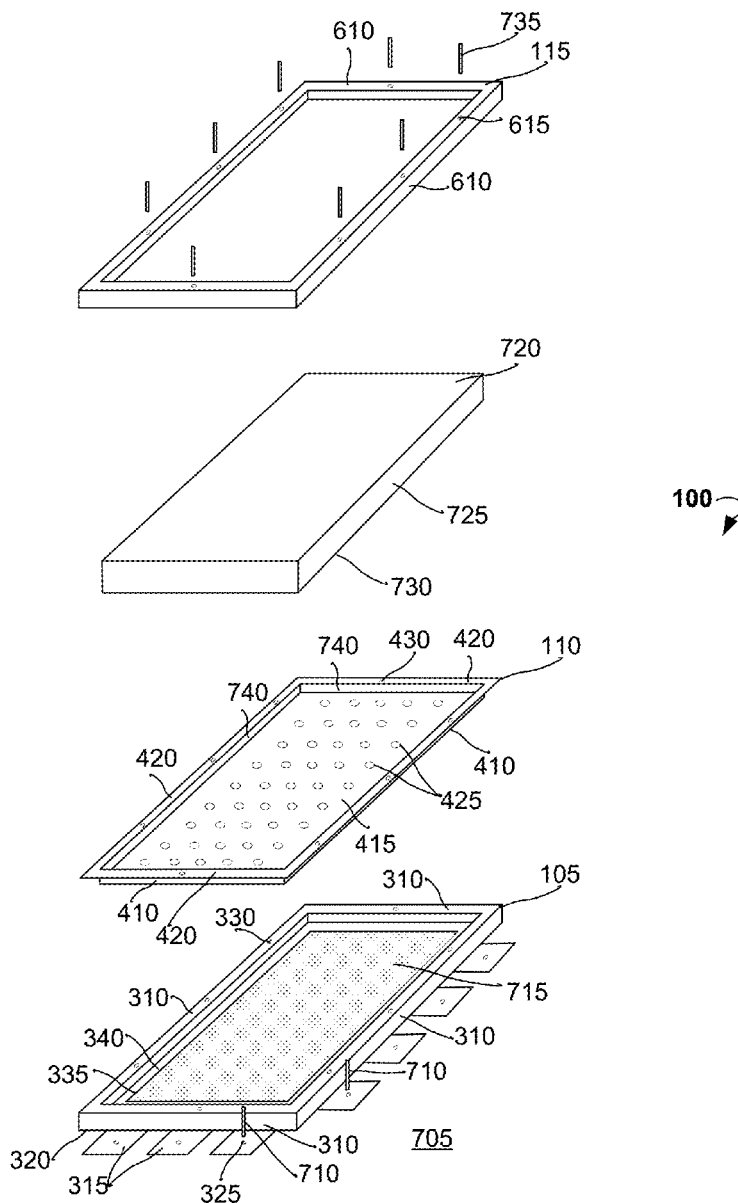




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