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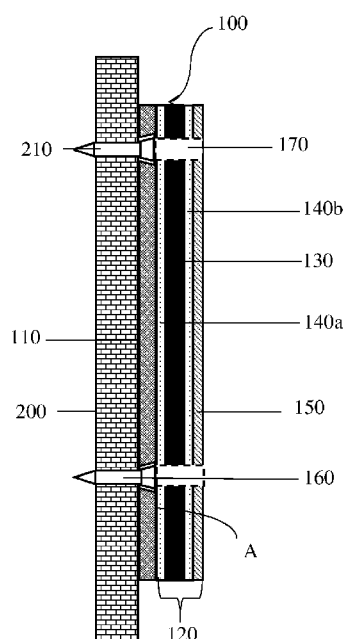


FIG. 2

(57) Abstract: A mounting channel 100 for glass is disclosed. The mounting channel 100 comprises a support member 110 and a polymer member 120 overlying the front surface of the support member 110. The back surface of the support member 110 secures the mounting channel 100 to any wall surface by mechanical bonding and the polymer member 120 secures the glass to the front surface of the support member 110 by adhesive bonding.

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A MOUNTING CHANNEL FOR GLASS

Technical Field

The present disclosure relates, in general to a mounting channel, and more specifically to a mounting channel for mounting glass on any surface.

5 Background

Conventional glass installation methods for interior applications involve installation of an aluminium frame on the concrete wall to compensate for the unevenness of the wall and screwing plywood boards on the aluminium frame. The glass panel is then fixed on the plywood using silicon glue. It takes a
10 minimum of 48 hours for the silicon glue to cure before the room can be used. Such conventional methods have several steps including aluminium frame installation, pasting plywood followed by solid flat panel, in particular glass panel and curing. Thus the process is time-consuming and increases labor costs. After gluing the solid flat panel, in particular glass panel, replacing the same due
15 to breakage or refurbishing is difficult. Alternatively, adhesive tapes are also used in place of silicon glue.

Although the use of adhesive tapes and silicon glue provide aesthetically improved solution to glass installations by being completely concealed behind the glass panel, they do not provide the necessary durability.
20 Further, these adhesives are applied in random quantities and pattern that often may result in wastage of adhesives.

While the above described installation methods pertain to the use of adhesives, mechanical means of glass installations are also not uncommon. These involve the use of frames for fitting glass panels and screws for fixing the
25 frame onto the concrete wall. While the mechanical glass installation methods are highly durable they do not carry a high aesthetic quotient (they are not concealed solutions) that increase the aesthetic appearance of the building. Thus in essence a glass installation system for interior applications needs to be both highly durable and aesthetically appealing.

The applicant of the present disclosure is also the owner of two Indian applications viz., 1518/CHE/2015 and 201741013275 that disclose on devices for holding glass panels for interior applications. These devices comprise of corner clips and channel clips made of materials having a similar transparent, translucent or colored appearance as glass but with less cost. However, in order to achieve high aesthetic value, these devices need to be manufactured from materials that provide an appearance as close to glass as possible.

The applicant of the present disclosure is also the owner of the Indian granted patent 295874 that relates to a method of installing a glass panel on a substrate using adhesives. The method includes determining an optimum quantity of an adhesive and optimal pattern of application required for installing glass. Although the method provides a shear bond strength ranging between 115 kPa and 276 kPa for the installation, the safety factor of these installations using adhesive are not as high as that achieved by the mechanical installation methods.

Thus there is a need for improved glass installation devices and methods for interior applications. For design teams seeking to create highly aesthetic glass mountings without sacrificing the beauty of the building, concealed mounting solutions offer many benefits. In this regard, the present disclosure substantially fulfills this need by disclosing a concealed mounting solution that allows architects to create sophisticated designs while supporting goals such as low cost, low maintenance, building protection, sound insulation and durability. Further the present disclosure provides much flexibility in terms of mounting style and arrangement since they can be erected in any number of configurations, and do not require any complicated hardware and installation processes.

The present disclosure overcomes all the limitations of the prior art described above and relates to a mounting channel for glass that has a high aesthetic value, is simple and inexpensive to fabricate and install and also one that anchors glass by a combination of mechanical bond strength and adhesive bond strength thereby distributing the weight of the glass along the two components of the mounting channel. Further, the mounting channel achieves a

shear bond strength as high as 515 kPa. Furthermore, the disclosed mounting channel is unique by the simplicity of its components and provides fast and easy installation process.

Summary of the Disclosure

5 In one aspect of the present disclosure, a mounting channel for mounting glass for interior applications is disclosed. The mounting channel comprises a support member having a front surface and a back surface and a polymer member overlying the front surface of the support member. The polymer member comprises a foam core sandwiched on both sides by an adhesive member
10 and a removable liner member overlying the adhesive member farthest from the support member. The back surface of the support member secures the mounting channel to any surface by mechanical bonding and the polymer member secures the glass to the front surface of the support member by adhesive bonding.

 In another aspect of the present disclosure, a method of mounting
15 glass on any surface using mounting channels of the present disclosure is disclosed. The method comprises the steps of securing one or more mounting channels on the surface by mechanical screwing, removing the liner member attached to the polymer member and securing the glass over the polymer member of the mounting channel by compression.

20 Other features and aspects of this disclosure will be apparent from the following description and the accompanying drawings.

Brief Description of the Drawings

 Embodiments are illustrated by way of example and are not limited to those shown in the accompanying figures.

