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(54) SUBSTRATE AND RAISED FLOOR FORMED BY USING SAME

(57) A substrate and a raised floor formed by using the same; the substrate is provided on a support stand and can be used to mount at least one plate thereon, and the substrate has at least one first region and at least one second region thereon. The first region has a shape of a long strip, the second region and the first region are adjacently provided along a first direction, and the second region forms a misalignment with the first region along a second direction perpendicular to the first direction, such that the first region and the second region form a segment difference in the second direction; when a plurality of substrates are adjacently arranged, the plate is enabled to form mutually crossed patterns on the substrate.

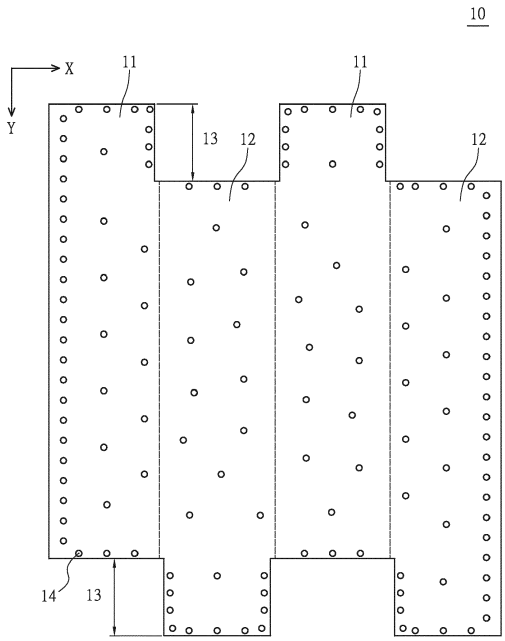

FIG.1

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Description

BACKGROUND OF THE INVENTION

a) Field of the Invention

[0001] The present invention relates to a substrate 10 and a raised floor 50 formed by using the same and, more particularly, to a movable substrate 10 having mutually crossed patterns formed thereon and a raised floor 50 thereof.

b) Description of the Prior Art

[0002] A raised floor is usually applied to an indoor space, so that the raised floor forms a space having a drop with an indoor floor, which is then used for wiring layouts between the indoor floor and the raised floor.

[0003] Generally, the traditional raised floor is consisted of a support stand and a substrate, in which the support stand is mounted on the indoor floor, and the substrate is mounted on the support stand, such that the substrate forms a space having a drop between the support stand and the indoor floor.

[0004] Regarding the substrate in the current raised floor, for example, as claimed in the Taiwan Utility Model Patent No. M530333 "Improved Structure Of Raised Floor" filed by the applicant of the present application, the substrate is mostly square and when a plurality of raised floors are spread on the indoor floor at the same time, a complete flat surface is constructed so as to reach a requirement for flatness in the raised floor.

[0005] However, because the current substrates are mostly square, when they are spread on the indoor floor, the substrates appear to be monotonous in an overall application, and cannot present crossed patterns as seen in wooden floors or marble floors.

[0006] Accordingly, the technical means and a purpose thereof to be solved by the present invention is to provide a movable substrate having mutually crossed patterns formed thereon and a raised floor thereof.

SUMMARY OF THE INVENTION

[0007] A main object of the present invention is to provide a movable substrate having mutually crossed patterns formed thereon and a raised floor formed by using the substrate.

[0008] To achieve the aforesaid object, the present invention provides a substrate for being mounted on a support stand so as to enable a plate to be mounted thereon for forming a raised floor, and the substrate comprises at least one first region and at least one second region. The first region has a shape of a long strip. The second region and the first region are adjacently provided along a first direction and are mutually joined, and the second region forms a misalignment with the first region on one side of a second direction perpendicular to the first direction, such that the first region and the second region form a segment difference on one side of the second direction.

[0009] In one embodiment, the substrate is further consisted of a plate body and a strengthened bottom plate provided below the plate body, and the first region and the second region are provided on the plate body.

[0010] In one embodiment, the plate body is further provided with two of the first regions and one of the second region, in which the two first regions are mutually interspaced along the first direction, and the second region is provided between the two interspaced first regions.

[0011] In one embodiment, the plate body is further provided with two of the first regions and two of the second regions, in which the two first regions are mutually interspaced along the first direction and the two second regions are mutually interspaced along the first direction, and the two first regions and the two second regions are mutually interspaced and alternately provided along the first direction.

[0012] To achieve the aforesaid object, the present invention further provides a substrate, wherein the substrate comprises at least one first region and at least one second region. The first region has a shape of a long strip. The second region and the first region are adjacently provided along a first direction and are mutually joined, and the second region forms a misalignment with the first region on one side of a second direction perpendicular to the first direction, such that the first region and the second region form a segment difference on one side of the second direction. The substrate has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms respectively, in which the support arms enclose on an edge where the first region and the second region are not mutually joined, and the support arms have a height taller than a height of the substrate.

[0013] In one embodiment, the substrate is further consisted of a plate body and a strengthened bottom plate provided below the plate body, in which at least one of the first region and at least one of the second region are provided on the plate body, and the plurality of support arms are formed by bending an edge between the plate body and the strengthened bottom plate.

[0014] To achieve the aforesaid object, the present invention provides a raised floor for being mounted on an indoor floor, such that a difference in height is formed between the raised floor and the indoor floor, and the raised floor comprises a substrate, two plates, a support stand, and two panels. The substrate comprises at least a first region having a shape of a long strip and at least a second region adjacently provided to the first region along a first direction and mutually joined therewith, and the second region forms a misalignment with the first region on one side of a second direction perpendicular to the first direction, such that the first region and the second region form a segment difference on one side of the second direction. One of the plates is mounted on

the first region and the other plate is mounted on the second region. The support stand has a rectangular frame for mounting the substrate, four mount fixing plates respectively provided on each end corner of the rectangular frame, and four stands supported on the ground and respectively used to support each of the mount fixing plates, wherein the rectangular frame is consisted of two mutually interspaced horizontal bars and two mutually interspaced straight bars which are perpendicularly provided to the two horizontal bars. Each of the panels is respectively covered on each of the straight bars, and each panel has a positioning portion covering on each of the straight bars and a garnish strip portion protruding from the positioning portion, in which a drop is formed between the garnish strip portion and the positioning portion, and one of the garnish strip portions is located on an edge of the first region away from the second region and is adjacent to the first region, another of the garnish strip portions is located on an edge of the second region away from the first region and is adjacent to the second region, and the two panels and the two plates are on the same plane.

[0015] In one embodiment, the substrate has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms respectively, in which the support arms enclose on an edge where the first region and the second region are not mutually joined, and the support arms have a height taller than a height of the substrate.

[0016] In one embodiment, each of the mount fixing plates is further consisted of a central support portion and two lateral support portions respectively located on two corresponding sides of the central support portion, wherein one of the stands and an end of one of the straight bars are fixed on the central support portion, and one end of one of the horizontal bars is provided on one of the lateral support portions.

[0017] In one embodiment, each of the lateral support portions is concavely provided with an accommodation groove, and one end of each of the horizontal bars is mounted in the accommodation groove.

[0018] In one embodiment, each of the panels has the positioning portion thereof being in a reversed U-shape, and an edge of the first region adjacent to one of the garnish strip portions is pressed against the positioning portion of the adjacent panel and located in the drop.

[0019] In one embodiment, each of the panels has the positioning portion thereof being in a reversed U-shape, and an edge of the second region adjacent to one of the garnish strip portions is pressed against the positioning portion of the adjacent panel and located in the drop.

[0020] To achieve the aforesaid object, the present invention further provides a raised floor for being mounted on the ground, such that a difference in height is formed between the raised floor and the ground, and the raised floor comprises a substrate, two plates, a support stand, and two panel sets. The substrate comprises at least a first region having a shape of a long strip and at least a second region adjacently provided to the first region along a first direction and mutually joined therewith, and the second region forms a misalignment with the first region on one side of a second direction perpendicular to the first direction, such that the first region and the second region form a segment difference on one side of the second direction. One of the plates is mounted on the first region and the other plate is mounted on the second region. The support stand has a rectangular frame for mounting the substrate, four mount fixing plates respectively provided on each end corner of the rectangular frame, and four stands supported on the ground and respectively used to support each of the mount fixing plates, wherein the rectangular frame is consisted of two mutually interspaced horizontal bars and two mutually interspaced straight bars which are perpendicularly provided to the two horizontal bars. Each of the panel sets is respectively covered on each of the straight bars, and each of the panel sets has a lower panel covering on each of the straight bars and an upper panel covering above the lower panel, in which the lower panel has a cover portion covering above the straight bar and a limiting portion upwardly extended from the cover portion, the limiting portion is upwardly protruded from the cover portion and the lower panel is covered on the limiting portion and envelopes the limiting portion.

[0021] In one embodiment, the substrate has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms respectively, in which the support arms enclose on an edge where the first region and the second region are not mutually joined, and the support arms have a height taller than a height of the substrate.

[0022] In one embodiment, the limiting portion further has a limiting groove downwardly and concavely provided on a top surface, and a limiting bar capable of being inserted into the limiting groove is further provided in a position inside the lower panel corresponding to the limiting groove.

[0023] In one embodiment, the panel adjacent to the second region further has a barb portion extended below the support arms.

[0024] In one embodiment, the substrate has positions in upper and lower end corners on edges where the first region and the second region are not mutually joined being respectively and outwardly extended to form positioning plates, and each of the positioning plates is pressed against the adjacent straight bar.

[0025] In one embodiment, each of the straight bars has a position thereof adjacent to the positioning plate further provided with a movable fixing plate, in which the movable fixing plate is pivotally provided on the straight bar, and the movable fixing plate is capable of rotating on the straight bar and forming a pressing position pressing on the positioning plate, so as to fix the substrate to the straight bar.

[0026] In one embodiment, each of the mount fixing plates is further consisted of a central support portion

and two lateral support portions respectively located on two corresponding sides of the central support portion, wherein one of the stands and one end of one of the straight bars are fixed on the central support portion, and one end of one of the horizontal bars is provided on one of the lateral support portions.

[0027] In one embodiment, each of the lateral support portions is concavely provided with an accommodation groove, and one end of each of the horizontal bars is mounted in the accommodation groove.

[0028] The present invention provides a substrate and a raised floor formed by using the same, which has the following advantages in comparison to the prior art:

1. The substrate of the present invention has the segment difference formed in the second direction and between the first region and the second region adjacent to each other, such that after assembling a plurality of substrates adjacently, the plurality of plates can be used to present particular crossed patterns as those resulted from alternately arranging wooden floors or marble floors on the substrate, thereby increasing variations in uses and enhancing aesthetics of the overall raised floor.
2. Upon application to the support stand, the substrate of the present invention not only raises a space but also has the effects of noise insulation and moisture resistance, and can be conveniently lifted up on the support stand so as to clean the substrate and the plates and perform wiring layouts. In addition, the plates can be conveniently taken off the substrate and be independently replaced.

[0029] To enable a further understanding of the said objectives and the technological methods of the invention herein, the brief description of the drawings below is followed by the detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030]

FIG. 1 is a schematic plan view showing the substrate according to a first embodiment of the present invention.

FIG. 2 is a schematic three-dimensional exploded view showing the substrate of the first embodiment in combination with the plate according to the present invention.

FIG. 3 is a three-dimensional exploded view showing the substrate of the first embodiment in combination with the plate according to the present invention.

FIG. 4 is a schematic plane view showing the substrate according to a second embodiment of the present invention.

FIG. 5 is a schematic three-dimensional exploded view showing the substrate of the second embodiment in combination with the plate according to the present invention.

FIG. 6 is a schematic dissected view showing the substrate of the second embodiment in combination with the plate according to the present invention.

FIG. 7 is a schematic three-dimensional exploded view showing the substrate of a third embodiment in combination with the plate according to the present invention.

FIG. 8 is a schematic plane view showing the raised floor according to the present invention.

FIG. 9 is a schematic exploded view showing the support stand according to the first embodiment of the present invention.

FIG. 10 is a schematic magnified and exploded view showing a part of the support stand of the first embodiment according to the present invention.

FIG. 11 is a schematic dissected view showing the support stand according to the first embodiment of the present invention.