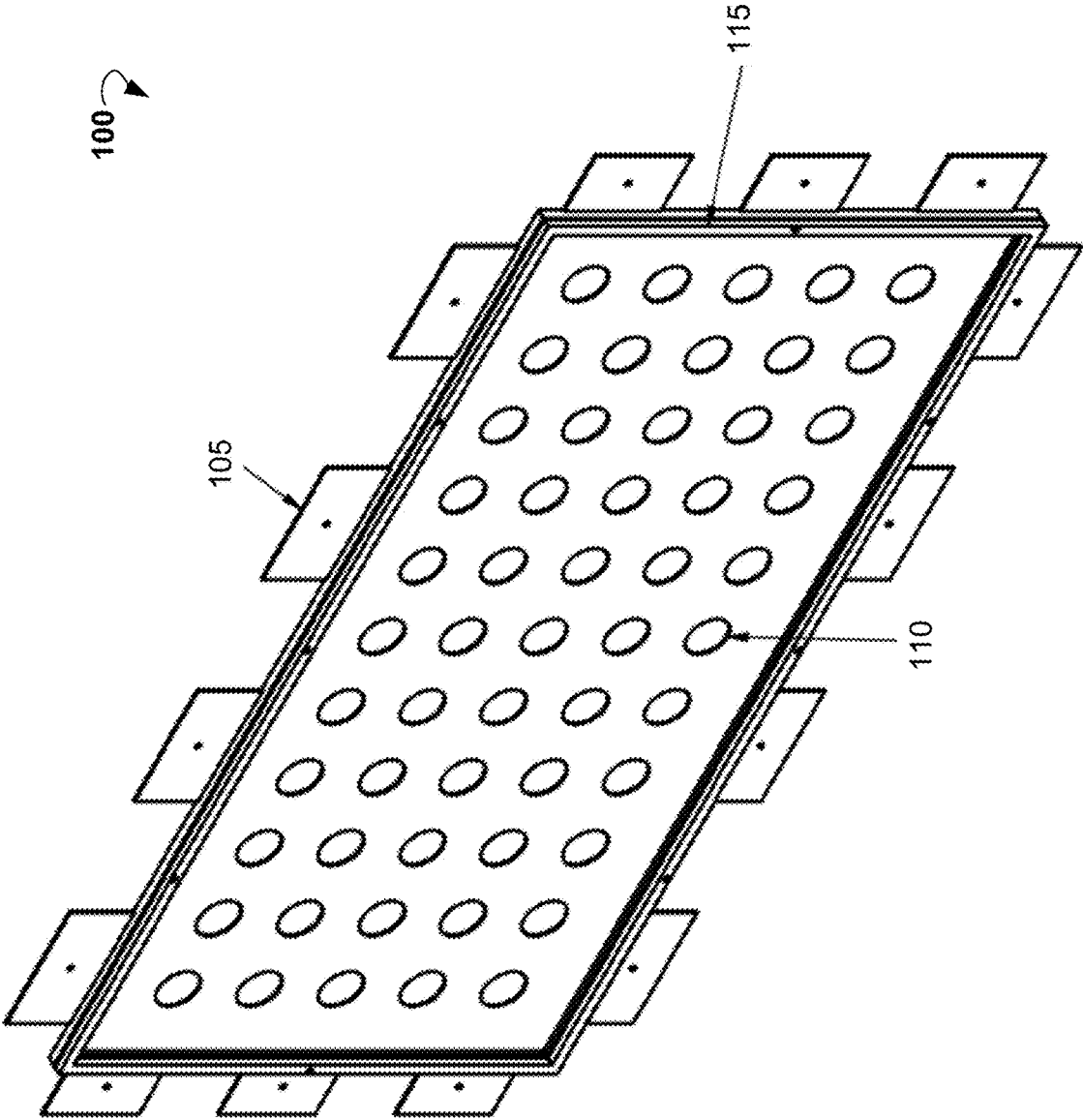
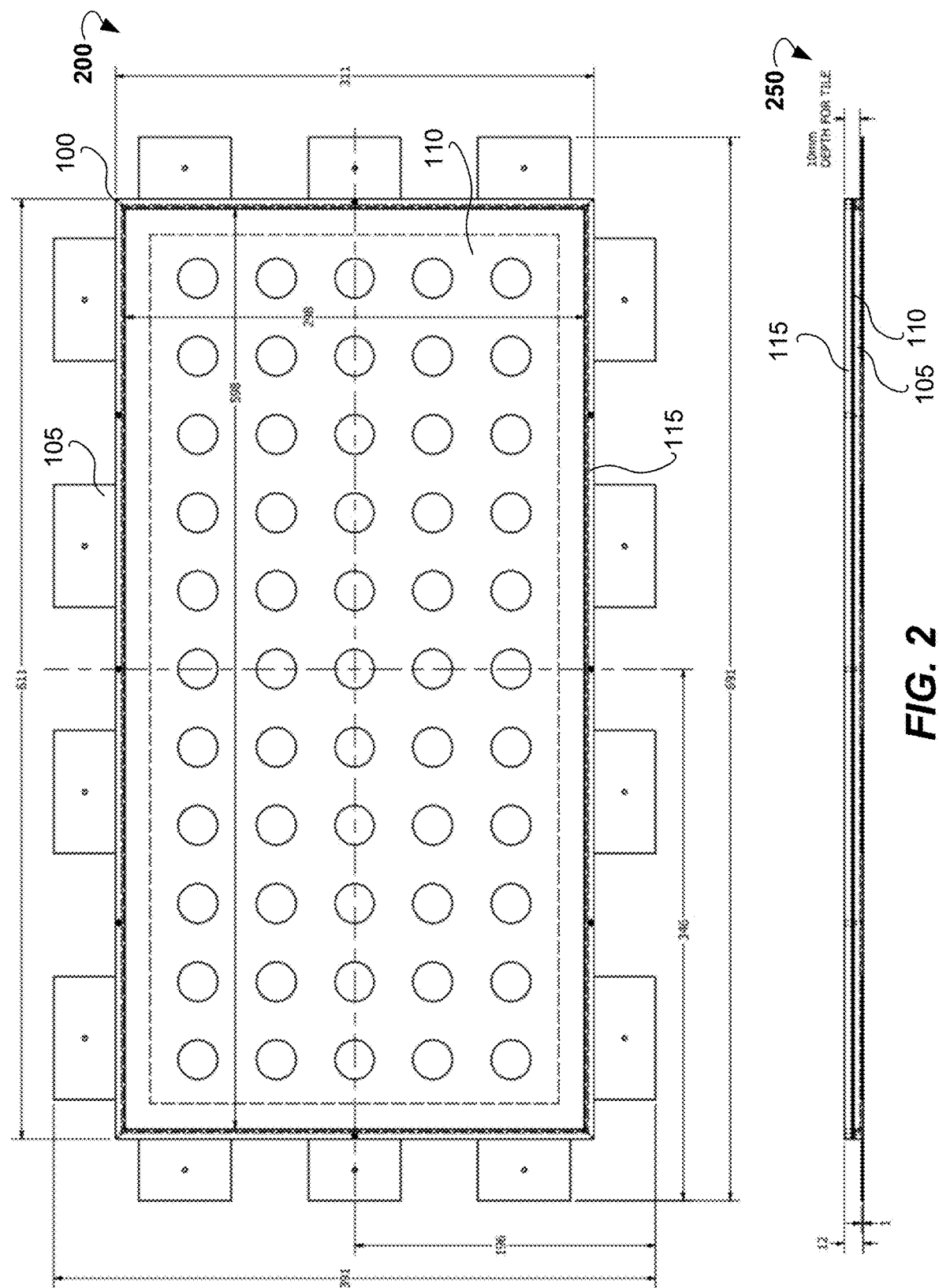


