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(54) STAINLESS STEEL METAL FLOOR

(57) The utility model relates to a stainless steel metal floor, which is formed by the assembly of more than one substrate (1) and more than one floor edge trim identification strip (2), wherein the upper base surface of the substrate (1) is provided with protruding lines (11), a pair of adjacent right-angle edges is provided with a first substrate lug buckle (14) respectively, the other pair of adjacent right-angle edges is provided with a second substrate lug buckle (15) respectively, the second substrate lug buckle (15) is opened with a substrate taper hole (151) and a substrate straight hole (152) from top to bottom, the floor edge trim identification strip (2) comprises a first floor edge trim identification strip (21) and a second floor edge trim identification strip (22), the end part of one ends of the first and second floor edge trim identification strips is provided with an inward groove, the end part of the other ends of the first and second floor edge trim identification strips is provided with an outward buckle, the base surfaces of the first and second floor edge trim identification strips are further evenly provided with concave-convex strips and one sides thereof are further evenly provided with expansion screw holes along the length direction, one long side edge of the first floor edge trim identification strip (21) is provided with a first identification strip lug buckle (215), one long side edge of the second floor edge trim identification strip (22) is provided with a second identification strip lug buckle (225), and the second identification strip lug buckle (225) is provided with an identification strip straight hole (226) and an identification strip taper hole (227). The utility model is simple and reasonable in structure design, convenient in assembly, firm and reliable in connection and fine in antiskid effect.

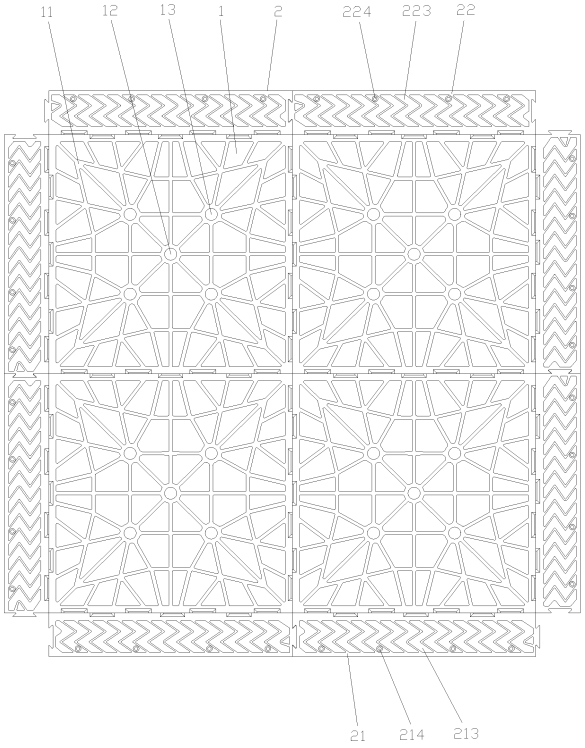

FIG. 1

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Description

Field Of The Invention

[0001] The utility model relates to a floor, and in particular to a stainless steel metal floor.

Background Of The Invention

[0002] Conventional single metal floor substrate has 9 counter bores (0.36 square meters), and is screwed up and connected with a cement base surface through expansion bolts and under the action of adhesives; customers think that products having no expansion bolt head on the surfaces are more beautiful than those having expansion bolt heads on the surfaces and the antiskid effect is better than that of previous products.

SUMMARY OF THE INVENTION

[0003] In view of the above problem, the utility model provides a stainless steel metal floor, which is simple and reasonable in structure design, convenient in assembly, firm and reliable in connection and fine in antiskid effect.

[0004] The utility model is realized through the following technical scheme:

[0005] the above stainless steel metal floor is formed by the assembly of more than one substrate and more than one floor edge trim identification strip; the substrate is a rectangular plate structure, the upper base surface of which is provided with protruding lines; a pair of adjacent right-angle edges of the substrate is provided with a first substrate lug buckle respectively, the other pair of adjacent right-angle edges is provided with a second substrate lug buckle respectively; both the first substrate lug buckle and the second substrate lug buckle are extended out along the outer side of the substrate horizontally; both the first substrate lug buckle and the second substrate lug buckle are formed by being bent upwards by 90 degrees first and then being bent outwards horizontally by 90 degrees; the second substrate lug buckle is opened with a substrate taper hole and a substrate straight hole from top to bottom; adjacent substrates are connected through the first substrate lug buckle and the second substrate lug buckle respectively and correspondingly, plus matched invisible expansion bolts; the floor edge trim identification strip comprises a first floor edge trim identification strip and a second floor edge trim identification strip which are of long-strip plate structures; the end part of one ends of the first and second floor edge trim identification strips along the length direction thereof is provided with an inward groove, the end part of the other ends of the first and second floor edge trim identification strips is provided with an outward buckle matched with the inward groove; the base surfaces of the first and second floor edge trim identification strips are further evenly provided with concave-convex strips and one sides thereof are further evenly provided with expansion screw holes along the length direction; the first and second floor edge trim identification strips are secured to the ground through the expansion screw holes plus expansion bolts; one long side edge of the first floor edge trim identification strip is provided with a first identification strip lug buckle matched with the first substrate lug buckle; the first identification strip lug buckle is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate; one long side edge of the second floor edge trim identification strip is provided with a second identification strip lug buckle matched with the second substrate lug buckle, the second identification strip lug buckle is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate; and all the second identification strip lug buckles are provided with an identification strip straight hole and an identification strip taper hole from top to bottom; the first and second floor edge trim identification strips are connected through the matching between the inward groove and the outward buckle.

[0006] Herein, for the stainless steel metal floor, the upper base surface of the protruding line and the concave base surface of the substrate have a height difference of 3.2mm; the protruding line comprises a straight protruding line and an arc protruding line; the central point of the substrate is an intersection point formed by the intersection of the straight protruding lines, the surrounding of the central point of the substrate has four intersection points formed by the intersection of the straight protruding lines and the arc protruding lines; all the intersection points are circular concave surfaces, which are flat with the upper base surface of the substrate.

[0007] Herein, for the stainless steel metal floor, a pair of adjacent right-angle edges of the substrate is provided with a group of three first substrate lug buckles respectively, and the other pair of adjacent right-angle edges is provided with a group of four second substrate lug buckles respectively.

[0008] Herein, for the stainless steel metal floor, one long side edge of the first floor edge trim identification strip is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with three first identification strip lug buckles.

[0009] Herein, for the stainless steel metal floor, one long side edge of the second floor edge trim identification strip is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with four second identification strip lug buckles.

[0010] Herein, for the stainless steel metal floor, the concave-convex strips are of Z-shaped structures, the concave Z shape is an identification surface, and the convex Z shape is an arc wear-resisting surface.

[0011] Herein, for the stainless steel metal floor, the first and second substrate lug buckles are bent upwards by 90 degrees first and then are bent outwards horizontally by 90 degrees to form a trapezoid having a height of 3.2mm.

[0012] Benefits:
the stainless steel metal floor provided by the utility model has a simple and reasonable structure design; during construction, it only needed to connect the substrate with a cement base surface by screwing up expansion bolts on the first substrate lug buckle and the second substrate lug buckle of the substrate and under the action of adhesives, and then trim the four edges of the substrate using the floor edge trim identification strip; the assembly connection is firm, reliable and beautiful.

BRIEF DESCRIPTION OF THE FIGURES

[0013]

FIG. 1 is a structure diagram of a stainless steel metal floor of the utility model;
FIG. 2 is a top view of a substrate of a stainless steel metal floor of the utility model;
FIG. 3 is a bottom view of a substrate of a stainless steel metal floor of the utility model;
FIG. 4 is a left view of a substrate of a stainless steel metal floor of the utility model;
FIG. 5 is a top view of a first floor edge trim identification strip of a stainless steel metal floor of the utility model; and
FIG. 6 is a top view of a second floor edge trim identification strip of a stainless steel metal floor of the utility model.

DETAILED DESCRIPTION OF THE INVENTION

[0014] As shown in FIG. 1 to FIG. 6, the stainless steel metal floor provided by the utility model is formed by the assembly of more than one substrate 1 and more than one floor edge trim identification strip 2.

[0015] Each substrate 1 is a rectangular structure, the upper base surface of which is provided with a plurality of protruding lines 11; the plurality of protruding lines 11 comprise straight protruding lines and arc protruding lines; the upper base surfaces of the plurality of protruding lines 11 and the concave base surface of the substrate 1 have a height difference of 3.2mm; the central point of the substrate 1 is a first intersection point 12 formed by the intersection of the straight protruding lines, the surrounding of the central point of the substrate 1 has four intersection points 13 formed by the intersection of the straight protruding lines and the arc protruding lines; the first intersection point 12 and the four second intersection points 13 all are circular concave surfaces, which are flat with the upper base surface of the substrate 1; during construction, the substrate is closely adhered to the ground under the action of metal adhesives.

