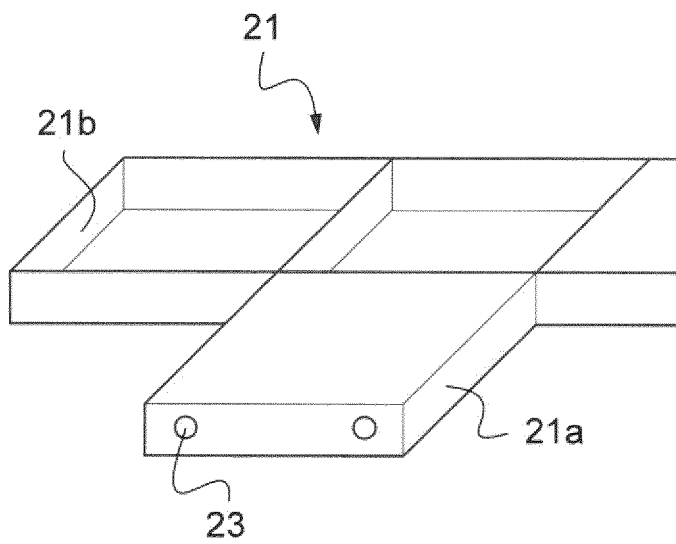
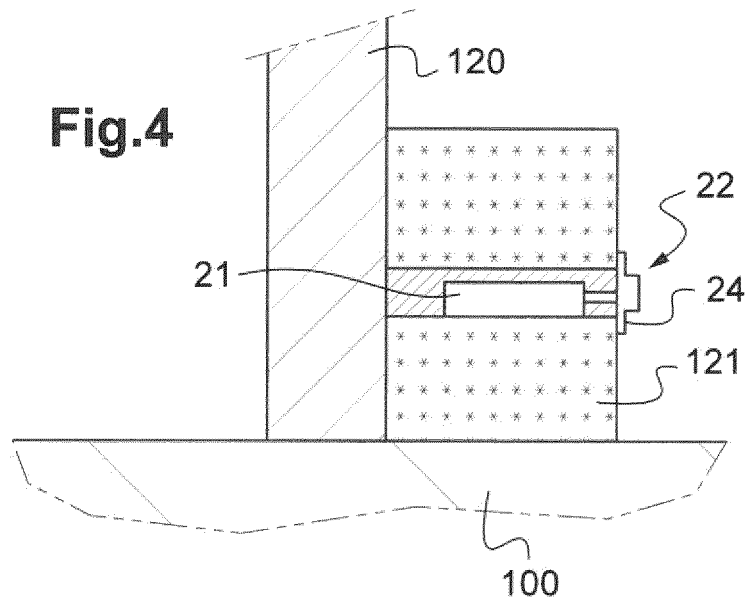