FIG. 1



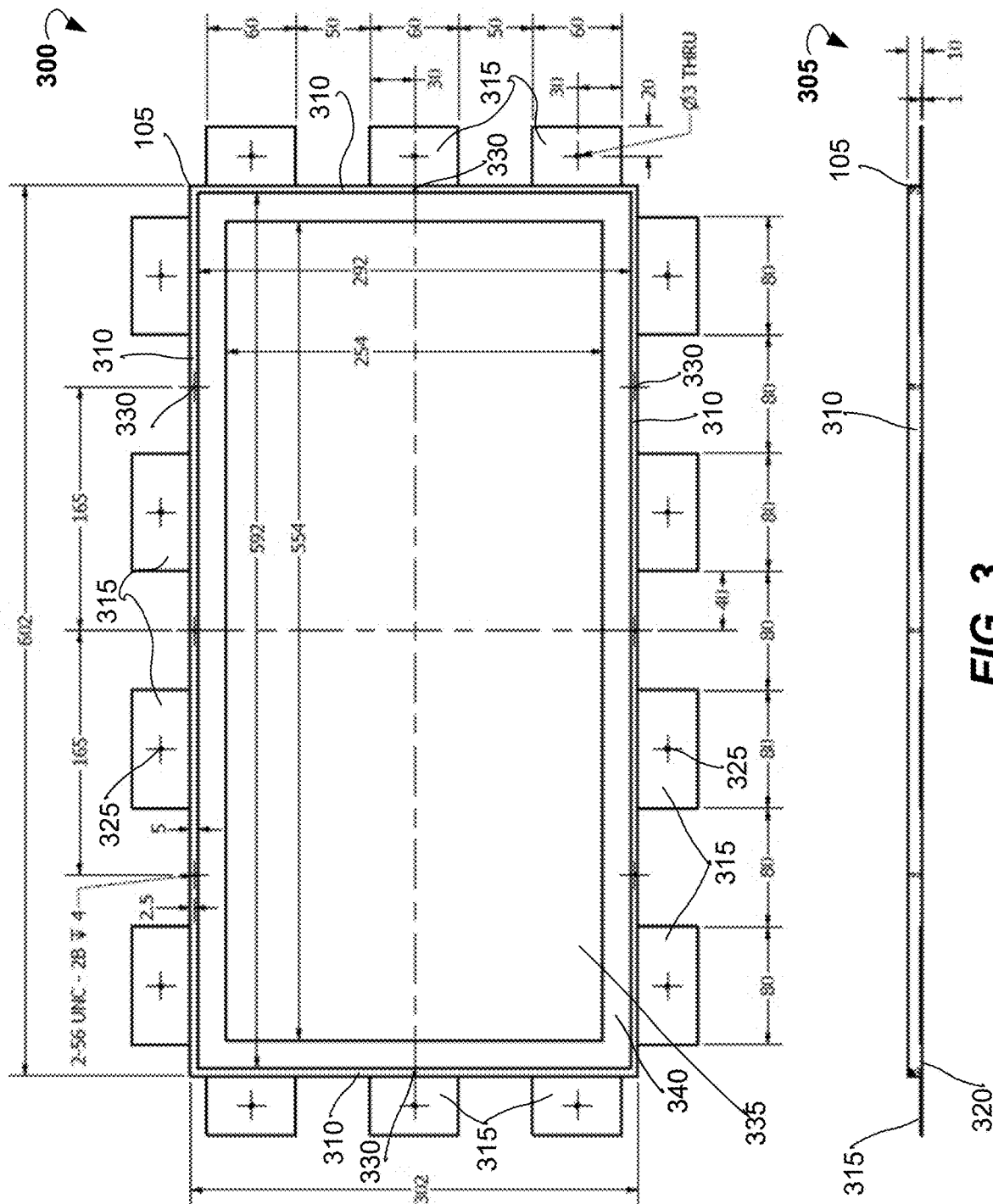


FIG. 3

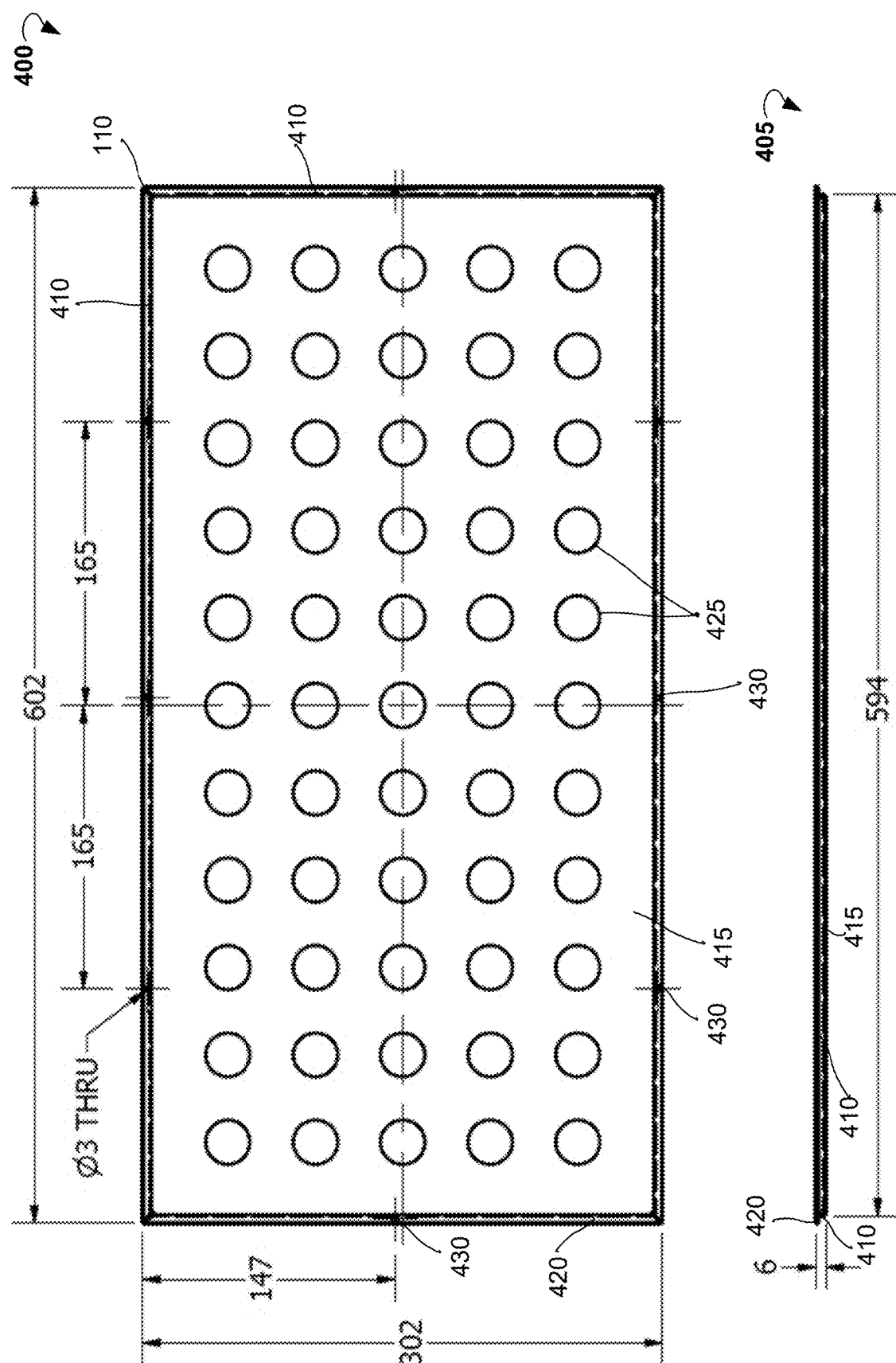


FIG. 4

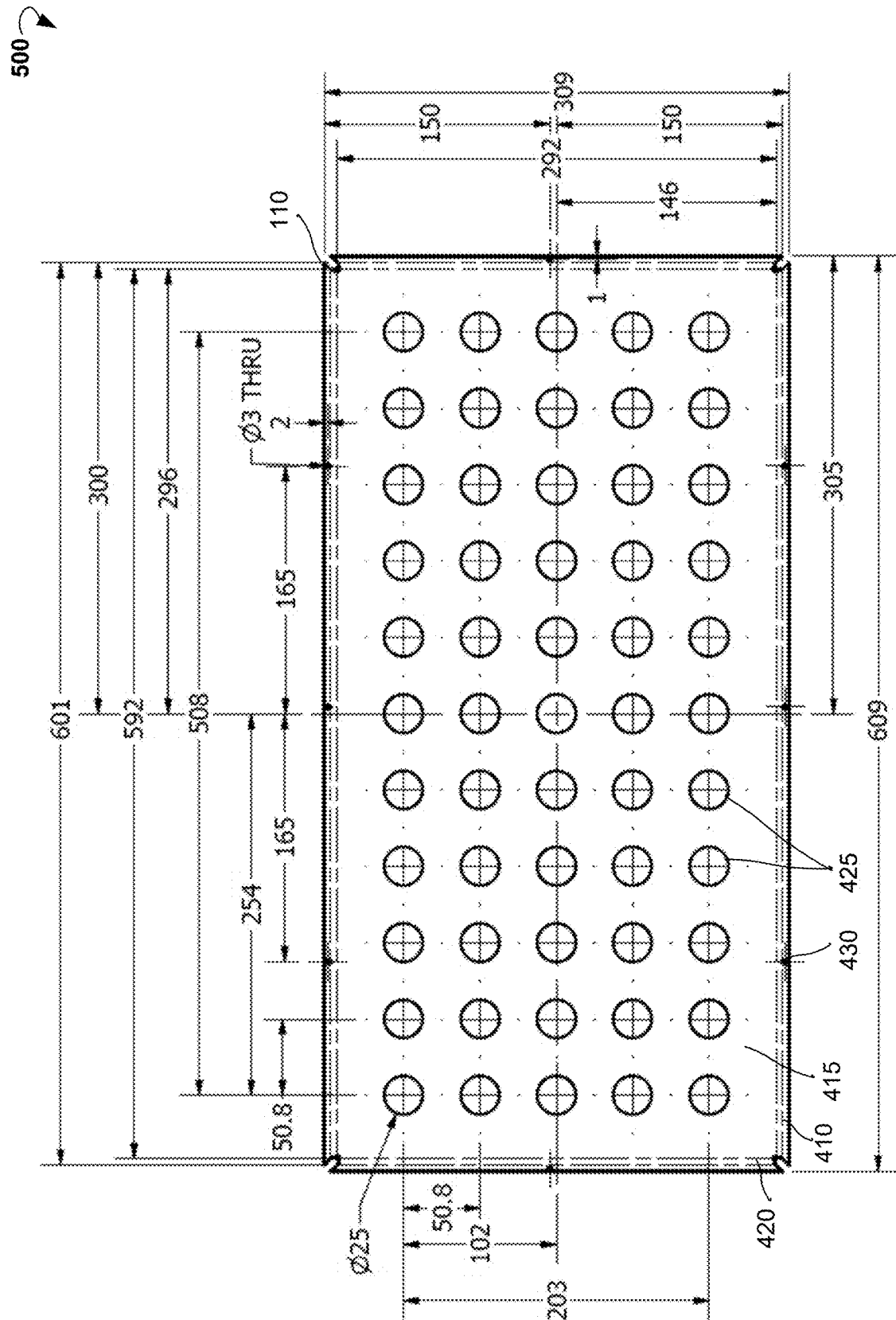


FIG. 5

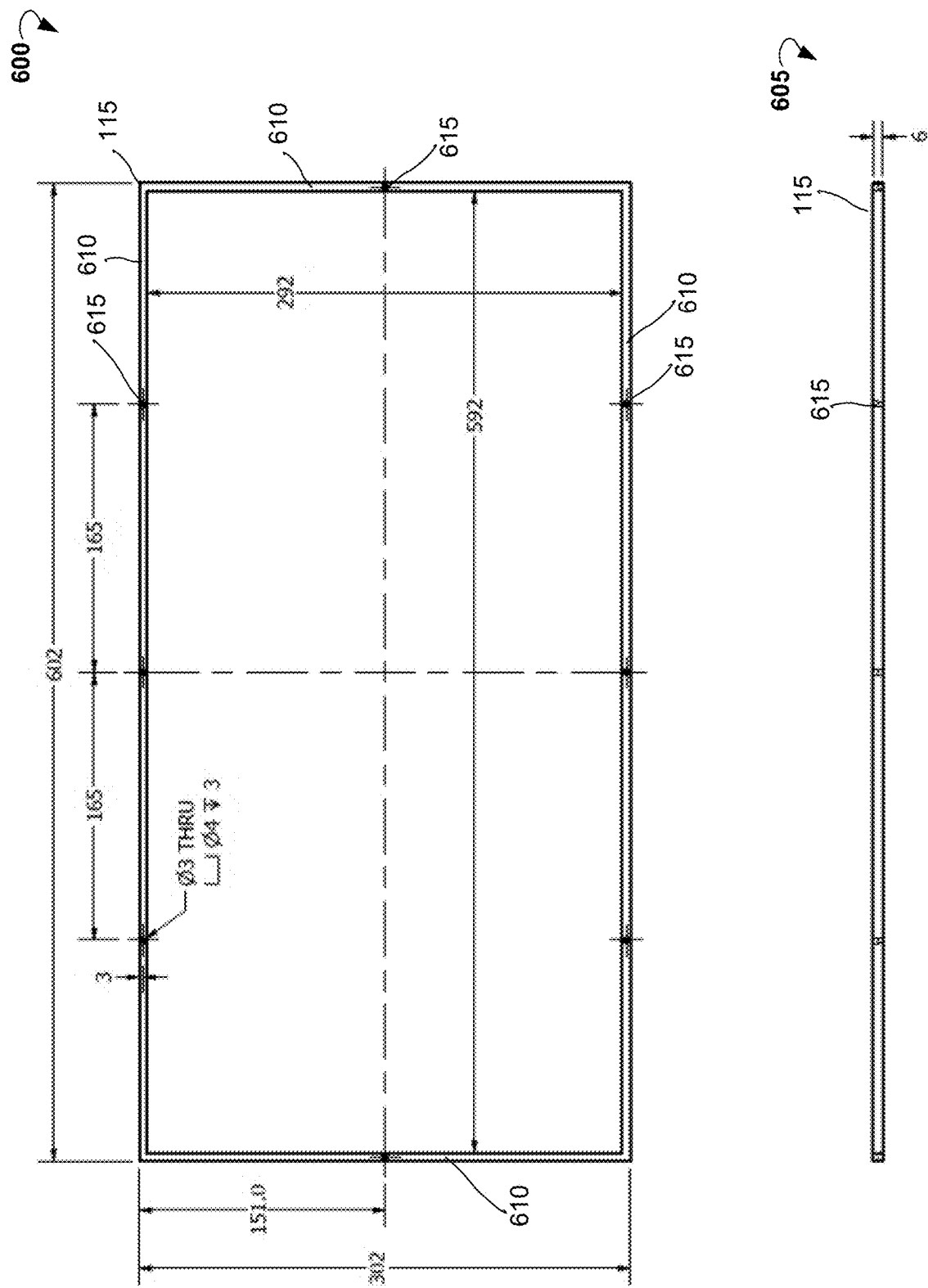


FIG. 6

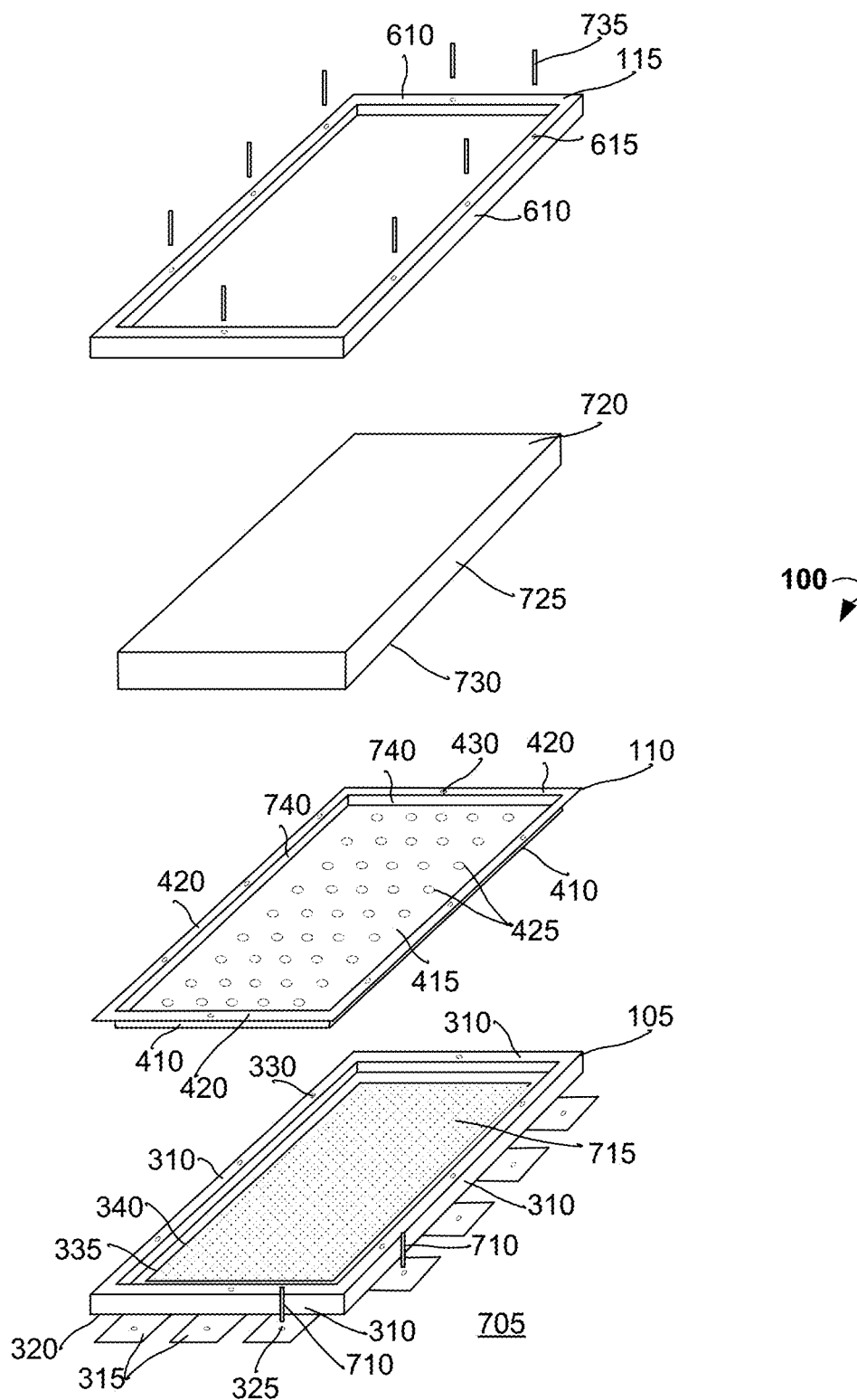


FIG. 7

TILE HOLDING SYSTEM

TECHNICAL FIELD

[0001] This disclosure generally relates to the construction and decoration fields. More particularly, this disclosure relates to tile holding systems.

BACKGROUND

[0002] During construction of buildings and decoration of interior spaces, floors and walls of the buildings may need to be covered with tiles. One of example systems for affixing tiles to walls includes a mechanical rainscreen system with rails installed vertically and tiles fixed to the rails. The tiles may be fixed to the wall with a certain amount of space between the tiles and the wall. This may keep the sun and elements of the mechanical rainscreen system away from the wall behind it to let air and water pass through. Traditional solutions for fixing tiles to floors include spreading a layer of a thin-set mortar on the floor and placing the tiles onto the thin-set mortar. After the thin-set mortar solidifies, the tiles remain fixed to the floor.

[0003] In the traditional systems, all tiles are permanently fixed. Removing such tiles can be a difficult and time-consuming project requiring prying up tiles with a pry bar, pole scraper, hammer, and chisel.

SUMMARY

[0004] This section introduces a selection of concepts in a simplified form that are further described in the Detailed Description section, below. This summary does not identify key or essential features of the claimed subject matter and is not intended to be an aid in determining the scope of the claimed subject matter.

[0005] According to one approach of the present disclosure, a tile holding system is provided. The tile holding system may include a tray base, a tray, and a cover. The tray base may include four side sections connected to form a rectangular shape. The tray base may further include a plurality of flanges connected to one or more of the four side sections. The tray may include four side