[0016] A pair of adjacent right-angle edges of each substrate 1 is provided with a group of three first substrate lug buckles 14 respectively, and the other pair of adjacent right-angle edges is provided with a group of four second substrate lug buckles 15 respectively; both the first substrate lug buckle 14 and the second substrate lug buckle 15 are of rectangular block structures and are extended out along the outer side of the substrate 1 horizontally; herein, both the first substrate lug buckle 14 and the second substrate lug buckle 15 are bent upwards by 90 degrees first and then bent outwards horizontally by 90 degrees to form a trapezoid having a height of 3.2mm; meanwhile, each second substrate lug buckle 15 is opened with a substrate taper hole 151 and a substrate straight hole 152 from the upper base surface to the lower base surface; the smaller hole of one end of the substrate taper hole 151 has a diameter of 8.5 mm, and the bigger hole of the other end has a diameter of 11.5 mm; the substrate straight hole 152 has a diameter of 8.5 mm; adjacent substrates 1 are connected through the first substrate lug buckle 14 and the second substrate lug buckle 15 respectively and correspondingly, plus matched invisible expansion bolts.

[0017] The floor edge trim identification strip 2 comprises a first floor edge trim identification strip 21 and a second floor edge trim identification strip 22.

[0018] The first floor edge trim identification strip 21 is a rectangular structure overall; the end part of one end along the length direction thereof is provided with a first trapezoidal inward groove 211, the end part of the other end is provided with a first trapezoidal outward buckle 212 matched with the first inward groove 211; the base surface of the first floor edge trim identification strip 21 is further evenly provided with a plurality of first Z-shaped concave-convex strips 213; the concave Z shape of the first Z-shaped concave-convex strip 213 is an identification surface, and the convex Z shape is an arc wear-resisting surface (antiskid surface); one side of the first floor edge trim identification strip 21 is further evenly provided with four first expansion screw holes 214 along the length direction; the first edge trim identification strip 21 is secured to the ground through the four first expansion screw holes 214 plus expansion bolts; meanwhile, one long side edge of the first floor edge trim identification strip 21 is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with three first identification strip lug buckles 215; each first identification strip lug buckles 215 is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate 1.

[0019] The second floor edge trim identification strip 22 is a rectangular structure overall; the end part of one end along the length direction thereof is provided with a second trapezoidal inward groove 221, the end part of the other end is provided with a second trapezoidal outward buckle 222 matched with the second inward groove 221; the base surface of the second floor edge trim identification strip 22 is further evenly provided with a plurality of second Z-shaped concave-convex strips 223; the concave Z shape of the Z-shaped concave-convex strip 223 is an identification surface, and the convex Z shape is an arc wear-resisting surface (antiskid surface); one side of

the second floor edge trim identification strip 22 is further evenly provided with four second expansion screw holes 224 along the length direction; the second edge trim identification strip 22 is secured to the ground through the four second expansion screw holes 224 plus expansion bolts; meanwhile, one long side edge of the second floor edge trim identification strip 22 is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with four second identification strip lug buckles 225; each second identification strip lug buckles 225 is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate 1; each second identification strip lug buckle 225 is provided with an identification strip straight hole 226 and an identification strip taper hole 227 from top to bottom.

[0020] The utility model is simple and reasonable in structure design, convenient in assembly, firm and reliable in connection and fine in antiskid effect, and is suitable for popularization and application.

Claims

1. A stainless steel metal floor, **characterized in that**:
the floor is formed by the assembly of more than one substrate (1) and more than one floor edge trim identification strip (2);
the substrate (1) is a rectangular plate structure, the upper base surface of which is provided with protruding lines (11); a pair of adjacent right-angle edges of the substrate (1) is provided with a first substrate lug buckle (14) respectively, the other pair of adjacent right-angle edges is provided with a second substrate lug buckle (15) respectively; both the first substrate lug buckle (14) and the second substrate lug buckle (15) are extended out along the outer side of the substrate horizontally; both the first substrate lug buckle (14) and the second substrate lug buckle (15) are formed by being bent upwards by 90 degrees first and then being bent outwards horizontally by 90 degrees; the second substrate lug buckle (15) is opened with a substrate taper hole (151) and a substrate straight hole (152) from top to bottom; adjacent substrates are connected through the first substrate lug buckle (14) and the second substrate lug buckle (15) respectively and correspondingly, plus matched invisible expansion bolts;
the floor edge trim identification strip (2) comprises a first floor edge trim identification strip (21) and a second floor edge trim identification strip (22) which are of long-strip plate structures; the end part of one ends of the first and second floor edge trim identification strips along the length direction thereof is provided with an inward groove, the end part of the other ends of the first and second floor edge trim identification strips is provided with an outward buckle; the base surfaces of the first and second floor edge trim identification strips are further evenly provided with concave-convex strips and one sides thereof are further evenly provided with expansion screw holes along the length direction; the first and second floor edge trim identification strips are secured to the ground through the expansion screw holes plus expansion bolts;
one long side edge of the first floor edge trim identification strip (21) is provided with a first identification strip lug buckle (215) matched with the first substrate lug buckle (14); the first identification strip lug buckle (215) is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate; one long side edge of the second floor edge trim identification strip (22) is provided with a second identification strip lug buckle (225) matched with the second substrate lug buckle (15), the second identification strip lug buckle (225) is bent upwards by 90 degrees first and then is bent outwards horizontally by 90 degrees to be flat with the base surface of the substrate; and all the second identification strip lug buckles (225) are provided with an identification strip straight hole (226) and an identification strip taper hole (227) from top to bottom; the first and second floor edge trim identification strips are connected through the matching between the inward groove and the outward buckle.

