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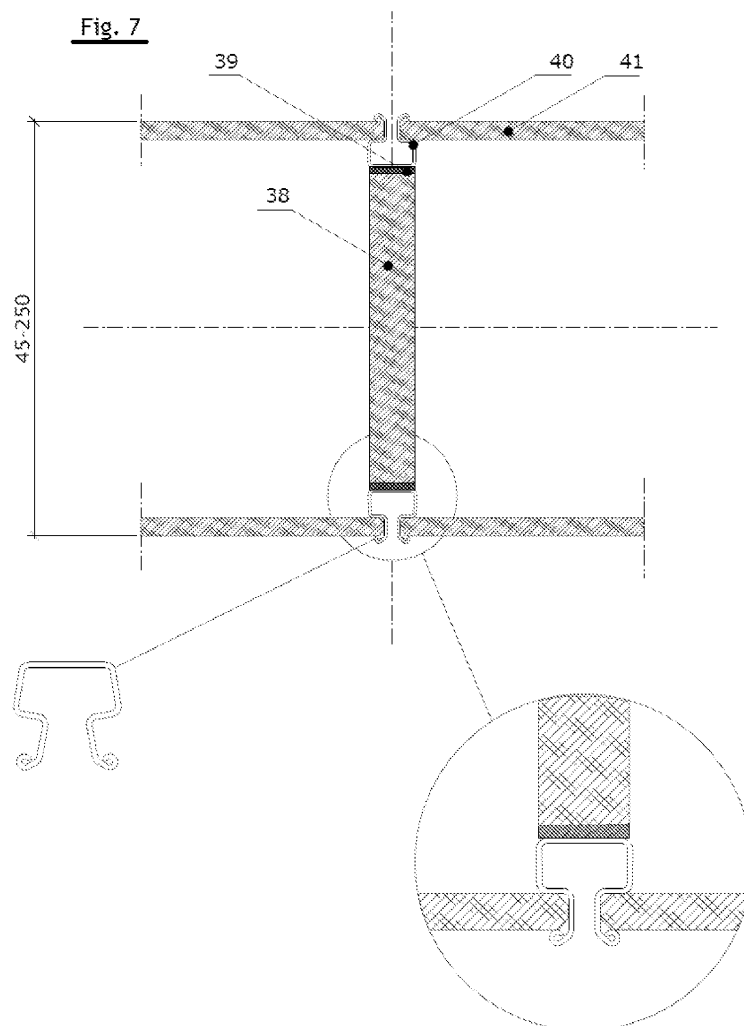
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(54) **A metal alloy profile device**

(57) A metal alloy composition shaped into a profile useful for partition modular panel systems making it possible to set up light weight partition systems such as those

of 4 mm glass useful for example divide open office spaces, easy to mount and to move again without causing damages and without using heavy lifting equipment.



Description

FIELD OF THE INVENTION

[0001] The present invention relates to a metal alloy profile device, a method for manufacturing the metal alloy profile device, an assembly of parts and use of the metal alloy profile device for holding modular panels, which modular panels may be used for partitioning office spaces or rooms.

BACKGROUND ART

[0002] It has been well known for many years to use easily transportable modular panels for partitioning an empty space, such as an office space, in a very fast manner. Partitioning systems are shown by example in US3289368 and 3841042 which both disclose modular panels lying on horizontal profile members that are themselves mounted on vertical support legs and in which electrical plugs and telephone connections are incorporated.

[0003] Glass is often used for such partition as this gives partition walls a quality appearance and creates light, open rooms. Its soundproofing properties allow to work undisturbed and in peace - ideal conditions for offices. Depending on the chosen glass types, front-mounted glazing for optimum soundproofing up to 50 dB is available in trade. It can be tailor-made on demand either single or double glazed, frames with different widths which can be integrated with electrical blinds.

[0004] It is an important feature of a sturdy partition that is must be relatively inexpensive to manufacture, as well as to erect, remove or modify. Also ideally, requiring few, if any, exposed screws or fasteners for fastening or holding the component parts together, all of said component parts, except the panel cores, doors and their hardware, supporting-post pedestals, coil springs and screws, are provided from appropriate lengths of framing members of different cross sectional shapes of extruded aluminum (normally called "shapes" in the industry) of proper thickness.

[0005] US3180459 briefly describes use of basic aluminum extruded components, solid and/or glazed panels, or a combination of both, and various fasteners, these various items being converted to form the various types of sturdy partition assemblies.

[0006] Aluminum extrusion profiles come in many different shapes and uses. As indicated above, they are typically used for windows, partitions using glass and in general as building materials for example also used as building material for making curtain walls, windows and doors. Profiles can be hollow and are stamped by fed aluminum strips of suitable width depending on the stamping machine and desired shapes. Examples of shapes and applications are numerous and an overview can be seen easily on supplier's catalogues of for example Hentec Industry Ltd (Figure 10). Other aluminum pro-

files are rails widely used in decoration of villas, house balcony, stairway, etc. It has the advantage of strong structure, bright colors, graceful and smooth shapes.

[0007] Velux, a window producing company, has a product on the market which has the trade name "Vital" as shown in Figure 9. Vital shows the drawings of the window and its specific profile used. These are specially developed so that water can run off and no water damages occur to the windows. There it is shown that glass is held between a profile as known to the skilled person.

[0008] Profiles are can be made of stainless steel and other metals and the choice may for example depend on specific weather conditions or strength requirements.

SUMMARY OF THE INVENTION

[0009] The present invention relates to a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile. A typical embodiment of the metal alloy profile device of the present invention is illustrated in figure 1.

[0010] Such metal alloy profile device (1) of the present invention is for instance useful to provide support for modular panel systems (e.g. of glass, gypsum, veneer), to make partitions or to create isolated closed rooms within an office space. The disclosed metal alloy profile device (1) makes it easier to mount modular panels (light weight) and facilitates easy dismantling without risk of damaging the materials of such modular panel systems. Also, as will be explained below, there is a significant weight reduction possible now, as lighter weight modular panel systems (less thick glass for example, and avoiding heavy steel posts) can be chosen as compared to prior art, so that the entire modular panels systems become easier to handle.

[0011] The present inventors have produced a metal alloy profile device which has a profile shaped so that it can support, maintain and hold the modular panel, such as a glass modular panel without the necessity to use nails or screws. The modular panel, e.g. made of a glass which forms a modular panel can be readily inserted into the metal alloy profile device without the use of force, and the metal alloy profile device will then maintain the modular panel, e.g. the glass modular panel, stable in that position. The metal alloy profile device of the present invention can also directly be fixed to posts (such as glass post, so that the glass modular panel system can be easily set up and dismantled without too many handlings and without complicated and also heavy machinery/equipment for the skilled person.

[0012] The metal alloy profile device (1) of the present

invention is used by the skilled person who can by simply taking the modular panel (e.g. glass panel) and push it into the metal alloy profile device, which then hold it due to its specific characteristic flexible/elastic form, which is a result of the herein disclosed metal alloy and the hold-
ings arms (2, 2') as defined further herein. (See also, FIG. 3B wherein a typical embodiment of the metal alloy profile device of the present invention holds a modular panel (F)).

[0013] Furthermore, the present invention relates to a method for manufacturing metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile, wherein the method comprises shaping the metal alloy into a suitable metal alloy profile device (1).

[0014] Such manufacturing is known to the skilled person and may be done by for instance extrusion, by molding or by rolling the metal alloy into a suitable metal alloy profile device (1).

[0015] Roll forming, also termed in the art as rollforming, is a continuous bending operation in which a long strip of metal (typically coiled steel) is passed through consecutive sets of rolls, or stands, each performing only an incremental part of the bend, until the desired cross-section profile is obtained. Roll forming is ideal for producing parts with long lengths or in large quantities.

[0016] The rollforming machine basically exists of shaped round rolls. There can be up to 20 of such rolls. In case of present invention, there are 6 to 7. Each roll or combinations of rolls, contributes to a specific shape to the fed metal alloy and forms the profile in the end. The chosen metal alloy, typically a suitable width of for example 6 cm and a chosen thickness of 1.0 mm is first fed into the first station, and it bends the profile slightly upwards as an example, the second gives the shape according to figure 1 with, the third with the fourth delivers the holding arms and shapes the end part (3, 3') curves.

[0017] Moreover, the present invention relates to an assembly of parts comprising a metal alloy profile device (1), having a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile, and a modular panel (F), wherein the holding arms are in the second position when holding the modular panel (F).

[0018] Also, the present invention relates to use of a

metal alloy for preparing a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile.

[0019] Furthermore, the present invention relates to use of a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), and a modular panel (F), for preparing an assembly of parts wherein the holding arms are in the second position when holding the modular panel (F).

[0020] Last, the present invention relates to a method for partitioning a room comprising the steps according to figure 6 and 7:

- i) set the acoustic tape (28) on the tracks (27)
- ii) mount the tracks with screws (29)
- iii) set steel postes (30) against the modular panel (33)
- iv) set glass posts (38) in place
- v) set frame for glass (31) in
- vi) set gaskets (32) on the glass edge top and bottom
- vii) set modular panel (e.g. glass) in the metal alloy profile device (1) starting from the side
- viii) fixed the sides with omega sections (34)
- ix) add filler (36)
- x) set top trim (figure 4, number 19)
- xi) finish with omega cover sections (37)

[0021] As said, the profile is useful for partition systems. Herein it is shown new technical possibilities, using 2 layers full glass modular panel systems with glass post. It shows upright standing an assembly profile "herein termed profile (1)" assembled on the glass pole and it can be seen how the profile holds the 4 mm glass. By such profile assembled on the glass pole or also just using the herein disclosed profile, a steps of assembly are reduced as compared to how it is done in prior art. It is now also easier to set it up with less risk of mistakes during assembly. Profiles are flexible and allow tolerance at work and make it easier to handle bigger surfaces of glass.

[0022] Prior art profile devices have a higher risk of being damaged during setting up or dismantling. Typical damages are such as scratches and distortions on the ready product (e.g. modular panel system) as external

(using tools) are used to dismantle. With present invention, no tools are involved in the actual dismantling of the modular panels. The panels are also light weight (e.g. 4 mm glass instead of prior art glass of 10-15 mm), which also reduces risk for damages as handling lighter weights is easier.

