



- (51) **International Patent Classification:**
A47B 96/06 (2006.01)
- (21) **International Application Number:**
PCT/US2015/065954
- (22) **International Filing Date:**
16 December 2015 (16.12.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
62/092,454 16 December 2014 (16.12.2014) US
- (72) **Inventor; and**
- (71) **Applicant : STEFENACK, Ian** [US/US]; 4364 Manayunk Avenue, Philadelphia, PA 19128 (US).
- (74) **Agents: MASSINA, Glenn, M.** et al.; Fox Rothschild LLP, IP Docket, 997 Lenox Drive, Building 3, Lawrenceville, NJ 08648 (US).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

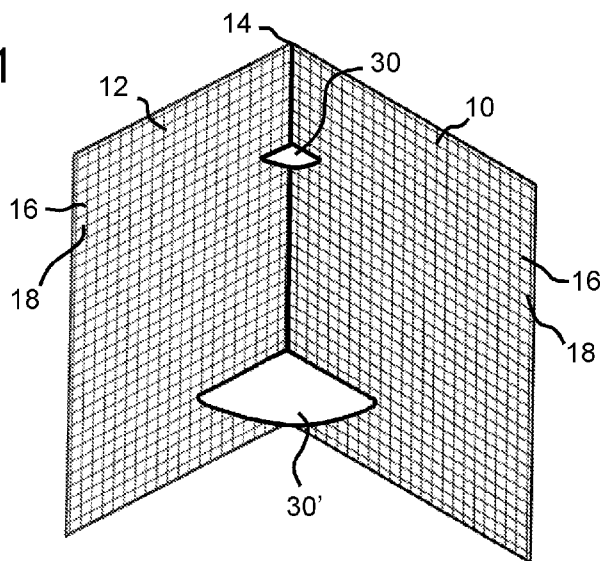
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** PLATFORM MOUNTING SYSTEM AND METHOD

Fig. 1



(57) **Abstract:** A surface platform mounting system and method. The system includes a platform and a plurality of anchoring plates. The platform defines at least one anchoring edge and at least one free edge. Each anchoring edge defines an inwardly extending channel. Each anchoring plate is configured to be secured within a respective channel and within a respective slot of the surface.

PLATFORM MOUNTING SYSTEM AND METHOD

[0001] This application claims the benefit of US Provisional Application No. 62/092,454, filed on December 16, 2014, the contents of which are incorporated herein by reference.

FIELD OF THE INVENTION

[0002] This disclosure relates to platforms utilized as shelves, seats and the like. More particularly, the disclosure relates to a system and method for mounting a platform along a surface.

BACKGROUND OF THE INVENTION

[0003] Platforms are often installed in bathroom showers and the like and are utilized as shelves, seats or other support surfaces. The platforms may be manufactured from natural and synthetic materials, for example, stone, porcelain and ceramic tile. Typically, the platform is selected before installation of the bathroom tiles and the edges of the platform are mortared into place during the tiling process. Since the platform is occupying the space where the next row of tile would normally be placed, the tiles need to be cut accommodate the platform and maintain the consistency of the tile rows.

[0004] Often times it is decided to add a platform shelf or seat into the shower after the tiling is complete. Such a retro-fit installation can be difficult, requiring removal or cutting of the existing wall tiles. Alternatively, the platform is secured using adhesive strips, adhesive caulk or

the like, however, because the platform is subjected to sheer and torque forces along the wall, the adhesives frequently fail after some time.

SUMMARY OF THE INVENTION

[0005] In at least one embodiment, the present disclosure provides a surface platform mounting system. The system includes a platform and a plurality of anchoring plates. The platform defines at least one anchoring edge and at least one free edge. Each anchoring edge defines an inwardly extending channel. Each anchoring plate is configured to be secured within a respective channel and within a slot of a surface.

[0006] In at least one embodiment, the present disclosure provides a method of securing a platform relative to a surface. The method includes securing a plurality of anchoring plates in respective slots in the surface such that at least a portion of each anchoring plate extends from the surface; sliding at least one channel defined along at least one anchoring edge of the platform over the portions of anchoring plates extending from the surface; and securing each anchoring plate within the respective channel. In at least one embodiment, the slot is defined by a joint between two tiles secured to the surface.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The accompanying drawings, which are incorporated herein and constitute part of this specification, illustrate the embodiments of the invention, and, together with the general description given above and the detailed description given below, serve to explain the features of the system and method. In the drawings:

[0008] Fig. 1 is a perspective view of a portion of a shower incorporating a shelf platform and a seat platform in accordance with embodiments of the invention.

[0009] Fig. 2 is a top plan view of a platform system in accordance with an embodiment of the disclosure.

[0010] Fig. 3 is rear perspective view of a platform in accordance with an embodiment of the disclosure.

[0011] Fig. 4 is a side elevation view of the platform of Fig. 3.

[0012] Fig. 5 is a perspective view of an anchoring plate in accordance with an embodiment of the disclosure.

[0013] Fig. 6 is a front elevation view of the anchoring plate of Fig. 5.

[0014] Fig. 7 is a top plan view of the anchoring plate of Fig. 5.