2. The stainless steel metal floor according to claim 1, **characterized in that**: the upper base surface of the protruding line (11) and the concave base surface of the substrate (1) have a height difference of 3.2mm; the protruding line (11) comprises a straight protruding line and an arc protruding line; the central point of the substrate (1) is an intersection point formed by the intersection of the straight protruding lines, the surrounding of the central point of the substrate (1) has four intersection points formed by the intersection of the straight protruding lines and the arc protruding lines; all the intersection points are circular concave surfaces, which are flat with the upper base surface of the substrate (1).

3. The stainless steel metal floor according to claim 1, **characterized in that**: a pair of adjacent right-angle edges of the substrate (1) is provided with a group of three first substrate lug buckles (14) respectively, and the other pair of adjacent right-angle edges is provided with a group of four second substrate lug buckles (15) respectively.

4. The stainless steel metal floor according to claim 1, **characterized in that**: one long side edge of the first floor edge trim identification strip (21) is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with three first identification strip lug buckles (215).

5. The stainless steel metal floor according to claim 1, **characterized in that**: one long side edge of the second floor edge trim identification strip (22) is straight and the arris edge is a cambered surface, the other long side edge is evenly provided with four second identification strip lug buckles (225).

6. The stainless steel metal floor according to claim 1, **characterized in that**: the concave-convex strips are of Z-shaped structures, the concave Z shape is an identification surface, and the convex Z shape is an arc wear-resisting surface.

7. The stainless steel metal floor according to claim 1, **characterized in that**: the first and second substrate lug buckles are bent upwards by 90 degrees first and then are bent outwards horizontally by 90 degrees to form a trapezoid having a height of 3.2mm.