FIG. 12 is a schematic magnified and assembled view showing a part of the support stand of the first embodiment according to the present invention.

FIG. 13 is a schematic plane view showing the substrate according to a fourth embodiment of the present invention.

FIG. 14 is a schematic magnified view showing a part of the substrate according to the fourth embodiment of the present invention.

FIG. 15 is a schematic exploded view showing the support stand of the second embodiment according to the present invention.

FIG. 16 is a schematic dissected view showing the support stand according to the second embodiment of the present invention.

FIG. 17 is a schematic magnified and assembled view showing a part of the support stand of the second embodiment according to the present invention.

FIG. 18 is a schematic magnified view showing the positioning plate being located in the pressing position according to the present invention.

FIG. 19 is a schematic magnified view showing the positioning plate being located outside the pressing position according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0031] The detailed explanations and technical content of the present invention are provided as follows and in combination with the drawings:

as shown in FIGs. 1 to 3, the present invention firstly provides a substrate 10 for being spread on a support stand (not shown in the drawings and will be further described later), and used to carry a plurality of plates 20 so as to form a raised floor (not shown in the drawings and will be further described later). The support stand is to be mounted on an indoor floor (not shown in the draw-

ings), so as to form a space having a drop between the substrate 10 and the indoor floor (which is a prior art and will not be further described here).

[0032] The substrate 10 is provided thereon with at least one first region 11 having a shape of a long strip and a second region 12 having a shape of a long strip. In the present embodiment, the substrate 10 is provided with two of the first regions 11 and two of the second regions 12, in which the two first regions 11 are provided in a mutually interspaced manner in a first direction X and the two second regions 12 are likewise provided in a mutually interspaced manner in the first direction X, and one of the second regions 12 is provided between the two first regions 11, while the other of the two second regions 12 is adjacently provided on a side of one of the first regions 11; each of the first regions 11 and each of the second regions 12 which are adjacent to each other are mutually joined, and each of the second regions 12 forms a misalignment with the two first regions 11 in a second direction Y perpendicular to the first direction X, so as to enable the two first regions 11 and the two second regions 12 to form a segment difference 13 on at least one side in the second direction Y. In the present embodiment, the first region 11 and the second region 12 respectively form a segment difference 13 on two sides in the second direction Y.

[0033] In the present embodiment, each of the first regions 11 and each of the second regions 12 respectively enable a plate 20 to be carried thereon, wherein each of the first regions 11 and each of the second regions 12 have the same area, and each of the plates carried on each of the first regions 11 and each of the second regions 12 has the same area; therefore, when each of the first regions 11 and each of the second regions 12 are mutually misaligned in the second direction Y, each of the plates 20 adjacent to each other is enabled to form mutually crossed arrangements therebetween.

[0034] In addition, in order to enable the plates 20 to be effectively fixed on each of the first regions 11 and each of the second regions 12, the substrate 10 is further provided with a plurality of fixing holes 14; when the plates 20 are provided on the substrate 10, a plurality of fastening elements (not shown in the drawings, in which the fastening elements are screws) can be employed, such that the fastening elements can be screwed into the plates 20 by passing through the fixing holes 14 from a bottom portion of the substrate 10, thereby effectively fixing the plates 20 on the substrate 10.

[0035] FIGs. 4 to 6 show a second embodiment of the substrate 30 of the present invention; in the present embodiment, peripheral edges of the substrate 30 further comprise a plurality of support arms 35, in which the support arms 35 enclose on an edge where the first region 31 and the second region 32 are not mutually joined and the same are not mutually connected, and the support arms 35 have a height taller than a height of the substrate 30. In addition, a support portion 36 is further protrudingly provided between each of the first regions 31 and each of the second regions 32 which are adjacent to each other, and each of the support portions 36 has a height the same as the height of the support arms 35, such that each of the first regions 31 and each of the second regions 32 are enclosed by the plurality of support arms 35 and at least one support portion 36.

[0036] The substrate 30 is further consisted of a plate body 37 and a strengthened bottom plate 38 located below the plate body 37, and the first regions 31 and the second regions 32 are provided on the plate body 37; the plurality of support arms 35 are formed by bending an edge between the plate body 37 and the strengthened bottom plate 38, such that the structural strength of the overall substrate 30 and the support arms 35 can be effectively increased.

[0037] In the present embodiment, in order to enable each of the plates 20 to be fixed on the substrate 30 more effectively, an edge of each of the plates 20 has formed thereon a cover region 21 covering over the support arms 35 and the support portions 36, and the cover regions 21 have a thickness less than a thickness of each of the plates 20. Accordingly, when the plates 20 are respectively provided on each of the first regions 31 and each of the second regions 32, each of the plates 20 can be fixed on each of the first regions 31 and each of the second regions 32 by using the aforesaid fastening element, and the cover regions 21 of each of the plates 20 can cover over the support arms 35 and the support portions 36, thereby completely shielding the substrate 30.

[0038] FIGs. 7 and 8 show a third embodiment of the substrate; in the present embodiment, the first region 41 and the second region 42 of the substrate 40 form the segment difference 43 on one side in the second direction Y, and another side forms a linear arrangement. Accordingly, when the substrates 30 and 40 of the present invention are provided on an indoor floor, decent finishing effects can be achieved in the first direction X as well as in the second direction Y. Each of the plates 20 is enabled to present an effect of mutually crossed arrangements at the same time, so as to enhance aesthetics of the raised floor.

[0039] As shown in FIGs. 8 to 12, the substrates of the second and the third embodiments of the present invention can be used to provide a raised floor 50 provided on an indoor floor; the raised floor 50 can be consisted of, according to an area of the indoor floor, a plurality of aforesaid substrates 30 and 40, a plurality of plates 20 carried on the substrates 30 and 40, a plurality of support stands 60 for supporting the substrates 30 and 40, and a plurality of panels 70.

[0040] In the present embodiment, structural relationships between the substrates 30, the plates carried on the substrates, one of support stands 60 and two of panels 70 therein are used for illustration, wherein the support stand 60 is consisted of a rectangular frame 61 for mounting the aforesaid substrate 30, four mount fixing plates 62 respectively provided on each end corner of the rectangular frame 61, and four stands 63 for support-

ing on the indoor floor; each of the mount fixing plates 62 is mounted on one of the stands 63, and each of the stands 63 is capable of adjusting a height thereof independently (which is a prior art and will not be further described here), so as to adjust a height of each of the mount fixing plates 62. The rectangular frame 61 is consisted of two mutually interspaced horizontal bars 611 and two mutually interspaced straight bars 612 perpendicularly provided to the two horizontal bars 611, and each of the mount fixing plates 62 is respectively connected to one end between one of the straight bars 612 and one of the horizontal bars 611, in which the straight bars 612 and the horizontal bars 611 are mutually and perpendicularly provided on the mount fixing plates 62, such that the two horizontal bars 611 and the two straight bars 612 form the rectangular frame 61 for mounting the substrate 30 thereon, and for enabling the plates 20 to be respectively mounted on the two first regions 31 and the two second regions 32. It should be noted that when each of the straight bars 612 and each of the horizontal bars 611 are mounted on each of the mount fixing plates 62, the straight bars 612, the horizontal bars 611 and the mount fixing plates 62 are effectively assembled by means of fastening (which is a prior art and not shown in the drawings, and will not be explained here) via fastening elements. Each of the panels 70 is covered on each of the straight bars 612 and each of the panels 70 has a positioning portion 71 covering on the straight bar 612 and having a reversed U-shape, and a garnish strip portion 72 protruding from the positioning portion 71, in which a drop is formed between the garnish strip portion 72 and the positioning portion 71, and one of the garnish strip portions 72 is located on an edge of the first region 31 away from the second region 32 and is adjacent to the first region 31, another of the garnish strip portions 72 is located on an edge of the second region 32 away from the first region 31 and is adjacent to the second region 32, and the two garnish strip portions 72 and the two plates 20 are on the same plane.

[0041] Furthermore, the mount fixing plate 62 is consisted of a central support portion 621 and two lateral support portions 622 respectively located on two corresponding sides of the central support portion 621, one end of the straight bar 612 is fixed on the central support portion 621, and one end of the horizontal bar 611 is fixed on the lateral support portion 622. In addition, each of the lateral support portions 622 is further concavely provided with an accommodation groove 623, so as to enable one end of the horizontal bar 611 to be accommodated in the accommodation groove 623, such that a height of the straight bar 612 on the mount fixing plate 62 is taller than a height of the horizontal bar 611.

[0042] Therefore, when the raised floor 50 having a greater area is formed by using the plurality of support stands 60, the plurality of panels 70, the plurality of substrates 30 and 40 and the plurality of plates 20, a top surface of the garnish strip portion 72 is exposed between the substrates 30 and 40 which are mutually adjacent and extended along the first direction X, such that the top surface of the garnish strip portion 72 is held between the two adjacent substrates 30 and 40, thereby enabling the overall raised floor 50 to present an effect of alternate arrangements by means of the plates 20, and to present different visual effects by means of the garnish strip portion 72.

[0043] FIGs. 13 to 19 show a fourth embodiment of the substrate 80; in the present embodiment, the substrate 80 have positions of upper and lower end corners on edges where the first region 81 and the second region 82 are not mutually joined being respectively and outwardly extended to form positioning plates 89, and each of the positioning plates 89 is not mutually connected to the support arms 85 protrudingly extended from an edge between the first region 81 and the second region 82.

[0044] Regarding the substrate 80 in the aforesaid fourth embodiment, the present invention further provides a type of raised floor which is consisted of the plurality of substrates 80, the plurality of plates 20 provided on the substrates 80, the plurality of support stands 60, and a plurality of panel sets 90. In the present embodiment, the substrates 80, the plates 20 and the support stands 60 are identical to the aforesaid structures (see the description of FIGs. 8 to 12), and will not be further described here. Each of the panel sets 90 is respectively consisted of a lower panel 91 covering on each of the straight bars 612 and an upper panel 92 covering above the lower panel 91, wherein the lower panel 91 has a cover portion 911 covering above the straight bar 612 and a limiting portion 912 upwardly extended from the cover portion 911, the limiting portion 912 is upwardly protruded from the cover portion 911 and has a limiting groove 913 downwardly and concavely provided on a top surface, and the limiting groove 913 is extended along an extending direction of the straight bar 612 covered thereby. The upper panel 92 is covered on and envelopes the limiting portion 912, and a limiting bar 921 capable of being inserted into the limiting groove 913 is further provided in a position inside the upper panel 92 corresponding to the limiting groove 913.

[0045] Therefore, when each of the lower panels 91 is covered above each of the straight bars 612, each of the lower panels 91 can be used to mutually interspace the two adjacent substrates 80 along the first direction X by using the limiting portion 912, and enable an edge of each of the substrates 80 from the two adjacent substrates 80 along the first direction X to be separately pressed against the cover portion 911, and further cover the upper panel 92 on the limiting portion 912 while also enable the limiting bar 921 to be inserted into the limiting groove 913, thereby preventing the upper panel 92 from being deviated on the lower panel 91, thus enabling the upper panel 92 to be effectively positioned on the lower panel 91.

[0046] The two adjacent substrates 80 along the second direction Y are mutually and tightly provided, such that the positioning plates 89 located in the end corners

of the two substrates 80 adjacently provided in the second direction Y are mutually and adjacently provided to and pressed against one of the straight bars 612. In order to enable the substrates 80 mounted on the support stand 60 to be fixed more stably, a movable fixing plate 613 is further provided in a position on the straight bar 612 adjacent to the two positioning plates 89, in which the movable fixing plate 613 is pivotally provided on the straight bar 612 by using a fastening element 614.

[0047] After mounting the two substrates 80 adjacently provided in the second direction Y on the support stand 60, by rotating a direction of the movable fixing plate 613 and enabling the same to form a pressing position pressing on the two adjacent positioning plates 89, the movable fixing plate 613 is enabled to be pressed on the two adjacent positioning plates 89 at the same time, and then the fastening element 614 is rotated to enable the movable fixing plate 613 to be securely fastened on the straight bar 612. Accordingly, the substrates 80 can be effectively fixed on the straight bar 612, thereby preventing gaps from being generated between the substrates 80 and the straight bars 612, and effectively reducing noises. At the same time, by covering the panel sets 90 above the movable fixing plates 613, the movable fixing plates 613 can be shielded and different visual effects can be formed on the raised floor by the panel sets 90.

