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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: IMPROVED MOUNTING ASSEMBLY

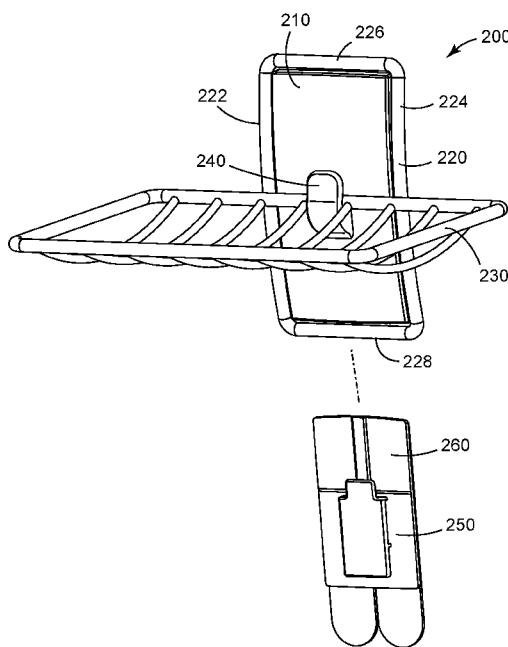


FIG. 2

(57) Abstract: The present disclosure relates generally to an improved mounting assembly. In general, the mounting device includes a cover plate, a frame (at least a portion of which is adjacent to the cover plate), and an accessory that is attachable to the cover plate. The frame includes generally horizontal top and bottom portions or members that cooperatively limit or prohibit lateral motion of the cover plate relative to the frame when the cover plate is attached to the frame and is attached to a wall or vertical surface. The presence of the generally horizontal bottom and top portions or members facilitate faster and easier application and removal of the mounting assembly to a wall or other vertical surface by permitting the mounting assembly to be removed from the backplate on the wall in a single step.



Published:

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

IMPROVED MOUNTING ASSEMBLY

Technical Field

5 [0001] The present disclosure relates generally to an improved mounting assembly.

Background

[0002] Double-faced adhesive tapes (*i.e.*, tapes bearing adhesive on both major opposing surfaces) are widely known and used to attach articles to surfaces. For example, stretch-releasing adhesive tapes have 10 found use in a wide variety of assembling, joining, attaching, and mounting applications. One example of a commercially available double-sided, stretch-releasing adhesive product is COMMAND® strips sold by 3M Company. These double-sided, stretch-releasing adhesive products can be attached to an article support device that has a hook, clip, hanger, etc. Utensils, decorations, tools and various other articles (generally referred to as accessories) can then be hooked, clipped, hung, or otherwise attached to the 15 support device. Examples of such assemblies are described in, for example, U.S. Patent Nos. 7,802,766; 8,020,820, and 8,814,112.

[0003] Article support devices using a stretch-releasable adhesive tape often comprises a base comprising a planar surface configured to be attached to the stretch-releasable adhesive tape, in combination with a support body that comprises an article support member and that is removably 20 attachable to the base, so that, when it is desired to remove the device from a mounting surface, the body can be detached from the base so as to access and activate the stretch-releasable adhesive.

[0004] One specific example of an attachment or mounting assembly 1 is shown in Fig. 1 in which a bath caddy 10 is attached to two vertical walls 80, 180 by an attachment system including a coupling plate 20, 120; a mounting plate 40, 140; and an adhesive strip 60, 160. Adhesive strips 60, 160 adhere mounting plate 40, 140 to wall 80, 180. Mounting plate 40, 140 and coupling plate 20, 120 securely mate or attach 25 to one another, and coupling plate 20, 120 mates, attaches, or is formed on bath caddy 10. The entire attachment assembly 1 permits bath caddy 10 to be hung or mounted on a wall or in a corner between two walls 80, 180.

Summary

[0005] Some embodiments of the present disclosure relate to a mounting assembly, comprising: a cover plate having a front surface and a rear surface; the front surface of the cover plate including an attachment device capable of attaching an accessory to the cover plate; the rear surface of the cover plate capable of being slid into (or otherwise attached to) a backplate; a frame having both a bottom member and a top member that are each closely adjacent to at least a portion of the cover plate such that the bottom and top 35 members limit or prohibit lateral motion of the cover plate relative to the frame when the cover plate is in the frame and attached or adhered to a vertical surface; and adhesive strips capable of adhering the backplate to a vertical surface.

[0006] In some embodiments, the accessory is at least one of a utensil, a decoration, a tool, and/or another device or article. In some embodiments, the frame includes opposed side members. In some embodiments, the frame includes opposed top and bottom members. In some embodiments, the frame includes opposed side members and opposed top and bottom members and the opposed top and bottom members each connect with and are generally perpendicular to each of the opposed side members. In some embodiments, the attachment device is a hook. In some embodiments, the accessory snaps into the attachment device. In some embodiments, the adhesive strips are double-sided adhesive strips. In some embodiments, the adhesive strips are stretch-release adhesive strips. In some embodiments, the adhesive strips include a tab.

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Brief Description of Drawings

[0007] Fig. 1 is an exploded schematic view of a prior art mounting assembly.

[0008] Fig. 2 is a schematic view of a mounting assembly according to the present disclosure.

[0009] Figs. 3A – 3F are step-wise schematic views of the mounting assembly of Fig. 2 in operation.

15 [0010] Fig. 4 is a schematic view of another mounting assembly according to the present disclosure.

[0011] Fig. 5 is a schematic view of another mounting assembly according to the present disclosure.

[0012] Fig. 6 is a schematic view of another mounting assembly according to the present disclosure.

Detailed Description

20 [0013] The inventors of the present disclosure invented a mounting assembly that is capable of mounting an accessory such as, for example, a utensil, a decoration, a tool, and/or another device or article. In general, the mounting device includes a cover plate, a frame (at least a portion of which is adjacent to the cover plate), and an accessory that is attachable to the cover plate. The frame includes a generally horizontal bottom portion or member and an opposed, generally parallel generally horizontal top portion or member that cooperatively limit or prohibit lateral motion of the cover plate relative to the frame when the cover plate is attached to the frame and is attached to a wall or vertical surface. More specifically, the bottom and top portions or members of the frame (when attached to cover plate and when the mounting assembly is attached or adhered to wall) limit or prohibit lateral motion of the cover plate relative to the frame. The presence of the bottom and top portions or members facilitate faster and easier application and removal of the mounting assembly to a wall or other vertical surface by permitting the mounting assembly to be removed from the backplate on the wall in a single step (instead of requiring the user to first remove the accessory and then remove the cover plate from the backplate).