[0015] Figs. 8-12 are schematic views illustrating a method of mounting a platform in accordance with an embodiment of the disclosure.

DETAILED DESCRIPTION OF THE INVENTION

[0016] In the drawings, like numerals indicate like elements throughout. Certain terminology is used herein for convenience only and is not to be taken as a limitation on the present invention. It should be understood, based on this disclosure, that the invention is not limited by the embodiments described herein.

[0017] Referring to Fig. 1, a portion of a shower incorporating a shelf platform system 30 and a seat platform system 30' in accordance with embodiments of the invention will be described. The shower includes adjacent walls 10 and 12 which meet at a corner 14. Each wall 10, 12 includes tiles 16 formed in rows with grout joints 18 between the rows. While an exemplary

shower is described herein, the invention is not limited to such. The systems and methods described herein can be used on any surfaces, whether tiled or not and whether in a shower, other area of the bathroom, in a kitchen or any other surfaces. In the illustrated embodiment, each platform system 30, 30' is positioned along one of the horizontal joints 18, as will be described in more detail hereinafter. However, it is recognized that the platform system 30, 30' may be positioned along a surface without joints or in a position not aligned with a joint.

[0018] Referring to Figs. 2-4, the platform systems 30, 30' generally include a platform 32 and a plurality of anchoring plates 50. The platform systems 30 and 30' are substantially the same except for the size of the platform 32 and the number of anchoring plates 50 utilized. As such, only the platform system 30 will be described in detail below.

[0019] The illustrated platform 32 includes a body with anchoring edges 34 and 36 with a free edge 38 extending therebetween. The illustrated platform 32 is intended to be positioned in a corner 14 and therefore includes the anchoring edges 34, 36 at a right angle. The free edge 38 is illustrated as a rounded surface, but may have additional configurations. Additionally, the platform 32 may be configured for installation in an area other than a corner whereby the platform 32 may include more or less than two anchoring edges 32, 34 and they may be at angles other than 90°. For example, the platform may be configured for mounting along a planar wall wherein the platform will only include one anchoring edge. The remaining edges will define free edges.

[0020] Referring to Figs. 3 and 4, a channel 35, 37 is defined along each anchoring edge 34, 36. In the illustrated embodiment, the channels 35, 37 intersect at area 39 in the corner of the platform 32, however, such intersection may not be necessary. Each channel 35, 37 has a depth D which is at least as large as half the width W of the anchoring plates 50 (see Fig. 6), however,

the depth D may be larger than the width W to provide flexibility of the system. As one example, the channels 35, 37 may have a depth D of approximately 1 to 1 ½ inches. Similarly, each channel 35, 37 has a height H which is slightly larger than the thickness T of the anchoring plates 50. As one example, the channels 35, 37 may have a height H of approximately 1/16 to 3/32 of an inch. The channels 35, 37 extend along a substantial portion of the anchoring edge 34, 36, however, terminate a distance from the free edge 38 such that a solid portion 33 extends between the channel 35, 37 and the free edge 38. With such configuration, the free edge 38 remains unblemished and the channels 35, 37 are not visible upon mounting of the platform 32 (see Fig. 12).

[0021] The channels 35, 37 may be formed into the anchoring edges 34, 36 during manufacture of the platform 32 or after manufacturing. To form the channels 35, 37 after manufacturing, a standard platform may be utilized and a tile saw or the like used to form the channels 35, 37.

[0022] Referring to Figs. 5-7, each anchoring plate 50 has a solid body 52 which has a substantially elliptical shape with narrow ends 54 and a wider central region 56. While an elliptical shape is shown, the anchoring plates may have other configurations, for example, rectangular. The central region 56 defines the maximum width W of the anchoring plate 50. The width W may vary depending on the thickness of the tile 16 or other characteristics of the surface to which the platform 32 is to be mounted, however, the depth D of the channels 35, 37 allow for a standard width W which can be used with tiles 16 of varying thickness. As an example, the anchoring plate body 52 may have a width W of approximately 1 inch. The body 52 has a length L which is larger than the width W thereof. For example, the ratio of the length L to the width W may be approximately 1.5:1 to 3:1. As an example, the anchoring plate body 52 may have a

length L of approximately 2-3/8 inches. The anchoring plates 50 have a thickness T configured to fit within the joint 18 between the tiles 16. As an example, the anchoring plate body 52 may have a thickness T of approximately 0.06 inches, which is less than the typically smallest tile joint 18 of 1/16 of an inch.

[0023] Having described the general components of the platform system 30, a method of installing the platform 32 will be described with reference to Figs. 8-12. The method will generally be described with respect to a retrofit installation, however, it is understood that the system and method may also be utilized in new installations as described below.

[0024] As a first step in a retrofit installation, a horizontal grout joint 18 is selected and a plurality of receiving slots 60 are formed within the joint 18 by removing the grout, as shown in Fig. 8. The grout may be removed, for example, using a handheld grout saw, an oscillating tool with a grout removing blade, or a grinder with a thin kerf blade. Other methods may also be utilized. Alternatively, if the platform is to be mounted on a non-tiled surface or in an area of a tiled wall other than a joint, the slots 60 may be formed where desired, for example, using a saw or grinder with a blade made for cutting tile/stone.