[0048] As shown in FIGs. 1 to 19, in comparison to the prior art, the substrates 10, 30, 40 and 80 and the raised floor 50 provided in the present invention is capable of enabling the plates 20 mounted on the substrates 10, 30, 40 and 80 to present crossed patterns particular to wooden floors or marble floors, as well as enhancing variations and aesthetics in applications of the overall raised floor 50. Further, when the substrates 10, 30, 40 and 80 of the present invention are applied to the support stands 60, apart from being lifted and increasing a space, the effects of noise insulation and moisture resistance are also provided, and the substrates can be conveniently lifted up on the support stands 60, so as to enable cleaning of the substrates 10, 30, 40 and 80 and the plates 20 and performing wiring layouts. In addition, the plates 20 can be taken off the substrates 10, 30, 40 and 80 and independently replaced, thereby significantly improving maintenance efficiency and reducing maintenance costs.

Claims

1. A substrate 10 for being mounted on a support stand 60, thereby enabling a plate 20 to be mounted for forming a raised floor 50, and the substrate 10 comprises:

   at least one first region 11 having a shape of a long strip; and
   at least one second region 12, wherein the second region 12 and the first region 11 are adjacently provided along a first direction and are mutually joined, and the second region 12 forms a misalignment with the first region 11 on one side of a second direction perpendicular to the first direction, such that the first region 11 and the second region 12 form a segment difference on one side of the second direction.

2. The substrate 10 of claim 1, wherein the substrate 10 is further consisted of a plate body 37 and a strengthened bottom plate 38 provided below the plate body 37, and the first region 11 and the second region 12 are provided on the plate body 37.

3. The substrate 10 of claim 2, wherein the plate body 37 is further provided with two of the first regions 11 and one of the second region 12, the two first regions 11 are mutually interspaced along the first direction, and the second region 12 is provided between the two interspaced first regions 11.

4. The substrate 10 of claim 2, wherein the plate body 37 is further provided with two of the first regions 11 and two of the second regions 12, the two first regions 11 are mutually interspaced along the first direction and the two second regions 12 are mutually interspaced along the first direction, and the two first regions 11 and the two second regions 12 are mutually interspaced and alternately provided along the first direction.

5. A substrate 10, the substrate 10 comprises thereon:

   at least one first region 11 having a shape of a long strip; and
   at least one second region 12, wherein the second region 12 and the first region 11 are adjacently provided along a first direction and are mutually joined, and the second region 12 forms a misalignment with the first region 11 on one side of a second direction perpendicular to the first direction, such that the first region 11 and the second region 12 form a segment difference on one side of the second direction;
   wherein the substrate has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms 35 respectively, the support arms 35 enclose on an edge where the first region 11 and the second region 12 are not mutually joined, and the support arms 35 have a height taller than a height of the substrate 10.

6. The substrate 10 of claim 5, wherein the substrate 10 is further consisted of a plate body 37 and a strengthened bottom plate 38 provided below the plate body 37, at least one of the first region 11 and at least one of the second region 12 are provided on the plate body 37, and the plurality of support arms 35 are formed by bending an edge between the plate

body 37 and the strengthened bottom plate 38.

7. A raised floor 50 for being mounted on an indoor floor, thereby forming a difference in height between the raised floor 50 and the indoor floor, the raised floor 50 comprises:

a substrate 10 including at least one first region 11 having a shape of a long strip and at least one second region 12 adjacently provided to the first region 11 along a first direction and mutually joined therewith, and the second region 12 forms a misalignment with the first region 11 on one side of a second direction perpendicular to the first direction, such that the first region 11 and the second region 12 form a segment difference on one side of the second direction;
two plates 20, wherein one of the plates 20 is mounted on the first region 11 and the other plate is mounted on the second region 12;
a support stand 60 having a rectangular frame 61 for mounting the substrate 10, four mount fixing plates 62 respectively provided on each end corner of the rectangular frame 61, and four stands 63 supported on the ground and respectively used to support each of the mount fixing plates 62, wherein the rectangular frame 61 is consisted of two mutually interspaced horizontal bars 611 and two mutually interspaced straight bars 612 which are perpendicularly provided to the two horizontal bars 611; and
two panels 70, wherein each of the panels 70 is respectively covered on each of the straight bars 612, and each of the panels 70 has a positioning portion 71 covering on the straight bar 612 and a garnish strip portion 72 protruding from the positioning portion 71, a drop is formed between the garnish strip portion 72 and the positioning portion 71, and one of the garnish strip portions 72 is located on an edge of the first region 11 away from the second region 12 and is adjacent to the first region 11, another of the garnish strip portions 72 is located on an edge of the second region 12 away from the first region 11 and is adjacent to the second region 12, and the two panels 70 and the two plates 20 are on the same plane.

8. The raised floor 50 of claim 7, wherein the substrate 10 has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms 35 respectively, the support arms 35 enclose on an edge where the first region 11 and the second region 12 are not mutually joined, and the support arms 35 have a height taller than a height of the substrate 10.

9. The raised floor 50 of claim 7, wherein each of the mount fixing plates 62 is further consisted of a central support portion 621 and two lateral support portions 622 respectively located on two corresponding sides of the central support portion 621, one of the stands 63 and one end of one of the straight bars 612 are fixed on the central support portion 621, and one end of one of the horizontal bars 611 is provided on one of the lateral support portions 622.

10. The raised floor 50 of claim 9, wherein each of the lateral support portions 622 is concavely provided with an accommodation groove 623, and one end of each of the horizontal bars 611 is mounted in the accommodation groove 623.

11. The raised floor 50 of claim 7, wherein each of the panels 70 has the positioning portion 71 thereof in a reversed U-shape, and an edge of the first region 11 adjacent to one of the garnish strip portions 72 is pressed against the positioning portion 71 of the adjacent panel 70 and located in the drop.

12. The raised floor 50 of claim 7, wherein each of the panels 70 has the positioning portion 71 thereof in a reversed U-shape, and an edge of the second region 12 adjacent to one of the garnish strip portions 72 is pressed against the positioning portion 71 of the adjacent panel 70 and located in the drop.

13. A raised floor 50 for being mounted on the ground, thereby forming a difference in height between the raised floor 50 and the ground, the raised floor 50 comprises:

a substrate 10 including at least one first region 11 having a shape of a long strip and at least one second region 12 adjacently provided to the first region 11 along a first direction and mutually joined therewith, and the second region 12 forms a misalignment with the first region 11 on one side of a second direction perpendicular to the first direction, such that the first region 11 and the second region 12 form a segment difference on one side of the second direction;
two plates 20, wherein one of the plates 20 is mounted on the first region 11 and the other plate 20 is mounted on the second region 12;
a support stand 60 having a rectangular frame 61 for mounting the substrate 10, four mount fixing plates 62 respectively provided on each end corner of the rectangular frame 61, and four stands 63 supported on the ground and respectively used to support each of the mount fixing plates 62, wherein the rectangular frame 61 is consisted of two mutually interspaced horizontal bars 611 and two mutually interspaced straight bars 612 which are perpendicularly provided to the two horizontal bars 611; and
two panel sets 90, wherein each of the panel

sets 90 is respectively covered on each of the straight bars 612, and each of the panel sets 90 has a lower panel 91 covering on each of the straight bars 612 and an upper panel 92 covering above the lower panel 91, the lower panel 91 has a cover portion 911 covering above the straight bar 612 and a limiting portion 912 upwardly extended from the cover portion 911, and the limiting portion 912 is upwardly protruded from the cover portion 911 and the lower panel 91 is covered on the limiting portion 912 and envelopes the limiting portion 912.

14. The raised floor 50 of claim 13, wherein the substrate 10 has peripheral edges thereof outwardly and protrudingly provided with a plurality of support arms 35 respectively, the support arms 35 enclose on an edge where the first region 11 and the second region 12 are not mutually joined, and the support arms 35 have a height taller than a height of the substrate 10.

15. The raised floor 50 of claim 13, wherein the limiting portion 912 further has a limiting groove 913 downwardly and concavely provided on a top surface, and a limiting bar 921 capable of being inserted into the limiting groove 913 is further provided in a position inside the upper panel 92 corresponding to the limiting groove 913.

16. The raised floor 50 of claim 13, wherein the substrate 10 has positions in upper and lower end corners on edges where the first region 11 and the second region 12 are not mutually joined being respectively and outwardly extended to form positioning plates 89, and each of the positioning plates 89 is pressed against the adjacent straight bar 612.

17. The raised floor 50 of claim 16, wherein each of the straight bars 612 has a position adjacent to the positioning plate 89 further provided with a movable fixing plate 613, the movable fixing plate 613 is pivotally provided on the straight bar 612, and the movable fixing plate 613 is capable of rotating on the straight bar 612 and forming a pressing position pressing on the positioning plate 89, so as to fix the substrate 10 to the straight bar 612.

18. The raised floor 50 of claim 13, wherein each of the mount fixing plates 62 is further consisted of a central support portion 621 and two lateral support portions 622 respectively located on two corresponding sides of the central support portion 621, one of the stands 63 and one end of one of the straight bars 612 are fixed on the central support portion 621, and one end of one of the horizontal bars 611 is provided on one of the lateral support portions 622.

19. The raised floor 50 of claim 18, wherein each of the lateral support portions 622 is concavely provided with an accommodation groove 623, and one end of each of the horizontal bars 611 is mounted in the accommodation groove 623.