25 FIG. 1 illustrates a cross-sectional view of a mounting channel, according to one embodiment of the present disclosure;

 FIG. 1A illustrates a cross-sectional view of a framed mounting channel, according to one embodiment of the present disclosure;

30 FIG. 1B illustrates a cross-sectional view of a frameless mounting channel, according to one embodiment of the present disclosure;

FIG. 2 illustrates a cross-sectional view of a mounting channel secured to a wall, according to other embodiments of the present disclosure;

FIG. 3 illustrates an exploded view of the mounting channel secured to a wall, according to an embodiment of the present disclosure;

5 FIG. 4 illustrates a cross-sectional view of a glass panel mounted on a wall using mounting channels, according to another embodiment of the present disclosure; and

FIG. 5 depicts a method of mounting glass on any surface using mounting channels, according to one embodiment of the present disclosure.

10 Skilled artisans appreciate that elements in the figures are illustrated for simplicity and clarity and have not necessarily been drawn to scale. For example, the dimensions of some of the elements in the figures may be exaggerated relative to other elements to help to improve understanding of embodiments of the invention.

15 Detailed Description

Wherever possible, the same reference numbers will be used throughout the drawings to refer to the same or similar parts. Embodiments disclosed herein are related to a mounting channel for mounting glass on any surface.

20 **FIG. 1** illustrates a mounting channel 100, in accordance with an embodiment of the present disclosure. The mounting channel 100 comprises of a support member 110 and a polymer member 120. The support member 110 has a front surface A and a back surface B and the polymer member 120 overlies the front surface A of the support member 110. The polymer member 120 comprises
25 of a foam core 130 sandwiched on both sides by an adhesive members 140a, 140b and a liner member 150 overlying the adhesive member 140b farthest from the support member 110. The liner member 150 is removably coupled to the foam core 130 of the polymer member 120. The adhesive member 140a closest to the support member 110 binds the polymer member 120 to the support member
30 110. In one embodiment, the width of the support member 110 is no greater than

30 mm. In one other embodiment, the width of the support member 110 ranges between 8 mm and 30 mm.

In one embodiment of the invention, the support member 110 is made to be substantially flat without any protrusions and houses a plurality of screw holes 160. In one aspect of the embodiment, the screw holes 160 are countersunk screw holes. The countersunk screw holes 160 accommodate the screw heads within the screw hole and hence prevents the screw head from protruding from the surface of the support member 110 coming in contact with the glass to be mounted or other articles in general. The screw holes 160 are provided at predetermined distances from each other.

In alternate embodiments, the support member 110 may be manufactured to be a hollow support member with an air gap between the front surface A and the back surface B. In yet another embodiment, the support member 110 may be manufactured as two separate thin strips that are attached together with an air gap there between them. In yet another embodiment, the support member 110 can be manufactured in any shape provided the said profile shape obtains a minimal space between the surface such as wall and the glass to be mounted on the wall.

In yet another embodiment, the support member 110 may be manufactured as a framed support member 110' as depicted in **FIG. 1A**. In this embodiment, the framed support member 110' has an outstretched bent arm 201 that cups the glass to be mounted within its area. In such a case, the mounting channel will no longer be a concealed mounting channel as illustrated in **FIG. 1** but would be a framed mounting channel 100'. In still another embodiment, the support member 110'' may be manufactured as a frameless support member 110'' as depicted in **FIG. 1B**. In this embodiment, the frameless support member 110'' has an outstretched arm 201' that extends over the glass to be mounted. In such a case, the mounting channel will no longer be a concealed mounting channel as illustrated in **FIG. 1** but would be a frameless mounting channel 100''.

The polymer member 120 also houses a plurality of apertures 170 that correspond in position and size to the screw holes 160 provided on the support member 110. In one embodiment of the present disclosure, the distance between two consecutive screw holes 160 on the support member 110 and apertures 170 on the polymer member 120 ranges between 100 mm and 250 mm. In one particular embodiment the distance ranges between 150 mm and 200 mm.

In one embodiment of the present disclosure, the support member is made of a metal such as aluminum or mild steel or strengthened steel, or plastic or wood or composite materials. In one other embodiment, the support member 110 may be anodized or surface modified. In another embodiment of the present disclosure, the foam core 130 of the polymer member 120 includes compounds selected from the group consisting of polyurethane foam, a polyvinyl chloride foam, a silicone foam, an ethylene propylene diene monomer rubber foam, an acrylic foam, a polychloroprene foam, a foam blend of EPDM rubber and polypropylene, a polyethylene foam, an ethylvinyl acetate foam or any combination thereof. In yet another embodiment, the adhesive members 140a, 140b is made of a material selected from the group consisting of silicone, epoxy, phenoxy, amine based resins, polyester resin, cellulosic, vinyls, aldehyde condensation resins, cyanoacrylates, polyolefin polymers, urethanes, acrylic adhesives, butyl, rubber, asphalt or Bitumin based adhesives.

In one other embodiment, the liner member 150 is formed from an aqueous precursor. In another aspect of the embodiment, the aqueous precursor includes a release agent in an aqueous medium. The release agent includes a silicone-based material, a fluorine-based material, a long-chain alkyl-based material, a fatty acid amide-based material, a polyvinyl alcohol-based material, a silica powder material, or any combination thereof. In this embodiment, the liner member 150 is formed by applying the aqueous precursor onto the surface underlying the liner member 150 followed by dehydration of the precursor. Optionally curing can also be performed after dehydration. Post dehydration and/or curing, the liner member 150 is formed over the adhesive member 140b.