[0025] Once the slots 60 are formed, an anchoring plate 50 is secured in each slot 60, for example, utilizing an adhesive 62 applied to one half of the plate 50. The plates 50 are inserted into the slots 60 as illustrated by arrow A in Fig. 9. For a new installation, it is not necessary to form the slots within the joint. Instead, the anchoring plates 50 may simply be secured within the joint 18 as the tile 16 is installed, with the joint serving as the slot. Use of the platform system 30 in a new installation eliminates the need to cut the tile 16 around the platform 32. Upon installation, a portion of each plate 50 extends from the surface of the respective wall 10, 12.

[0026] The number of anchoring plates 50 may be selected based on the size of the platform 32. For example, for a 10 inch corner shelf, two plates 50 may be utilized along each anchoring edge 34, 36; however, for a 24 inch corner seat, five plates 50 may be utilized along each anchoring edge 34, 36.

[0027] Once the anchoring plates 50 are secured, adhesive 62 or the like is applied in the channels 35, 37 as illustrated in Fig. 10. Alternatively or additionally, adhesive may be applied to the portions of the anchoring plates 50 extending from the wall surface. The platform 32 is then moved horizontally into the corner 14 as indicated by the arrows B in Fig. 11. As the platform 32 is moved into the corner 14, the anchoring plates 50 are received in the respective channels 35, 37. Once the adhesive has cured or otherwise dried, the platform 32 is reliably secured in the corner 14, as illustrated in Fig. 12. Once secured, the channels 35, 37 and the anchoring plates 50 are not visible, however, the anchoring plates 50 interact with the channels 35, 37 and the tiles 16 and/or surface to withstand the sheer and torsional forces applied to the platform 32. Caulk or the like (not shown) may be applied about the anchoring edges 34, 36 of the platform 32.

[0028] These and other advantages of the present invention will be apparent to those skilled in the art from the foregoing specification. Accordingly, it will be recognized by those skilled in the art that changes or modifications may be made to the above-described embodiments without departing from the broad inventive concepts of the invention. It should therefore be understood that this invention is not limited to the particular embodiments described herein, but is intended to include all changes and modifications that are within the scope and spirit of the invention as defined in the claims.

What is claimed is:

1. A surface platform mounting system comprising:
a platform defining at least one anchoring edge and at least one free edge, wherein each anchoring edge defines an inwardly extending channel;
a plurality of anchoring plates, each anchoring plate configured to be secured within a respective channel and within a respective slot defined in the surface.
2. The surface platform mounting system according to claim 1 wherein the platform is configured as a shelf.
3. The surface platform mounting system according to claim 1 wherein the platform is configured as a seat.
4. The surface platform mounting system according to claim 1 wherein the platform includes two anchoring edges which extend at a right angle to one another.
5. The surface platform mounting system according to claim 4 wherein the free edge extends between the two anchoring edges and has a curved configuration.
6. The surface platform mounting system according to claim 1 wherein the platform includes only one anchoring edge and at least two free edges.

7. The surface platform mounting system according to claim 1 wherein each anchoring plate has a maximum width and a depth of each channel is equal to or greater than one half of the maximum width.
8. The surface platform mounting system according to claim 1 wherein each anchoring plate has a thickness and a height of each channel is slightly larger than the thickness.
9. The surface platform mounting system according to claim 1 wherein each channel extends along a substantial portion of the anchoring edge but terminates a distance from a respective free edge such that a solid portion extends between the channel and the free edge.
10. The surface platform mounting system according to claim 1 wherein each channel is formed in the platform during manufacture of the platform.
11. The surface platform mounting system according to claim 1 wherein each channel is formed in the platform after manufacture of the platform utilizing a post-manufacturing process.
12. The surface platform mounting system according to claim 11 wherein the post-manufacturing process includes cutting with a saw.
13. The surface platform mounting system according to claim 1 wherein each anchoring plate has an elliptical configuration.

14. The surface platform mounting system according to claim 1 wherein each anchoring plate has a length which is larger than a maximum width of the anchoring plate.
15. The surface platform mounting system according to claim 14 wherein the ratio of the length to the maximum width is in the range of approximately 1.5:1 to 3:1.
16. A method of securing a platform relative to a surface, the method comprising:
- securing a plurality of anchoring plates in respective slots in the surface such that at least a portion of each anchoring plate extends from the surface;
 - sliding at least one channel defined along at least one anchoring edge of the platform over the portions of anchoring plates extending from the surface; and
 - securing each anchoring plate within the respective channel.
17. The method according to claim 16 wherein the surface is a tiled surface and the slots are defined within joints between tiles.
18. The method according to claim 17 wherein the surface is in a bathroom shower.
19. The method according to claim 16 further comprising the step of defining the slots in the surface.

20. The method according to claim 19 wherein the step of defining the slots in the surface includes cutting the slot into the surface or a joint of the surface.