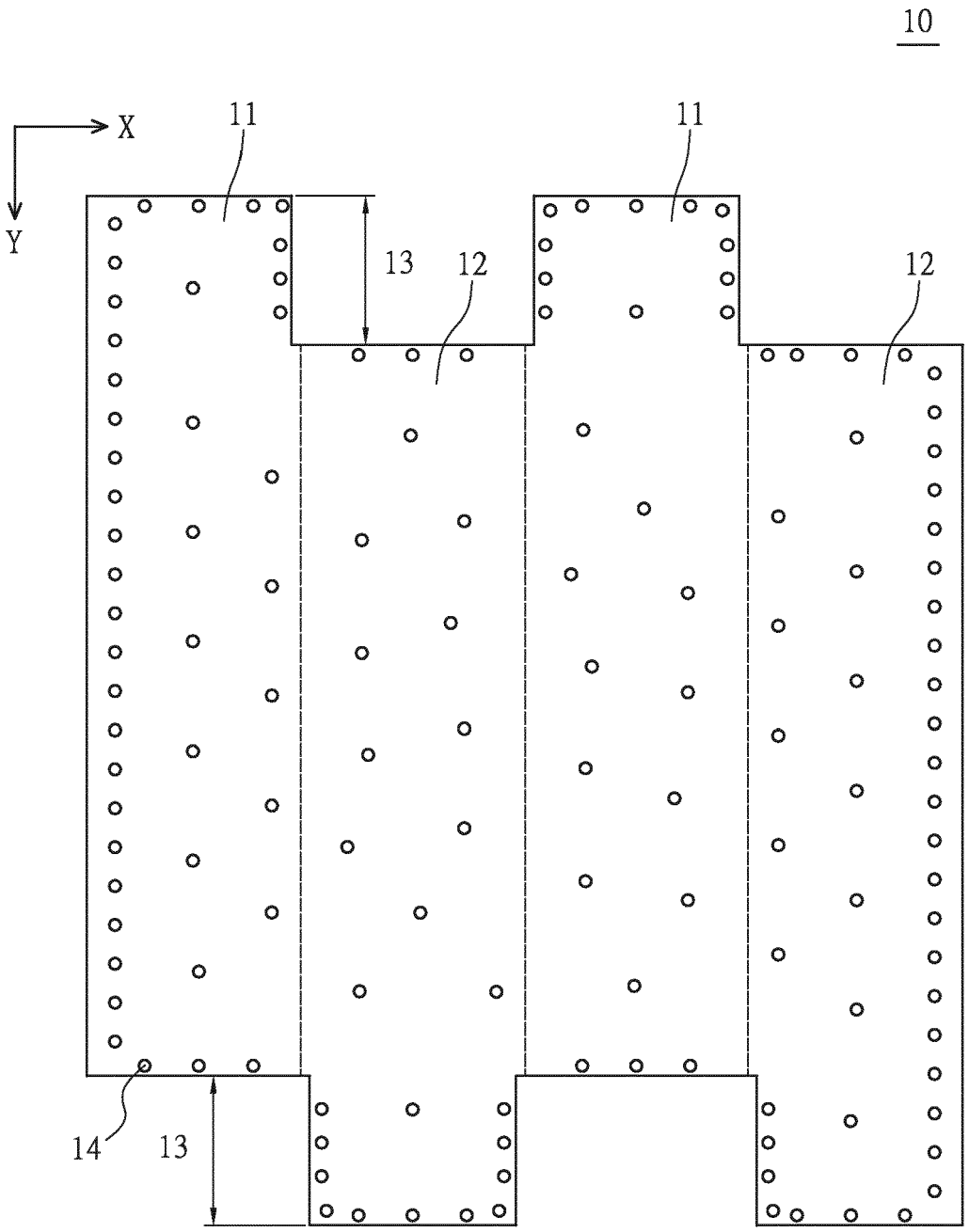

FIG. 1

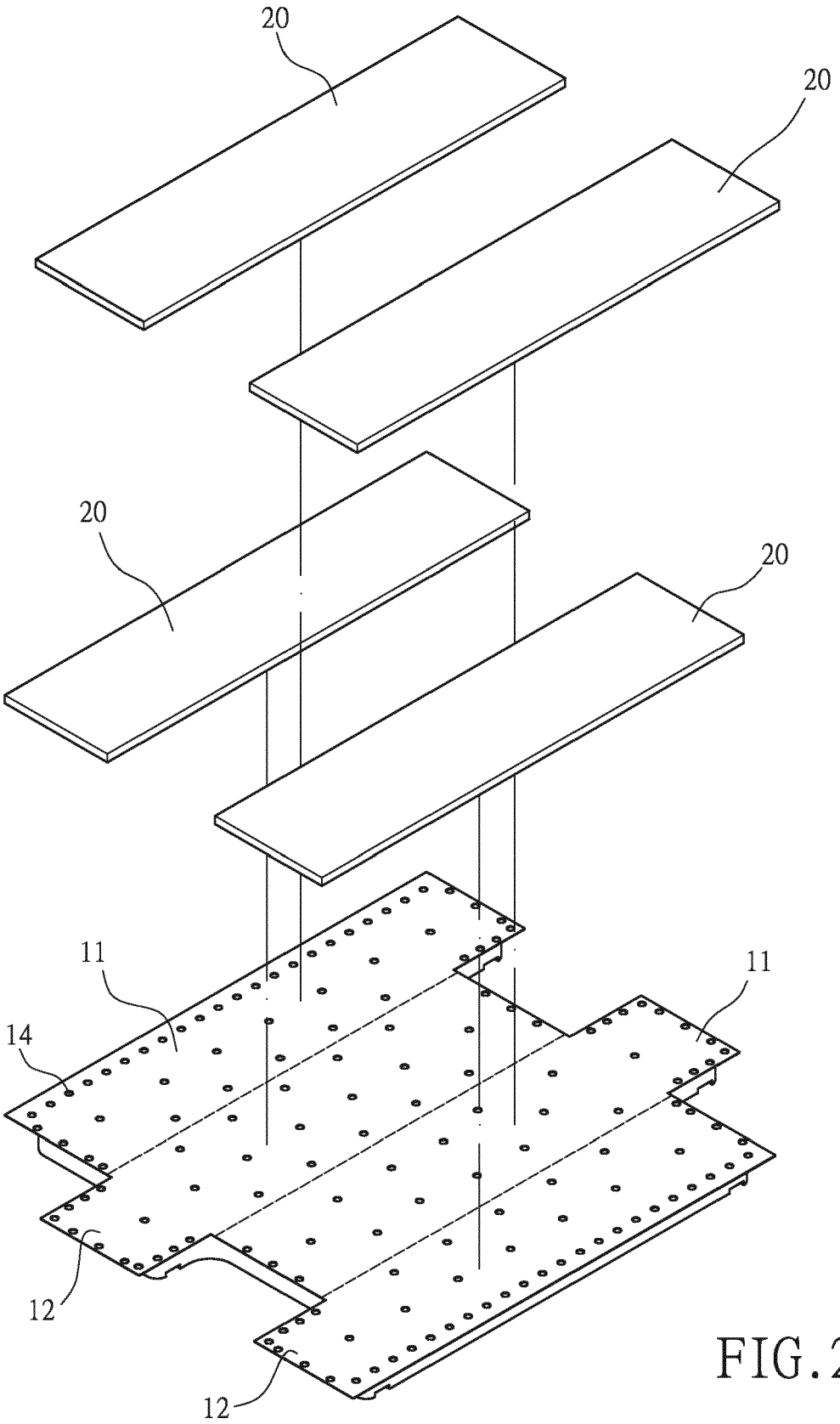

FIG. 2

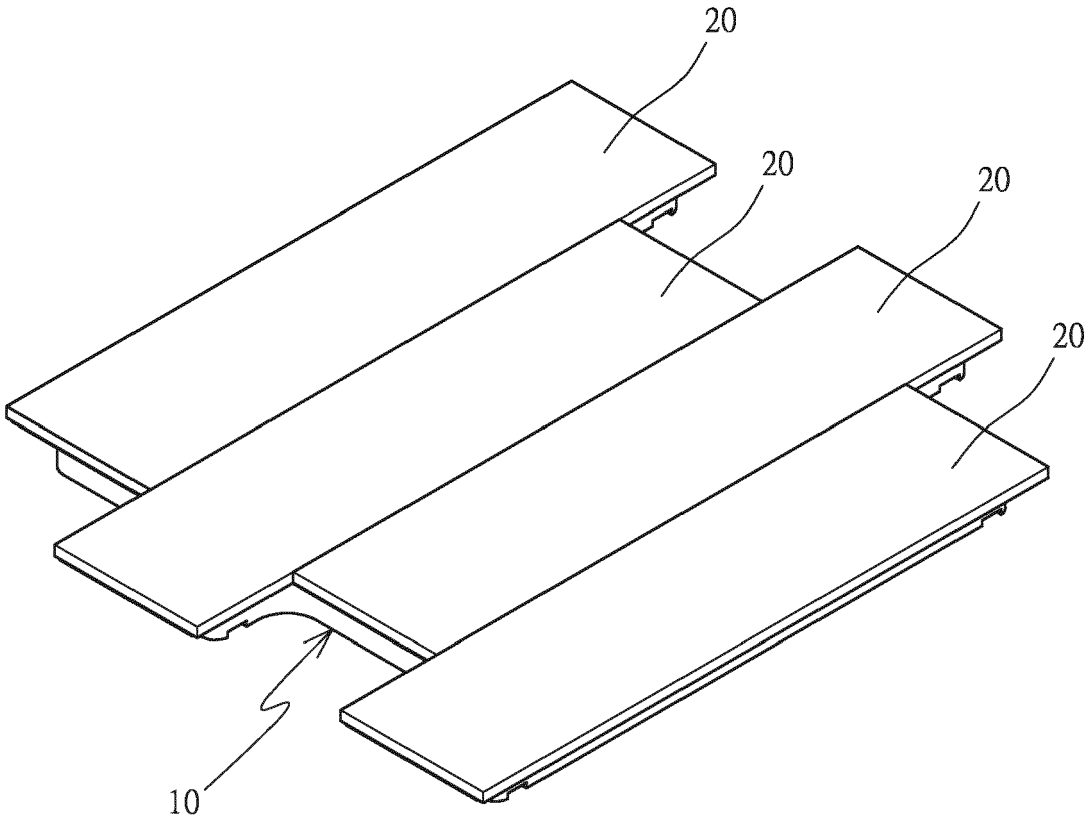

FIG.3

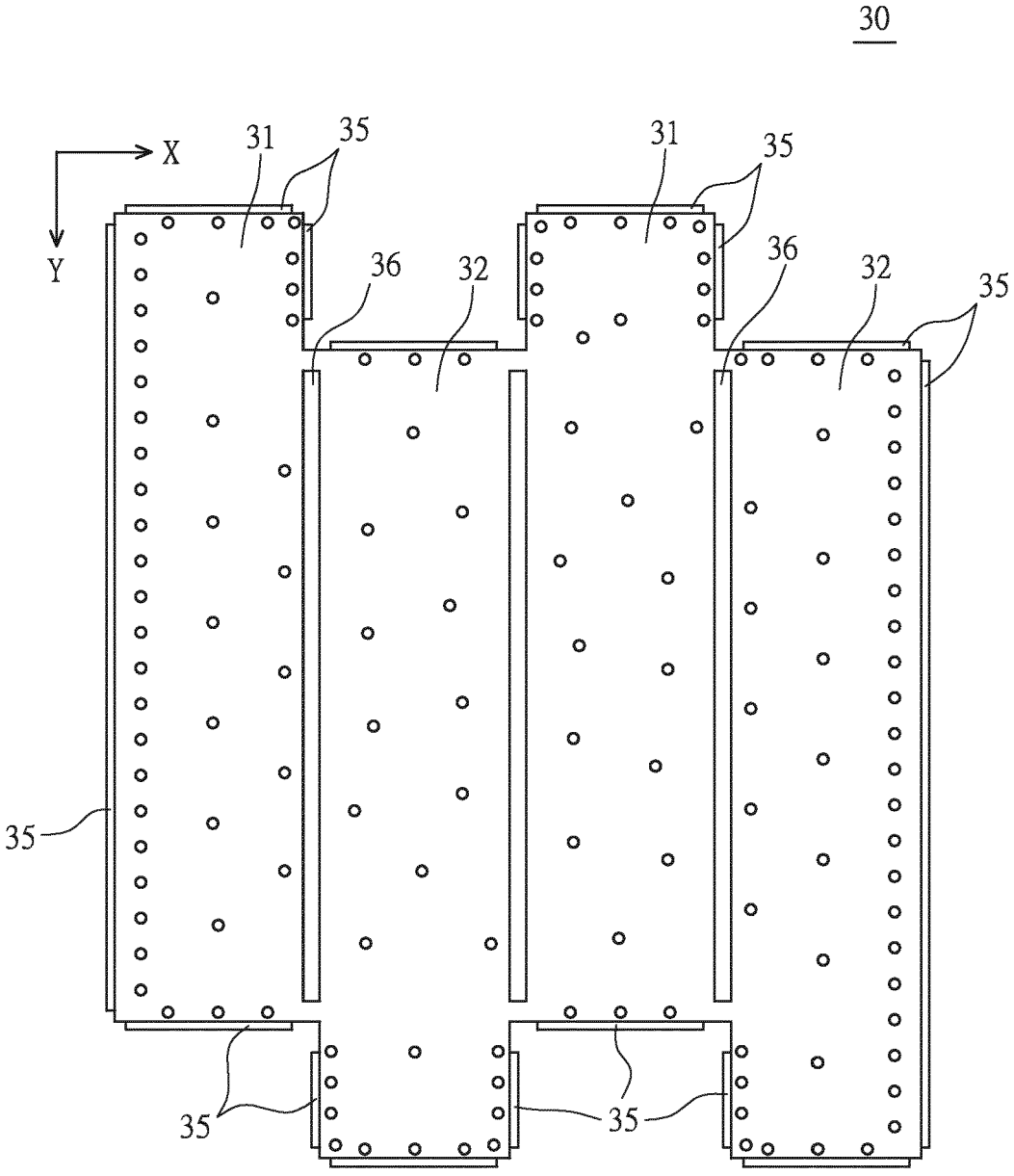

FIG.4

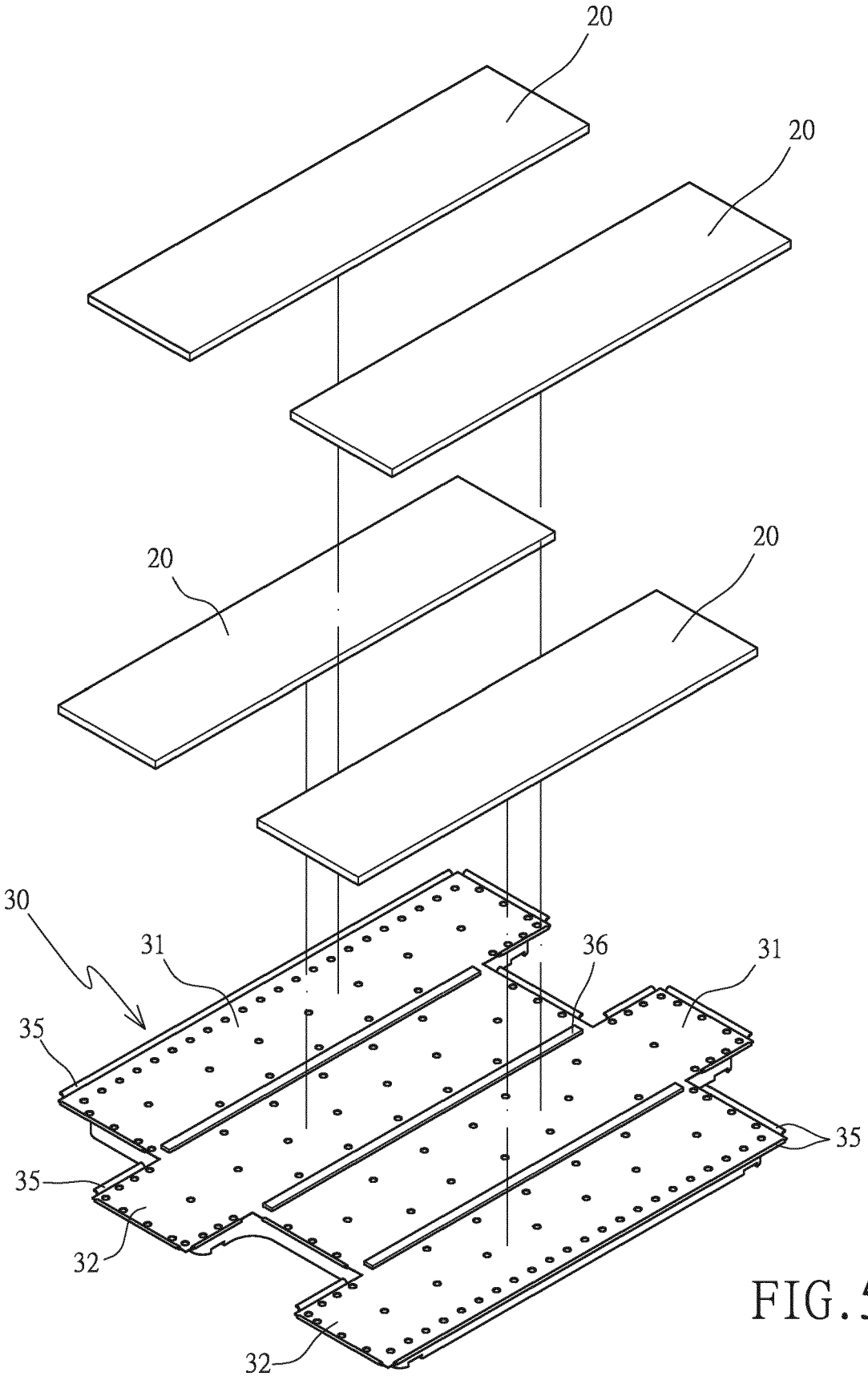

FIG.5

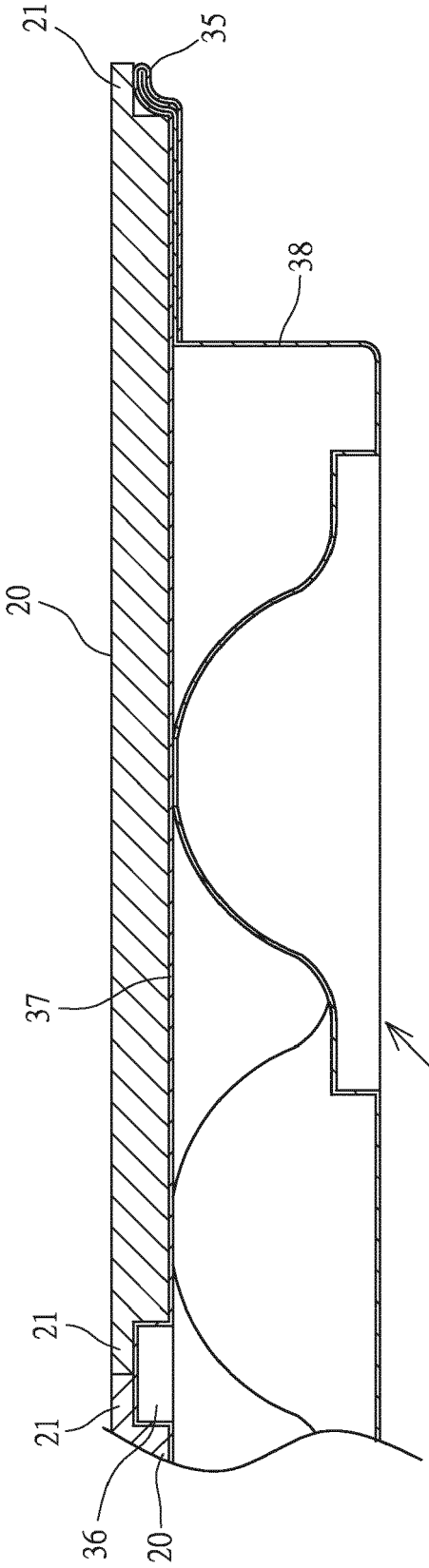