[0023] In prior art, typically, one layer full glass modular panels with a glass thickness of 10 to 15 mm is the solution for dividing space with modular panels. A thickness of 10 to 15 mm is heavy and the skilled person needs tools to carry such glass modular panels. In these constructions, as done today, there is also typically used a particular joint process with one layer modular panel between the 10-15 mm glass. These are also heavy in weight and are difficult to transport and demands heavy lifting on building places.

[0024] The herein described metal alloy profile device of the present invention simplifies mounting of two layers full glass modular panels and hereby achieves the advantages of one layer full glass modular panel.

[0025] Another advantage is time which is saved with the assembly of part of the present invention. There is no need for screws and special machines to set up such partitions systems with the preferred herein disclosed metal alloy profile devices. Further, the final result is also more stylish, understood herein as less visible assembly of parts are necessary for the glass modular panel and the ones used as disclosed herein are also smaller in dimensions.

[0026] Another advantage is that this construction is much easier to handle and carry, there is less risk for damages on the end product either during first time setting up or during dismantling and mounting in another place.

[0027] Yet another advantage with the metal alloy profile device of the present invention is that glass parts with a thickness 4 mm can be used. Existing solutions can also use 4 mm glass but then the construction needs wide posts (preferably in prior art heavy steel posts) to give stability to the construction, which makes it an undesirable design and today this is basically not chosen. With the herein disclosed metal alloy profile device, it is now possible to mount modular panel system of 4 mm glass thickness, which are stable and does not have the disadvantage of using wide heavy steel post in between the glass partitions. The glass partitions are simply held together by the herein disclosed suitable metal alloy profile device which gives good stability of the entire construction. Importantly, 4 mm glass, which weights much less than 10 mm to 15 mm glass, can now be used, makes handling easier. A common accepted standard of maximum allowed standard for lifting materials for the skilled person is about 25 kg. Four (4) mm glass modular panels weigh much less than 30 kg and thus no special lifting tools are necessary any more. This simplifies the assembly and handling. The reduction in weight, using for example glass thickness of 4 mm, compared to glass of 12 mm, is estimated at approximately 67% less. Generally,

it may be estimated as a 1/3 part less weight in favor of the invention presented herein.

[0028] This significant reduction in weight reduces carrying and burden of handling, preventing also physical damages of skilled builders, which sets up such modular panel systems.

[0029] Yet another advantage is design, which is an important factor in the partition systems for offices and publically shared spaces. With the present invention, steel posts are replaced by light weight glass posts (FIG. 7). This creates the possibility of making and setting up real full glass systems, where light can come in all sides and fewer barriers (posts) are needed. The preferred metal alloy profile device disclosed herein can be pre-fixed (FIG. 7) to the glass post (Fig. 7), so that the skilled person does not have to handle tools, and simply inserts the glass parts, chosen by its customers and depending on the space to be partitioned.

[0030] The skilled person who may be a carpenter is typically involved in setting up such modular panel systems. The carpenter receives a ready to set up package which comprises; the herein present invention described suitable profiles, (suitable is herein understood as dimensions of the profile fitting with the chosen thickness of glass, i.e. if 4 mm glass thickness, a profile suitable for 4 mm glass thickness is provided), the correct fitting thickness of glass, which will form the modular panel and glass post. The carpenter can now set up a complete modular panel system or as said above it could also be a closed well isolated room within an open space, suitable for meeting rooms for example or suitable as a room to hold confidential discussions or to have telephone discussions which could disturb other people when such perhaps loud talks are held in open spaces.

[0031] The manufactured an metal alloy profile device of first and second aspect are useful to build glass modular panel systems, partition of open spaces and now can be set-up and dismantled very easily and without the burden that such work is extremely heavy. Further it has the advantages that no screws are involved in setting it up, so that the risk for damage during handling, or dismantling is significantly reduced. The profiles are glued to glass post, so that the skilled person has no need for additional fixing systems such as screws as done in the prior art.

[0032] With the herein disclosed profiles it now becomes extremely useful to easily set up modular panel systems where the modular panel may be glass (or gypsum or veneer) for so-called flexible office systems.

DEFINITIONS

[0033] Prior to a discussion of the detailed embodiments of the invention is provided a definition of specific terms related to the main aspects of the invention.

[0034] Generally, all the definitions of the relevant terms herein should be understood as the skilled person would understand them in the present technical context.

[0035] The term "acoustic tape" is understood herein as a material made of rubber to isolate from sound reducing it and which is material known to the skilled person and is flexible of typically 1 cm by 1 cm provided in rolls.

[0036] The term "frame for modular panel" (such as glass) and denoted 16 in FIG. 4, and is set over the track, it is constructed as such that dimension of the frame is slightly bigger than the track so it can slide over it.

[0037] The term "filler" fills a space between the modular panel (see- FIG. 6 number (36)) and the chosen modular panel, and is made of steel, it delivered kind of resistance, if it would be there, the mounting section would not be straight.

[0038] The term "gasket" and is 25 in FIG. 5 and is a type of extruded plastic shaped profile to protect the modular panel edges from damages, that is preventing glass to have direct contact with metal and to tighten the connections.

[0039] The term "glass pole" is understood herein as a post and is placed between modular panels of e.g. glass to give stability to the construction. The herein disclosed profile (1) is pre-glued to the glass post and replaces the prior art steel posts which are much heavier and not so esthetic for office spaces. (See FIG.7)

[0040] The term "metal alloy profile device" as used herein is made of any suitable metal alloy as long as it has a suitable flexibility when being used according to the present invention. The metal alloy profile device has an elongated nature since it has to hold a modular panel of any suitable length and in particular when being assembled it has to hold two modular panels opposite each other in a position where the system of the metal alloy profile device and the modular panels is stable. A typical embodiment of a metal alloy profile device of the present invention is shown in figures 1-3B.

A metal alloy profile device

[0041] The term "metal alloy profile" is defined herein as a shaped profile in the form of a profile of suitable dimension (length for example depending on the spaces to be partitioned) and the said metal alloy profile device can hold a modular panel such as a glass.

[0042] The term "omega cover section" is made of steel and is a mounting section and holds the modular panel (glass) - see FIG. 6 number 37)

[0043] The term "steel post" herein is a standard post as can be seen on FIG. 6 and noted (30). This is a standard steel post as used in the art. Typical dimensions are for example 30 mm width and 72 mm depth, length can vary according to the construction.

[0044] The term "track" herein is understood as a standard rails and is screwed into the ceiling and floor to hold the entire construction and to give it a dimension which is closed by the modular panels. (FIG 4 denoted as (13)) and is used in all directions; horizontal, vertical and sides.

[0045] The term "trim" is made of steel and known to

the skilled person and is used to carry the modular panel. Herein used a top trim and a bottom trim as shown in FIG.4 - top trim (19) and bottom trim would be the same placed on the bottom.

DRAWINGS

[0046] FIG.1 shows a metal alloy profile device (1) with a first holding arm (2) and a second holding arm (2'), wherein each of the holding arms has a groove (G), in which groove it is intended to insert a modular panel, such as a glass modular panel. As can be seen the end parts (3) and (3') are curved thereby forming the groove (G).

Below a description of the numbers denoted in FIG.1:

[0047]

1: A metal alloy profile device

2: A first holding arm, which is shaped as such that it, can hold a modular panel

2': A second holding arm, also shaped as such that it can hold a modular panel

2 and 2' are half parts where each half part is a holding arm.

G: A groove in which a modular panel may be inserted

G': A groove in which a modular panel may be inserted

FIG.2: shows the holding arms 2 and 2' with curved end part 3 and end part 3'

FIG.3A: Description of all parts of the metal alloy profile device - profile (1)

FIG.3B: Profile shaped to hold modular panel (F) - F may be glass and is set into the holding arm 2 and 2'.

FIG.3C: A metal alloy profile (1) showing distance K when there is no modular panel into the holding arm 2 and 2' and a distance L when there is a modular panel in holding arm 2 and 2'.

FIG. 4: Modular panel (e.g. Glass modular panel system) top solution

FIG. 5: Modular panel (e.g. glass modular panel system) base solution

FIG.6: Detail of assembly side fixation with steel post

FIG.7: Assembly details glass post

FIG. 8: Extruded Aluminum Profiles (Hentec Ltd - example of prior art)

FIG.9: Velux profile for windows, example of prior art

DETAILED DESCRIPTION OF THE INVENTION

[0048] Accordingly a first aspect of the invention is a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other

in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile. When the holding arms are in the first position it means that they are empty and that they are not holding the modular panels, they are in a rest position not being manipulated by the modular panels, whereas in the second position (for instance an embodiment as shown in figure 3C (in figure 3C, the distance K is the distance between the holdings arms 2 and 2' in case no modular panel rests into the holding arms, and the distance L shows a reduced distance in case a modular panel is present in the holding arms) the holding arms are assembled with two modular panels, which are inserted into each holding arm. In the second position the holding arms are being forced closer together by the construction or by the weight of the modular panels, however, it is important that the metal alloy profile device is made of a suitable metal alloy that will keep the flexibility of the holding arms, so that assembly and disassembly can be made without use of considerable force, and the distance between the holding arms gives the desired flexibility when modular panels are inserted to adjust for instabilities and correct for areas which may not be straight. Typically, the holding arms are located opposite to each other. When the holding arms are opposite to each other the distance between them functions to give stability to the modular panel and this is for example relevant on places or locations, where there are not always perfect straight floors, here the distance between the holding arms of the metal alloy profile compensates these forces.

[0049] In one embodiment of the metal alloy profile device (1), the first holding arm (2) comprise a first end part (3) and the second holding arm (2') comprise a second end part (3'), wherein said first end part (3) is curved and forms a first groove (G) together with a first bottom part (11) and a first side part (12), wherein said first side part (12) extends from said first bottom part (11) and forms a first angle (9) between said first bottom part (11) and said first side part (12) and said second end part (3') is curved and forms a second groove (G') together with a second bottom part (11') and a second side part (12'), wherein said second side part (12') extends from said second bottom part (11') and forms a second angle (9') between said second bottom part (11') and said second side part (12').

[0050] In a further embodiment of the metal alloy profile device (1), the distance in the second position compared to the distance in the first position between the first groove (G) and the second groove (G') is reduced by at least 10%, such as from 10% to 85%, typically, from 40% to 70% and typical 50%.