Fig.5

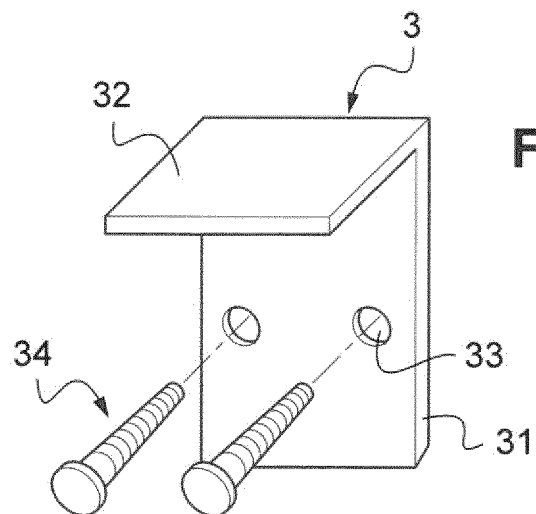


Fig.6

Fig.7

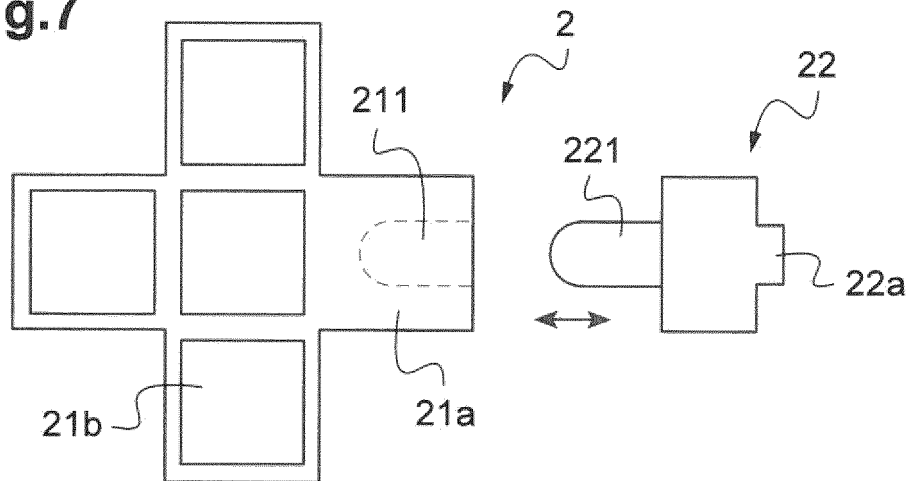


Fig.8

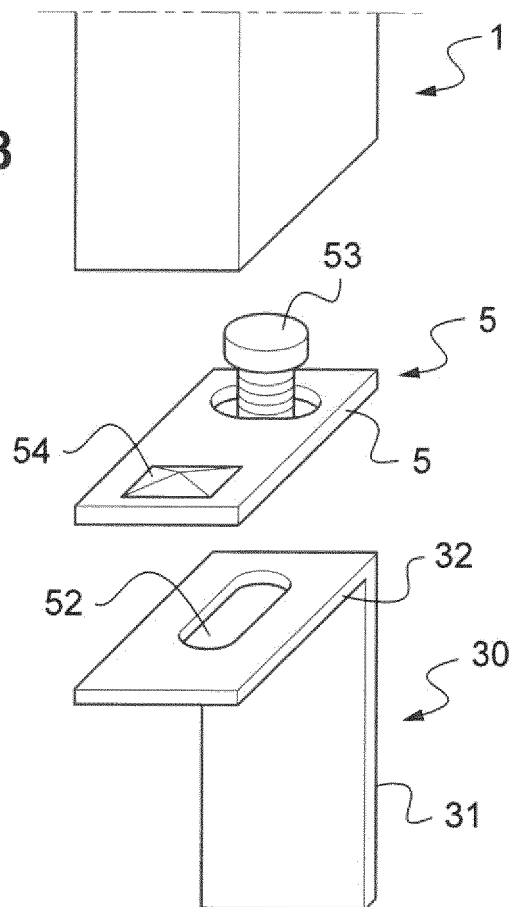


Fig.9

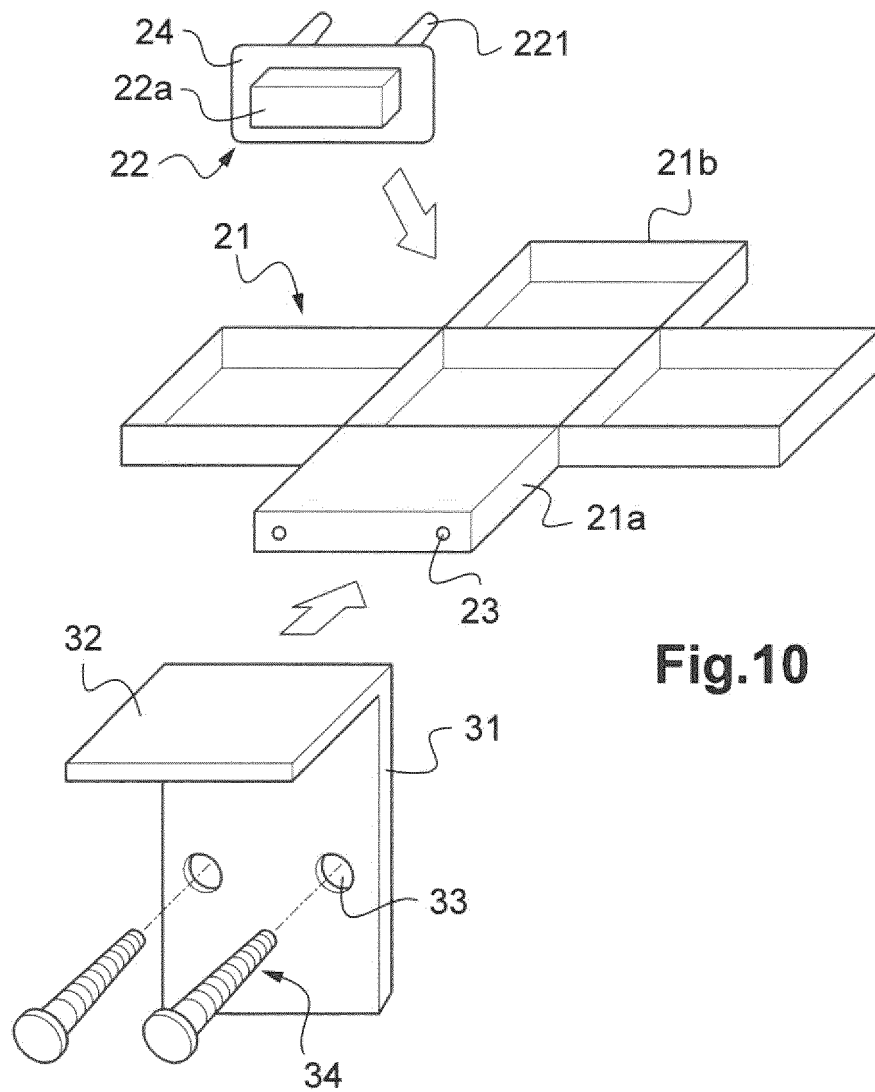
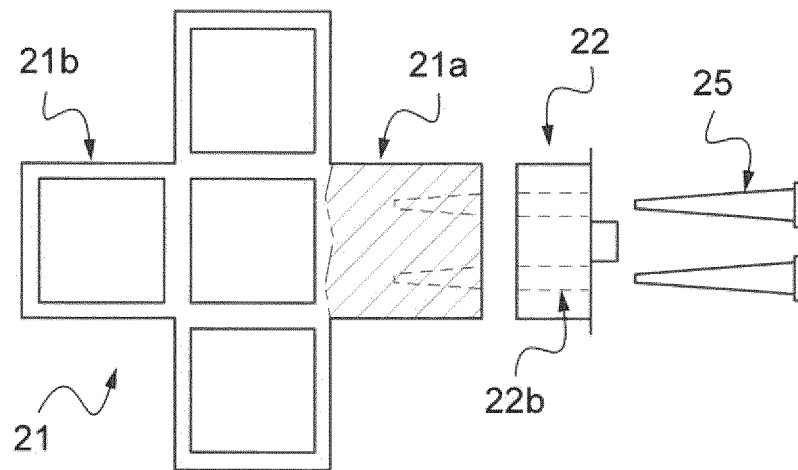