FIG.6

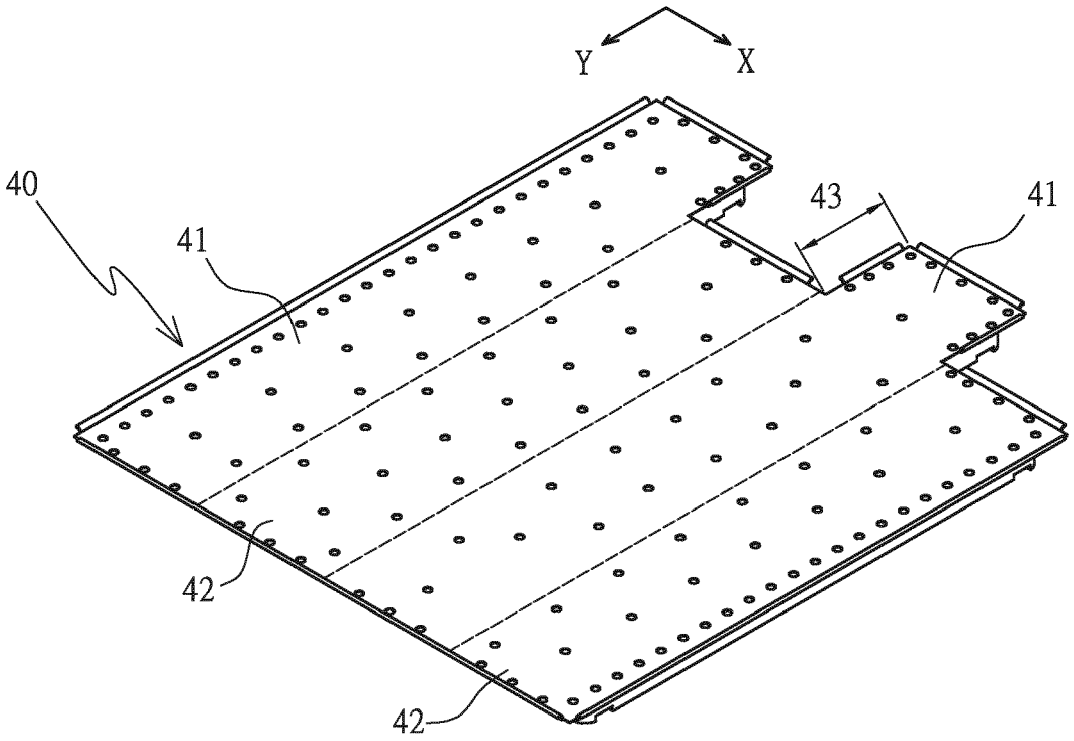

FIG.7

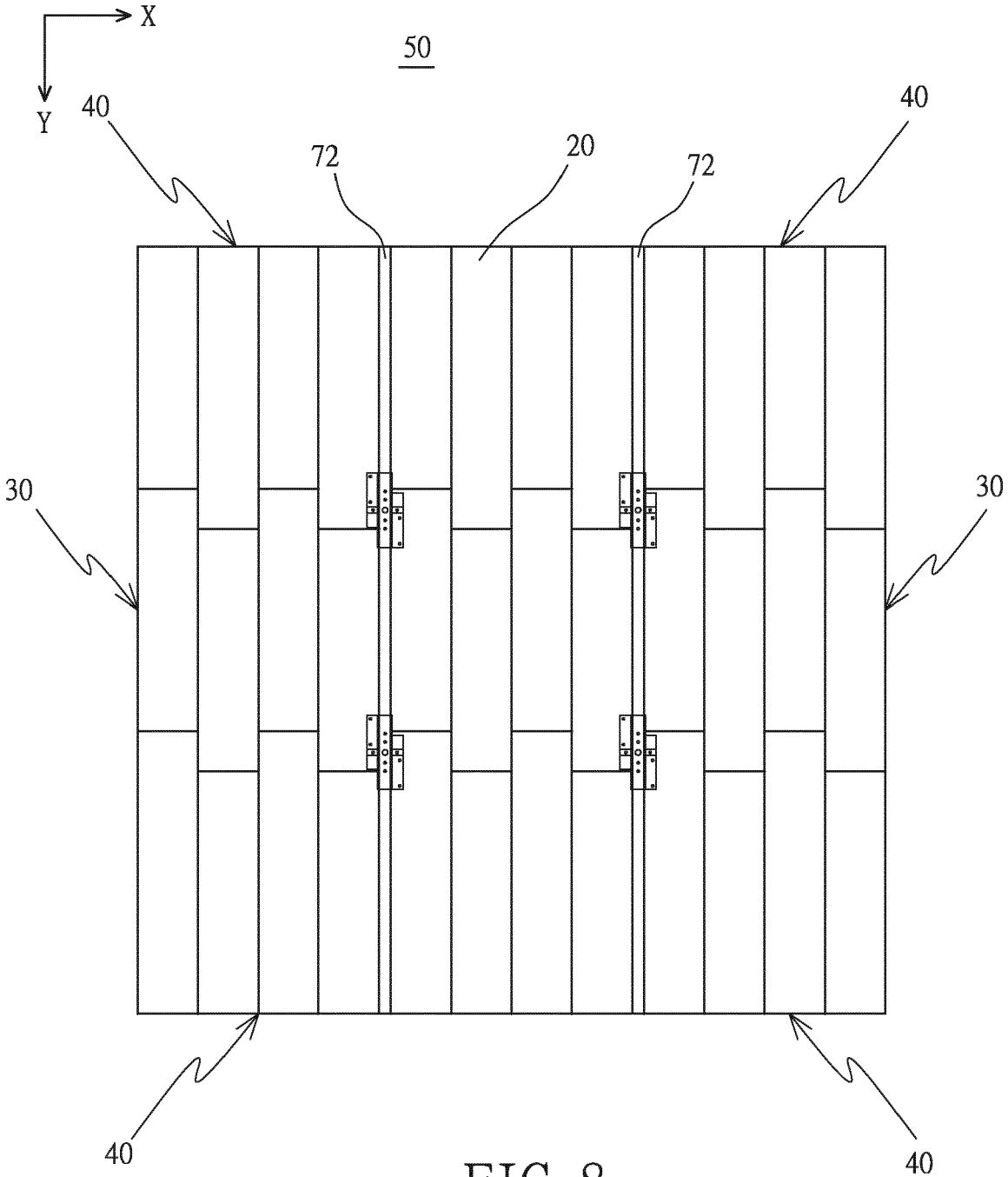

FIG.8

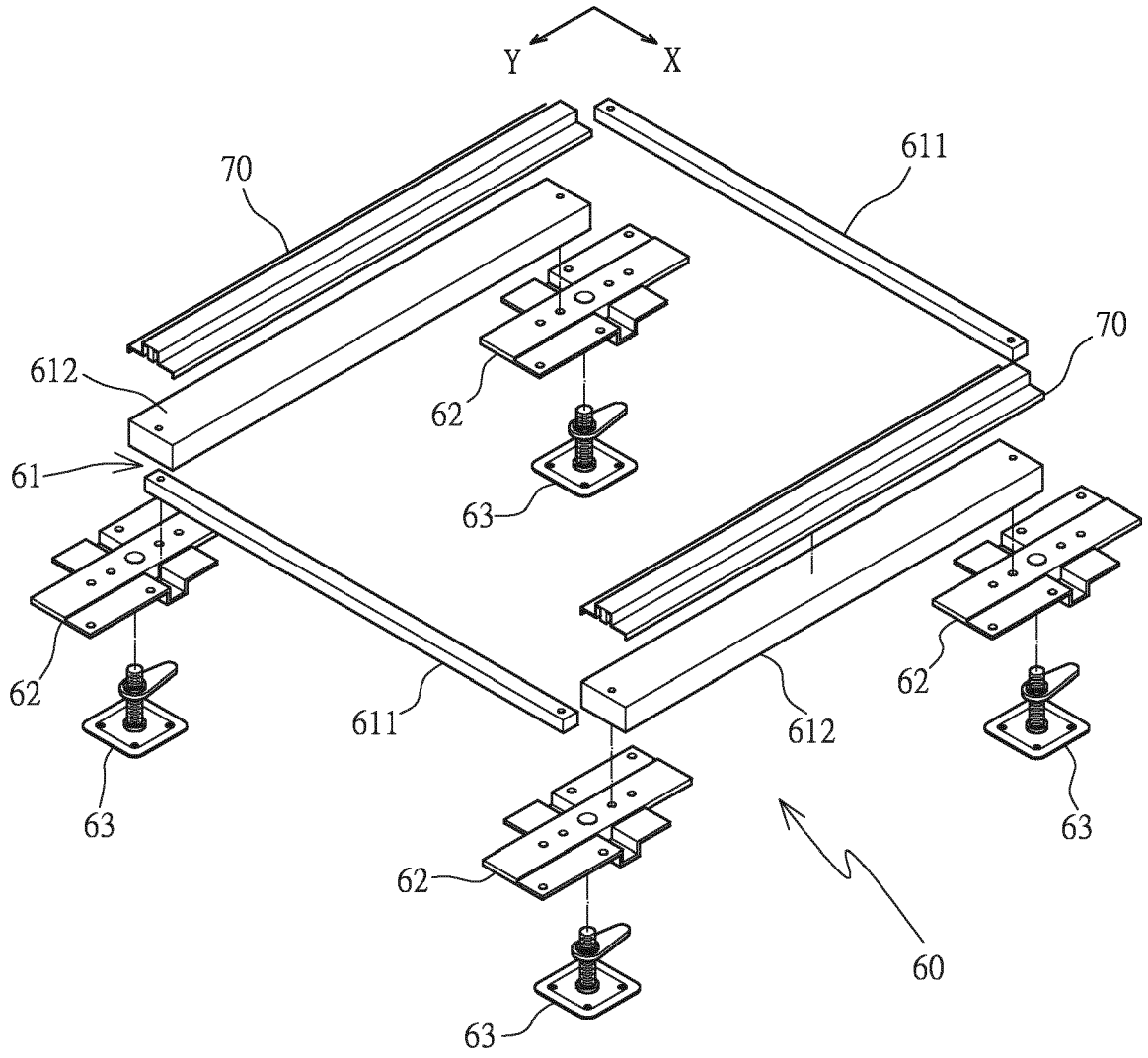

FIG. 9

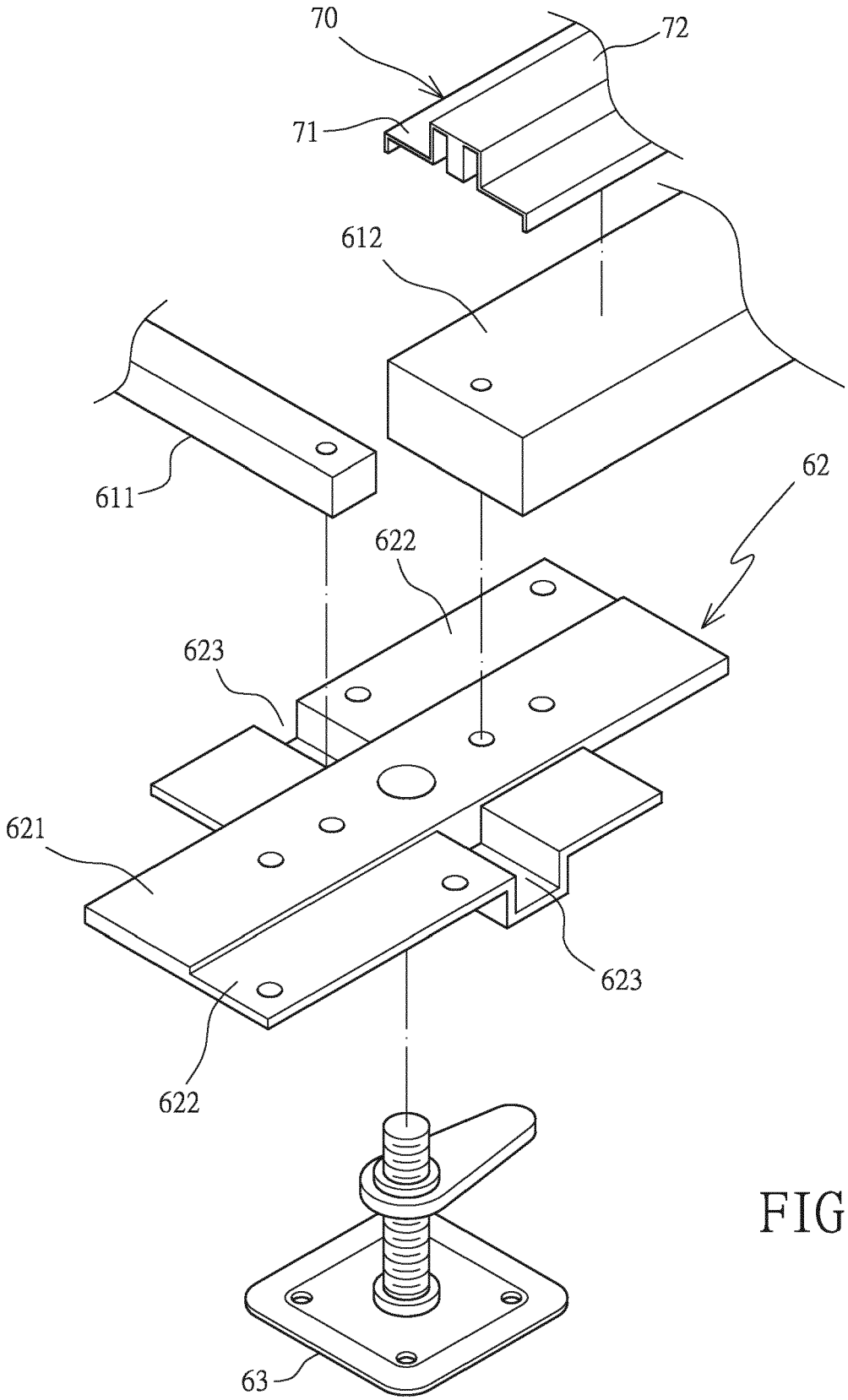

FIG. 10

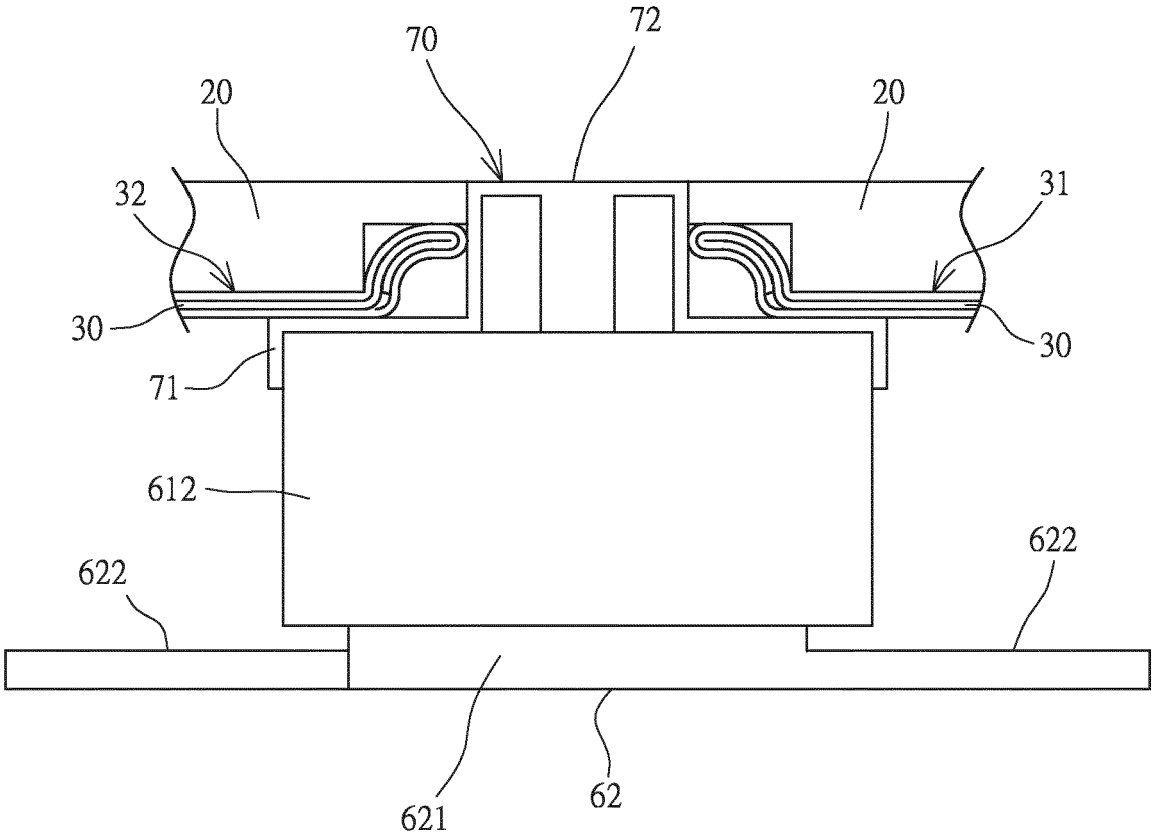

FIG. 11

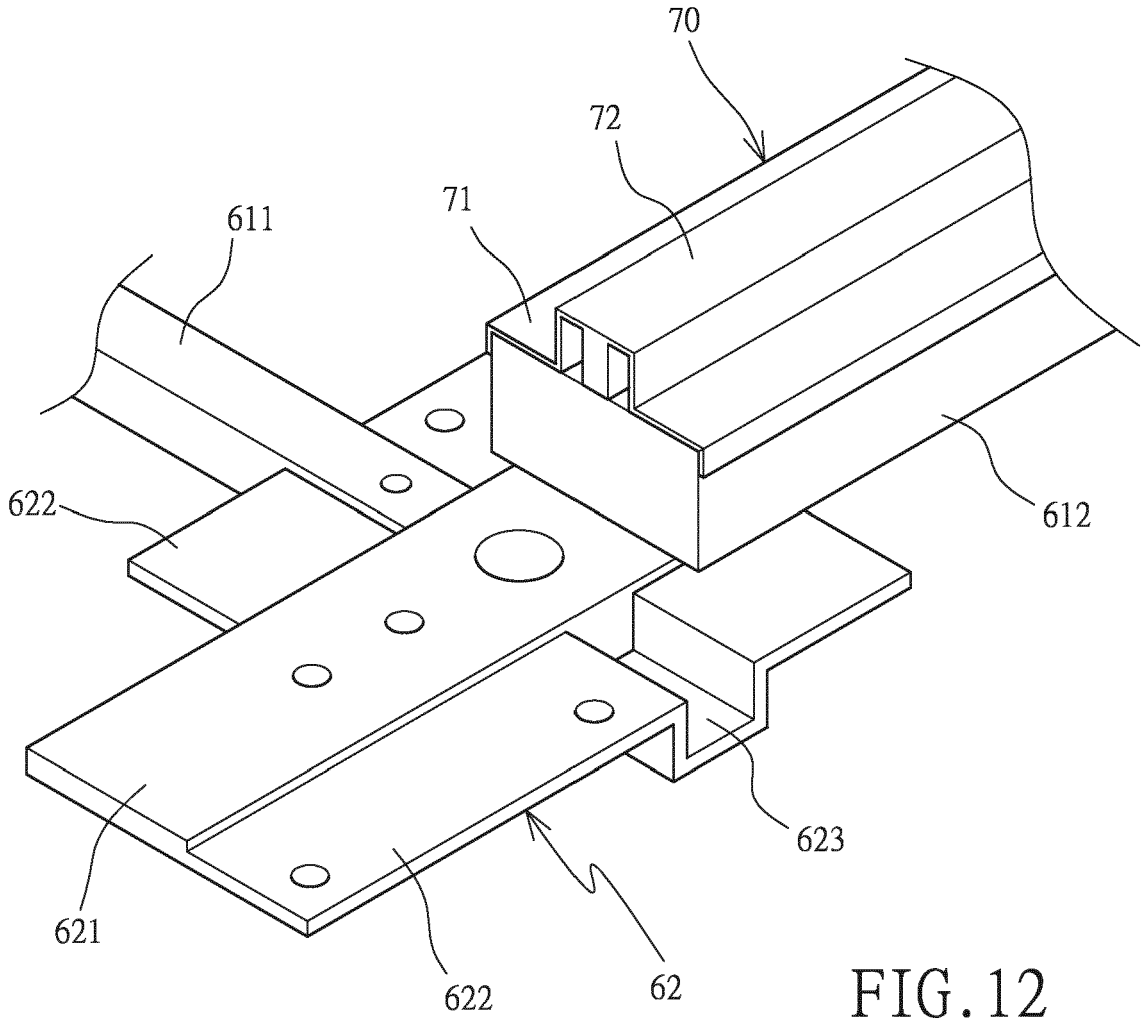