[0051] In another embodiment of the metal alloy profile device (1), the first end part (3) extends from the first bottom part (11) and forms an angle (10) between said

first bottom part (11) and said first end part (3) and the second end part (3') extends from the second bottom part (11') and forms an angle (10') between said second bottom part (11') and said second end part (3'). The particular end parts (3 and 3') with a curve improves the ability of the metal alloy profile device to hold the modular panel on each side in the grooves (G and G').

[0052] In a further embodiment of the metal alloy profile device (1), the first holding arm (2) and the second holding arm (2') are connected to each other through a mutual side part (5). In a preferred embodiment the mutual side part (5) forms an integral part of the metal alloy profile device (1). This is suitable when rolling methods are used to manufacture the metal alloy profile device (1).

[0053] In a still further embodiment of the metal alloy profile device (1), the first holding arm (2) further comprises a first further side part (4) extending from the first side part (12) and forms an angle (8) between the first further side part (4) and the first side part (12), and said first further side part (4) extends from the mutual side part (5) and forms an angle (6) between said first further side part (4) and said mutual side part (5), and the second holding arm (2') further comprises a second further side part (4') extending from the second side part (12') and forms an angle (8') between the second further side part (4') and the second side part (12'), and said second further side part (4') extends from the mutual side part (5) and forms an angle (7) between said second further side part (4') and said mutual side part (5).

[0054] In a further embodiment of the metal alloy profile device (1), the angle (6) and the angle (7) are independently selected from the range 80° to 120°, more preferred between 85° and 100° and typically about 90°.

[0055] In a still further embodiment of the metal alloy profile device (1), the angle (8) and the angle (8') are independently selected from the range 60° to 110°, more preferred from 80° to 95° and typically about 90°.

[0056] In a further embodiment of the metal alloy profile device (1), the angle (9) and the angle (9') are independently selected from the range 60° to 110°, more preferred from 80° to 95° and typically about 90°.

[0057] In a still further embodiment of the metal alloy profile device (1), the angle (10) and the angle (10') are independently selected from the range 95° to 155°, more preferred from 110° to 140° and typically about 135°.

[0058] In a further embodiment of the metal alloy profile device (1), the angle (3) and the angle (3') are independently selected from the range 0.1° to 25°.

[0059] A preferred embodiment of the metal alloy profile device (1) is shown in FIG.1.

[0060] In a preferred embodiment, the metal alloy profile device (1) has angles as shown in Figure 3A.

[0061] In a further embodiment of the metal alloy profile device (1) the metal alloy is selected from aluminum and stainless steel alloys. Aluminum and steel alloys are very suitable materials to give the preferred flexibility of the metal alloy profile device, and a preferred embodiment is to select a metal alloy of the same or substantially the

same flexibility as aluminum and stainless steel alloys.

[0062] In a still further embodiment of the metal alloy profile device (1), the metal alloy is an aluminum alloy selected from any one of 5005, 5005A, 5205, 5305, 5505, 5605, 5006, 5106, 5010, 5110, 5110A, 5210, 5310, 5016, 5017, 5018, 5018A, 5019, 5019A, 5119A, 5021, 5022, 5023, 5024, 5026, 5027, 5040, 5140, 5042, 5043, 5049, 5149, 5249, 5349, 5449, 5050, 5050A, 5150, 5051, 5051A, 5151, 5251, 5251A, 5351, 5451, 5052, 5252, 5352, 5154, 5154A, 5154B, 5154C, 5254, 5354, 5454, 5554, 5554, 5654, 5754, 5954, 5056, 5356, 5356A, 5456, 5456A, 5456B, 5556, 5556A, 5556B, 5556C, 5257, 5457, 5557, 5657, 5057, 5058, 5059, 5059, 5070, 5180, 5180A, 5082, 5083, 5183, 5183A, 5283, 5283A, 5283B, 5383, 5086, 5186, 5087 and 5088 according to the classification system of ANSI.

[0063] In a further embodiment of the metal alloy profile device (1), the metal alloy is aluminum alloy 5042 H19 according to the classification system of ANSI.

[0064] In a still further embodiment of the metal alloy profile device (1), the metal alloy is stainless steel selected from BS EN 10151 and EN 10258 according to the classification system of SAE designation.

[0065] Each of these aluminum and steel alloys individually constitutes a separate embodiment and each is intended to be selected as a typical embodiment together with one or more of the various embodiments described herein, which selection depends on the desired flexibility of the holding arms of the metal alloy profile device (1).

[0066] In a further embodiment of the metal alloy profile device (1) the metal alloy is rolled into a suitable profile.

[0067] In a still further embodiment of the metal alloy profile device (1), the thickness of the device (1) is from 0.1 mm to 1.0 mm, such as from 0.15 mm to 0.50 mm, or from 0.2 mm to 0.3 mm. Typically, the device thickness for stainless steel is in the range from 0.75 mm to 0.8 mm and for aluminum in the range of 0.2 to 1.0 mm. Typically, for spring steel the thickness is in the range of 0.15mm to 0.8mm.

[0068] The manufacturing of metal alloy profile device (1) may be done by roller forming machines known in the art. The skilled person may now manufacture a device as disclosed herein making use of known roller forming machines. It may also be produced by extrusion or molding.

[0069] Accordingly, a second aspect of invention is a method for manufacturing metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile, wherein the method comprises rolling, extruding or molding the metal alloy into a suitable profile (1). In a preferred embodiment the

method comprises rolling the metal alloy into a suitable profile (1). It is to be understood that all of the above described embodiments of the metal alloy profile device (1) of the present invention are also embodiments to be used when describing further embodiments of the method for manufacturing metal alloy profile device (1).

[0070] Accordingly, a third aspect of the invention is an assembly of parts comprising a metal alloy profile device (1), having a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), and a modular panel (F), wherein the holding arms are in the second position when holding the modular panel (F).

[0071] In a further embodiment of the assembly of parts the modular panel (F) comprises a robust material, such as the material selected from glass, gypsum or veneer.

[0072] In a still further embodiment of the assembly of parts the modular panel (F) is selected from a glass. (FIG. 3B).

[0073] In a further embodiment of the assembly of parts the glass has a thickness of from 1 to 20 mm, such as from 2-14 mm, or from 3-10 mm, or from 4-6 mm, typically the glass has a thickness of 4 mm.

[0074] In a still further embodiment of the assembly of parts the modular panel (F) is selected from a gypsum, such gypsum may have a thickness of from 6 to 20 mm, such as from 9 to 13 mm or from 9 to 12.5 mm.

[0075] In a further embodiment of the assembly of parts the modular panel (F) is selected from a veneer, such veneer may have a thickness of from 6 to 20 mm, such as from 9 to 13 mm or from 9 to 12.5 mm.

[0076] It is to be understood that all of the above described embodiments of the metal alloy profile device (1) of the present invention are also embodiments to be used when describing further embodiments of the assembly of parts comprising a metal alloy profile device (1).

[0077] The herein identified metal alloy has characteristics such as flexibility and hardness which are inherent to the composition of the metal alloy. As described above there are many metal alloys available in the prior art and the inventor has identified the particular use of the specific metal alloy composition for this specific profile device application.

[0078] Accordingly, a fourth aspect of the invention is the use of a metal alloy for preparing metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to

the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile.

[0079] It is to be understood that all of the above described embodiments of the metal alloy profile device (1) of the present invention are also embodiments to be used when describing further embodiments of the use of a metal alloy for preparing metal alloy profile device (1).

[0080] The metal alloy profile device can be a part of an assembly.

[0081] Accordingly, a fifth aspect of the invention is the use of a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), and a modular panel (F), for preparing an assembly of parts wherein the holding arms are in the second position when holding the modular panel (F).

[0082] It is to be understood that all of the above described embodiments of the metal alloy profile device (1) of the present invention are also embodiments to be used when describing further embodiments of the use of a metal alloy profile device (1) for preparing an assembly of parts. Accordingly, a sixth aspect of the invention is a method for partitioning a room comprising the steps according to figure 6 and 7:

- i) set the acoustic tape (28) on the tracks (27)
- ii) mount the tracks with screws (29)
- iii) set steel postes (30) against the modular panel (33)
- iv) set glass posts (38) in place
- v) set frame for glass (31)
- vi) set gaskets (32) on the glass edge top and bottom
- vii) set modular panel (e.g. glass) in the metal alloy profile device (1) starting from the side
- viii) fixed the sides with omega sections (34)
- ix) add filler (36)
- x) set top trim (figure 4, number 19)
- xi) finish with omega cover sections (37)

[0083] In summary, present invention offer solutions to partitioning modular panel systems.

A profile (1)

[0084] In the prior art there are many profiles made of compositions. The profiles have different functions as building materials. One can find profiles made of aluminum for holding curtains, fixing the rails to the ceiling, these rails are typically very hard shaped profiles unsuitable for the purpose of partition system as discussed herein. As said above, "metal alloy profile device" as used

herein is made of any suitable metal alloy as long as it has a suitable flexibility when being used according to the present invention. The metal alloy profile device has an elongated nature since it has to hold a modular panel of any suitable length and in particular when being assembled it has to hold two modular panels opposite each other in a position where the system of the metal alloy profile device and the modular panels is stable. A typical embodiment of a metal alloy profile device of the present invention is shown in figures 1-3B.

[0085] The inventor experimented with aluminum and stainless steel alloys.

Aluminum alloys as used herein

[0086] Aluminum alloys are alloys of aluminum, often with copper, zinc, manganese, silicon, or magnesium. Aluminum alloy compositions are registered with the Aluminum Association. Many organizations publish more specific standards for the manufacture of aluminum alloy, including the Society of Automotive Engineers standards organization, specifically its aerospace standards subgroups and the ASTM.

[0087] The herein preferred metal composition is selected from the group consisting of aluminum and stainless steel, most preferred aluminum. For aluminum alloys, there is made an international registration system. This list can be retrieved in www.aluminum.org and comprises all precise compositions.

[0088] Alloy systems are classified by a number system (ANSI) or by names indicating their main alloying constituents (DIN and ISO). Selecting the right alloy for a given application entails considerations of strength, ductility, formability, weld-ability and corrosion resistance to name a few.

[0089] Consequently, depending on the desired application within partition systems, the skilled person can now select a suitable alloy composition. Provided below is a selected list relevant for the present invention.