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35 [0014] One exemplary embodiment of a mounting device in accordance with the present disclosure is shown in Fig. 2. The mounting assembly 200 includes a cover plate 210; a frame 220; and an accessory 230 that is attachable to cover plate 210. In the specific embodiment shown in Fig. 2, accessory 230 is

shown as a soap holder or soap dish. Those of skill in the art will appreciate that any accessory (including, for example, utensils, decorations, tools, and various other articles) can be used with the teachings described herein. Some exemplary alternative accessories are shown, for example, in Figs. 4-6.

[0015] In the specific embodiment shown in Fig. 2, frame 220 includes opposed side members 222, 224, and opposed top and bottom members 226, 228. Top and bottom members 226, 228 each connect with and are generally perpendicular to each of side members 222, 224. Those of skill in the art will appreciate that alternative frame designs and constructions may be used. For example, all portions of frame 220 are optional except for bottom portion 228 and top portion 226. Bottom portion 228 (when attached to cover plate and when the mounting assembly is attached or adhered to wall) limits or prohibits lateral motion of cover plate 210 relative to frame 220. As such, the shape and design of the frame can be varied as long as bottom portion 228 is present to limit or prohibit motion of the cover plate relative to frame 220 when the cover plate is attached to the frame and the mounting assembly is attached or adhered to a wall.

[0016] In the specific embodiment shown in Fig. 2, accessory 230 is attached to cover plate 210 by a hook 240 that permits snap fit connection between cover plate 210 and a portion of accessory 230. Those of skill in the art will appreciate that attachment mechanisms other than hook 240 can be used to mate or attach cover plate 210 to accessory 230. Alternative attachment mechanisms or means can include, for example, mechanical or adhesive attachment mechanisms or means.

[0017] In the specific embodiment shown in Fig. 2, cover plate 210 slidably attaches or mates with a backplate 250 portion that is adjacent to adhesive strips 260. This backplate design and function is shown in greater detail in U.S. Patent Nos. 5,507,464 and 8,979,054, the entirety of each of which is incorporated by reference herein. Those of skill in the art will appreciate that attachment mechanisms other than backplate 250 can be used to mate or attach cover plate 210 to adhesive strips 260. Alternative attachment mechanisms or means can include, for example, mechanical or adhesive attachment mechanisms or means.

[0018] Adhesive strips 260 can be any desired adhesive strip including, for example, stretch release adhesive strips, double-sided adhesive strips, etc. Double-sided (also referred to as double-faced adhesive strips) can comprise any suitable sheet, film, layer, etc. that comprises pressure-sensitive adhesive functionality on oppositely-facing major surfaces. The double-faced adhesive can comprise any suitable adhesive that is available in the form of a sheet, tape, roll good, etc., from which a discrete piece of adhesive can be obtained that is suitable for being contacted with and bonded to bonding surface. Suitable adhesives thus include double-stick tapes, laminating adhesives, double-faced foam tapes, and the like, as are commonly known in the art.

[0019] In some embodiments, the adhesive strips include a stretch-release adhesive. Such a stretch-release property can allow the adhesive to be securely attached to a surface and to be later removed from the surface without visual disfigurement of, or leaving adhesive residue on, the surface. An exemplary suitable stretch-releasing adhesive can include an elastic backing, or a highly extensible and substantially

inelastic backing, with a pressure-sensitive adhesive disposed (e.g. coated) thereupon. Or the stretch-releasing adhesive can be formed of a solid, elastic pressure sensitive adhesive. Thus, in this context, the term stretch-releasing adhesive encompasses products that comprise a unitary, integral, or solid construction of adhesive (in addition to products that comprise a backing with separate layers of adhesive residing thereupon). Suitable exemplary stretch-releasing adhesives are described in U.S. Patent 5 4,024,312 to Korpman; German Patent No. 33 31 016; U.S. Patent 5,516,581 to Kreckel et al.; and PCT International Publication No. WO 95/06691 to Bries et al, all of which are incorporated herein in their entirety. Such stretch-release adhesives can range, for example, from about 0.2 mm in thickness to about 2 mm in thickness.

10 [0020] In embodiments where the mounting system is to be mounted in a moist environment (e.g., if the accessory is to be mounted in a shower, tub, or bathroom), the composition of the stretch-releasing adhesive can be chosen so as to maintain appropriate adhesion in the presence of moisture.

15 [0021] In some embodiments, the stretch-release adhesive includes a pull tab portion (e.g., an end of the tab that does not comprise adhesive), which may be grasped by a user and pulled so as to activate the stretch-release properties of the adhesive when it is desired to detach the mounting assembly (or a portion thereof) from the wall.

[0022] A single piece or multiple pieces of adhesive can be used. If two (or more) pieces are used, the pieces may be bonded so as not to be in contact with each other. Alternatively, if two (or more) pieces are used, the pieces may be in contact with each other or may be directly adjacent to one another.

20 [0023] Assembly of the pieces of mounting assembly 200 of Fig. 2 is shown schematically in Figs. 3A – 3F. The interconnection between the pieces of the mounting assembly 200 of Fig. 2 is shown schematically in Figs. 3A-3F.

25 [0024] As shown in Figs. 3A, the user moves cover plate 210 to engage with accessory 230 such that a portion of accessory 230 fits or snaps into or onto hook 240.

[0025] As shown in Fig. 3B, the user pushes accessory 230 and cover plate 210 together until they snap, click, or otherwise fully engage. In some embodiments, when fully engaged, hook 240 holds accessory 230 securely in place and minimizes its vertical, horizontal, and rotational movement.

30 [0026] As shown in Fig. 3C, the user then rotates cover plate 210 until it is generally flush with frame 220 (as shown in Fig. 3D). Cover plate is preferably flush with top and bottom portions or members 226, 228 of frame 220.

35 [0027] The user then slides or otherwise attaches cover plate 210 into or onto backplate 250. Fig. 3E shows a backside view of the construction of Fig. 3D and specifically shows cover plate 210 adhered or attached to backplate 250. Fig. 3E also shows the one or more double-sided adhesive strips 260 adhered or attaches to backplate 250. Adhesive strips 260 mount, adhere, or attach cover plate 210 (and ultimately

mounting assembly 200) to a wall or vertical surface. Adhesive strips 260 can be any desired adhesive strip product or formulation, as is described in greater detail herein.

[0028] Lastly, as shown in Fig. 3F, the user removes the liner from adhesive strips 260 and engages (e.g., pushes) the entire mounting assembly with (onto or adjacent to) the vertical surface or wall. Adhesive strips 260 adhere to the wall with sufficient strength to permit the entire mounting assembly to be mounted on or to the wall or vertical surface.

[0029] When the cover plate 210 and back plate 250 assembly are attached to a wall with adhesive strips 260, cover plate 210 can no longer rotate at the hook 240 relative to the frame and thus effectively locks frame 220 and cover plate 210 together.