FIG. 12

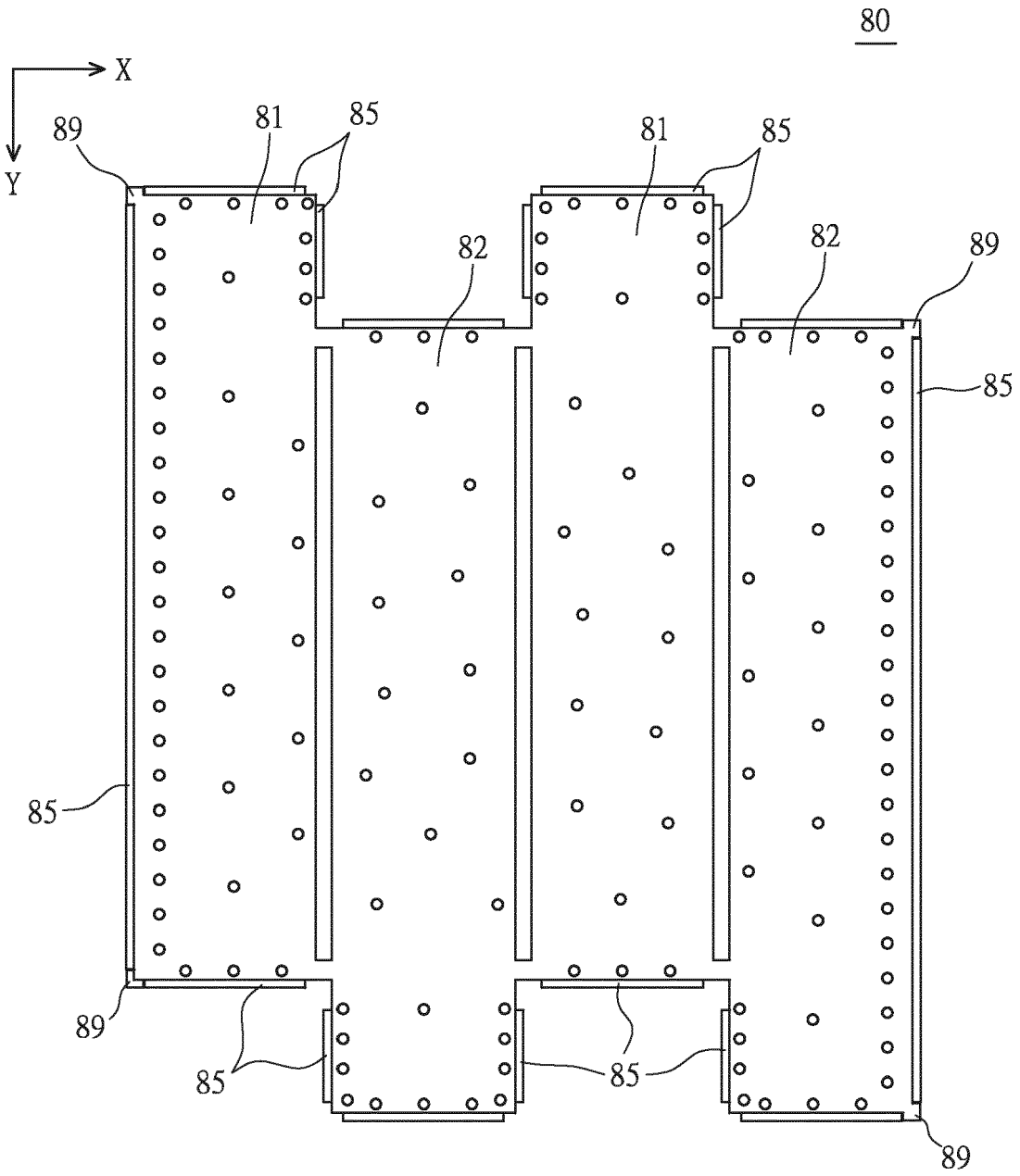

FIG. 13

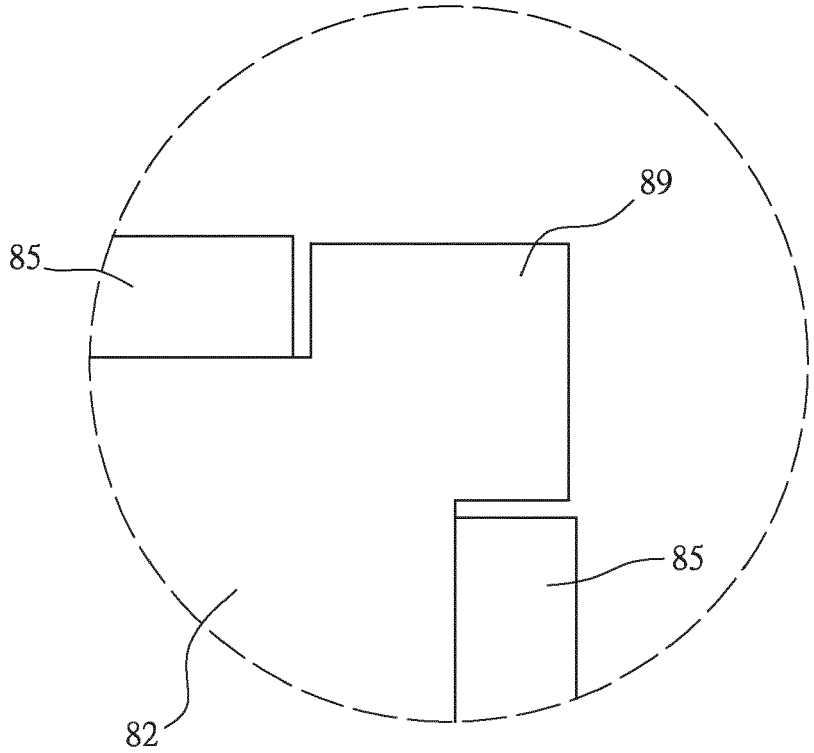

FIG. 14

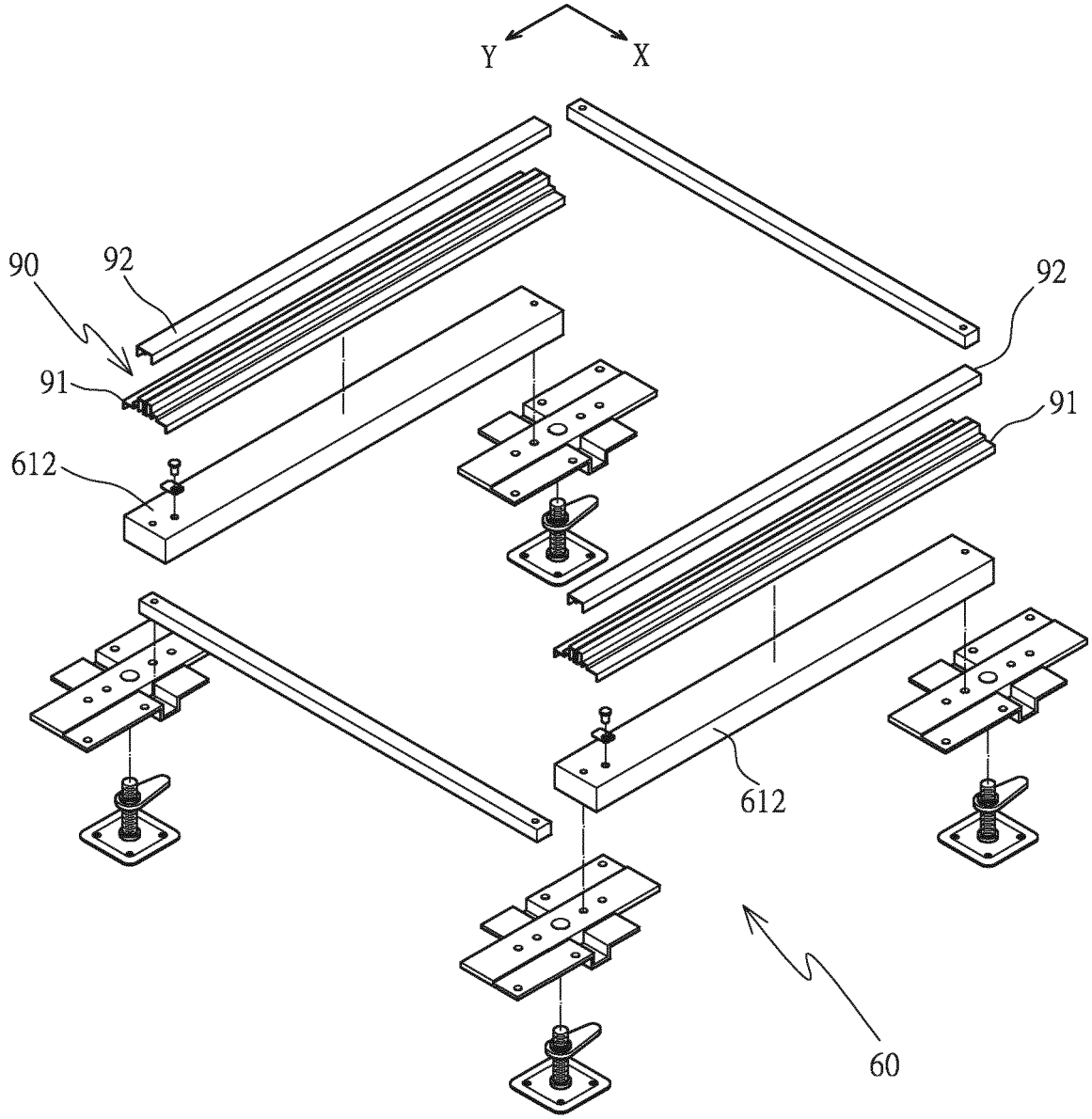

FIG. 15

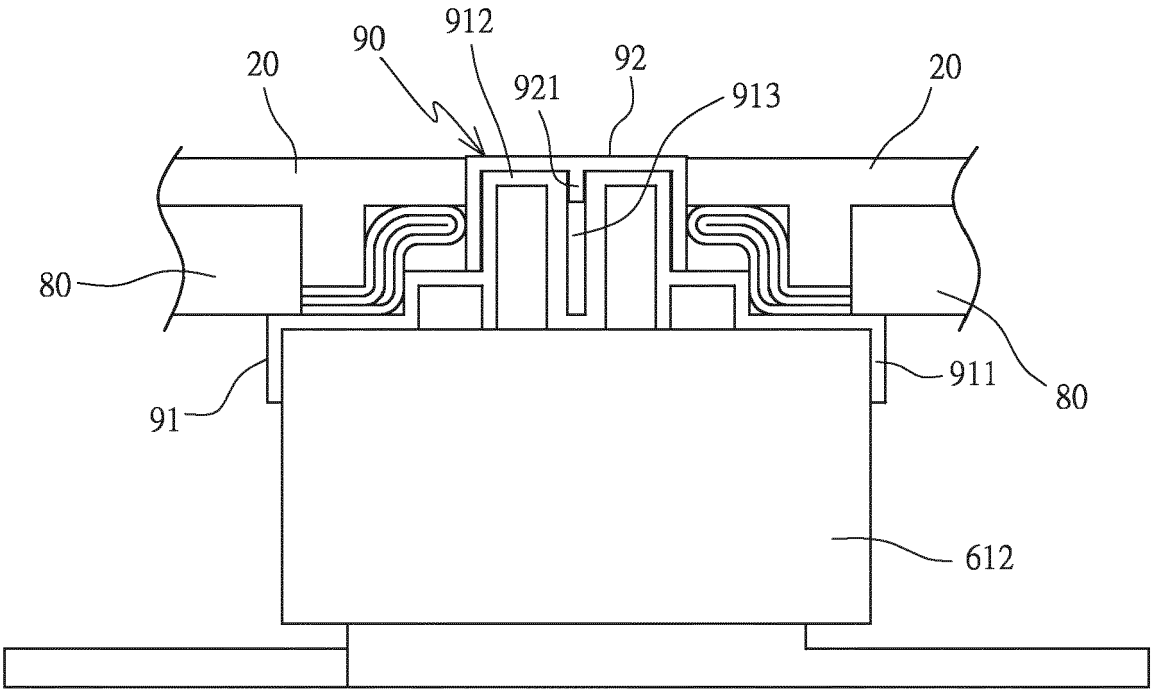

FIG. 16

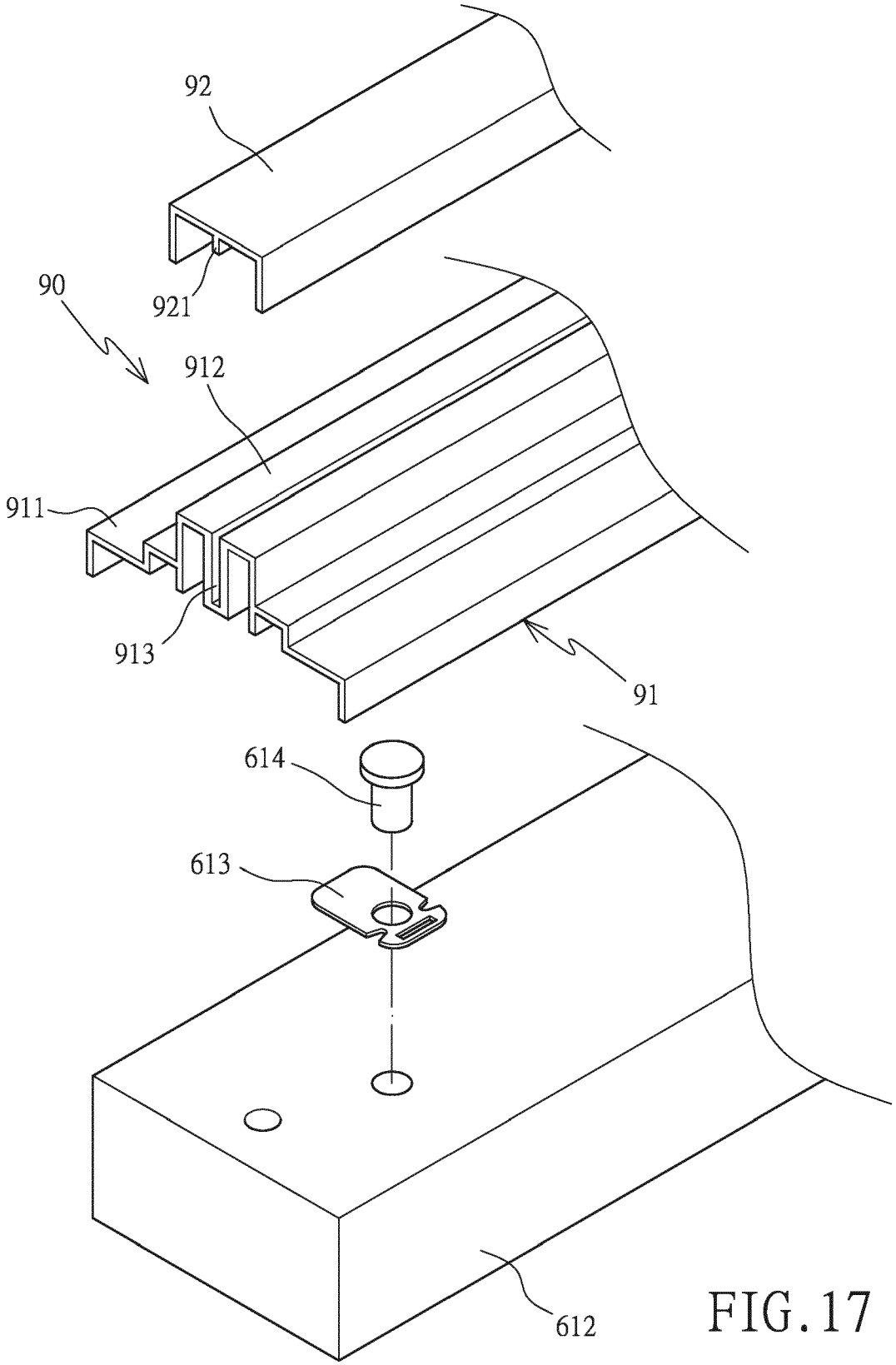

FIG. 17