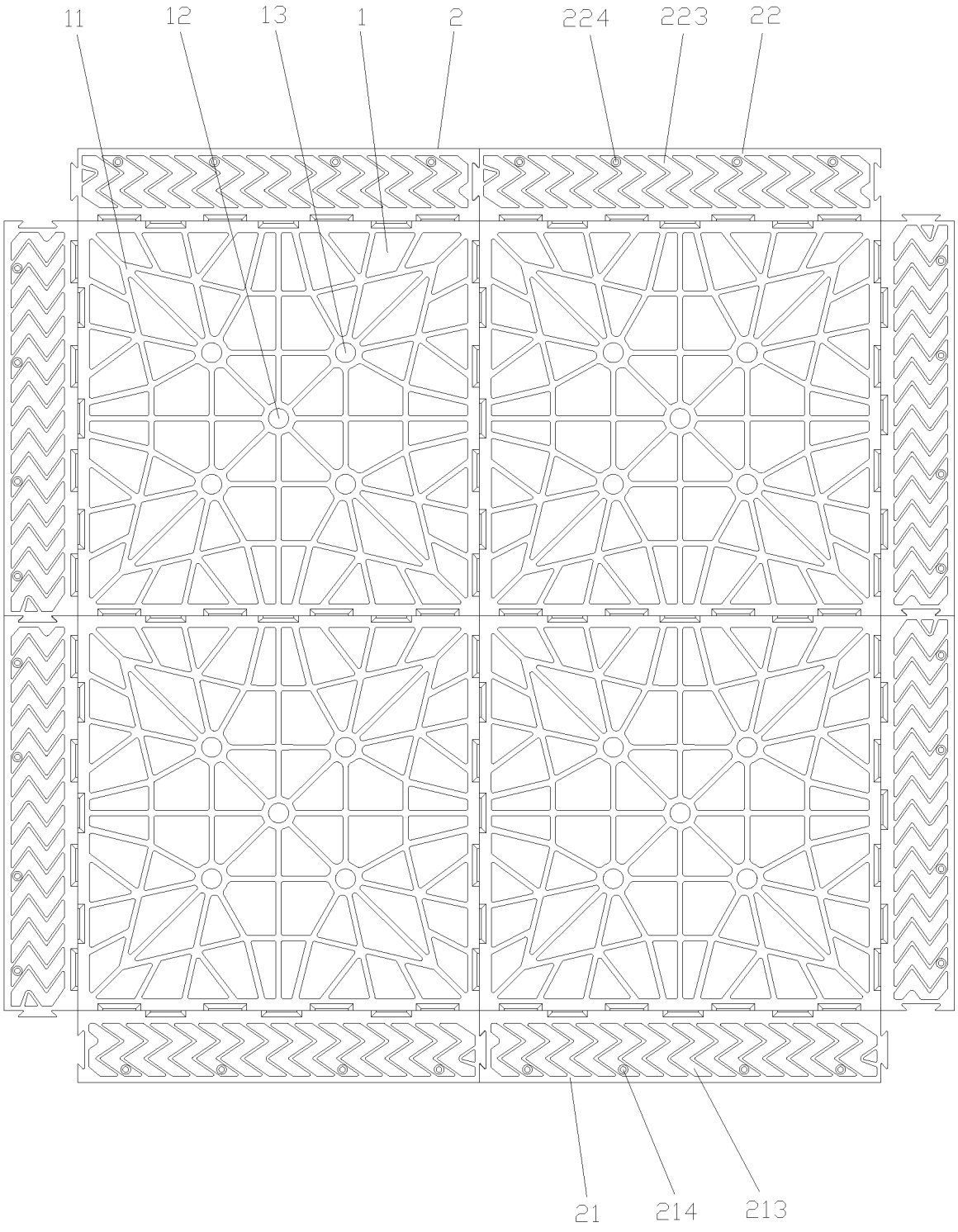

FIG. 1

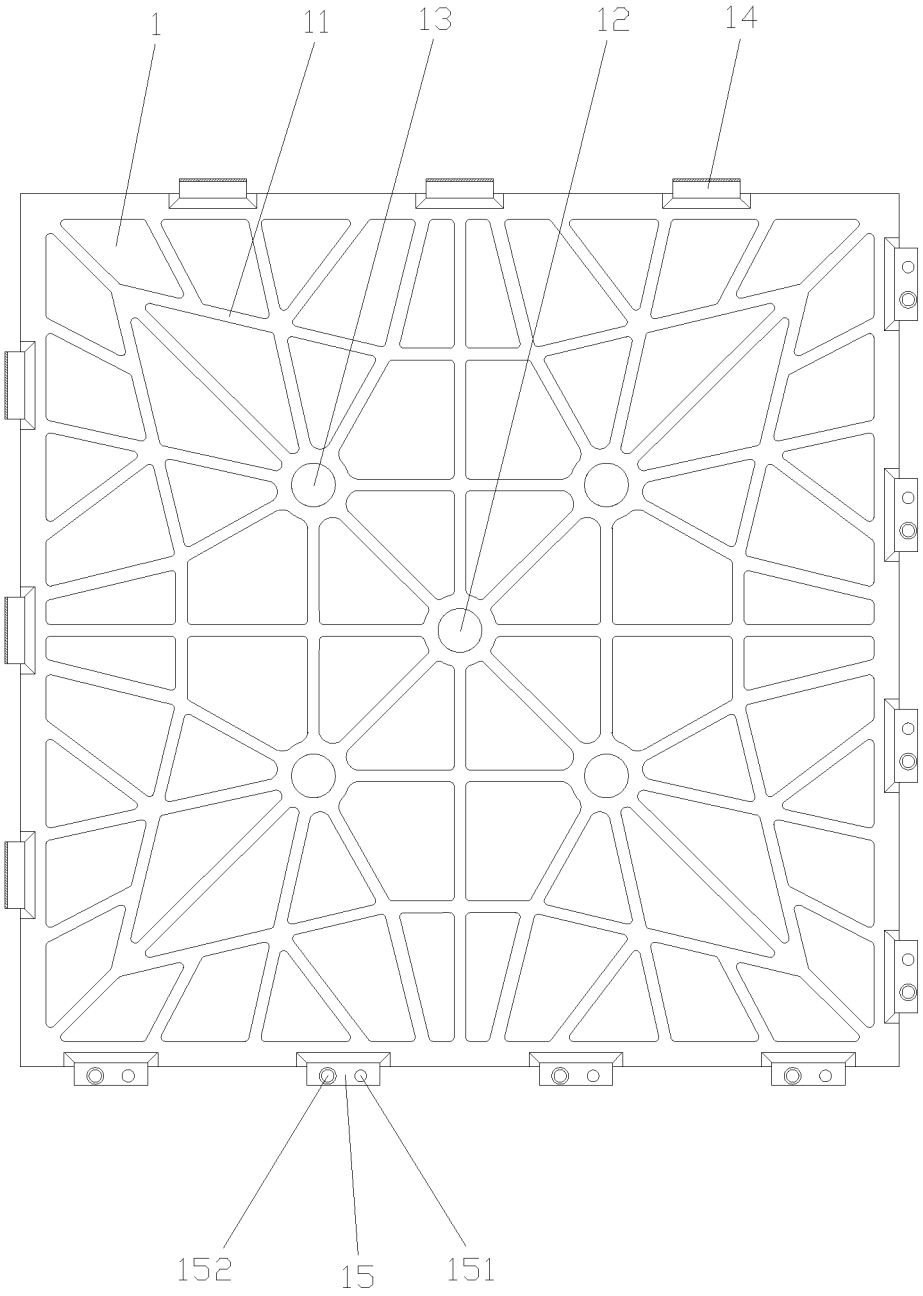

FIG. 2

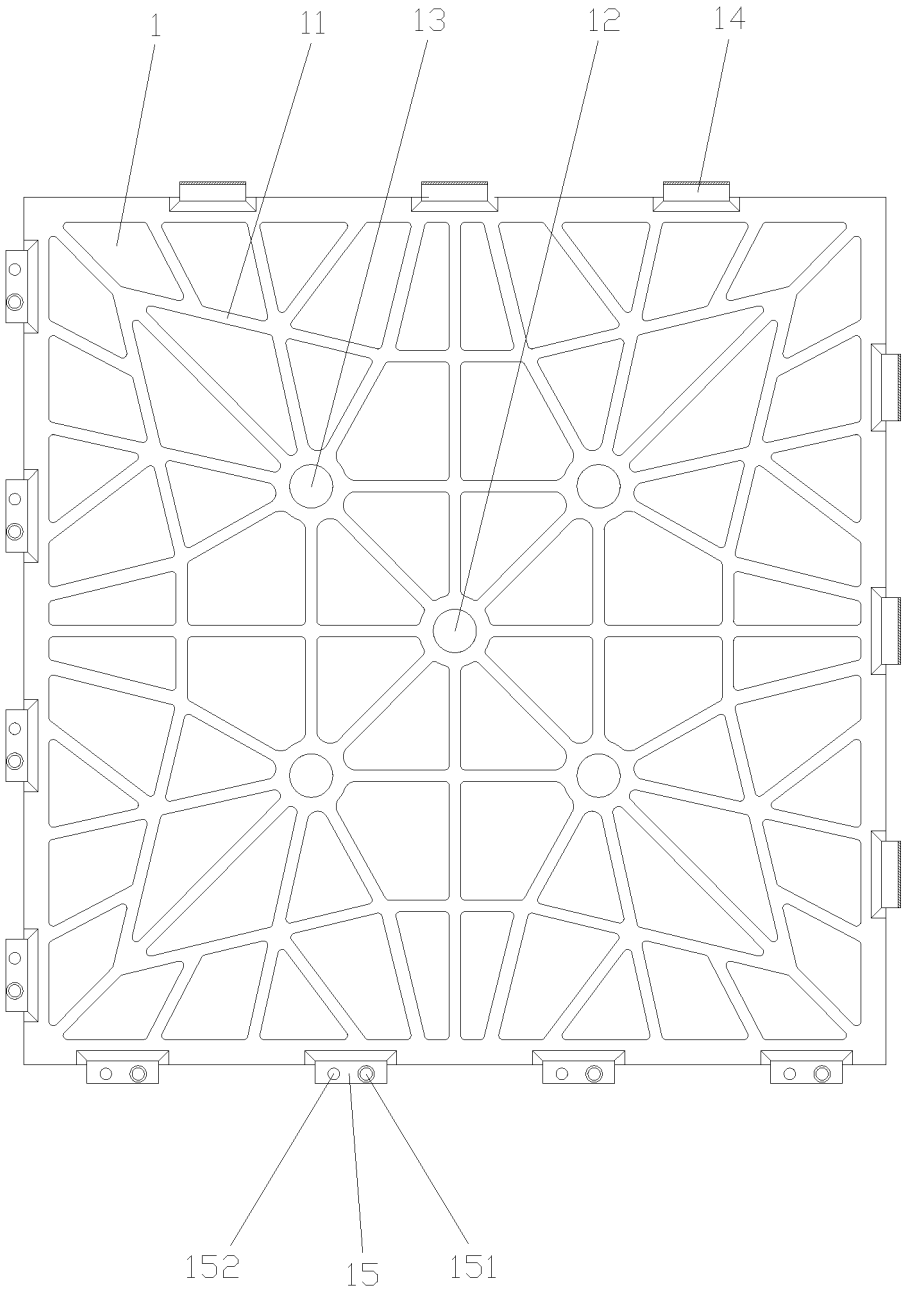

FIG. 3

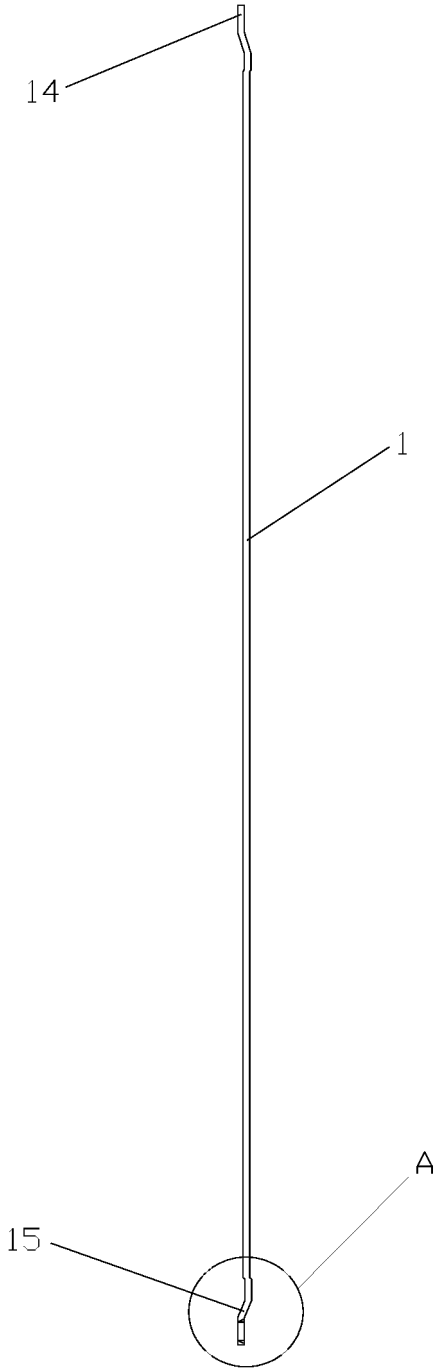

FIG. 4

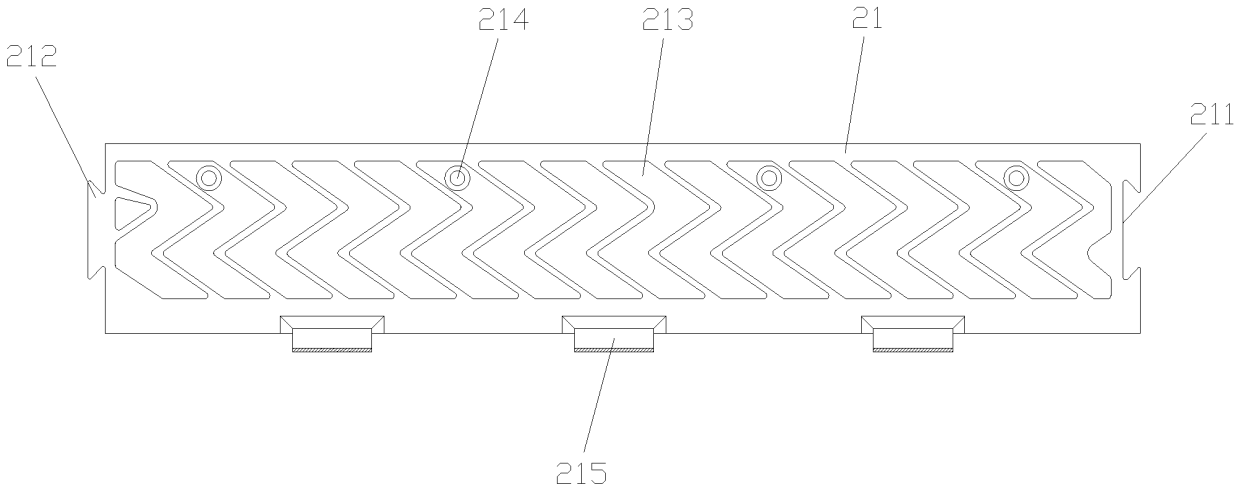

FIG. 5

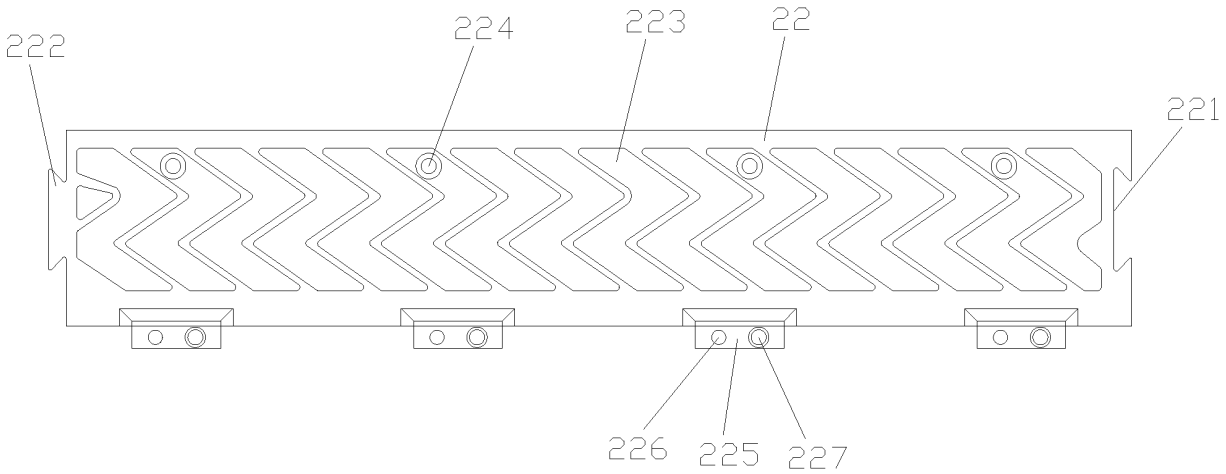

FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2017/087577

A. CLASSIFICATION OF SUBJECT MATTER

E04F 15/06 (2006.01) i

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)

E04F

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

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