pieces connected to form the rectangular shape. The tray may further include a collar connected to the four side pieces. The collar may be configured to enclose a tile. The tray may further include a support plate enclosed by the collar. The tray may be configured for placing on the tray base. The cover may have four side components connected to form the rectangular shape. The cover may be configured to cover the tray base and the tray. The tray base, the tray, and the cover may be installed on a horizontal surface.

[0006] According to another approach of the present disclosure, a vertical tile holding system is provided. The vertical tile holding system may include a tray base, a tray, and a cover. The tray base may include four side sections connected to form a rectangular shape. The tray base may further include a plurality of flanges connected to one or more of the four side sections. The tray may include four side pieces connected to form the rectangular shape. The tray may further include a collar connected to the four side pieces. The collar can be configured to enclose a tile. The tray may further include a support plate enclosed by the collar. The tray may be placed on the tray base. The cover may include four side components joined to form the rectangular shape. The cover may be configured to cover the

tray base and the tray. The tray base, the tray, and the cover may be installed on a vertical surface.

[0007] Other example embodiments of the disclosure and aspects will become apparent from the following description taken in conjunction with the following drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Embodiments are illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements.

[0009] FIG. 1 shows a front perspective view of a tile support system, according to an example embodiment.

[0010] FIG. 2 shows a front view and a side view of a tile support system, according to an example embodiment.

[0011] FIG. 3 shows a front view and a side view of a tray base, according to an example embodiment.

[0012] FIG. 4 shows a front view and a side view of a tray, according to an example embodiment.