[0030] In this manner, the pieces of the mounting assembly can be attached, removed, and/or reattached to each other and to a wall.

[0031] A summary of the steps involved in removing the mounting assembly from the wall is as follows. First, the user holds onto either the accessory or the bottom or side members of the frame and slides the cover plate off of the backplate. Next, the user removes the backplate from the wall by following the directions of the specific type of adhesive strips that were used to adhere or attach the backplate to the wall. Viola – the removal process is complete!

[0032] One of the benefits of the mounting assemblies of the present disclosure is that they can be removed more quickly, easily, and more intuitively than alternative mounting assemblies. In some embodiments, the mounting assemblies of the present disclosure can be removed in fewer steps.

Specifically, the accessory and cover plate can simultaneously (as a single unit) be removed (slid from) the backplate. This eliminates the step of removing the accessory from the cover plate.

[0033] Further, many users tend to grab onto the accessory and pull upwards when quickly removing the mounting assembly. In other constructions, this natural, intuitive action will result in disengagement of the accessory from the cover plate. At best, this results in a two-step process to remove the accessory and cover plate from the backplate attached to the wall. At worst, this can break the attachment mechanism or the portion of the accessory attached to the attachment mechanism, thereby destroying the re-usability of the apparatus. The mounting assemblies of the present disclosure, in contrast, will always slide off the backplate when the user pushes upwardly on the installed accessory. The mounting assemblies of the present disclosure will never disengage at the attachment point between the cover plate and accessory. Instead, they will always disengage at the attachment point between the cover plate and the backplate.

[0034] As stated above, the accessory used in the mounting assemblies of the type generally described herein can vary. Figs. 4-6 show varying exemplary alternative accessories that can be used with or in a mounting assembly of the type described herein.

[0035] In general, the cover plates and accessories of the mounting assemblies of the present disclosure are attachable to each other in a removable manner. In the present disclosure, the term “removably

attachable” means that the accessory and the cover plate can be attached to each other, can be separated from each other, and can be reattached to each other (e.g., multiple times).

5 [0036] In some embodiments, the cover plate and accessory are attachable to each other in a deflectable manner. In the present disclosure, the term “deflectably attachable” means that cover plate and accessory, when attached (e.g., connected) to each other, can be deflected (e.g., moved) relative to each other at least a small amount, without becoming detached from each other. In some embodiments, with the entire mounting assembly attached to a wall, it is possible to move at least a portion of the accessory at least a small amount, relative to the wall, while maintaining the attachment between the cover plate and the accessory.

10 [0037] Like reference symbols in the various figures indicate like elements. Unless otherwise indicated, all figures and drawings in this document are not to scale and are chosen for the purpose of illustrating different embodiments of the inventions. In particular, the dimensions of the various components are depicted in illustrative terms only, and no relationship between the dimensions of the various components should be inferred from the drawings, unless so indicated.

15 [0038] Although terms such as “top”, “bottom”, “upper”, “lower”, “under”, “over”, “front”, “back”, “outward”, “inward”, “up” and “down”, and “first” and “second” may be used in this disclosure, it should be understood that those terms are used in their relative sense only unless otherwise noted.

20 [0039] The term “wall” as used herein is not limited to items that are substantially vertical and/or that comprise, e.g., walls of buildings. Thus, the term “wall” as used herein encompasses such items as ceilings, shelves, and the like.

25 [0040] Those having skill in the art will appreciate that many changes may be made to the details of the above-described embodiments and implementations without departing from the underlying principles thereof. Further, various modifications and alterations of the present disclosure will become apparent to those skilled in the art without departing from the spirit and scope of the disclosure. The scope of the present disclosure should, therefore, be determined only by the following claims.

What is claimed is:

1. A mounting assembly, comprising:

a cover plate having a front surface and a rear surface;

5 the front surface of the cover plate including an attachment device capable of attaching an accessory to the cover plate;

the rear surface of the cover plate capable of being slid into (or otherwise attached to) a backplate;

10 a frame having a bottom member and a top member that are both closely adjacent to at least a portion of the cover plate such that the bottom and top members cooperatively limit or prohibit lateral motion of the cover plate relative to the frame when the cover plate is in the frame and attached or adhered to wall; and

adhesive strips capable of adhering the backplate to the wall.

15 2. The mounting assembly of claim 1, wherein the accessory is at least one of a utensil, a decoration, a tool, and/or another device or article.

3. The mounting assembly of any of the preceding claims, wherein the frame includes opposed side members.

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4. The mounting assembly of any of the preceding claims, wherein the frame includes opposed first and second side members.

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5. The mounting assembly of claim 4, wherein the opposed top and bottom members each connect with and are generally perpendicular to each of the opposed side members.

6. The mounting assembly of any of the preceding claims, wherein the attachment device is a hook.

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7. The mounting assembly of any of the preceding claims, wherein the accessory snaps into the attachment device.

8. The mounting assembly of any of the preceding claims, wherein the adhesive strips are double-sided adhesive strips.

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9. The mounting assembly of any of the preceding claims, wherein the adhesive strips are stretch-release adhesive strips.