21. The method according to claim 19 wherein the step of defining the slots in the surface includes placing tile and grout about the anchoring plate as the surface is tiled.

Fig. 1

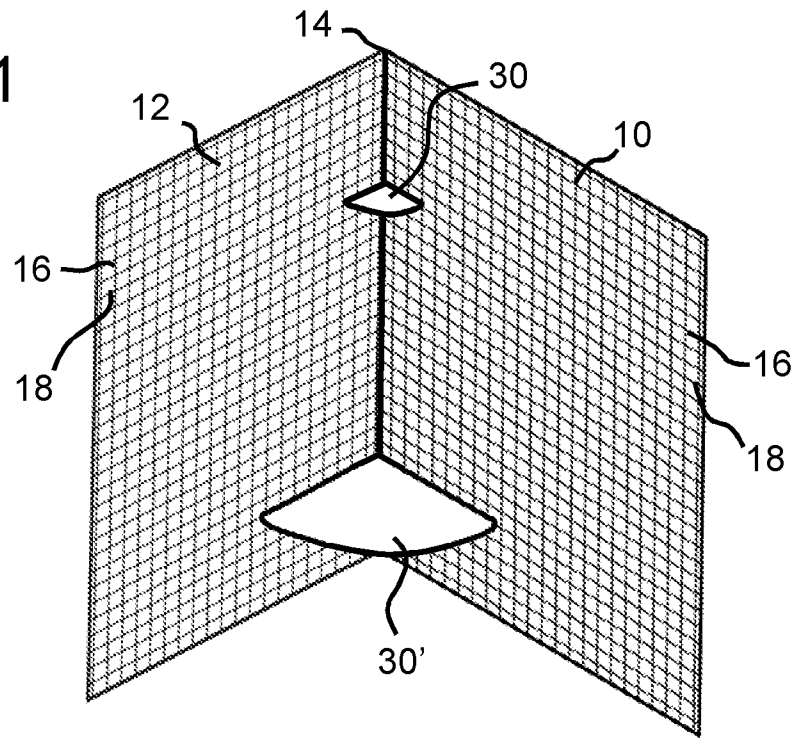