CNABS, CPRSABS, SIPOABS, EPODOC, WPI, CNKI: invisible; metal, metallic, floor, flooring, bolt, screw, hole, fold, bend, press, stress, strip, hidden, hiding, buckle, overlap, taper, cone, fastigiate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 105863213 A (HUBEI YONGYI METAL FLOORING CO., LTD.), 17 August 2016 (17.08.2016), claims 1-7	1-7
PX	CN 205955125 U (HUBEI YONGYI METAL FLOORING CO., LTD.), 15 February 2017 (15.02.2017), claims 1-7	1-7
A	CN 2126268 U (HUANG, Zengxin), 30 December 1992 (30.12.1992), description, page 1, line 10 to page 3, line 4, and figures 1-2	1-7
A	CN 204510732 U (HUBEI YONGYI METAL FLOORING CO., LTD.), 29 July 2015 (29.07.2015), the whole document	1-7
A	CN 202882328 U (GUANGXI CONSTRUCTION ENGNEERING GROUP NO. 3 CONSTRUCTION ENGINEERING CO., LTD.), 17 April 2013 (17.04.2013), the whole document	1-7
A	CN 202627418 U (HUBEI YONGYI METAL FLOORING CO., LTD.), 26 December 2012 (26.12.2012), the whole document	1-7
A	DE 102007022172 A1 (LEHR, M.), 13 November 2008 (13.11.2008), the whole document	1-7

☐ 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

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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
03 August 2017 (03.08.2017)	**23 August 2017 (23.08.2017)**
Name and mailing address of the ISA/CN: State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088, China Facsimile No.: (86-10) 62019451	Authorized officer **ZHANG, Baocheng** Telephone No.: (86-10) **62084898**

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2017/087577

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 105863213 A	17 August 2016	None	
CN 205955125 U	15 February 2017	None	
CN 2126268 U	30 December 1992	None	
CN 204510732 U	29 July 2015	None	
CN 202882328 U	17 April 2013	None	
CN 202627418 U	26 December 2012	None	
DE 102007022172 A1	13 November 2008	None	

Form PCT/ISA/210 (patent family annex) (July 2009)