[0090] Alloys may be selected from the list 5005, 5005A, 5205, 5305, 5505, 5605, 5006, 5106, 5010, 5110, 5110A, 5210, 5310, 5016, 5017, 5018, 5018A, 5019, 5019A, 5119A, 5021, 5022, 5023, 5024, 5026, 5027, 5040, 5140, 5042, 5043, 5049, 5149, 5249, 5349, 5449, 5050, 5050A, 5150, 5051, 5051A, 5151, 5251, 5251A, 5351, 5451, 5052, 5252, 5352, 5154, 5154A, 5154B, 5154C, 5254, 5354, 5454, 5554, 5654, 5754, 5954, 5056, 5356, 5356A, 5456, 5456A, 5456B, 5556, 5556A, 5556B, 5556C, 5257, 5457, 5557, 5657, 5057, 5058, 5059, 5059, 5070, 5180, 5180A, 5082, 5083, 5183, 5183A, 5283, 5283A, 5283B, 5383, 5086, 5186, 5087 and 5088 according to the international designation system ANSI.

[0091] Aluminum compositions 5042 with Temper H19 is most preferred.

Nomenclature

[0092] For aluminum alloys, in the 2xxx through 8xxx

alloy groups the last two of the four digits in the designation have no special significance but serve only to identify the different aluminum alloys in the group.

[0093] The second digit in the alloy designation indicates alloy modifications. If the second digit in the designation is zero, it indicates the original alloy; integers 1 through 9, which are assigned consecutively, indicate alloy modifications. A modification of the original alloy is limited to any one or a combination of the following: (a) Change of not more than the following amounts in arithmetic mean of the limits for an individual alloying element or combination of elements expressed as an alloying element or both.

[0094] Arithmetic Mean of Limits for Alloying Maximum

[0095] Elements in Original Alloy Change

Up thru 1.0 percent	0.15
Over 1.0 thru 2.0 percent	0.20
Over 2.0 thru 3.0 percent	0.25
Over 3.0 thru 4.0 percent	0.30
Over 4.0 thru 5.0 percent	0.35
Over 5.0 thru 6.0 percent	0.40
Over 6.0 percent	0.50

[0096] The 5042 compositions are most preferred herein and comprises the following elements according to the Aluminum association; 0.20 % silicon (Si), 0.35% Iron (Fe), 0.15 % Copper (Cu), 0.20-0.50 % Manganese (Mn), 3.0-4.0 % Magnesium (Mg), 0.10 % Cr, 0.25 % Zinc (Zn), 0.10 % Titanium (Ti), others 0.05 % and Aluminum (Al).

[0097] This particular most preferred composition gives the desired flexibility and hardness as selected by experimentation by present inventor and has the herein described characteristics of flexibility needed to obtain the springy, bouncy effect of the herein described profile (1). Alloy 5042 has the characteristic that when forces are applied, it will try to get to its original form. Additionally, as an important part of the characteristic, H19 which is a measure for temper, and designed according to the Aluminum Association (www.aluminum.org).

[0098] The term "temper" is denoted herein as the combination of mechanical properties, particularly strength, hardness and ductility, induced in a metal product by the thermal and/or mechanical treatments applied during its preparation.

[0099] The different alloys are treated as said above and termed herein as "temper". This is basically a thermal treatment, for example it may be a thermal treatment of between 400°C to 500°C where the composition is set and altered by re-crystallization. A combination of mechanical and thermal treatment then results in the specific characteristics, such as strength, elasticity, hardness and ductility. This makes the alloys particularly suitable for the herein described invention.

Stainless steel alloys as used herein

[0100] Stainless steel is defined as a steel alloy with a minimum of 10% chromium content by mass. Stainless steel alloys are expressed in EN-standard (steel no. k.b.s DIN), or also EN-standard, SAE grade or UNS.

[0101] Herein preferred are comprising stainless steel belonging to W. Nr. 1.4310 / AISI 301 and are characterized as alloys cold rolled steels and is cold rolled at temperatures of 800 to 900 °C. Material EN 1.4310 typically are used for springs and other formed parts such as diaphragms and electrical connectors.

[0102] The 301 designation is standardized with the following compositions;

SAE designation: 301

UNS designation: S30100

Cr: 16-18 %

Ni: 6-8 %

Carbon: 0.15 %

Manganese (Mn): 2 %

Silicium: 0.75%

Phosphorous: 0.045 %

Sulphur: 0.03 %

[0103] The 301 composition is described in the art as highly ductile, for formed products. Also hardens rapidly during mechanical working and good weld ability.

[0104] Herein preferred compositions are described in the art as stainless steel and identified as generally stainless steel compositions of standards; EN 10151 and EN 10258.

[0105] EN 10151 is described as stainless steel strip for springs.

[0106] EN10258 is a Stainless steels described in the art as cold-working, Rolling, Strips, Heat-resistant material.

[0107] As the preferred stainless steel for this specific application needs to be suitably flexible and with specified hardness, present inventors find these two type most preferred.

[0108] The skilled person receives a complete package, which comprises the following elements.

[0109] Herein referred to FIG.6: Assembly details have the following components:

[0110] The numbers are given as such that the skilled person uses the separate indicated assembly details denoted as 27 to 37 starting the fixation to the wall. The skilled person, a carpenter for example, fixes a side track which is as defined standard rails available in trade. The side track (27) gives the construction an attachment to the wall. Between the screw (29) to fix the side track, acoustic tape (28) is added. A steel post (30) is added and fits into the side track (27). On the steel post (30) a frame for glass (31) is added and on both the top and the bottom, gaskets (32) for the sides are added. The modular panel (33) is fixed into the gasket (32) and to finish both top and bottom are closed with an omega section

screwed into the steel post (30) and closed again with a filler (36).

[0111] Listed parts on FIG.6 are;

- 27: side track
- 28: acoustic tape
- 29. screw
- 30. steel post
- 31. frame for glass
- 32. gasket (only for sides)
- 33. modular panel (glass)
- 34. omega section
- 35. screw
- 36. filler
- 37. omega cover section

[0112] An example of a modular panel system may be as follows: 4 mm glass outdoor are forming the modular panel partitions, and are chosen as suitable for example glass partitions of size for example 900-1200 mm width, 10 mm glass post with pre-glued profile and on the bottom double adhesive tape. (FIG.7).

Glass post

[0113] A glass post is used in the partition systems to give extra support to the entire construction and is placed between modular panels. In the prior art, typically, (heavier) stainless steel posts are used. Present invention allows the use of less heavy posts such as glass posts, and also gives the benefit of a more estatique design with less barriers (such as said heavy stainless steel posts) in the modular panels.

[0114] Glass post is optional and can be included in the assembly package. This is prefabricated, to make it even easier for the skilled person to set up partitions systems. On the glass pole, suitable profiles are glued on, so that the skilled person sets it up, and click in the glass partitions systems.

[0115] Preferred glass post may have following dimensions of thickness from 6 to 20mm and a width of 45mm to 200mm.

EXAMPLES

Example 1: FIG. 1 *Metal alloy profile device with holding arm (2) and (2') (cross section)*

[0116] Fig. 1: precise details of the preferred metal alloy profile device.

- 1. Metal alloy profile
- 2. Holding arm which is shaped as such that it can hold a modular panel
- 2'.Holding arm which is shaped as such that is can hold a modular panel

The modular panel fits in the groove G,G' as shown in

figure 1.

Description of the material: Aluminum coil

5 **[0117]**

Alloy: 5042
Temper: H19
The aluminum is rolled.

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[0118] FIG. 1 also shows in details the ends part (3 and 3') and is curled and has a function to hold the modular panel in place. It is formed by the rollforming machine as described herein.

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Example 2: FIG. 2 shows *the holding arm 2 and 2' with end part 3 and 3'*

Example 3: FIG. 3A *Description of all parts of the metal alloy profile (1) device*

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[0119]

- 25 2: holding arm (2)
- 3: end part curved (3)
- 4: side part (4)
- 5: part (5) may be fixed to glass pole
- 6: angle (6)
- 7: angle (7)
- 30 8: angle (8)
- 9: angle (9)
- 10: angle (10)
- 11: first bottom part
- 12: first side part

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- 2': holding arm (2')
- 3': end part curved (3')
- 4': side part (4')
- 5': part (5') may be fixed to glass pole
- 40 6': angle (6')
- 7': angle (7')
- 8': angle (8')
- 9': angle (9')
- 10': angle (10')
- 45 11': second bottom part
- 12': second side part

[0120] Description according to FIG 3A, wherein typical thickness and typical angles are:

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- 6 and 6': thickness: 1 mm - angle: 100°
- 7 and 7': thickness: 1 mm - angle: 90°
- 8 and 8': thickness: 1 mm - angle: 90°
- 9 and 9': thickness: 0,75mm - angle: 135°
- 55 10 and 10': end part thickness: 0,75mm - angle: 95° - 155°

Example 4: FIG.3B Profile (1) shaped to hold modular panel (F) - F may be glass and is set into the holding arm 2 and 2'.

[0121] FIG.3B shows the profile (1) with a modular panel (F). The modular panel (F) can be e.g. glass, gypsum or veneer.

[0122] The modular panel (F) is fixed in the holding arms (2, 2').

[0123] FIG. 3C shows the flexibility of the metal alloy profile (1). When a modular panel is pushed into the groove G and G' (FIG:1), the distance K becomes smaller to as shown in figure 3C, and forms distance L. As described, typically a 50% reduction in the distance may be achieved depending on the weight of the chosen modular panel.

Example 5: FIG. 4 Modular panel (e.g. *Glass modular panel system*) *top solution*

[0124]

- 13. track (head track for the top and bottom track for the bottom part)
- 14. Acoustic tape
- 15. screw
- 16. frame
- 17. gasket, protective on the glass modular panel
- 18. glass (modular panel)
- 19. top trim

[0125] The skilled person fixes the top using the assembly top solution in following way; fix a frame (13) with a screw (15) and in between acoustic tape (14) to the ceiling. Add a gasket (17) to protect the glass modular panel, add glass modular panel into the gasket (17) and fix the top trim (19) on both sides.

[0126] **Example 6:** FIG. 5 Modular panel (e.g. glass modular panel system) base solution After the top is fixed, the skilled person fixes the bottom in the following way. Set the base track (20) to the floor and fix it with a screw (22) and in between the base track and the screw add acoustic tape (21). Set a bottom trims (23) on each side, and set the frame (24) in place, add gaskets (25) to protect the glass and set the glass panel into the gaskets.