Fig. 2

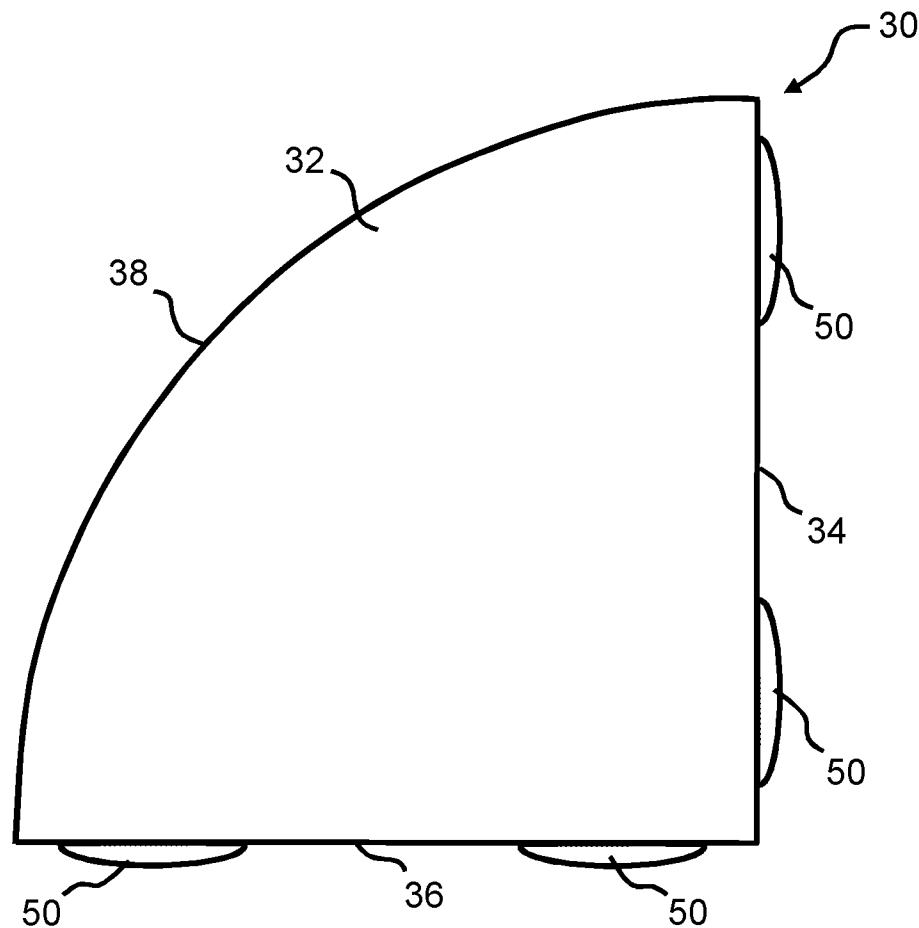


Fig. 3

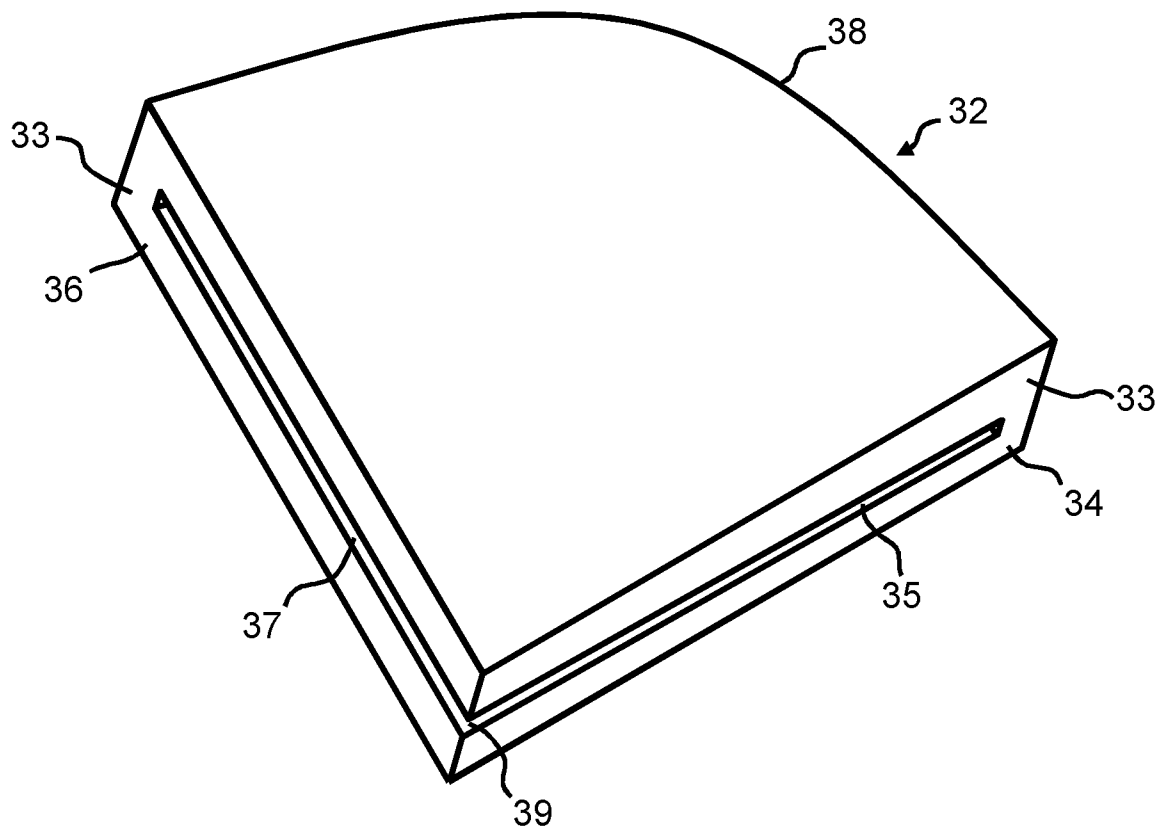


Fig. 4

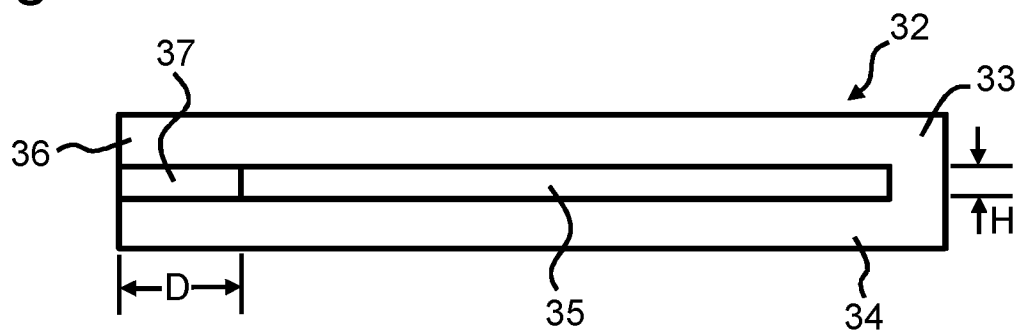


Fig. 5

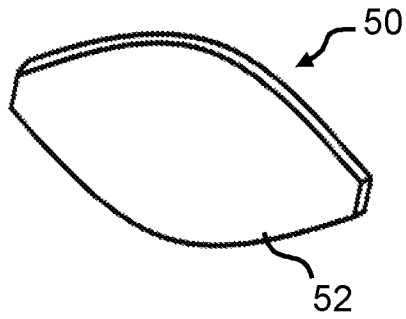