10. The mounting device of claim 9, wherein the adhesive strips include a tab.

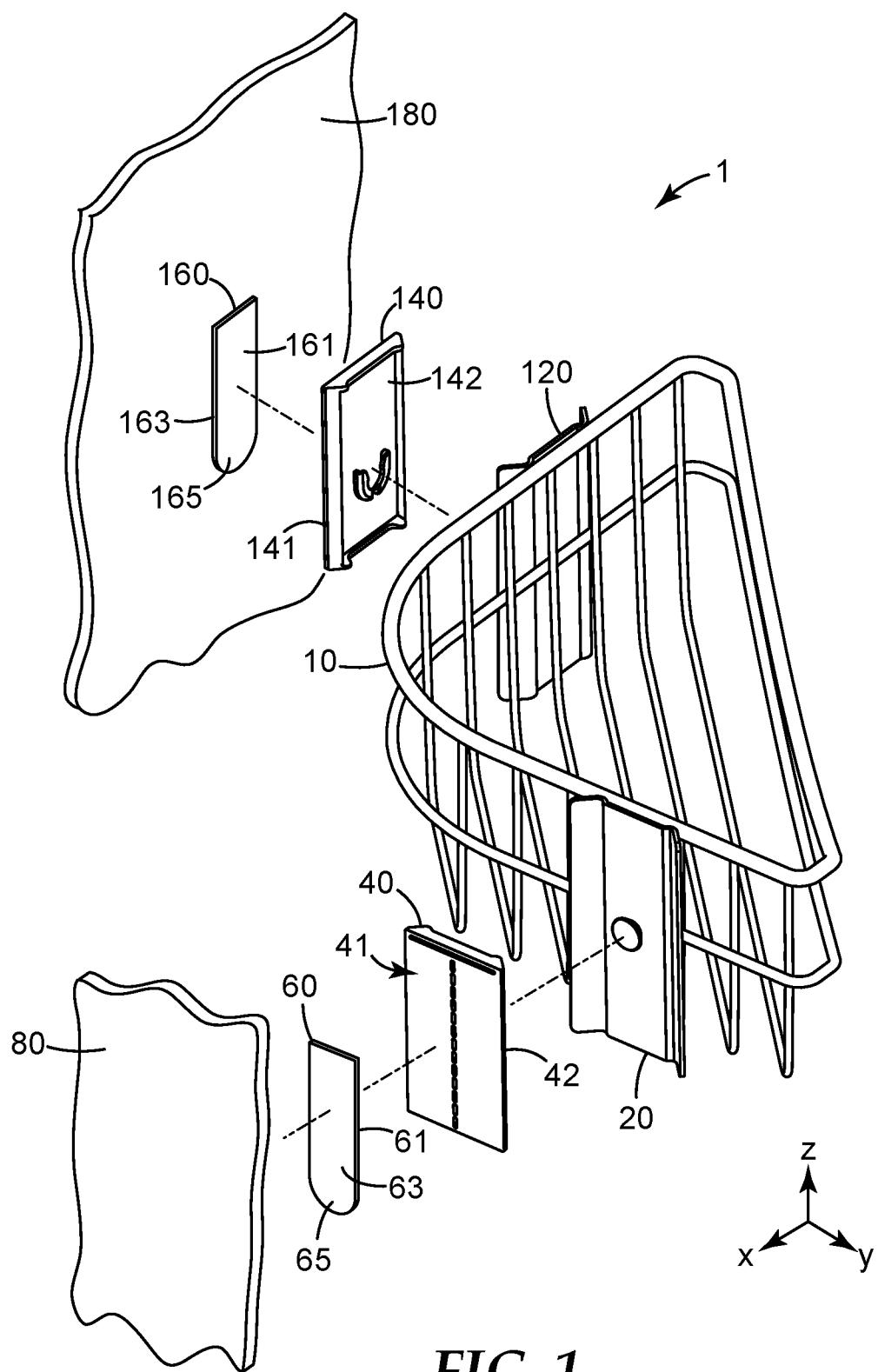