[0013] FIG. 5 shows a flat layout of a tray, according to an example embodiment.

[0014] FIG. 6 shows a front view and a side view of a cover, according to an example embodiment.

[0015] FIG. 7 shows an extended view of a tile holding system, according to an example embodiment.

DETAILED DESCRIPTION

[0016] The following detailed description of embodiments includes references to the accompanying drawings, which form a part of the detailed description. Approaches described in this section are not prior art to the claims and are not admitted to be prior art by inclusion in this section. The drawings show illustrations in accordance with example embodiments. These example embodiments, which are also referred to herein as “examples,” are described in enough detail to enable those skilled in the art to practice the present subject matter. The embodiments can be combined, other embodiments can be utilized, or structural, logical, and operational changes can be made without departing from the scope of what is claimed. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope is defined by the appended claims and their equivalents.

[0017] According to an example embodiment, a tile holding system is provided. With the tile holding system, a tile can be removably installed on a floor or a wall. After installation, the tile can be removed from the floor or the wall, if needed, and replaced with other tile. The tile holding system can be used for decorative purposes or messages. For example, when a tile with some pattern is installed using a tile holding system, the tile may be easily demounted from the floor or the wall and replaced with another tile having a different pattern. In another example embodiment, a tile may have a message written on it (i.e., some information or advertisement) and can be mounted in public places, such as a café, for example. The tile may be installed using the tile holding system of the present disclosure. Using the disclosed tile holding system, an operator of a public place can change a message by quickly replacing one or more tiles with a new message instead of using a sticker or writing the new message on the tile.