Fig.10

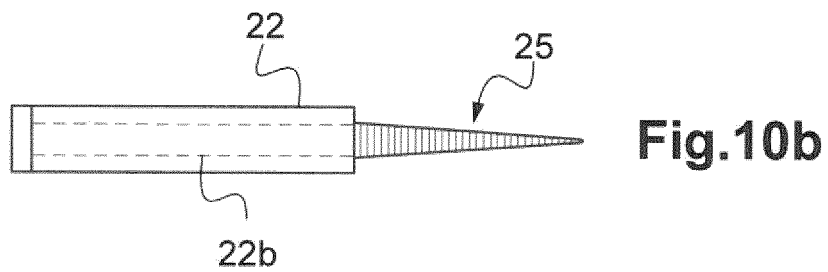
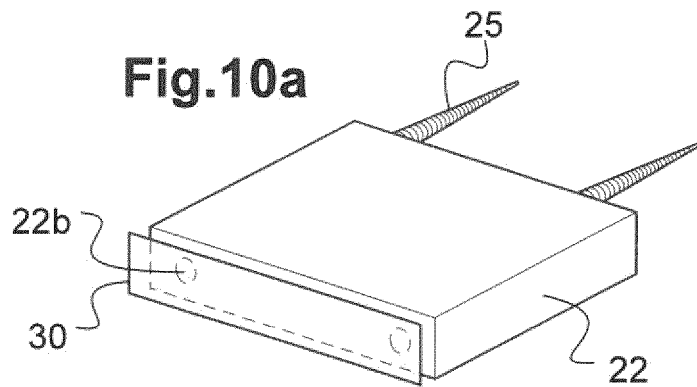
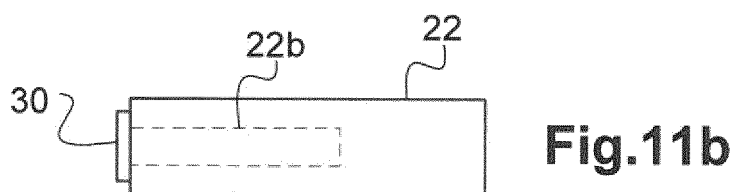
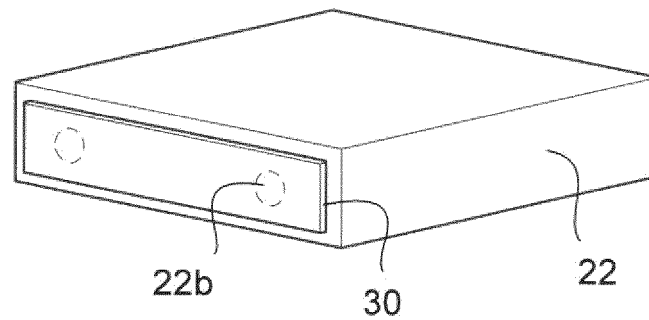


Fig.11a





EUROPEAN SEARCH REPORT

Application Number
EP 17 17 0706

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	WO 2014/098585 A1 (J W FRANSEN BEHEER B V [NL]) 26 June 2014 (2014-06-26) * figures 1-3, 5A, 5B * * page 4, line 20 * * page 5, line 6 * * page 6, line 17 * -----	1-3,7-17 4-6,18	INV. E04G21/18
			TECHNICAL FIELDS SEARCHED (IPC)
			E04G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 June 2017	Examiner Tryfonas, N
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			

 2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 17 17 0706

5

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-06-2017

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2014098585 A1	26-06-2014	AU 2013364537 A1	02-07-2015
		CA 2934857 A1	26-06-2014
		EP 2935725 A1	28-10-2015
		NL 2011700 C	24-06-2014
		US 2015368917 A1	24-12-2015
		WO 2014098585 A1	26-06-2014

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- NL 2004502 [0004]