FIG. 1
prior art

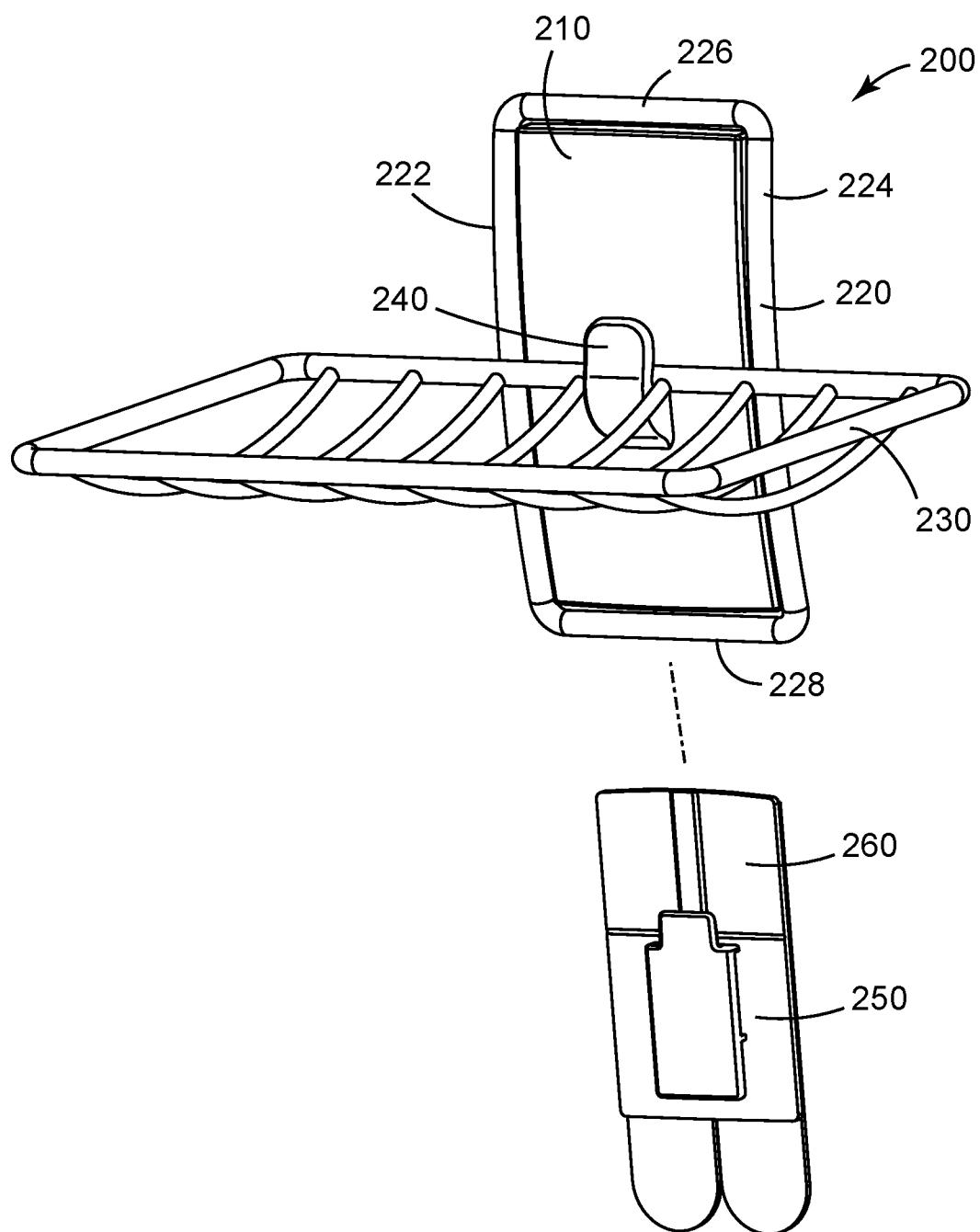


FIG. 2

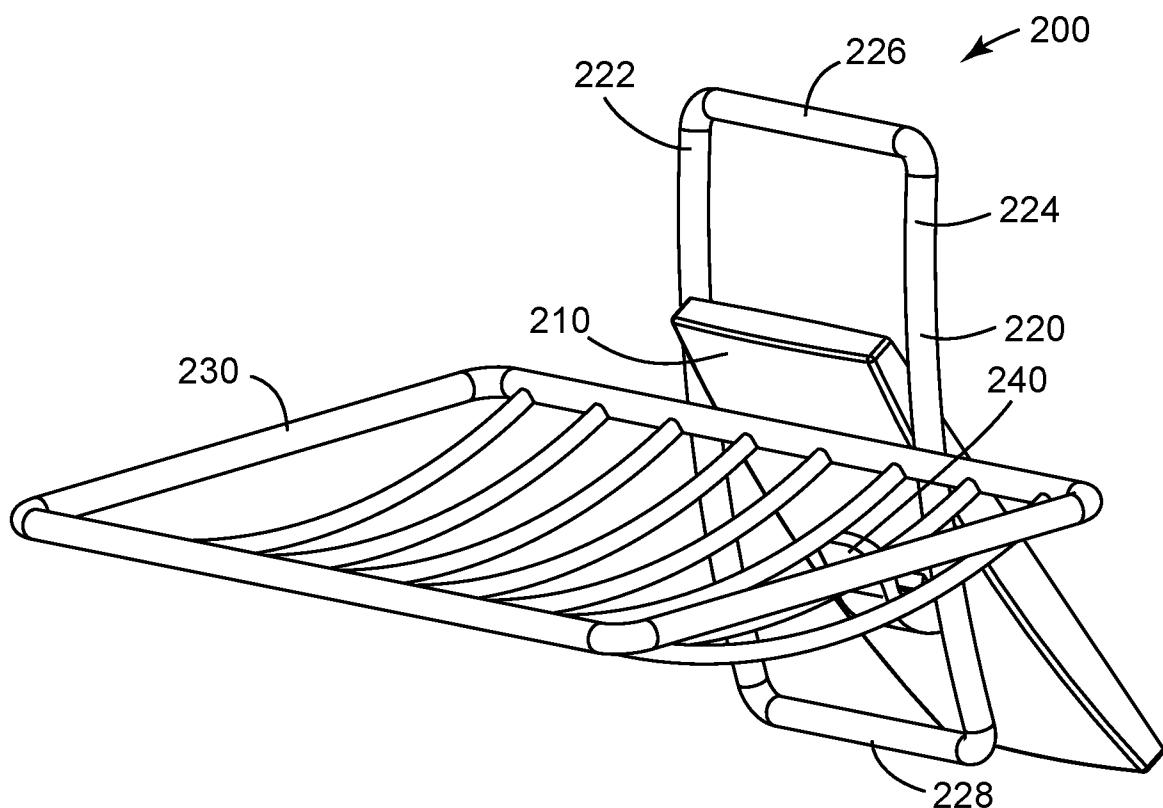