In an alternative embodiment, the liner member 150 can be formed from a non-aqueous precursor. The non-aqueous precursor includes a release agent in a non-aqueous solvent. In this embodiment, the liner member 150 is formed by applying the non-aqueous precursor onto the surface underlying the
5 liner member 150 followed by removal of the non-aqueous solvent. Optionally curing can also be performed after dehydration. Post solvent removal and/ or curing, the liner member 150 is formed over the adhesive member 140b.

FIG. 2 illustrates the mounting channel 100 secured to a wall surface 200, according to one embodiment of the present disclosure. The
10 mounting channel 100 may be installed on cementitious wall or other surfaces similar to walls without using any complex installation tools. In one embodiment of the present disclosure, the mounting channel 100 can be secured anywhere on the wall surface 200 by mechanical screws 210.

The mechanical screws 210 used for securing the mounting
15 channel 100 may be any conventional screws used for mounting and does not require any specialized designs. The countersunk screw holes 160 on the support member 110 along with the apertures 170 on the polymer member 120 provide room for housing the screw heads of the mechanical screws 210 in such a way that the screw heads do not protrude outside the mounting channel 100.
20 Therefore, when any article is mounted using the mounting channel 100 of the present disclosure, the entire surface area of the foam core 130 is found to be in contact with the article.

The configuration and the present disclosure and its mode of operation is best understood from the exploded view of the mounting channel 100
25 of the present disclosure secured to the wall surface 200 as illustrated in **FIG. 3**, according to one embodiment of the present disclosure. The dimension of the polymer member 120 overlying the support member 110 completely match in size and cover the entire surface area of the support member 110. The connection between the support member 110 and the polymer member 120 is established by
30 a pure adhesive bonding. The liner member 150 overlying the adhesive member 140b farthest from the support member 110 prevents the mounting channel 100

from bonding to other substrates/ articles when supplied in a package. The mounting channels 100 are directly screwed onto the wall surface 200 using mechanical screws 210. The articles to be mounted, particularly glass are then mounted on the mounting channel 100 by removing the liner member 150 and
5 pressing the articles against the adhesive member 140b.

In alternate embodiments, a liner member 150' may optionally be present over the adhesive member 140a closest to the support member 110. In such embodiments, the support member 110 and the polymer member 120 are first bonded together by removing the releasable line member 150'. Then the
10 mounting channel 100 are directly screwed onto the wall surface 200 using mechanical screws 210. Following which the liner member 150 overlying the adhesive member 140b farthest from the support member 110 is removed to mount the articles, particularly glass on the mounting channel 100.

FIG. 4 illustrates a glass panel 220 mounted on a wall surface 200
15 using the mounting channel 100 of the present disclosure. Two mounting channels 100 of the present disclosure are screwed to the wall surface 200 at a predetermined distance from each other. The predetermined distance between the mounting channels 100 corresponds to the length of the glass panel 220 to be mounted on the wall surface 200. The distance between two mounting channels
20 100 is not greater than 500 mm. In embodiments where the length of the glass panel 220 is greater than 500 mm, multiple mounting channels 100 are used for mounting the glass panel 220 on the wall surface 200.

In one aspect of the embodiment, the mounting channels 100 are placed vertically and screwed onto the wall surface 200 as illustrated in **FIG. 4**.
25 In alternate aspects of the embodiment, the mounting channels 100 can be placed horizontal at a predetermined distance from each other. The predetermined distance corresponds to the height of the glass panel in embodiments where the mounting channel 100 is placed horizontally on the wall surface 200. In few other aspects of the embodiment, the mounting channels may be placed diagonally and
30 screwed onto the wall surface 200. In yet another aspect of the embodiment, a combination of mounting channels 100 secured vertically, horizontally and

diagonally to the wall surface 200 can be used for mounting glass panels on the wall 200. The desired position in which the mounting channels 100 are to be screwed onto the wall surface 200 is selected based on the dimension of the glass 220 to be mounted on the wall surface 200.

5 The back surface B of the support member 110 secures the mounting channel 100 to the wall surface 200 through screws 210 and the polymer member 120 secures the glass panel 220 to the front surface of the support member 110 by adhesive bonding. Multiple mounting channels 100 can be used for securing multiple glass panels 220 on the wall 200. Glass panel 220
10 illustrated in **FIG. 4** is only for teaching purpose and should not be considered to limit the scope of the invention in any manner. Articles other than glass panels not limiting to tiles, wooden shelves, cabinets, mirror, plastic articles etc. may also be mounted on the wall surface 200 using the mounting channel 100 of the present disclosure. Similarly, the mounting channels 100 of the present disclosure
15 may be used for mounting articles on surface other than wall such as plywood etc.

Examples

Comparative Example 1

Shear Bond Strength of Mounting Channel 100

20 The shear-load and failure mode of the mounting channel 100 of the present disclosure was measured by performing the following test. Five Planilaque (registered trademark) glass panels manufactured by Saint-Gobain, samples of size 100 mm x 20 mm were mounted on a plywood using silicon adhesive, double sided tape and mounting channel 100 of the present disclosure.
25 The failure mode and the shear bond strength of each of the samples were tested and the results are tabulated in Table 1.