[0018] In one example, embodiment, the tile holding system includes three pieces, specifically, a tray base, a tray for holding a tile, and a cover. The tray base may be a rectan-

gular frame with a rectangular opening in the middle of the frame. The tray base may have flanges extending outwards along the perimeter of the tray base. The tray base may be permanently fixed onto a floor. To affix the tray base, the tray base can be placed onto the floor. The flanges may have openings for inserting fasteners. The fasteners can be used to attach the tray base to the floor. Upon fixing the tray base, a plurality of tiles can be fixed around the tray base, for example, by applying a layer of the thin-set mortar onto the flanges and placing the plurality of tiles onto the thin-set mortar. The thin-set mortar may be adhesive mortar made of cement, sand, and a water retaining agent. The thin-set mortar may fix the plurality of tiles to the tray base. Specifically, the plurality of tiles can be placed onto the layer of the thin-set mortar on the flanges of the tray base along the perimeter of the tray base. After the layer of the thin-set mortar solidifies, the plurality of tiles placed on the flanges prevent the tray base from coming off the floor.

[0019] The tray for holding the tile may have four side pieces connected to form the rectangular shape, a support plate, and a collar enclosing a support plate. The tray may be configured to enclose the tile and hold the tile in place on the tray base. The collar may be of a rectangular shape corresponding to the shape of the tray base. In an example embodiment, the tile may be permanently fixed to the tray. Specifically, the tile may be placed on the support plate such that the collar encloses sides of the tile. In an example embodiment, epoxy, glue, or any other adhesive material can be used to fix the collar of the tray to the sides of the tile.

[0020] Upon fixing the tray base to the floor, the tray with the tile fixed to the collar of the tray can be placed on the tray base. When the tray is placed on the tray base, the four side pieces of the tray may contact the upper surface of the tray base. The support plate with the tile in it can be accommodated in the rectangular opening of the tray base.

[0021] The cover may include a rectangular frame of the same shape as the tray base. The cover may also have a rectangular opening surrounded by the rectangular frame. After disposing the tray with the tile on the tray base, the four side pieces of the tray can be visible around the tile. To hide the four side pieces of the tray, the cover can be placed onto the four side pieces of the tray. Therefore, the purpose of the cover is to hide the tray that otherwise would be visible.

[0022] The cover, tray, and tray base may have mounting openings. When the tray is placed onto the tray base and the cover is placed onto the tray, the mounting openings in the tray base, tray, and cover may be positioned each on top of the other. Fasteners may be inserted into each opening to fix the cover, tray, and tray base to each other.

[0023] When someone wants to replace the tile, the fasteners can be removed. Upon removing the fasteners, the cover may be taken off the tray, and the tray with the tile can be taken off the tray base. The tray with the tile can be then replaced with a further tray of the same size and form and another tile can be fixed to the further tray. The further tray with another tile can be placed on the tray base, the cover can be placed onto the further tray, and fasteners can be used to attach the cover, further tray, and tray base to each other. Thus, the tile can be removably attached to the floor or the wall and replaced when needed using the tile holding system of the present disclosure.

[0024] Referring now to the drawings, FIG. 1 shows a front perspective view of a tile support system 100, accord-

ing to an example embodiment. FIG. 2 shows a front view 200 of the tile support system 100 and a side view 250 of the tile support system 100, according to an example embodiment. The tile support system 100 can include a tray base 105, a tray 110, and a cover 115.

[0025] In an example embodiment, the overall size of each of the tray base 105, the tray 110, and the cover 115 can be 611 mm×311 mm. The inner size of each of the tray base 105, the tray 110, and the cover 115 for accommodating a tile can be 598 mm×298 mm. Therefore, the tile support system 100 can enclose the tile having the size of 598 mm×298 mm. In other example embodiment, any other outer and inner sizes of the tray base 105, the tray 110, and the cover 115 are possible to accommodate tile of any size. For example, the tile holding systems 100 with different sizes can be used for different size tiles (i.e., 18×18 inches, 24×24 inches, 18×36 inches, 24×48 inches, 6×24 inches, and so forth). The size of the tile can usually differ by up to 3% in one direction. The tile holding system 100 can be applied to tiles having differing sizes.

[0026] In an example embodiment, the total depth of the tile holding system 100 can be 12 mm. The tile holding system 100 can be configured to hold the tile having a depth of 10 mm. For example, the depth of the tray base 105 can be 6 mm, the depth of four side pieces of the tray 110 can be 1 mm, and the depth of the cover 115 can be 5 mm.

[0027] FIG. 3 shows a front view 300 and a side view 305 of a tray base 105, according to an example embodiment. The tray base 105 may include four side sections 310 connected to form a rectangular shape. In an example embodiment, each one of the four side sections 310 of the tray base 105 may have a rectangular cross-section.

[0028] The tray base 105 may further have a plurality of flanges 315 connected to one or more of the four side sections 310. The flanges 315 may extend beyond the outer size of the tray base 105 formed by the four side sections 310. In an example embodiment, the flanges 315 may include rectangular plates attached to the four side sections 310. The flanges 315 may be perpendicular to the one or more of the four side sections 315. The flanges 315 may be attached to the bottom edge 320 of the four side sections 310 of the tray base 105.

[0029] The flanges 315 may be located on the same surface, e.g., a horizontal surface if the tile support system 100 is used as a horizontal tile support system for holding a tile on the floor, or a vertical surface if the tile support system 100 is used as a vertical tile support system for holding a tile on the wall. One or more of the plurality of flanges 315 may have at least one opening 325 for inserting a fastener (not shown). The fastener can be used to attach the tray base 105 to the floor.

[0030] In an example embodiment, the tray base 105 can be attached to the floor as follows. First, the tray base 105 may be placed onto the floor. Fasteners (such as screws, nails, and so forth) can be inserted into the openings 325 in the flanges 315 and attached to the floor by screwing or driving into the floor. Thus, the fasteners may hold the tray base 105 securely attached to the floor.

[0031] After the tray base 105 is secured to the floor, a layer of the thin-set mortar (or any other material typically used for fixing tiles to a floor or wall) can be applied to the floor around the tray base 105, specifically, onto the flanges 315 of the tray base 105 and onto the floor around the flanges 315. Further tiles can be placed directly onto the layer of the

thin-set mortar placed on the flanges 315 of the tray base 105 and the floor around the flanges 315. The further tiles may not have any tray holding systems on them. Therefore, the tray holding system 100 shown in FIG. 1 can be placed onto the floor and surrounded by the further tiles attached to the floor in a conventional manner used in construction. The tray holding system 100 enables replacing the tile held by the tray holding system 100 with other tile. For example, the tile held by the tray holding system 100 may have one pattern replaced with another pattern. In some example embodiments, several tray holding systems 100 can be attached to the floor in order to enable replacing several tiles held by the tray holding systems 100.

[0032] In an example embodiment, the one or more of the four side sections 310 of the tray base 105 can have at least one opening 330 for inserting a further fastener (not shown). The openings 330 may be used to secure the tray base 105, the tray 110, and the cover 115 together using fasteners, as described in more detail below with reference to FIG. 6.

[0033] The four side sections 310 may form a rectangular opening 335 between the side sections 310. In an example embodiment, the tray base 105 may further have an inner flange 340 along sides of the side sections 310 that face the rectangular opening 335.

[0034] In the example embodiment shown in FIG. 3, the tray base 105 may have the outer size of 602 mm×302 mm and the inner size of 592 mm×292 mm. The tray base 105 may be used for holding the tray 110 having the size of about 592 mm×292 mm.