FIG. 3A

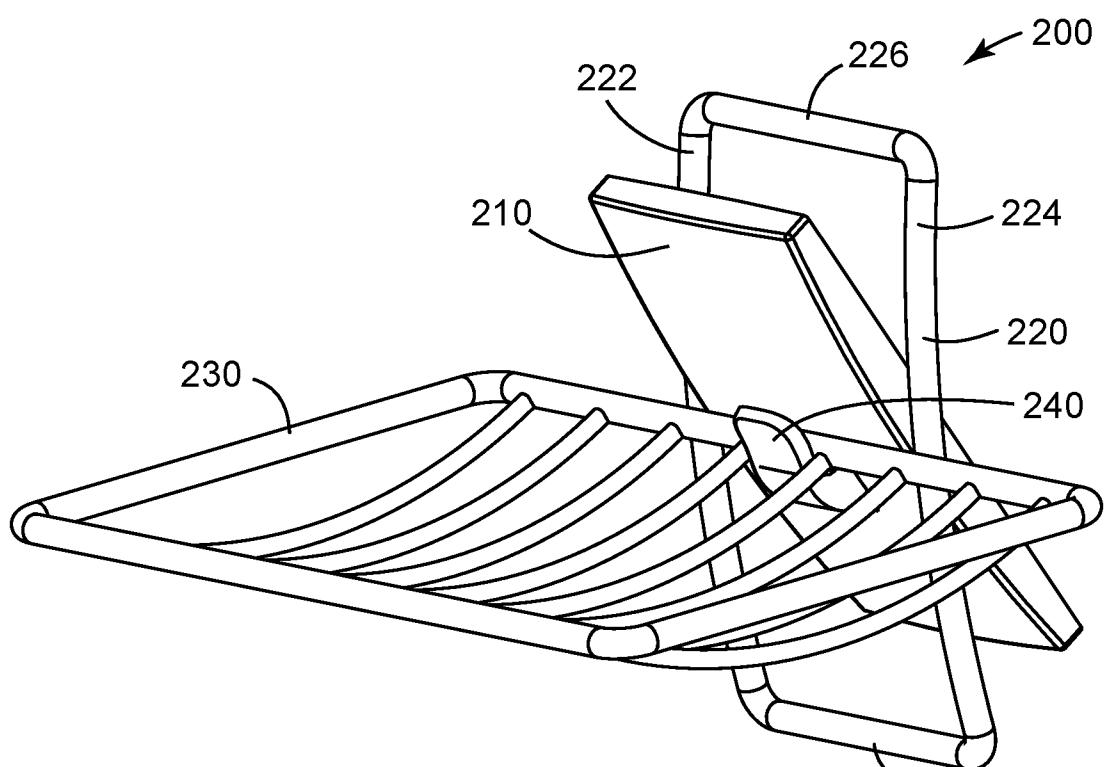
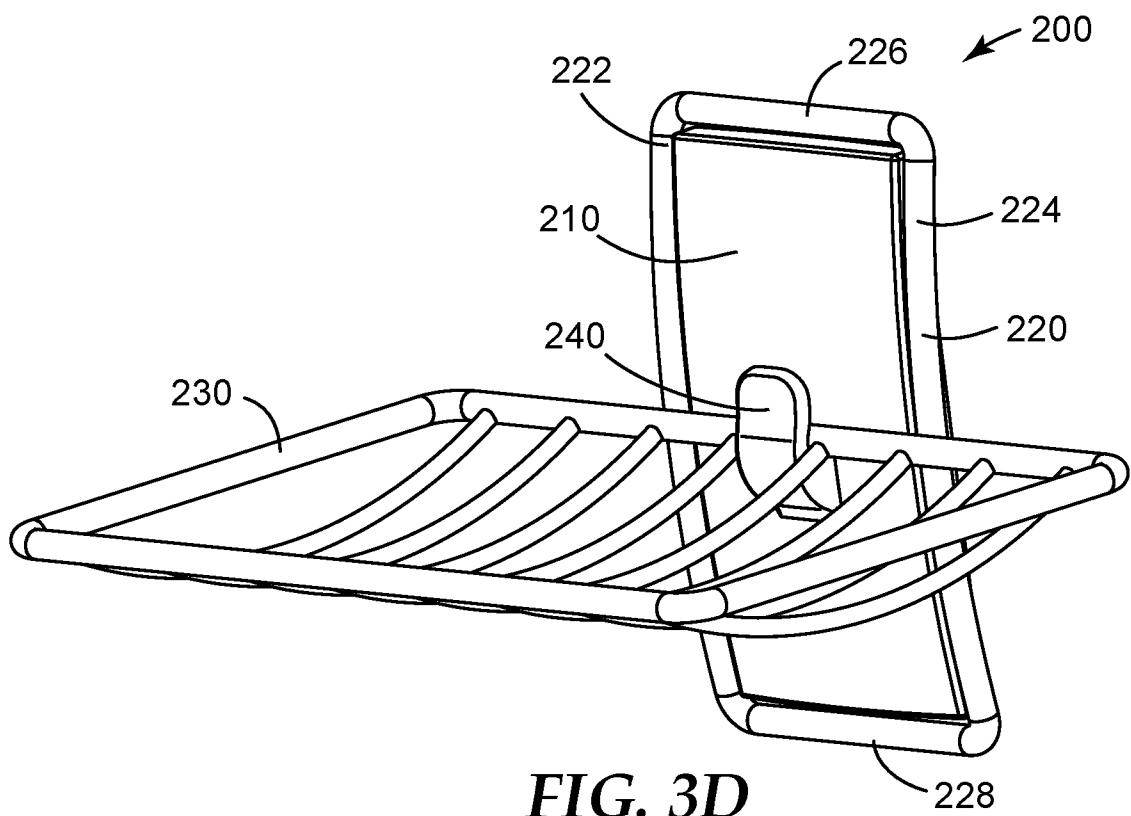