Fig. 6

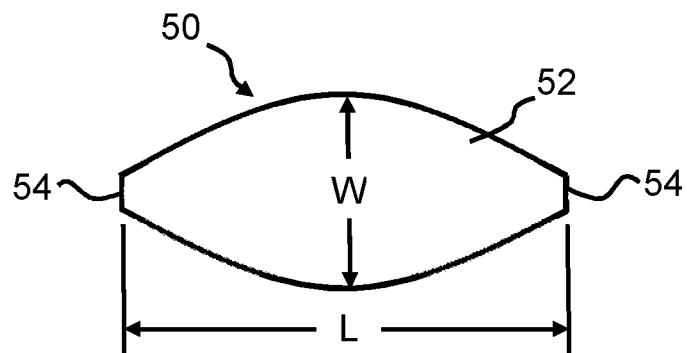


Fig. 7

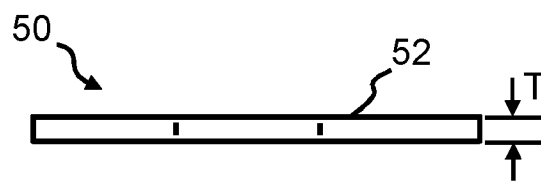


Fig. 8

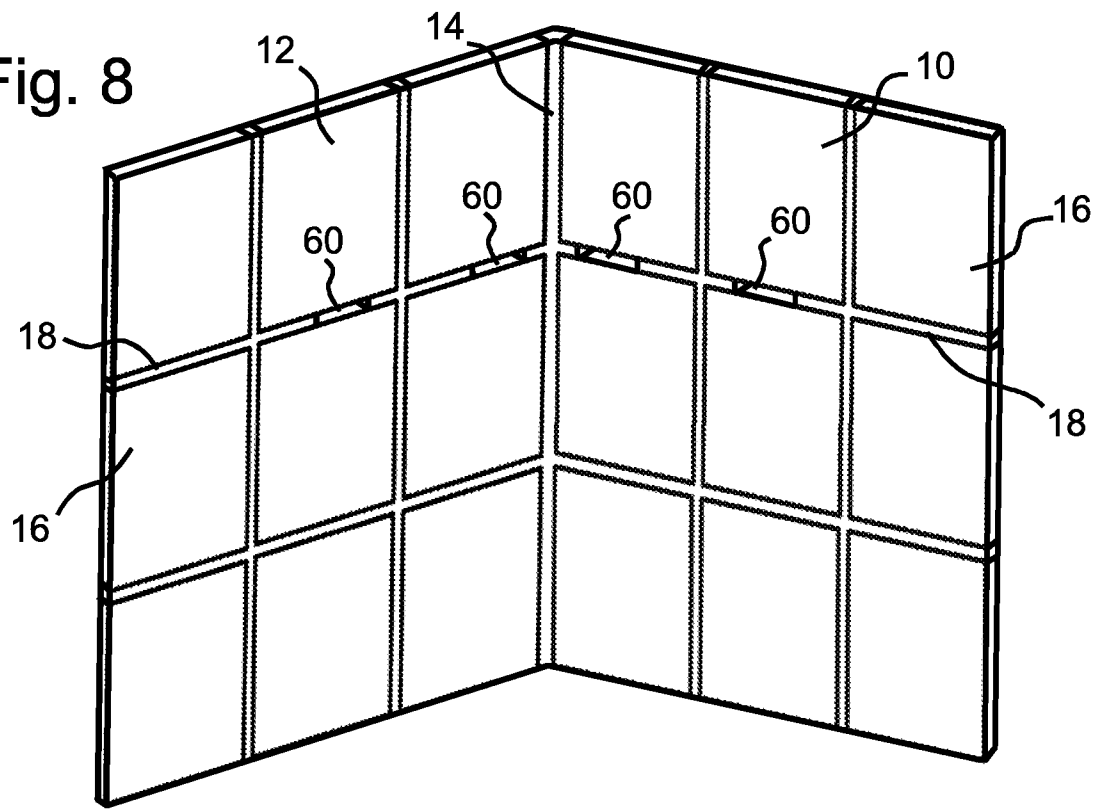
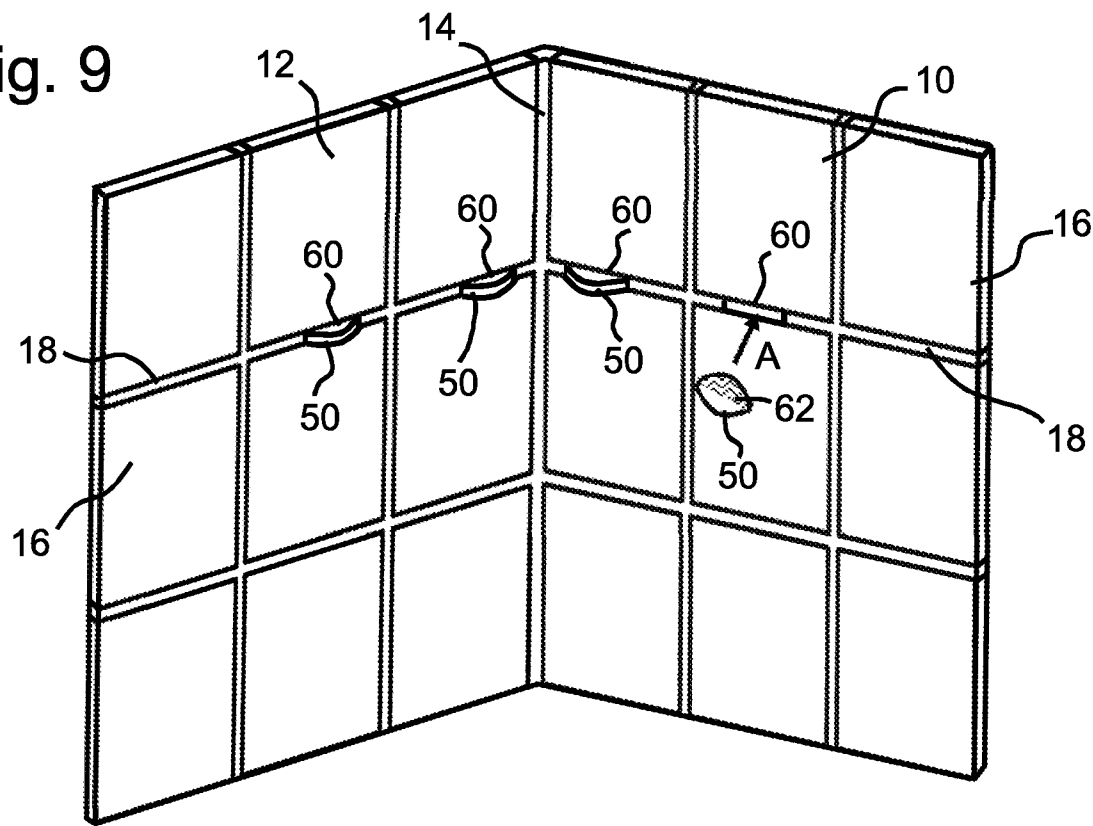