[0035] FIG. 4 shows a front view 400 and a side view 405 of a tray 110, according to an example embodiment. FIG. 5 shows a flat layout 500 of the tray 110, according to an example embodiment. The tray 110 may include four side pieces 420 connected to form the rectangular shape, such as a flat rectangular frame. The tray 110 may be configured to enclose a tile (not shown).

[0036] The tray 110 may also have a collar 410 attached to the four side pieces 420. The tray 110 may also have a support plate 415 enclosed by the collar 410. The four side pieces 420 may extend to a predetermined distance perpendicularly with respect to the collar 410 of the tray 110. The support plate 415 may have a plurality of openings 425.

[0037] The tray 110 may be placed on the tray base 105. Specifically, after attaching the tray base 105 to the floor, the tray 110 may be placed onto the tray base 105. To place the tray 110 onto the tray base 105, the four side pieces 420 of the tray 110 may be placed onto the corresponding four side sections 310 of the tray base 105. When the tray 110 is placed on the tray base 105, the support plate 415 of the tray 110 may contact the floor in the rectangular opening 335 between the side sections 310 of the tray base 105. Furthermore, in the embodiment with the tray base 105 having the inner flange 340, the support plate 415 of the tray 110 may rest on the inner flange 340 of the tray base 105.

[0038] Moreover, when the tray 110 is placed on the tray base 105, the plurality of openings 425 in the support plate 415 of the tray 110 can be configured to accommodate sand. Specifically, the sand may be first placed onto the floor in the rectangular opening 335 created by the inner flange 340 of the tray base 105. In some example embodiments, a thin-set mortar with a bond breaker such as a non-porous paper, plastic, wrap, or tar paper can be used instead of sand between the tray 410 and a mortar bed of the floor. The bond breaker breaks the bond but allows the thin-set mortar with

the bond breaker to support the point load of the tile holding system 100. Then, after the tray 110 is placed on the tray base 105, the sand may fill the openings 425 in the support plate 415 of the tray 410. Optionally, the sand may be further placed onto the support plate 415 and evenly distributed along the support plate 415. The sand may be used as a support under the tile to evenly distribute a load applied onto the tile. By distributing the load, the sand support under the tile prevents the tile from cracking.

[0039] When the tray 110 is placed onto the tray base 105, the four side pieces 420 of the tray 110 may contact the four side sections 310 of the tray base 105. When the tray 110 and the tray base 105 are placed on the floor, the four side pieces 420 of the tray 110 and the four side sections 310 of the tray base 105 can be placed horizontally. Furthermore, when the tray 110 and the tray base 105 are placed on the wall, the four side pieces 420 of the tray 110 can be positioned substantially vertically. The collar 410 of the tray 110 may enclose the tile. In an example embodiment, adhesive material (such as a glue or epoxy) may be placed onto surfaces of the collar 410 facing the tile to attach the tile to the collar 410 of the tray 110. The collar 410 may have a depth equal to about half of the depth of the tile. Therefore, about the half of the depth of the tile can be permanently fixed to the collar 410.

[0040] In an example embodiment, before installation into the tray 110, the tile can be cut using a 5-axis head waterjet to have a tapered form with a wider upper surface (which later acts as the floor) and a narrower lower surface (which is hidden). In this embodiment, the collar 410 of the tray 110 may not be vertical, but rather inclined to correspond to the tapered form of the tile. Specifically, the collar 410 can be narrower along a perimeter of the support plate 415 and wider along the perimeter of the four side pieces 420 of the tray 110.

[0041] The tile can be replaceable. To replace the tile, the tray 110 with the tile can be replaced with a further tray having another tile enclosed by the further tray. In an example embodiment, the tray 110 can be configured to release the tile enclosed in the tray 110. In this embodiment, the adhesive material used to attach the tile to the collar 410 of the tray 110 may allow releasing the tile from the collar 410 of the tray 110.

[0042] The four side pieces 420 of the tray 110 may have at least one opening 430 for inserting the fastener (not shown). When the tray 110 is placed on the tray base 105, the openings 430 of the tray 110 are positioned over the openings 330 of the tray base 105. The fasteners, when inserted into the openings 430 and openings 330, attach the tray 110 to the tray base 105.

[0043] In the example embodiment shown in FIGS. 4 and 5, the tray 110 may have the outer size of 602 mm×302 mm (the size of the support plate 415). The size of the collar 410 may be, for example, 594 mm×294 mm. The collar 410 may be configured to hold the tile having the size of about 592 mm×292 mm.

[0044] FIG. 6 shows a front view 600 and a side view 605 of a cover 115, according to an example embodiment. The cover 115 may have four side components 610 connected to form the rectangular shape. The cover 115 may be configured to cover the tray base 105 and the tray 110 shown in FIGS. 3 and 4, respectively. In an example embodiment, the four side components 610 of the cover 115 may have a rectangular cross-section. The one or more of the four side

components 610 of the cover 115 may have at least one opening 615 for inserting the fastener.

[0045] After the tray base 105 is attached to the floor and the tray 110 is placed onto the tray base 105, the cover 115 can be placed onto the tray 110. The cover 115 acts as a mask that snaps on to hide the tray 110 below the cover 115. When the cover 115 covers the tray 110, the at least one opening 615 of the cover 115 can be positioned over the at least one opening 430 of the tray 110 shown in FIG. 4. The fasteners, when inserted into the opening 615 of the cover 115, the openings 430 of the tray 110, and the openings 330 of the tray base 105, attach the cover 105, the tray 110, and the tray base 105 to each other.

[0046] The four side components 610 of the cover 115 may have a width equal to the width of trowel lines between tiles on the floor. Therefore, the cover 115 can camouflage the tile holding system 100 on the floor among other tiles placed adjacent to the tile holding system 100.

[0047] When the tile held by the tray 110 needs to be replaced, the fasteners can be removed from the opening 615 of the cover 115 and the cover 115 can be detached from the tray 110 and the tray base 105. The tray 110 with the tile can be taken out and replaced with a further tray.

[0048] In an example embodiment, the tile holding system 100 with the tray base 105, the tray 110, and the cover 115 can be a horizontal tile holding system configured to be installed on a horizontal surface, such as a floor or a subfloor. In other example embodiments, the tile holding system 100 with the tray base 105, the tray 110, and the cover 115 can include a vertical tile holding system installed on a vertical surface, such as a wall. In some other example embodiments, the tile holding system 100 with the tray base 105, the tray 110, and the cover 115 can include an inclined tile holding system installed on an inclined surface, such as an inclined mount, an inclined floor, an inclined wall, and so forth. The tile held by the tile holding system 100 may be used for illustration, advertising, or messaging and may have a decorative pattern, a picture, a message, an advertisement, a text, and so forth. The tile holding system 100 enables replacing the tile with another tile having some other decorative pattern, picture, message, advertisement, text, and so forth.