Table 1: Shear Bond Strength and Failure Mode Testing

Sample	Configuration	Shear bond Strength (kPa)	Failure Mode
Comparative sample 1	Planilaque /Silicon adhesives /Plywood	400	Cohesive split of Silicon
Comparative	Planilaque /Double	320	Cohesive split of

sample 2	sided tape /Plywood		foam tape
(Present Disclosure)	Planilaque /Mounting Channel 100 /Plywood	515	Cohesive split of polymer member 120

The Planilaque samples mounted using conventional silicon adhesives and double sided tapes failed due to cohesive spilt of silicon and foam tape with shear strengths 400 kPa and 320 kPa, respectively on plywood. The planilaque sample mounted on plywood using mounting channel 100 of the present disclosure exhibited a superior shear bond strength of 515 kPa, which is approximately 60% more than the shear bond strengths achieved by samples mounted on plywood using silicone and double sided tape.

Although the failure mode in using the mounting channels 100 of the present disclosure occurs due to cohesive spilt of the polymer member 120, the high dynamic shear strength (620 kPa) of the polymer member 120 provides the mounting channel 100 of the present disclosure a superior strength when compared to all the comparative samples.

Comparative Example 2

Shear-Load of Mounting Channel 100

The shear-load of a 1 m x 1 m Planilaque glass panel (from Saint-Gobain) mounted on a plywood using a double-sided tape (20 mm applied in a conventional pattern along the periphery of Planilaque glass); silicone applied as 4 beads/ square meter each having a width of 8 mm and length of 1000 mm was calculated and compared with the shear-load of a 1 m x 1 m Planilaque glass mounted on a plywood using the mounting channel 100 of the present disclosure through 5 mm screws at 150 mm distance. The results of the study are tabulated in Table 2.

Table 2: Shear-Load Testing

Sample	Configuration	Shear-Load (N)
Comparative sample 3	Planilaque/Silicone adhesive/Plywood	12,800

Comparative sample 4	Planilaque /Double-sided tape /Wall	24,576
(Present Disclosure)	Planilaque /Mounting Channel 100 /Wall	10,280

Since the failure mode of the mounting channel 100 occurs due to the failure of the polymer member 120, the polymer member 120 and its interface with the support member 110 form the limiting factor for this mounting system.

5 While the system using the double-sided tape fails at 24,576 N (with the tape between the glass panel and the plywood), the maximum shear load for the double-sided tape between the aluminum support and the plywood was found to be 10,280 N. High shear load of system including double-sided tapes are obtained at the cost of excessive usage of adhesive beyond the optimal requirement of the

10 system. Whereas systems including mounting channels of the present disclosure carry a comparatively less shear load capacity, which in essence is sufficient for such systems.

Industrial Applicability

With the implementation of the mounting channel 100 of the

15 present disclosure, any article not limiting to glass, mirrors, cabinets, shelves, tiles etc. can be mounted on a wall. Such installations may be done in a continuous manner and further provide a seamless finish to the wall surface. Since the mounting channel 100 is a completely concealed system for mounting articles on the wall, the aesthetic quotient of the wall remains unaltered.

20 Since the failure mode from using the mounting channel 100 of the present disclosure cannot occur due to a system failure, the disclosed invention is more stable and does not cause any damage to the wall system. Further fixing of the mounting channel 100 to the cementitious wall or other similar wall surfaces does not require any special tools or skills. Conventional

mechanical screws 210 can be used for fixing the mounting channel 100 onto the cementitious wall or other similar wall systems. The apertures 170 and countersunk screw holes 160 provided in the support member 110 and polymer member 120, respectively provide means for directly fixing the mounting channel 100 onto the wall surface followed by mounting any article onto the mounting channel 100 of the present disclosure.

The installation time using the mounting channel 100 of the present disclosure is roughly about half the time required by conventional mounting solutions available in the market. Further the mounting channel 100 of the present disclosure minimizes the gap between the wall surface and the mounted articles thereby avoiding dust collection at the same time providing enough space for circulation of air. The mounting channel 100 also facilitates mounting of curved articles on the wall. The shape of the mounting channel 100 may be custom made according to the article to be mounted on the wall.

The present disclosure further discloses a method 300 depicted in **FIG. 5** for mounting articles on a wall surface using mounting channels 100 of the present disclosure. The method 300 comprises of steps 310 to 340. In step 310 the mounting channels 100 are placed over the wall and markings corresponding to the desired position for fixing the mounting channels 100 are marked on the wall. In a preferred embodiment, the mounting channels 100 are placed vertically placed at the edges of the article to be mounted on the wall. In alternate embodiments, the mounting channels 100 could be mounted horizontally.

In step 320, the mounting channels 100 are fixed on the wall 200 using mechanical screws 210. The countersunk screw holes 160 provides to accommodate the head of the mechanical screws 210 within in and thus prevent the mechanical screws 210 coming in contact with the article to be mounted. Further the aperture 170 in the polymer member 120 of the mounting channel 100 houses the head of the mechanical screw 210 within it. In alternate embodiments, the support member 100 of the mounting channel 100 could be first screwed onto the wall 200 and the polymer member 120 provided with apertures 170

corresponding in size and position to the countersunk screw holes 160 in the support member 110 may be laid over the support member 110.

In yet another embodiment, multiple mounting channels 100 may be mounted vertically at intervals of less than 500 mm covering the entire surface of the wall 200 for the purpose wall cladding. In the penultimate step 330, the
5 liner member 150 is removed from the polymer member 120. The adhesive member 140b farthest from the support member 110 is exposed. The article to be mounted is then placed over the adhesive member 140b and attached by compression in the final step 340. In one optional embodiment, a foam backing
10 may be placed on the back surface of the article to be mounted on the wall. The foam backing may be made from polyethylene, polyurethane, polystyrene or acrylic etc. and prevents damage to the article due to any impact.