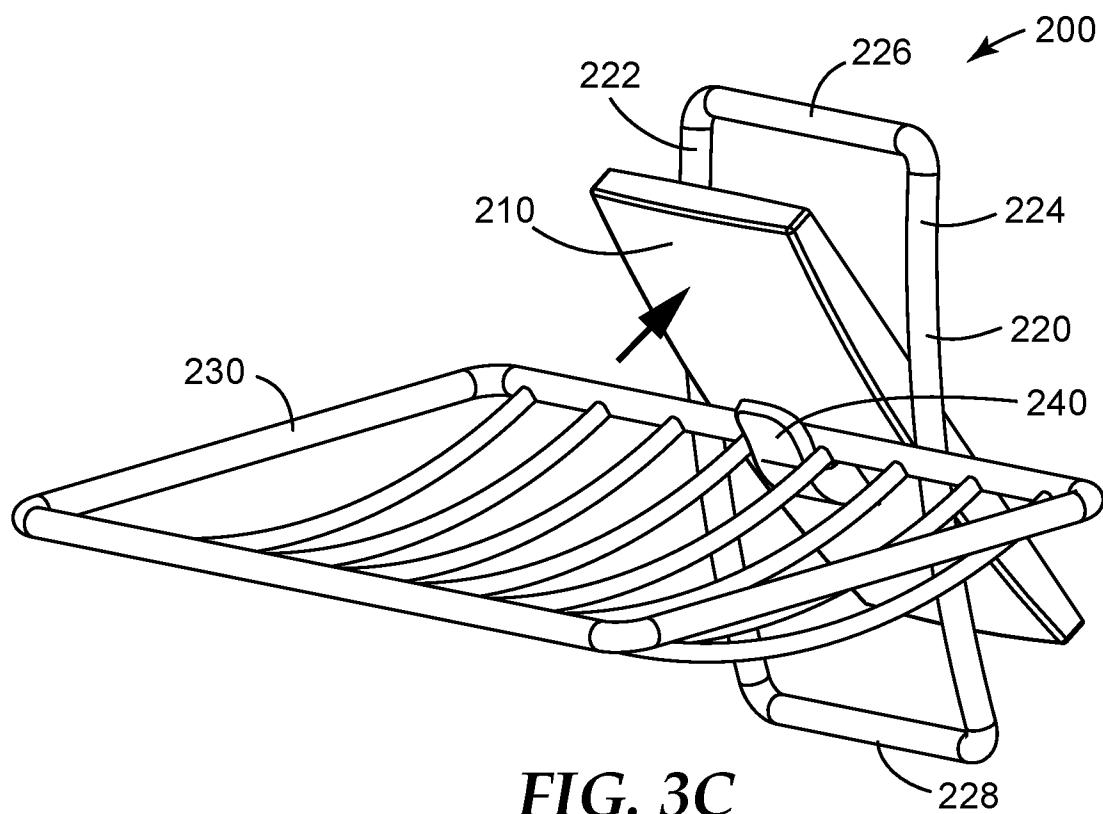
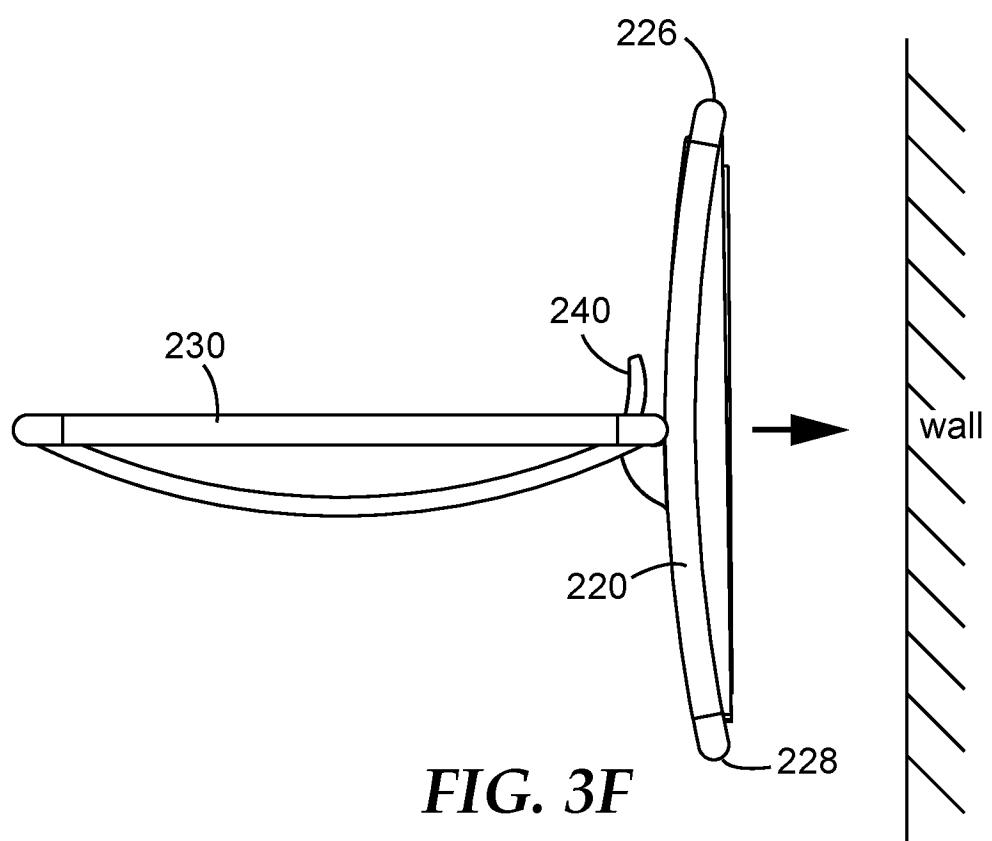
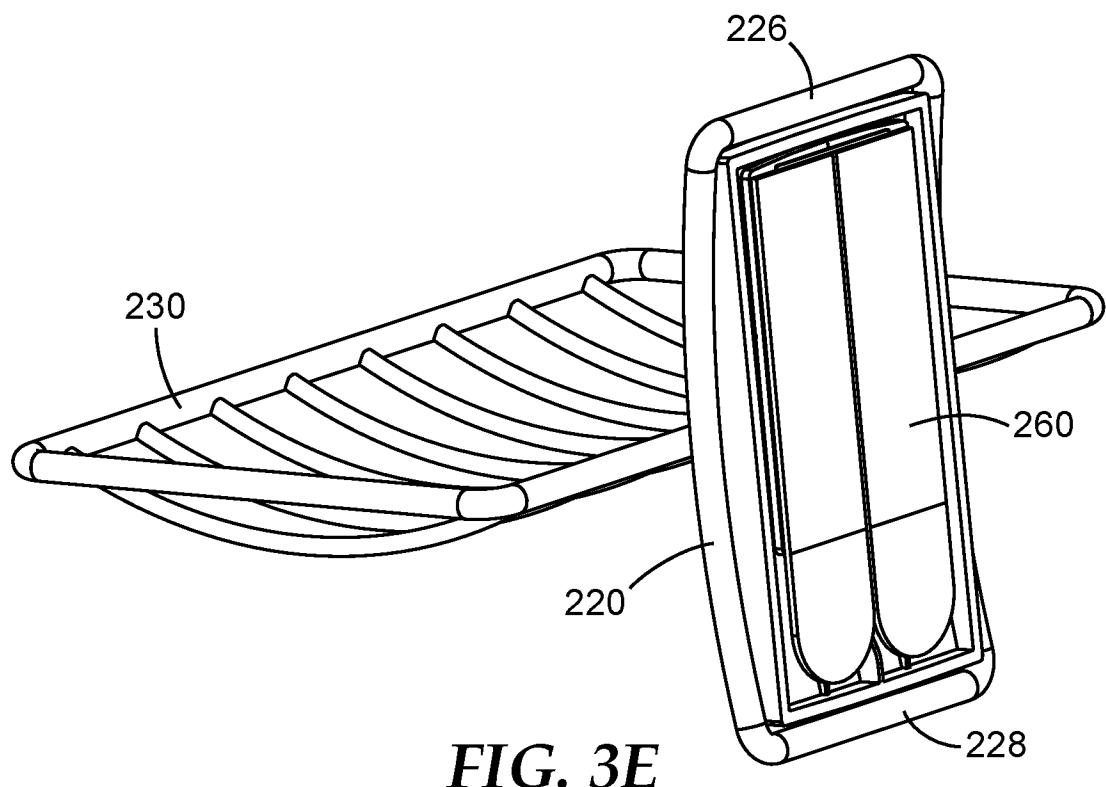