- 20. base track
- 21. acoustic tape
- 22. screw
- 23. bottom trim
- 24. frame for modular panel such as glass
- 25. plastic gasket
- 26. modular panel e.g. glass

Example 7: FIG. 6 *Detail of assembly side part to the wall*

[0127] The numbers are given as such that the skilled person uses the separate indicated assembly details de-

noted as 27 to 37 starting the fixation to the wall. The skilled person, a carpenter for example, fixes a side track which is as defined standard rails available in trade. The side track (27) gives the construction an attachment to the wall. Between the screw (29) to fix the side track, acoustic tape (28) is added. A steel post (30) is added and fits into the side track (27). On the steel post (30) a frame for glass (31) is added and on both the top and the bottom, gaskets (32) for the sides are added. The modular panel (33) is fixed into the gasket (32) and to finish both top and bottom are closed with an omega section screwed into the steel post (30) and closed again with a filler (36).

- 27: side track
- 28: acoustic tape
- 29. screw
- 30. steel post
- 31. frame for glass
- 32. gasket (only for sides)
- 33. modular panel (glass)
- 34. omega section
- 35. screw
- 36. filler
- 37. omega cover section

Example 8: FIG 7 *Assembly details glass post*

[0128] Once the side, bottom and top and fixed, the entire modular panel construction can be mounted using pre-fabricated glasposts (38) which comprise a metal alloy profile (1). The skilled person simply takes a glass post and fixed it to the glass modular panel as shown in figure 6. The glass post (38) comprises a glass post itself (38), glued on the top and bottom double adhesive tape (39) holding the metal alloy profile disclosed herein (1) (40) and which holds the modular panel (41). Such modules can be attached to each other fitting the length of a partition wall or fitting a suitable room (4 walls for example).

- 38. glass post
- 39. double adhesive tape
- 40. metal alloy profile device profile 1
- 41. modular panel (e.g. glass)

Claims

1. A metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position

hereby ensuring suitable flexibility of the profile.

2. The metal alloy profile device (1) of claim 1, wherein the first holding arm (2) comprise a first end part (3) and the second holding arm (2') comprise a second end part (3'), wherein said first end part (3) is curved and forms a first groove (G) together with a first bottom part (11) and a first side part (12), wherein said first side part (12) extends from said first bottom part (11) and forms a first angle (9) between said first bottom part (11) and said first side part (12) and said second end part (3') is curved and forms a second groove (G') together with a second bottom part (11') and a second side part (12'), wherein said second side part (12') extends from said second bottom part (11') and forms a second angle (9') between said second bottom part (11') and said second side part (12').
3. The metal alloy profile device (1) of claim 2, wherein the first end part (3) extends from the first bottom part (11) and forms an angle (10) between said first bottom part (11) and said first end part (3) and the second end part (3') extends from the second bottom part (11') and forms an angle (10') between said second bottom part (11') and said second end part (3').
4. The metal alloy profile device (1) of any of claims 1-3, wherein the first holding arm (2) and the second holding arm (2') are connected to each other through a mutual side part (5).
5. The metal alloy profile device (1) of claim 4, wherein the mutual side part (5) forms an integral part of the metal alloy profile device (1).
6. The metal alloy profile device (1) of any of claims 2-5, wherein the first holding arm (2) further comprises a first further side part (4) extending from the first side part (12) and forms an angle (8) between the first further side part (4) and the first side part (12), and said first further side part (4) extends from the mutual side part (5) and forms an angle (6) between said first further side part (4) and said mutual side part (5), and the second holding arm (2') further comprises a second further side part (4') extending from the second side part (12') and forms an angle (8') between the second further side part (4') and the second side part (12'), and said second further side part (4') extends from the mutual side part (5) and forms an angle (7) between said second further side part (4') and said mutual side part (5).
7. The metal alloy profile device (1) of claim 6, wherein the angle (6) and the angle (7) are independently selected from the range 80° to 120°.
8. The metal alloy profile device (1) of any of claims 6
- or 7, wherein the angle (8) and the angle (8') are independently selected from the range 60° to 110°.
9. The metal alloy profile device (1) of any of claims 6-8, wherein the angle (9) and the angle (9') are independently selected from the range 60° to 110°.
10. The metal alloy profile device (1) of any of claims 3-9, wherein the angle (10) and the angle (10') are independently selected from the range from 95° to 155 °.
11. The metal alloy profile device (1) of any of the preceding claims, wherein the metal alloy is selected from aluminum and stainless steel alloys.
12. The metal alloy profile device (1) of any of the preceding claims, where the metal alloy is an aluminum alloy selected from 5005, 5005A, 5205, 5305, 5505, 5605, 5006, 5106, 5010, 5110, 5110A, 5210, 5310, 5016, 5017, 5018, 5018A, 5019, 5019A, 5119A, 5021, 5022, 5023, 5024, 5026, 5027, 5040, 5140, 5042, 5043, 5049, 5149, 5249, 5349, 5449, 5050, 5050A, 5150, 5051, 5051A, 5151, 5251, 5251A, 5351, 5451, 5052, 5252, 5352, 5154, 5154A, 5154B, 5154C, 5254, 5354, 5454, 5554, 5554, 5654, 5754, 5954, 5056, 5356, 5356A, 5456, 5456A, 5456B, 5556, 5556A, 5556B, 5556C, 5257, 5457, 5557, 5657, 5057, 5058, 5059, 5059, 5070, 5180, 5180A, 5082, 5083, 5183, 5183A, 5283, 5283A, 5283B, 5383, 5086, 5186, 5087 and 5088 according to the classification system of ANSI.
13. The metal alloy profile device (1) of any of the preceding claims, where the metal alloy is aluminum alloy 5042 H19 according to the classification system of ANSI.
14. The metal alloy profile device (1) of any of the preceding claims, where the metal alloy is stainless steel selected from BS EN 10151 and EN 10258 according to the classification system of SAE designation.
15. The metal alloy profile device (1) of any of the preceding claims wherein the metal alloy is rolled into a suitable profile.
16. A method for manufacturing a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), wherein the method comprises

es rolling the metal alloy into a suitable profile (1).

17. An assembly of parts comprising a metal alloy profile device (1), having a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), and a modular panel (F), wherein the holding arms are in the second position when holding the modular panel (F). 5 10 15
18. The assembly of parts of claim 17, wherein said modular panel (F) comprises a robust material, such as the material selected from glass, gypsum or veneer. 20
19. The assembly of parts of claim 18, wherein the modular panel (F) is selected from a glass.
20. The assembly of parts of claim 19, wherein the glass has a thickness of from 3 to 14 mm, such as 4 mm. 25
21. The assembly of parts of claim 18, wherein the modular panel (F) is selected from a gypsum.
22. The assembly of parts of claim 21, wherein the gypsum has a thickness of from 6 to 20 mm. 30
23. The assembly of parts of claim 18, wherein the modular panel (F) is selected from a veneer. 35
24. The assembly of parts of claim 23, wherein the veneer has a thickness of from 6 to 20 mm.
25. Use of a metal alloy for preparing a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile. 40 45 50
26. Use of a metal alloy profile device (1), comprising a first holding arm (2) and a second holding arm (2'), wherein said holding arms are located substantially opposite to each other in a suitable distance so that said holding arms can move from a first position to a second position wherein the distance between the holding arms is shorter in the second position compared to the first position and wherein said holding 55

arms do not contact each other in the second position hereby ensuring suitable flexibility of the profile (1), and a modular panel (F), for preparing an assembly of parts wherein the holding arms are in the second position when holding the modular panel (F).