Note that not all of the activities described above in the general description or the examples are required, that a portion of a specific activity may
15 not be required, and that one or more further activities may be performed in addition to those described. Still further, the order in which activities are listed is not necessarily the order in which they are performed.

Benefits, other advantages, and solutions to problems have been described above with regard to specific embodiments. However, the benefits,
20 advantages, solutions to problems, and any feature(s) that may cause any benefit, advantage, or solution to occur or become more pronounced are not to be construed as a critical, required, or essential feature of any or all the claims.

The specification and illustrations of the embodiments described herein are intended to provide a general understanding of the structure of the
25 various embodiments. The specification and illustrations are not intended to serve as an exhaustive and comprehensive description of all of the elements and features of apparatus and systems that use the structures or methods described herein. Certain features, that are for clarity, described herein in the context of separate embodiments, may also be provided in combination in a single
30 embodiment. Conversely, various features that are, for brevity, described in the context of a single embodiment, may also be provided separately or in a sub

combination. Further, reference to values stated in ranges includes each and every value within that range. Many other embodiments may be apparent to skilled artisans only after reading this specification. Other embodiments may be used and derived from the disclosure, such that a structural substitution, logical
5 substitution, or another change may be made without departing from the scope of the disclosure. Accordingly, the disclosure is to be regarded as illustrative rather than restrictive.

The description in combination with the figures is provided to assist in understanding the teachings disclosed herein, is provided to assist in
10 describing the teachings, and should not be interpreted as a limitation on the scope or applicability of the teachings. However, other teachings can certainly be used in this application.

As used herein, the terms "comprises," "comprising," "includes," "including," "has," "having" or any other variation thereof, are intended to cover
15 a non-exclusive inclusion. For example, a method, article, or apparatus that comprises a list of features is not necessarily limited only to those features but may include other features not expressly listed or inherent to such method, article, or apparatus. Further, unless expressly stated to the contrary, "or" refers to an inclusive-or and not to an exclusive-or. For example, a condition A or B is
20 satisfied by any one of the following: A is true (or present) and B is false (or not present), A is false (or not present) and B is true (or present), and both A and B are true (or present).

Also, the use of "a" or "an" is employed to describe elements and components described herein. This is done merely for convenience and to give a
25 general sense of the scope of the invention. This description should be read to include one or at least one and the singular also includes the plural, or vice versa, unless it is clear that it is meant otherwise. For example, when a single item is described herein, more than one item may be used in place of a single item. Similarly, where more than one item is described herein, a single item may be
30 substituted for that more than one item.

Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. The materials, methods, and examples are illustrative only and not intended to be limiting. To the extent that certain
5 details regarding specific materials and processing acts are not described, such details may include conventional approaches, which may be found in reference books and other sources within the manufacturing arts.

While aspects of the present disclosure have been particularly shown and described with reference to the embodiments above, it will be
10 understood by those skilled in the art that various additional embodiments may be contemplated by the modification of the disclosed machines, systems and methods without departing from the spirit and scope of what is disclosed. Such embodiments should be understood to fall within the scope of the present disclosure as determined based upon the claims and any equivalents thereof.

15

List of ElementsTITLE: A MOUNTING CHANNEL FOR GLASS

- 100 Mounting Channel
- 100' Framed Mounting Channel
- 100'' Frameless Mounting Channel
- 110 Support Member
- 110' Framed Support Member
- 110'' Frameless Support Member
- 120 Polymer Member
- 130 Foam Core
- 140a Adhesive Member
- 140b Adhesive Member
- 150 Liner Member
- 150' Liner Member
- 160 Countersunk Screw Holes
- 170 Aperture
- 200 Wall
- 201 Outstretched Bent Arm
- 201' Outstretched Arm
- 210 Mechanical Screws
- 220 Glass Panel
- 300 Method
- 310 Step

320 Step

330 Step

340 Step

A Front Surface

B Back Surface

Claims

We Claim:

1. A mounting channel 100 for glass comprising:
 - a support member 110 having a front surface and a back surface;
 - and
 - a polymer member 120 overlying the front surface of the support member 110 comprising a foam core 130 sandwiched on both sides by an adhesive member 140a, 140b and a liner member 150 overlying the adhesive member 140b farthest from the support member 110,wherein the back surface of the support member 110 secures the mounting channel 100 to any surface by mechanical bonding and the polymer member 120 secures the glass to the front surface of the support member 110 by adhesive bonding.
2. The mounting channel 100 as claimed in claim 1, wherein the support member 110 is substantially flat without protrusions and houses a plurality of countersunk screw holes 160 at predetermined distance from each other.
3. The mounting channel 100 as claimed in claim 1, wherein the support member 110 is a framed support member or a frameless support member.
4. The mounting channel 100 as claimed in claim 1, wherein the polymer member 120 houses a plurality of apertures 170 corresponding in position and size to the plurality of countersunk screw holes 160 on the support member 110.
5. The mounting channel 100 as claimed in claim 2 and claim 4, wherein the distance between two consecutive countersunk screw holes 160

and two consecutive apertures 170 range between 100 mm and 250 mm.