FIG. 3B





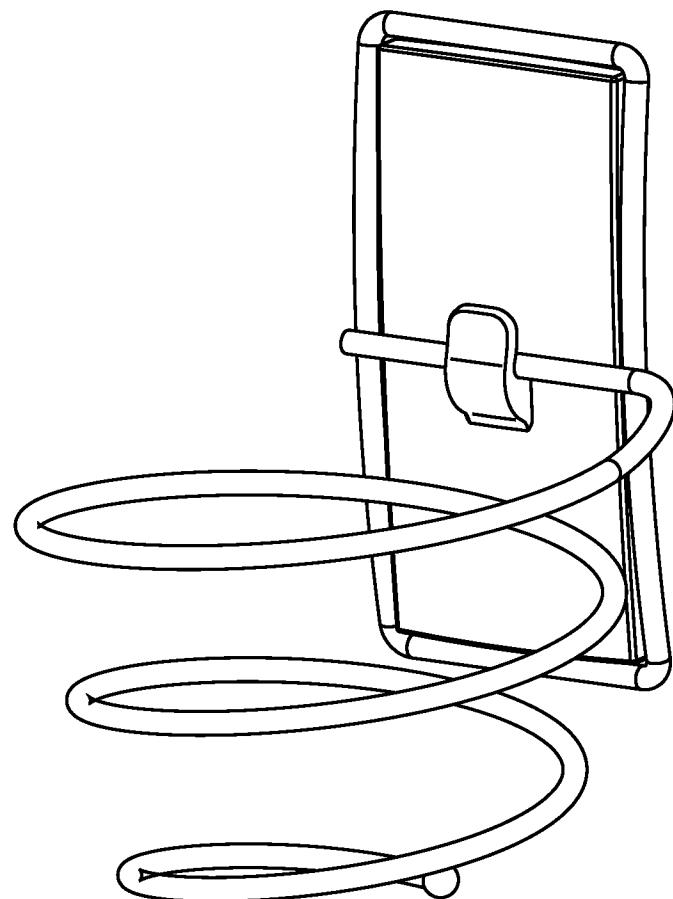


FIG. 4

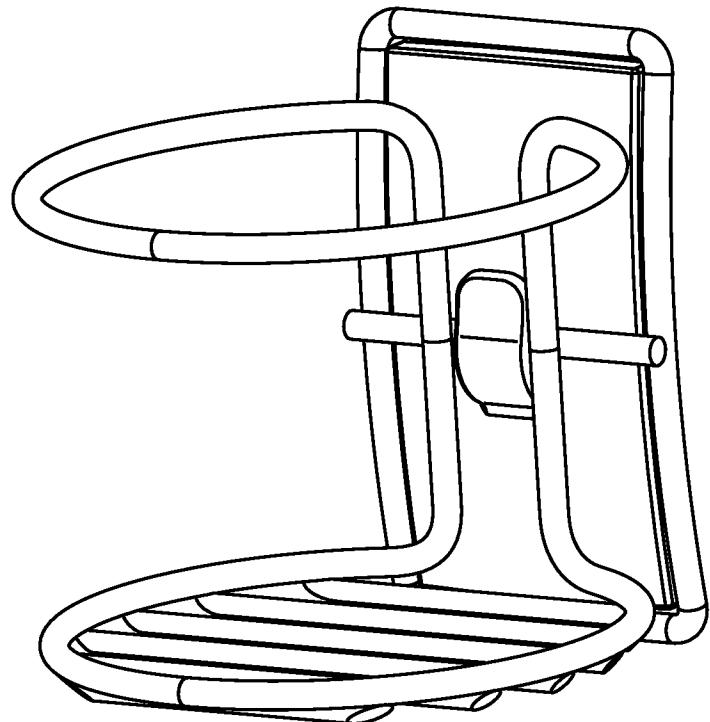


FIG. 5

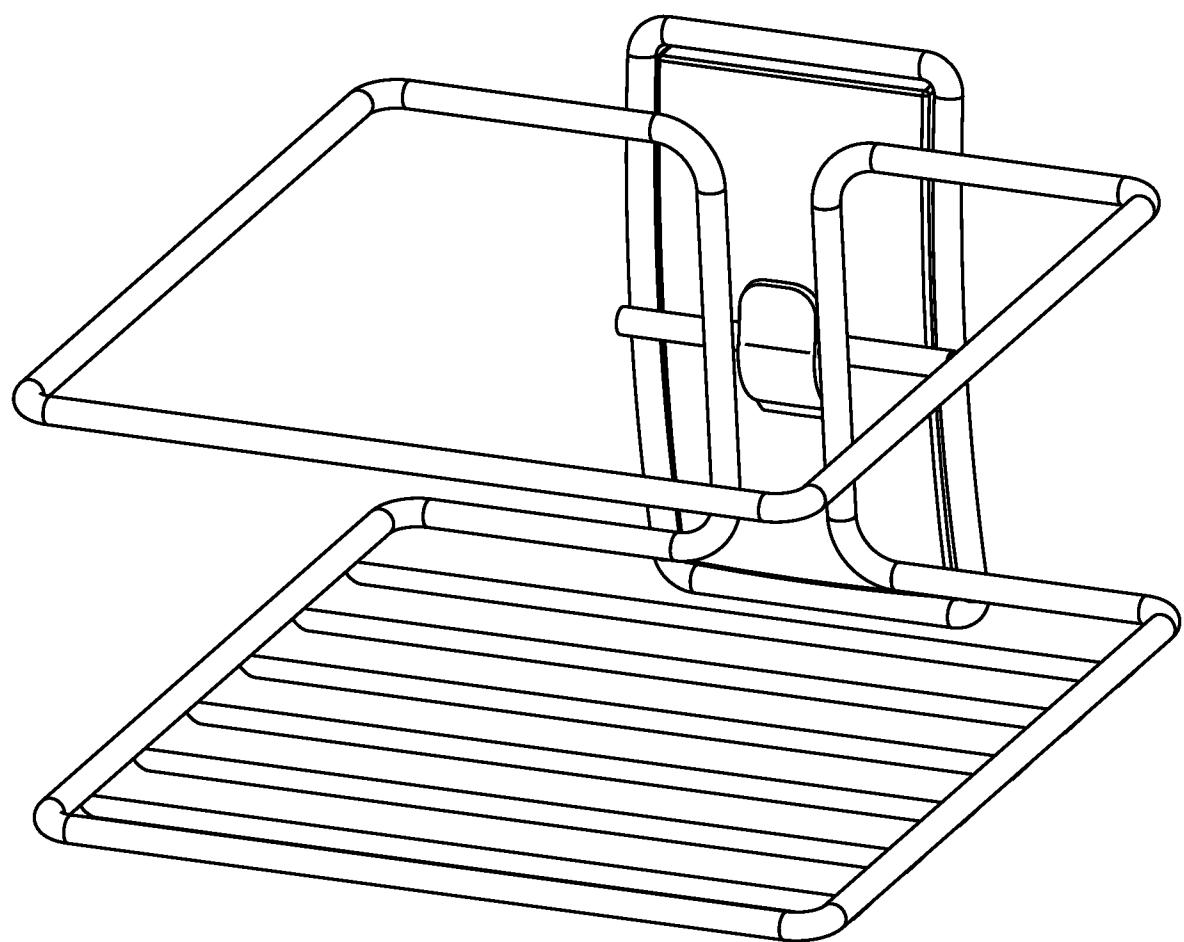


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2016/036126

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47K 10/12; A47F 5/08; A47G 1/16; A47G 1/17; A47G 29/08; F16B 45/00; F16B 47/00 (2016.01)

CPC - A47K 2201/02; A47G 1/17; A47G 1/175; A47K 3/281; F16B 45/00; F16B 47/003 (2016.08)

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 - A47F 5/08; A47G 1/16; A47G 1/17; A47G 29/08; A47K 10/12; F16B 45/00; F16B 47/00

CPC - A47G 1/17; A47G 1/175; A47K 3/281; A47K 2201/02; F16B 45/00; F16B 47/003

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

USPC - 29/428; 211/85.31; 248/205.3, 221.11, 304, 307, 467, 683; 428/343 (keyword delimited)

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

Orbit, Google Patents, Google Scholar, Google

Search terms used: mounting, assembly, back, cover, plate, front, surface, rear, attachment, device, member, hook, top, bottom, side, adhesive, strips, wall, frame, wire, grid, tool, accessory, utensil, decoration, limit, prohibit, motion, movement, lateral, adjacent, slide

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,131,773 A (WADE et al) 17 October 2000 (17.10.2000) entire document	1-3
Y	US 5,507,464 A (HAMERSKI et al) 16 April 1996 (16.04.1996) entire document	1-3
A	US 7,665,707 B2 (MORRISON) 23 February 2010 (23.02.2010) entire document	1-3
A	US 2007/0257165 A1 (NEWBOULD et al) 08 November 2007 (08.11.2007) entire document	1-3
A	US 2009/0242712 A1 (THOMPSON) 01 October 2009 (01.10.2009) entire document	1-3

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

“A”	document defining the general state of the art which is not considered to be of particular relevance	“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
“E”	earlier application or patent but published on or after the international filing date	“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
“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)	“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
“O”	document referring to an oral disclosure, use, exhibition or other means	“&”	document member of the same patent family
“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 August 2016

Date of mailing of the international search report

30 AUG 2016

Name and mailing address of the ISA/

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Authorized officer

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2016/036126

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.: 4-10 because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.