Fig. 1

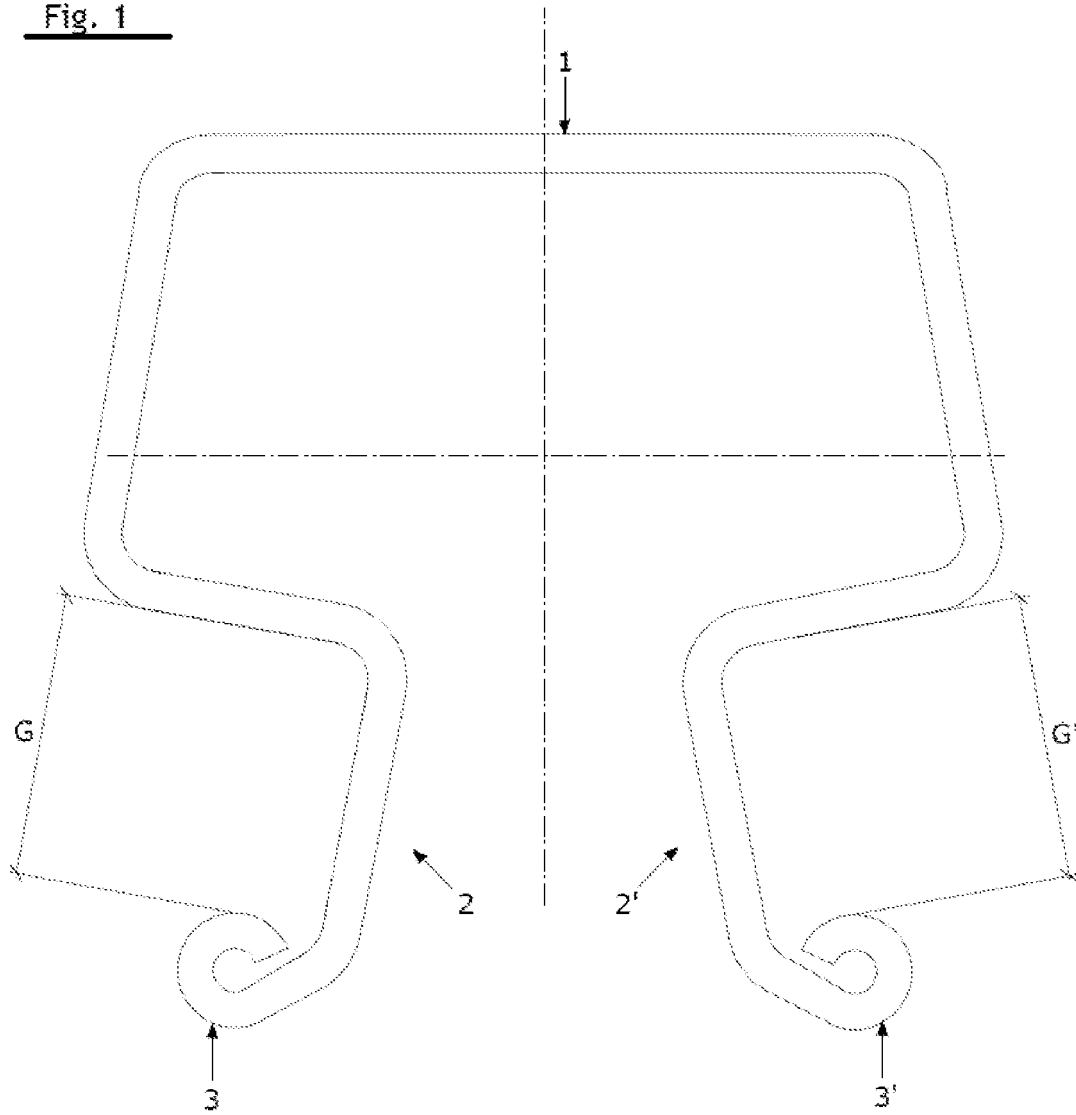
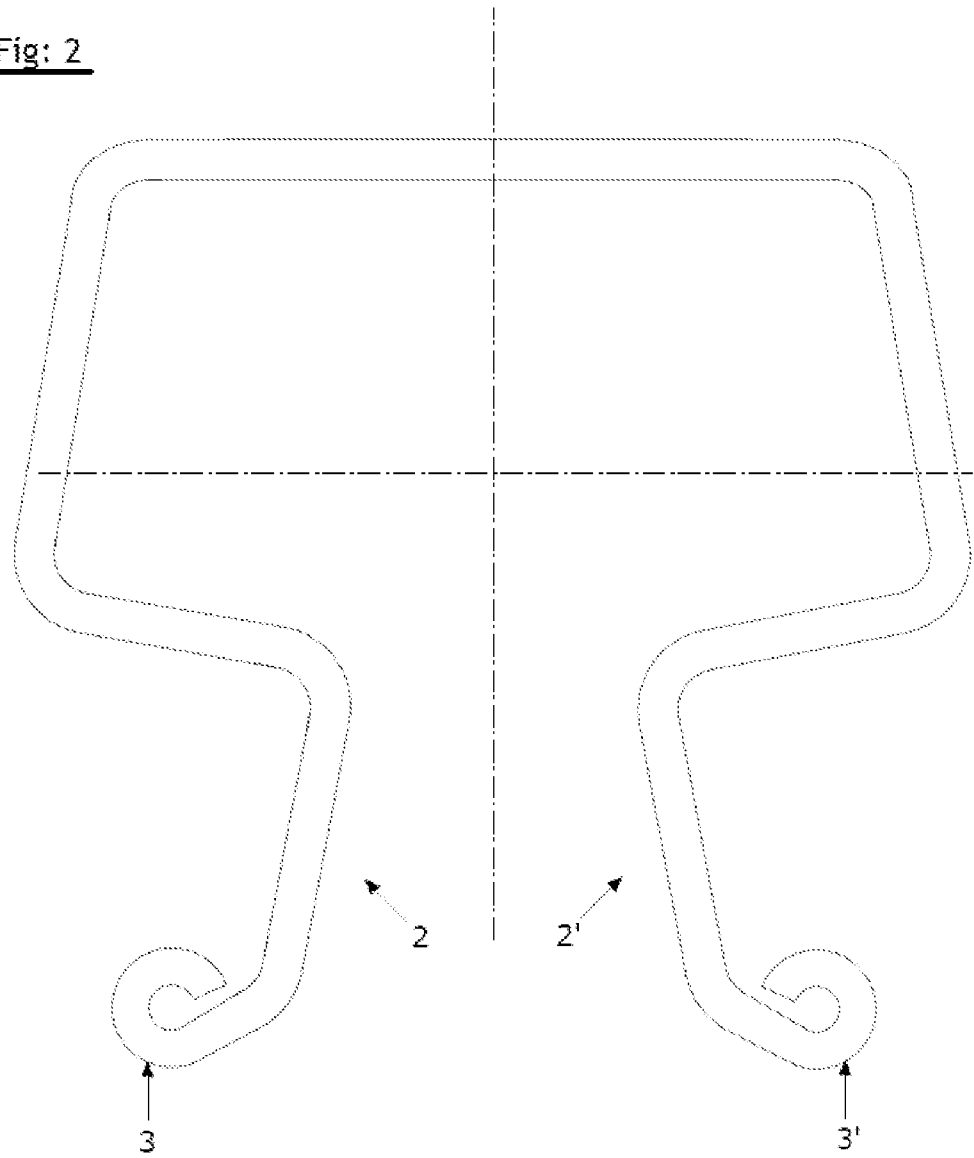