6. The mounting channel 100 as claimed in claim 1, wherein the adhesive member 140a closest to the support member 110 binds the polymer member 120 to the front surface of the support member 110.
7. The mounting channel 100 as claimed in claim 1, wherein the liner member 150 is removably coupled to the foam core 130.
8. The mounting channel 100 as claimed in claim 1, wherein the liner member 150 is removed when deployed to secure the glass on the polymer member 120.
9. The mounting channel 100 as claimed in claim 1, wherein the support member 110 is made of metals such as aluminium or strengthened steel or plastic or composite materials.
10. The mounting channel 100 as claimed in claim 1, wherein the foam core 130 includes a polyurethane foam, a polyvinyl chloride foam, a silicone foam, an ethylene propylene diene monomer rubber foam, an acrylic foam, a polychloroprene foam, a foam blend of EPDM rubber and polypropylene, a polyethylene foam, an ethylvinyl acetate foam or any combination thereof.
11. The mounting channel 100 as claimed in claim 1, wherein the removable liner member 150 is formed from an aqueous precursor.
12. The mounting channel 100 as claimed in claim 1, wherein the adhesive member 150 is made of a material selected from the group consisting of silicone, epoxy, phenoxy, amine based resins, polyester resin, cellulosic, vinyls, aldehyde condensation resins, cyanoacrylates,

polyolefin polymers, urethanes, acrylic adhesives, butyl, rubber, asphalt or Bitumin based adhesives.

13. The mounting channel 100 as claimed in claim 1, wherein the width of the support member 110 is no greater than 30 mm.
14. A method of mounting glass on any surface using mounting channels 100 as claimed in claim 1 comprising the steps of:
 - securing one or more mounting channels 100 on the surface by mechanical screwing;
 - removing the liner member 150 of the mounting channel 110;
 - and
 - securing the glass over the polymer member 120 of the mounting channel 100 by compression.
15. The method as claimed in claim 14, wherein distance between two mounting channels 100 is not greater than 500 mm.
16. Wall cladding or curtain walling using the mounting channels 100 as claimed in claim 1.

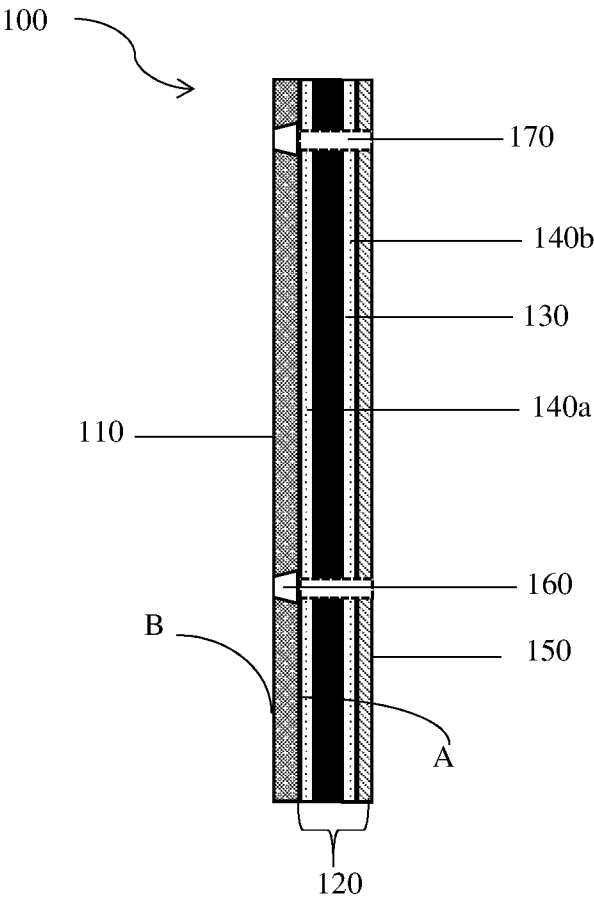
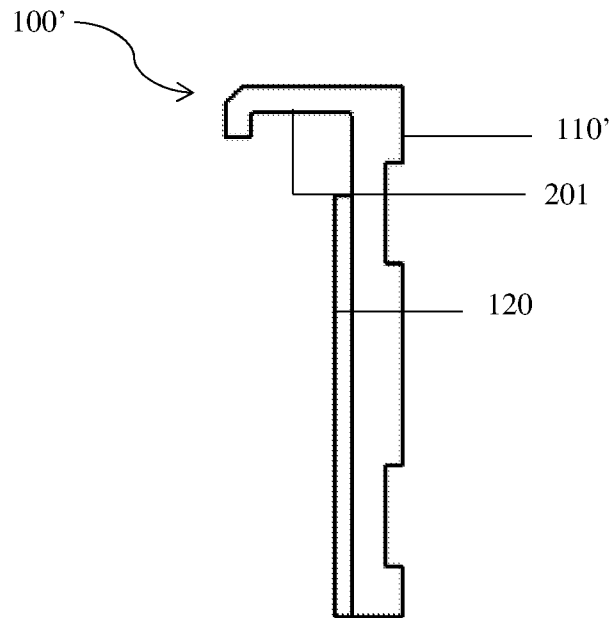
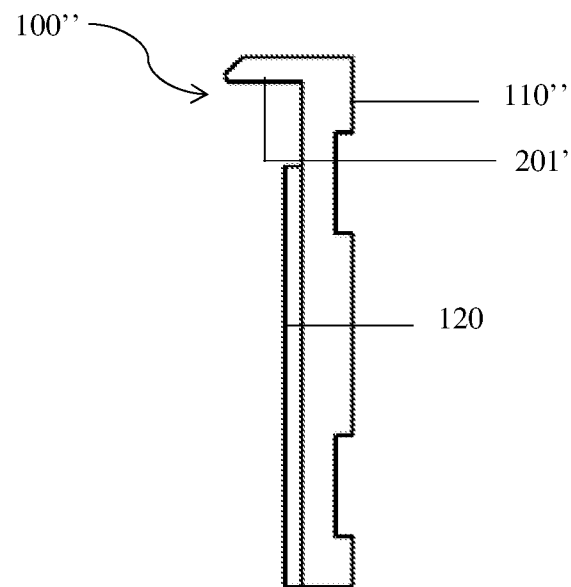