[0049] FIG. 7 shows an extended view of a tile holding system 100, according to an example embodiment. The tray base 105 may be attached to floor 705 using a layer of a thin-set mortar applied onto the floor 705 and further using a plurality of fasteners 710 inserted into openings 325 on the flanges 315 of the tray base 105 and screwed or otherwise attached to the floor 705. After attaching the tray base 105 to the floor 705, sand 715 may be placed into a rectangular opening 335 created by the inner flange 340 of the tray base 105.

[0050] A tile 720 can be attached to the tray 110. The tile 720 may include a porcelain tile, a ceramic tile, a stone tile, and so forth. An adhesive material can be applied onto inner sides 740 of the collar 410 of the tray 110 and the tile may be inserted into the collar 410. Therefore, sides 725 of the tile 720 can be attached to the inner sides 740 of the collar 410 of the tray 110 and a bottom surface 730 of the tile rests on the support plate 415 of the tray 110.

[0051] After attaching the tray base 105 to the floor 705, the tray 110 with the tile 720 can be placed onto the tray base 105. Specifically, after the tray 110 is placed onto the tray base 105, the support plate 415 of the tray 110 rests on the

inner flange 340 of the tray base 105 and the sand in the rectangular opening 335 of the tray base 105. The four side pieces 420 of the tray 110 rest on the four side sections 310 of the tray base 105. After the tray 110 with the tile 720 is placed onto the tray base 105, a portion of the sand 715 from the rectangular opening 335 of the tray base 105 may fill the space in the openings 425 of the support plate 415 of the tray 110. Thus, the sand 715 may create a support for the tile 720.

[0052] After disposing the tray 110 with the tile 720 on the tray base 105, the cover 115 may be placed onto the tray 110. When the cover 115 is placed over the tray 110, the four side components 610 of the cover 115 may rest on the four side pieces 420 of the tray 110.

[0053] Fasteners 735 can be used to attach the cover 115, the tray 110, and the tray base 105. The fasteners 735 can be inserted simultaneously into the openings 615 in the four side components 610 of the cover 115, openings 430 in the four side pieces 420 of the tray 110, and openings 330 in the four side sections 310 of the tray base 105.

[0054] In an example embodiment, the fasteners 735, when inserted into the cover 115, may not extend beyond the upper surface of the cover 115. In some embodiments, to release the cover 115 and the tray 110 from the tray base 105, a tool such as an Allen wrench or a screw driver can be used to reach the fasteners 735 through the openings 615, to unscrew fasteners 735 affixed inside the openings 615, 430, and 330.

[0055] In some example embodiment, the total depth of the tile holding system 100 may be 17 mm. The tile holding system 100 may be configured to hold the tile having the depth of 15 mm. The depth of the tray base 105 may be 10 mm, the depth of four side pieces 420 of the tray 110 may be 1 mm, and the depth of the cover 115 may be 6 mm. When the tile enclosed by the tile holding system 100 is attached to the floor 705, the tile may be horizontal with respect to other tiles attached to the floor 705 around the tile holding system 100.

[0056] In an example embodiment, when the tile holding system 100 is attached to a wall, no sand is used because no force is applied to the tiles attached to walls. The process of attaching the tile holding system 100 to the wall may be the same as the process of attaching the tile holding system 100 to the floor 705, as described above.

[0057] Thus, tile holding systems have been described. Although embodiments have been described with reference to specific example embodiments, it will be evident that various modifications and changes can be made to these example embodiments without departing from the broader spirit and scope of the present application. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.

What is claimed is:

1. A tile holding system comprising:

a tray base tray base including:

four side sections connected to form a rectangular shape; and

a plurality of flanges connected to one or more of the four side sections;

a tray including:

four side pieces connected to form the rectangular shape;

a collar connected to the four side pieces, the collar being configured to enclose a tile; and

a support plate enclosed by the collar;

wherein the tray is configured to be placed on the tray base; and

a cover having four side components connected to form the rectangular shape, the cover being configured to cover the tray base and the tray.

2. The tile holding system of claim 1, wherein the plurality of flanges are perpendicular with respect to the one or more of the four side sections.

3. The tile holding system of claim 1, wherein the four side sections of the tray base have a rectangular cross-section.

4. The tile holding system of claim 1, wherein the four side components of the cover have a rectangular cross-section.

5. The tile holding system of claim 1, wherein the support plate extends for a predefined distance beyond the four side pieces of the tray.

6. The tile holding system of claim 1, wherein the support plate has a plurality of openings.

7. The tile holding system of claim 6, wherein, when the tray is placed on the tray base, the plurality of openings in the support plate of the tray being configured to accommodate sand.

8. The tile holding system of claim 1, wherein one or more of the plurality of flanges have at least one opening for inserting a fastener.

9. The tile holding system of claim 8, wherein the tray base is configured to be attached to a floor by:

inserting the fastener into the at least one opening in the one or more of the plurality of flanges; and

attaching the fastener to the floor.

10. The tile holding system of claim 1, wherein one or more of the four side sections of the tray base have at least one opening for inserting a fastener.

11. The tile holding system of claim 10, wherein the support plate of the tray has at least one opening for inserting the fastener.

12. The tile holding system of claim 11, wherein the one or more of the four side components of the cover have at least one opening for inserting the fastener.

13. The tile holding system of claim 12, wherein, when the cover covers the tray, the at least one opening of the cover is positioned over the at least one opening of the tray, and the at least one opening of the tray is positioned over the at least one opening of the tray base.

14. The tile holding system of claim 1, wherein the tray is configured to release the tile enclosed in the tray, and the tile is replaceable.

15. The tile holding system of claim 1, wherein the tray base, the tray, and the cover are configured to be installed on a horizontal surface.

16. A vertical tile holding system comprising:

a tray base including:

four side sections connected to form a rectangular shape; and

a plurality of flanges connected to one or more of the four side sections;

a tray including:

four side pieces connected to form the rectangular shape;

a collar connected to the four side pieces, the collar being configured to enclose a tile; and

a support plate enclosed by the collar;

wherein the tray is configured to be placed on the tray base; and

a cover having four side components connected to form the rectangular shape, the cover being configured to cover the tray base and the tray;

wherein the tray base, the tray, and the cover are configured to be installed on a vertical surface.

17. The vertical tile holding system of claim 16, wherein one or more of the plurality of flanges have at least one opening for inserting a fastener.

18. The vertical tile holding system of claim 17, wherein the tray base is configured to be attached to the vertical surface by:

inserting the fastener into the at least one opening in the one or more of the plurality of flanges; and

attaching the fastener to the vertical surface.

19. The vertical tile holding system of claim 16, wherein the plurality of flanges are perpendicular to one or more of the four side sections.

20. A horizontal tile holding system comprising:

a tray base including:

four side sections connected to form a rectangular shape; and

a plurality of flanges connected to one or more of the four side sections;

a tray including:

four side pieces connected to form the rectangular shape;

a collar connected to the four side pieces, the collar being configured to enclose a tile;

a support plate enclosed by the collar; and

wherein the tray is configured to be placed on the tray base; and

a cover having four side components connected to form the rectangular shape, the cover being configured to cover the tray base and the tray,

wherein the tray base, the tray, and the cover are configured to be installed on a horizontal surface.

* * * * *