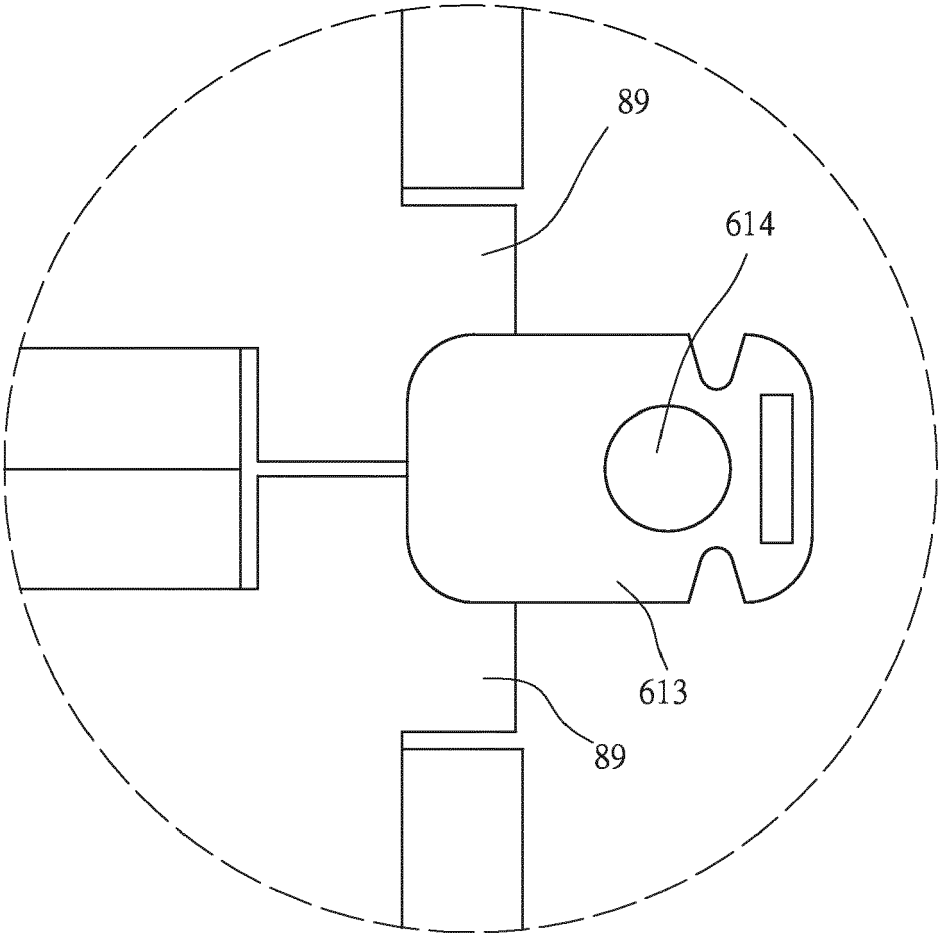

FIG. 18

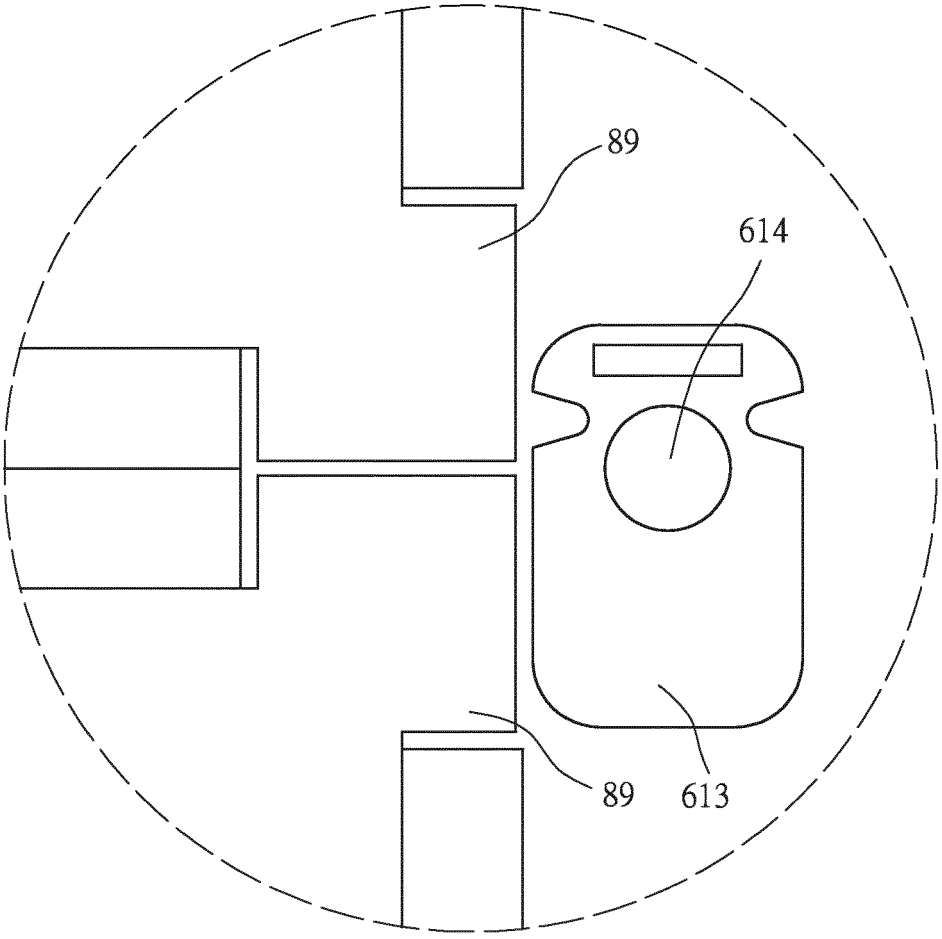

FIG. 19

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EUROPEAN SEARCH REPORT

Application Number
EP 19 18 3473

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Y	FR 2 635 134 A1 (OM KIKI KK [JP]) 9 February 1990 (1990-02-09) * figures 1,9 * * page 6, line 21 - line 36 * -----	5,6	TECHNICAL FIELDS SEARCHED (IPC) E04F
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	30 January 2020	Estorgues, Marlène

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