FIG. 1

**FIG. 1A****FIG. 1B**

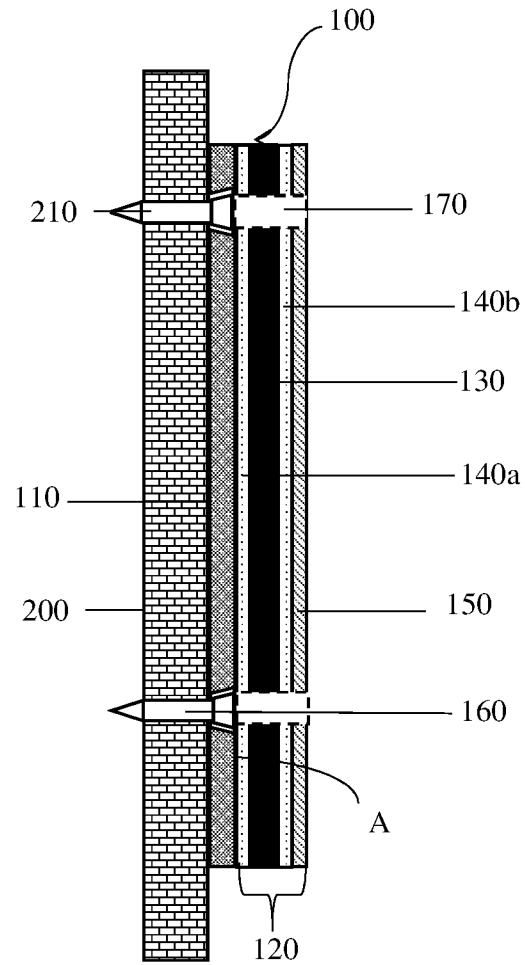


FIG. 2

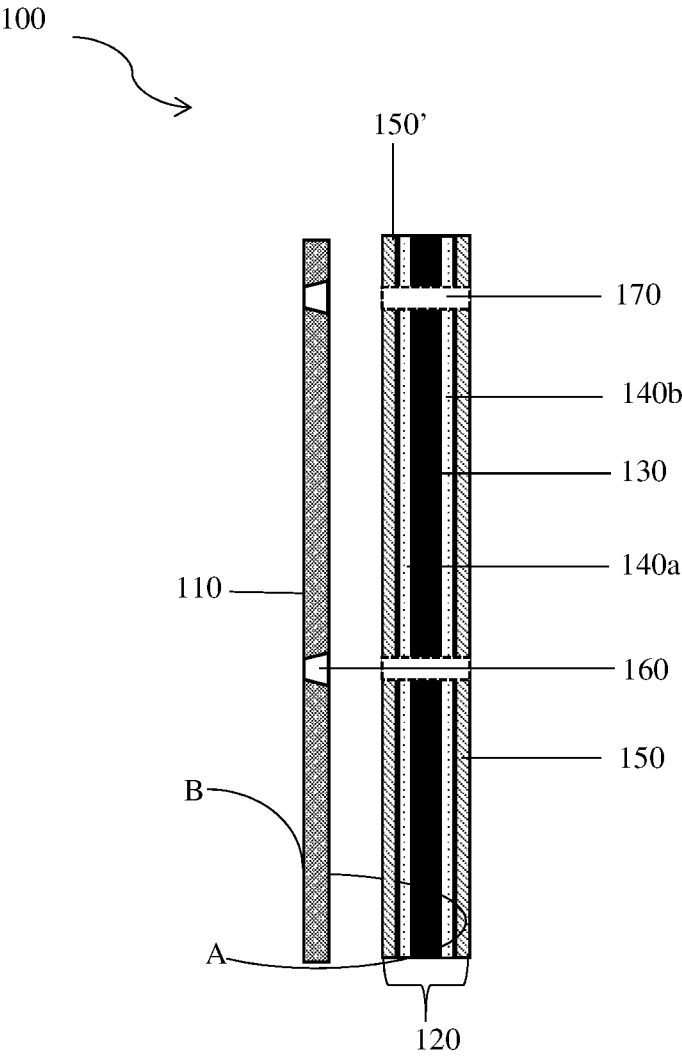


FIG. 3

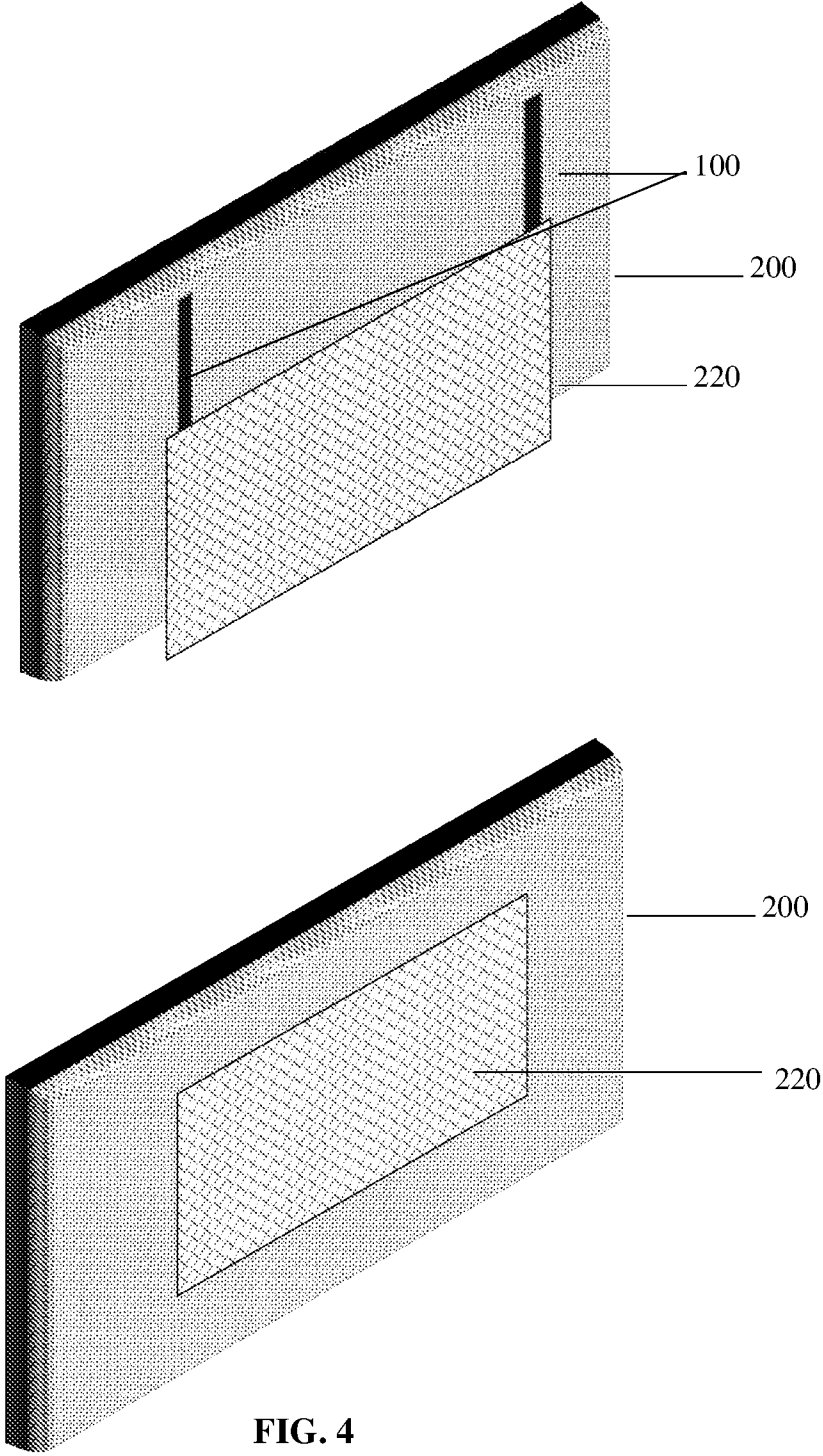
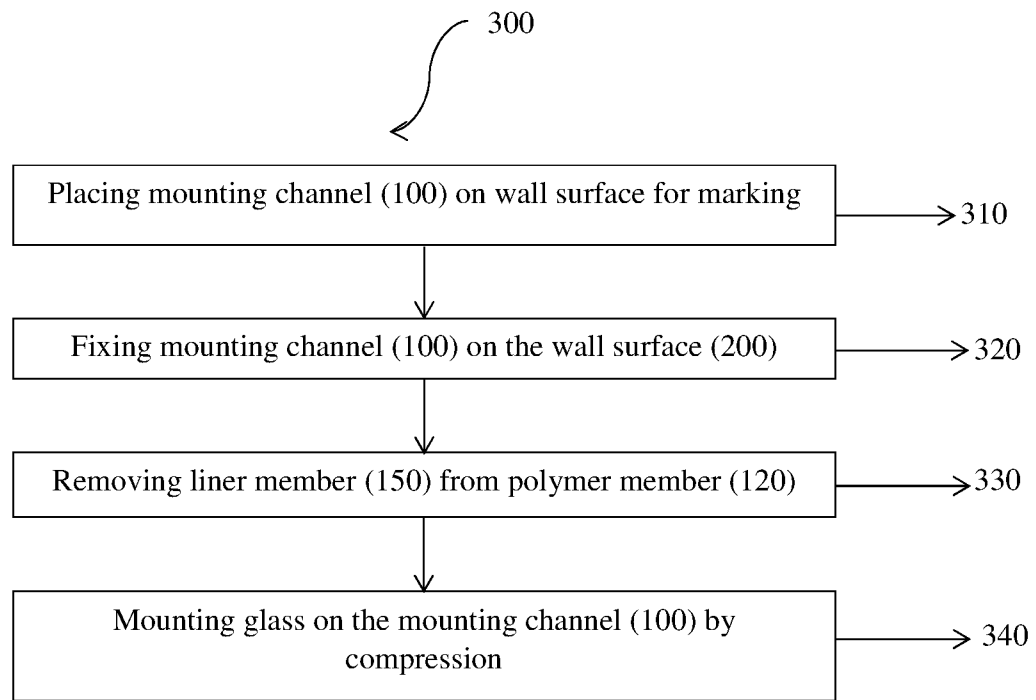


FIG. 4

**FIG. 5**

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IN2019/050485

A. CLASSIFICATION OF SUBJECT MATTER
E06B3/54 Version=2019.01

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

E06B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

TotalPatent One, IPO Internal Database

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 20120159880 A1 (VEILLEUX THOMAS A et al.) 28 June 2012 Para 023, figure 1	1-16

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

23-09-2019

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IN2019/050485

Citation	Pub.Date	Family	Pub.Date
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