Fig. 9



5/6

Fig. 10

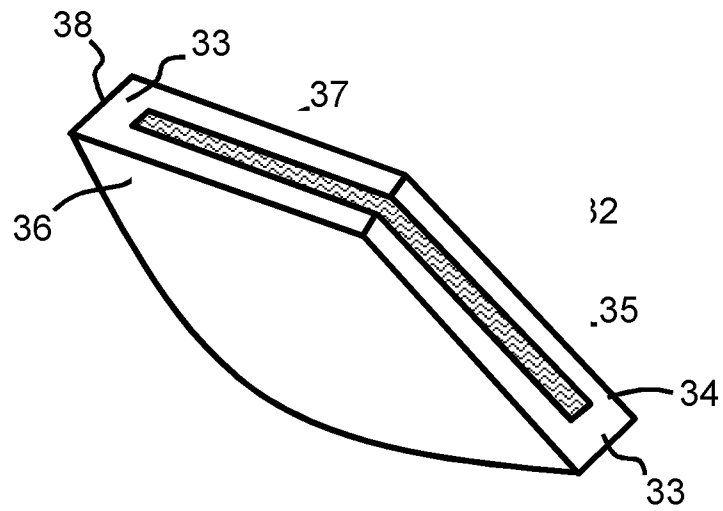


Fig. 11

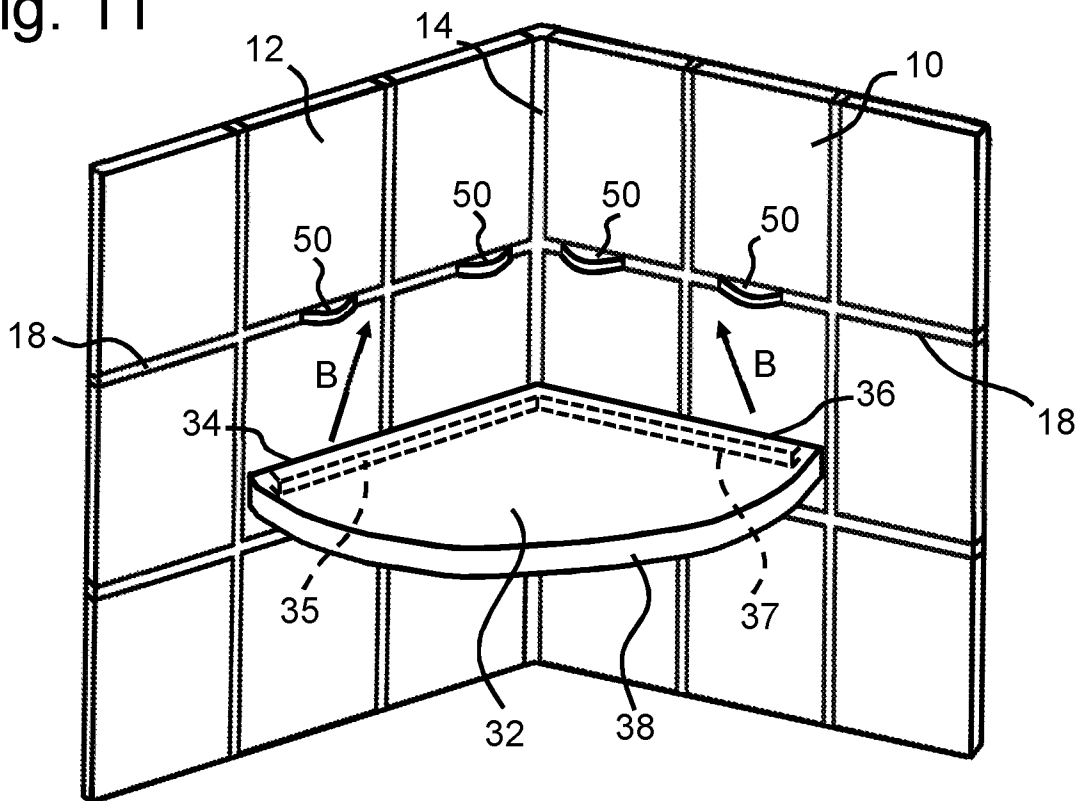
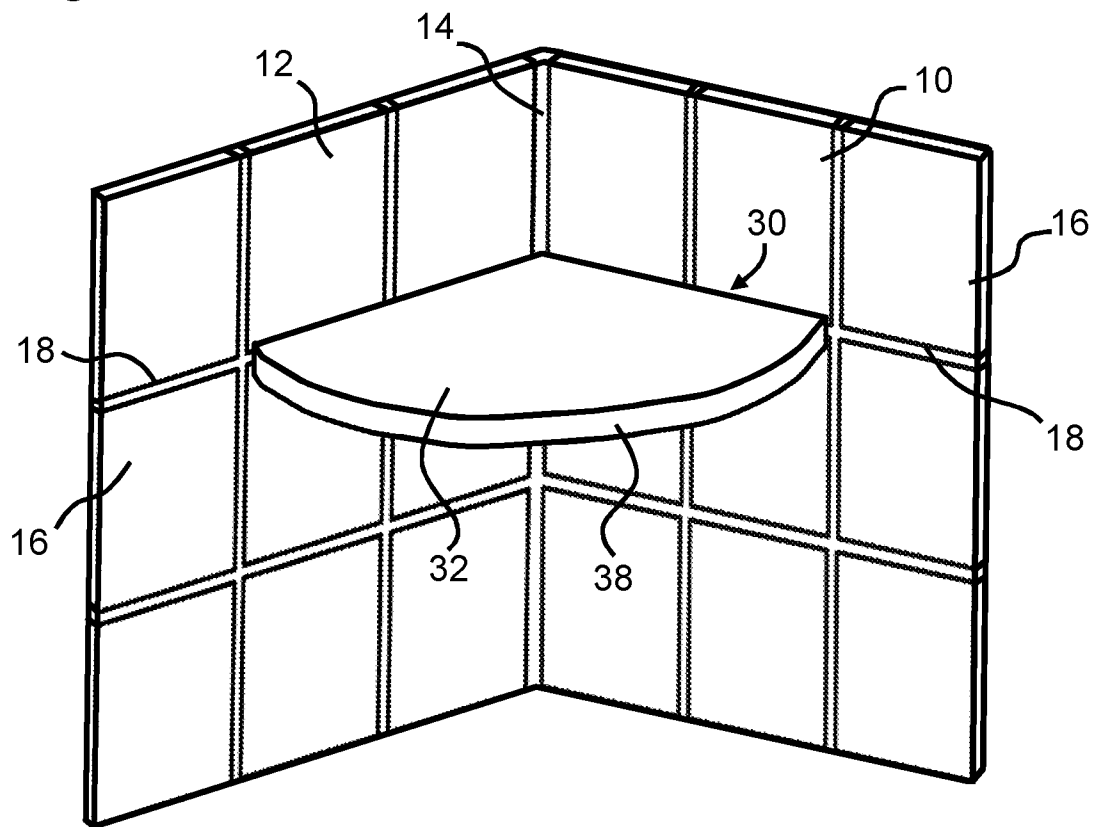


Fig. 12



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/065954

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47B 96/06 (2016.01)

CPC - A47B 96/066 (2016.02)

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)

IPC(8) - A47B 96/02, 96/06; A47K 3/00, 3/022, 3/12, 3/28 (2016.01)

CPC - A47B 96/02, 96/022, 96/024, 96/06, 96/066, 96/068; A47K 3/00, 3/022, 3/12, 3/122, 3/28, 3/281, 3/282 (2016.02)

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

USPC - 4/571.1, 578.1, 605, 611, 612; 52/34, 35; 211/90.01 (Keyword delimited)

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

PatBase, Google Patents, Google, Google Scholar, YouTube

Search terms used: surface, platform, anchor, edge, shower, shelf, seat

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,513,575 A (SLADE) 07 May 1996 (07.05.1996) entire document	1-21
Y	US 6,052,845 A (HARVEY) 25 April 2000 (25.04.2000) entire document	1-21
Y	US 2008/0224004 A1 (GALLIEN) 18 September 2008 (18.09.2008) entire document	6
A	US 2,261,078 A (SHOCKEY) 28 October 1941 (28.10.1941) entire document	1-21
A	US 5,477,969 A (BEESKAU et al) 26 December 1995 (26.12.1995) entire document	1-21

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"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
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 February 2016

Date of mailing of the international search report

04 MAR 2016

Name and mailing address of the ISA/

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774