Fig: 2



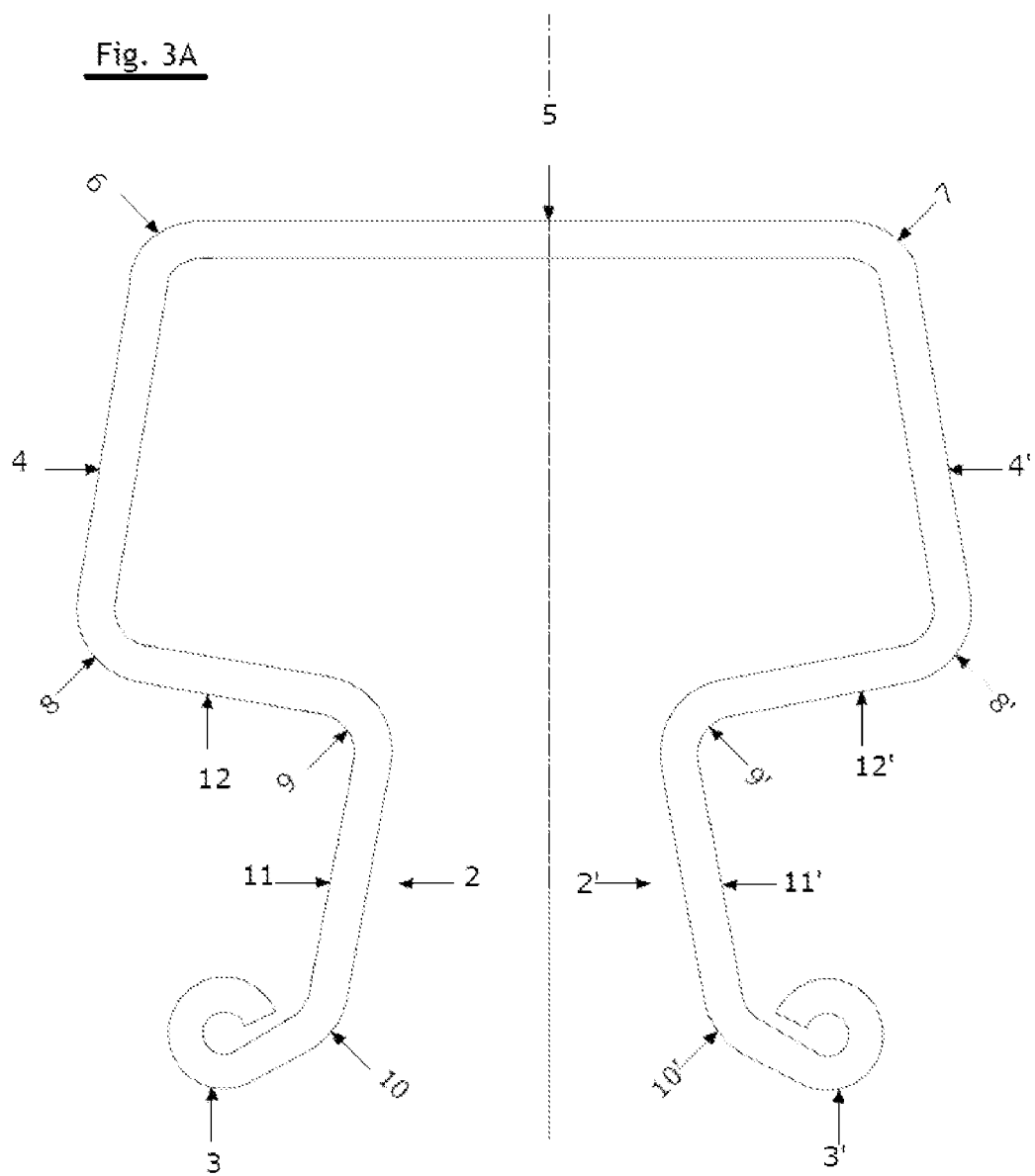


Fig: 3B

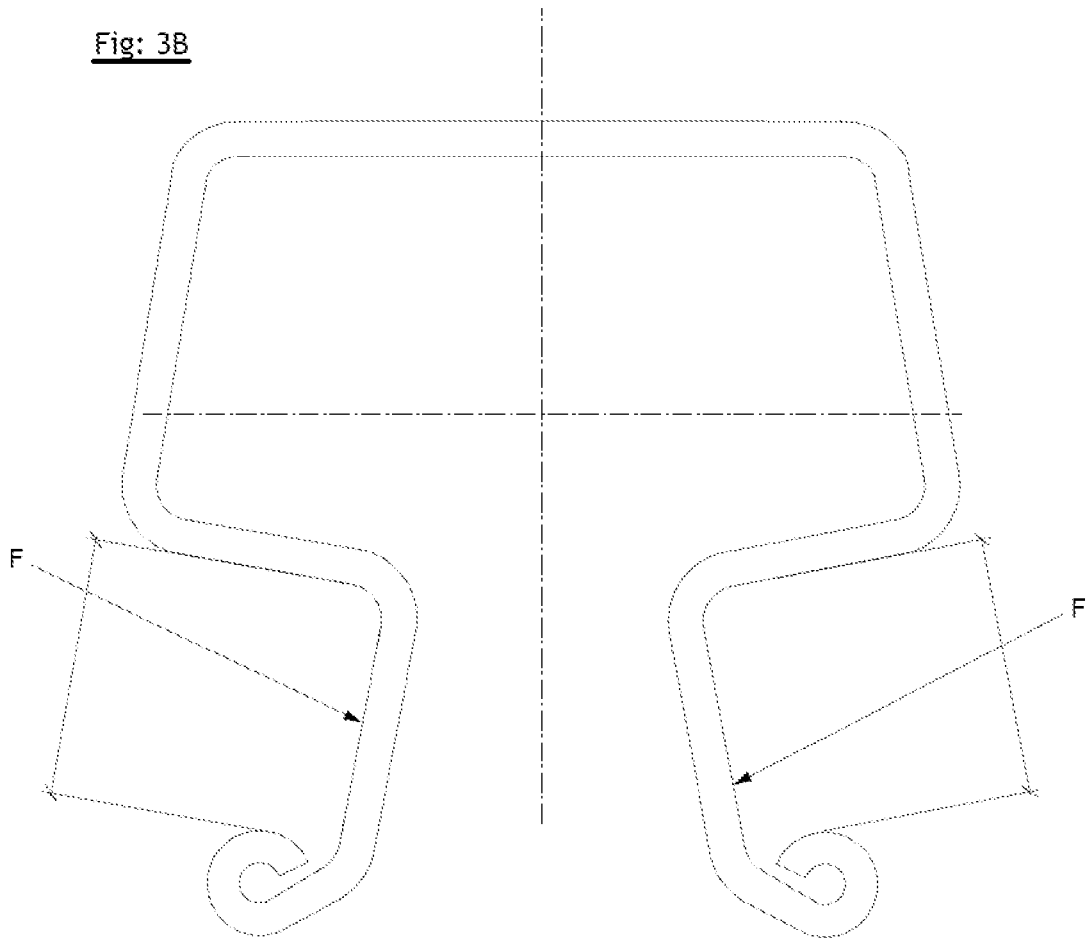


Fig: 3C

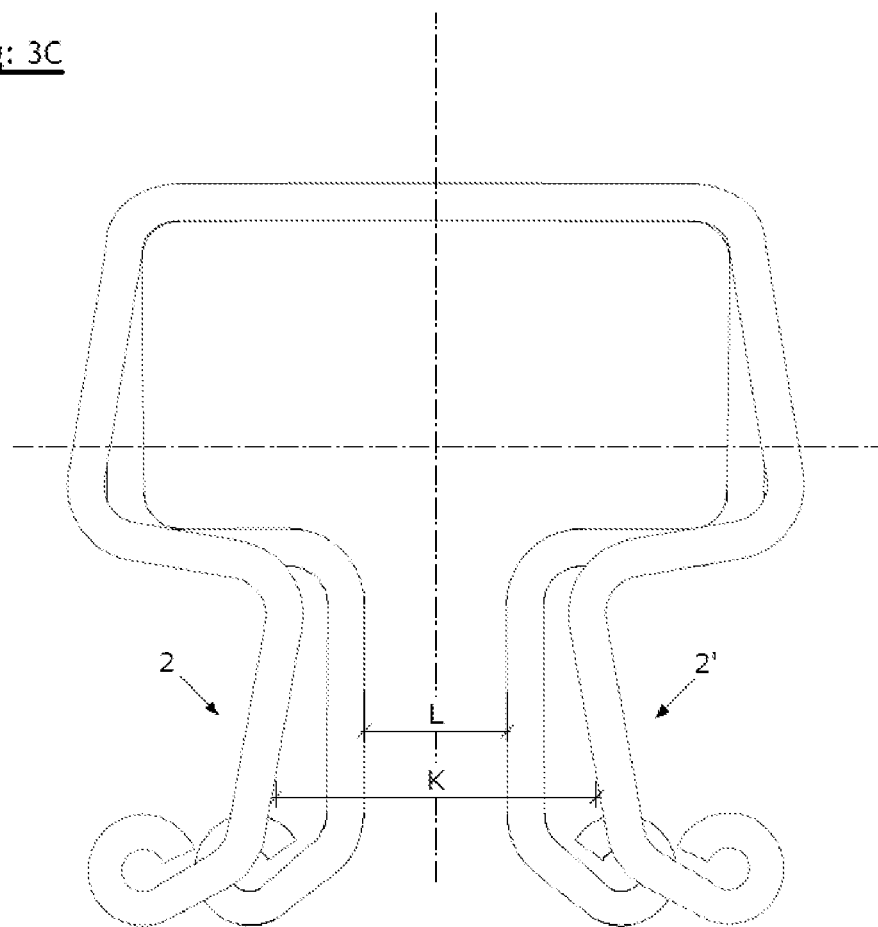


Fig. 4

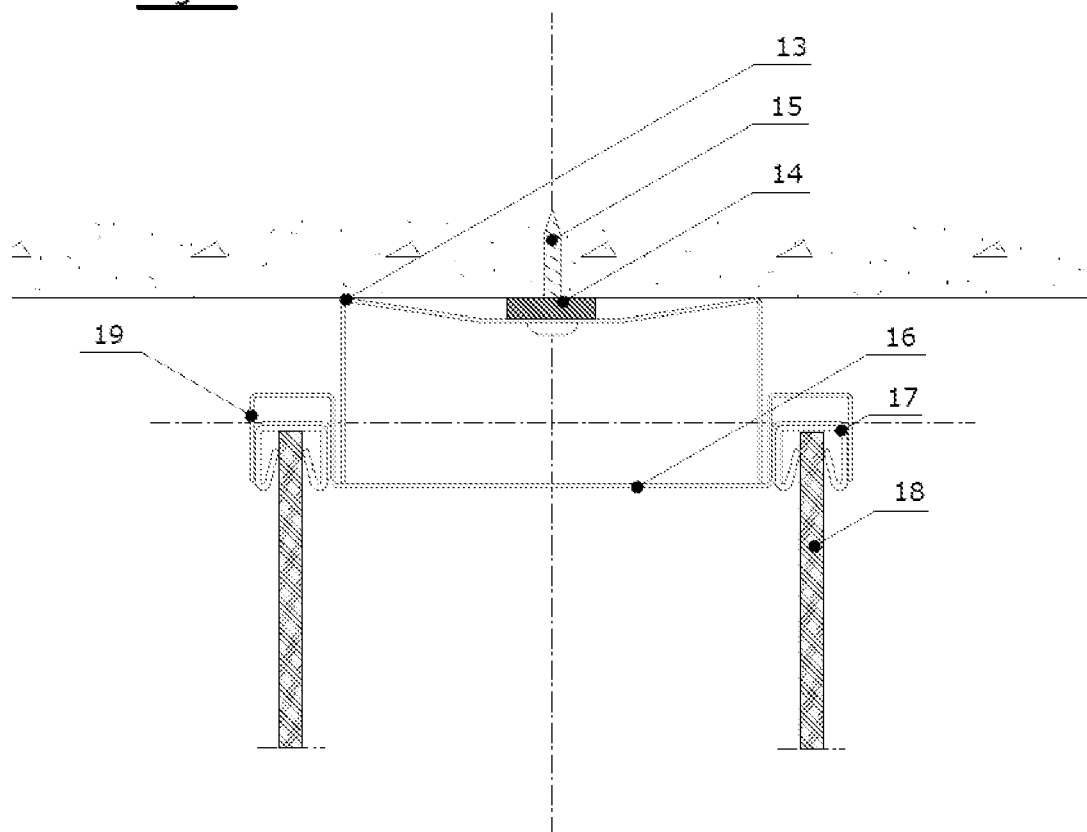


Fig. 5

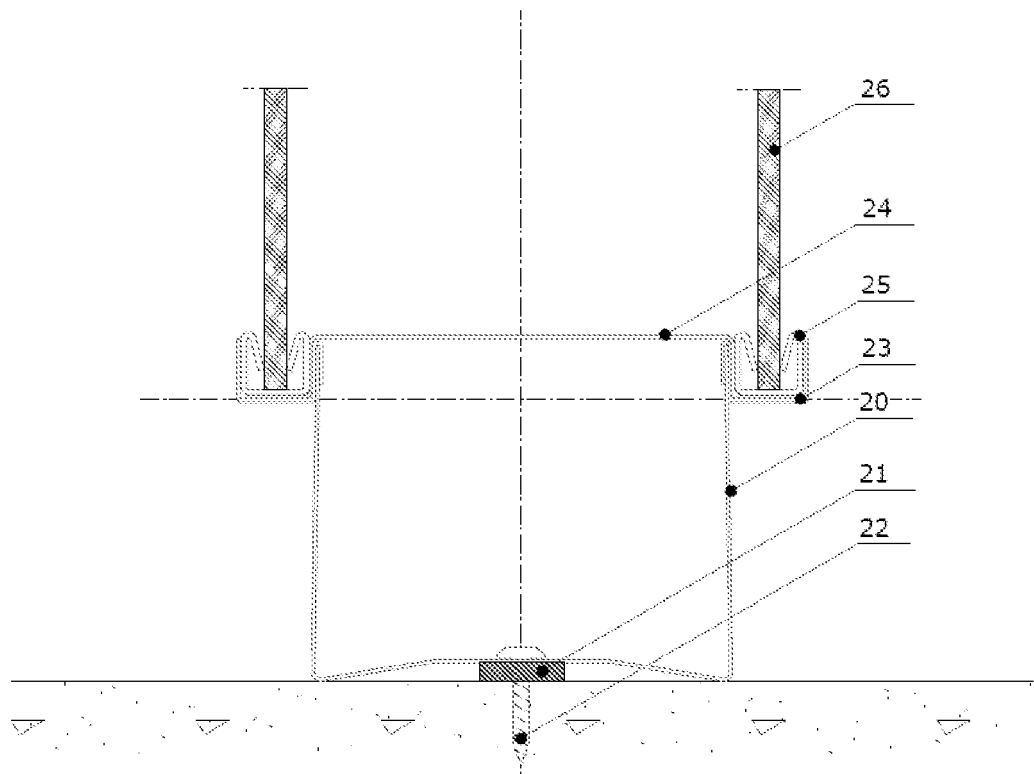
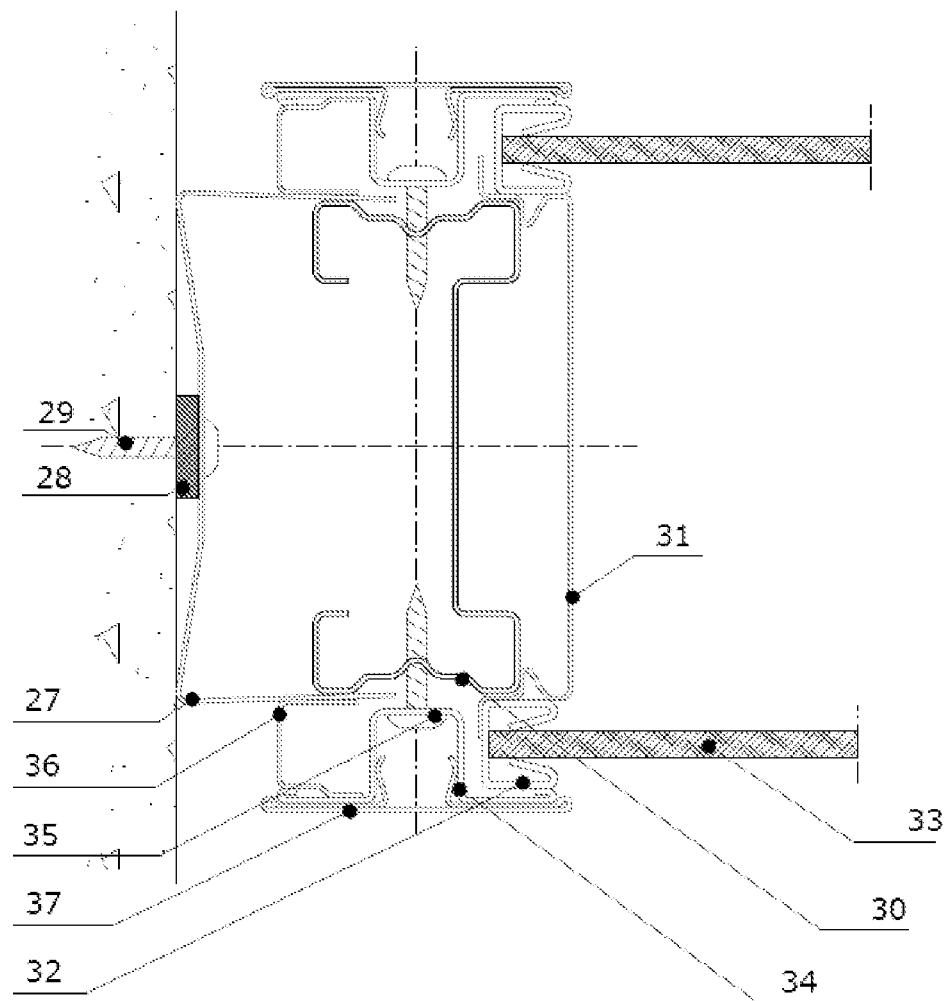


Fig. 6



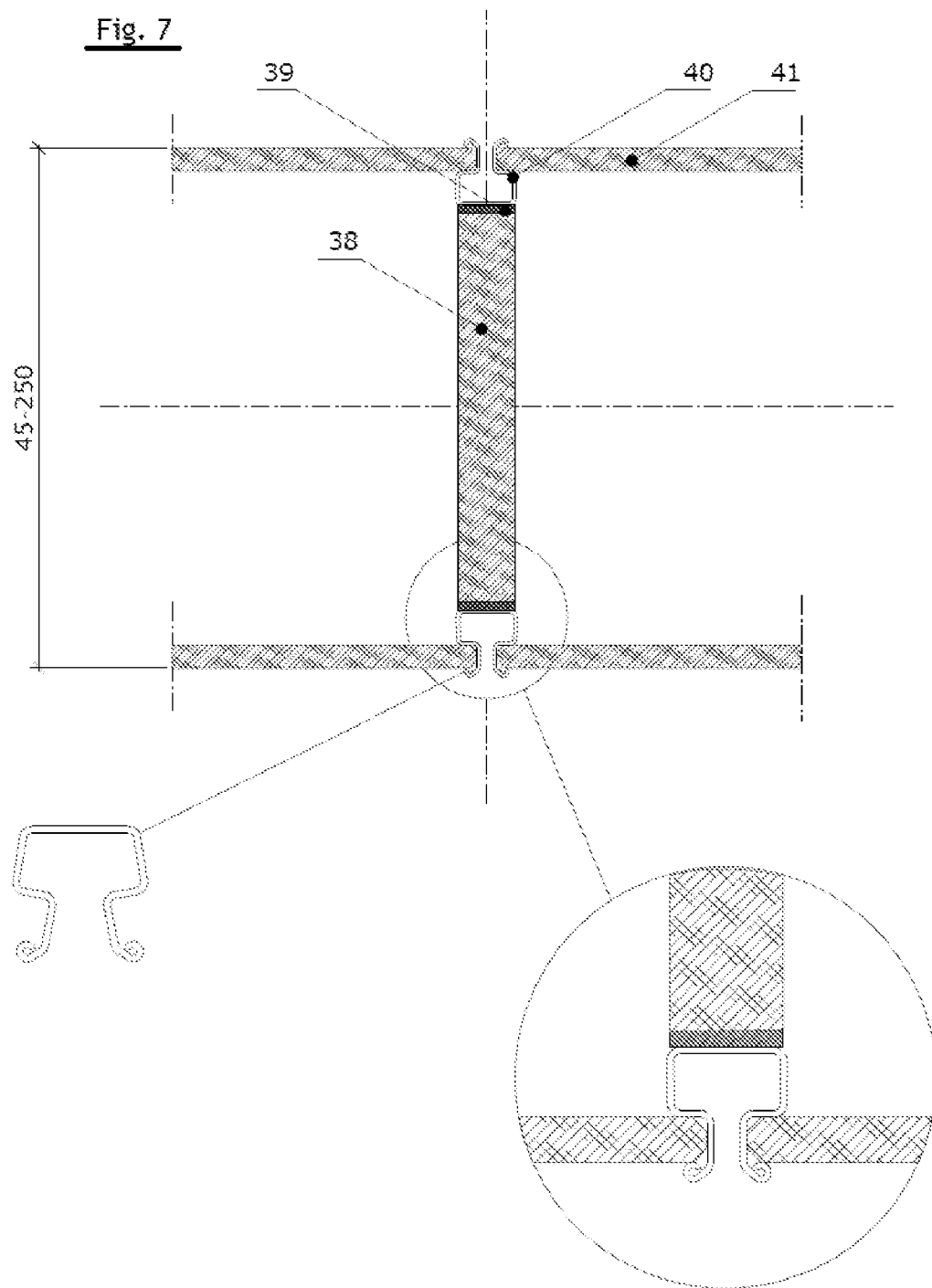


FIG.8. Aluminum Extrusion Profiles Used as Building Material (Hentec-101)

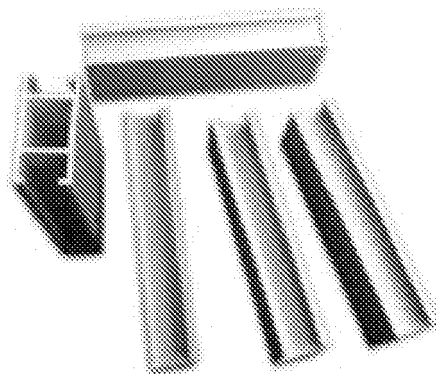
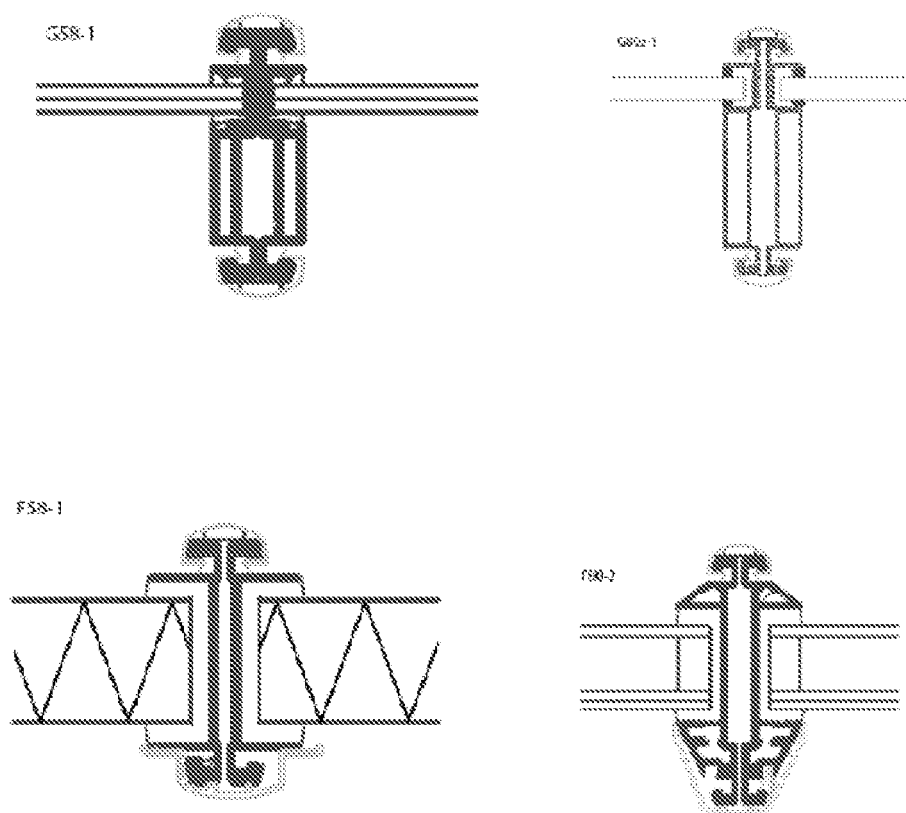


FIG.9 VITRAL PROFILE





EUROPEAN SEARCH REPORT

Application Number
EP 09 15 7993

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	DE 25 35 913 A1 (LEIDINGER GMBH M) 17 February 1977 (1977-02-17) * page 1, paragraph 1 * * page 10, last paragraph - page 11, paragraph 1 * * page 12, paragraph 2 * * figures 10-13 * -----	1-26	INV. E04B2/74
X	FR 1 302 523 A (BRIAND, M. HECTOR [FR]) 31 August 1962 (1962-08-31) * column 1, paragraphs 2,7 - column 2, paragraph 1; figure 3 * -----	1-26	
X	GB 930 827 A (ABIX METAL IND LTD) 10 July 1963 (1963-07-10) * page 2, lines 99-107; figures 8,9,11 * -----	1-26	
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