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(54) **ASSEMBLED EARLY-REMOVAL BUILDING FORMWORK SYSTEM AND ERECTING METHOD THEREOF**

(57) The present invention is applicable to construction engineering technical field, providing an assembling and dismantling-beforehand structural template system and a construction method thereof. In this template system, a first standard interior-wall template is close to an internal-corner of a building structure, a first non-standard exterior-wall template is close to an external-corner of the building structure, so that a first vertical pair wire-drawing bar group is closer to the corner position of the building structure, improving the template stress state of the corner part of the building structure. There is no need for a second standard interior and exterior-wallboard to open interactive wiredrawing bar holes. The horizontal spacing and the height spacing of interactive wiredrawing bar group are fixed, standardized, and serialized, thus reducing the processing difficulty and cost of the template. Meanwhile, holes don't need to change their location repeatedly, improving the template turnover rate, extending the template service life, and reducing costs. The construction formed by the bottom angle plate, the first and second vertical internal-corner templates and the interior-wallboard enhances the structural rigidity of the template system, simplifies the horizontal mode calibra-

tion procedure of the interior-wallboard in advance, and improves the building efficiency of the template system.

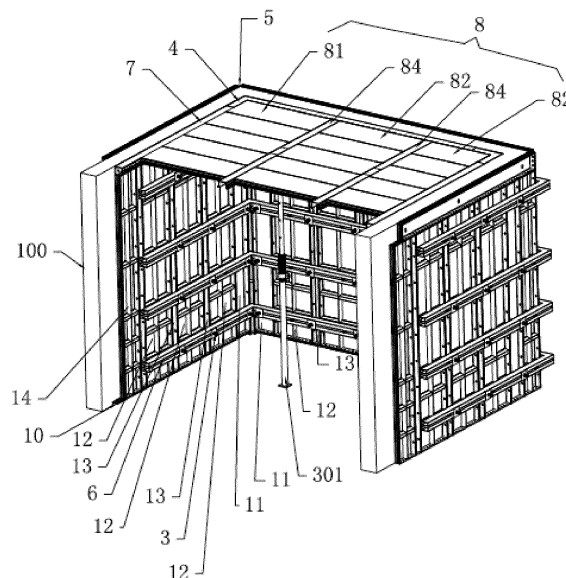


FIG. 1

Description

Field of the Invention

[0001] The invention relates to construction engineering technical field, and in particular relates to an assembling and dismantling-beforehand structural template system and construction method thereof.

Background of the Invention

[0002] With the development of the construction, the proportion of high-rise cast-in-place concrete structure is growing, and the template system has become the tool or equipment often used in the building work. In the assembling and dismantling-beforehand template system, it mainly comprises interior and exterior-wallboards arranged on the vertical plane at intervals, and floor boards arranged on horizontal plane, concreting into interior and exterior-wallboards to form walls, concreting into floor boards to form floors. In the structural template system, there are several via-holes in the vertical direction of wallboards, and the via-holes of the interior and exterior-wallboards are set correspondingly. Having the pair wiredrawing bar group cross through the via-holes can make a fixed connection between two wallboards. After concreting, the smaller spacing of via-holes on the wallboards leads to the bigger mounted interactive wiredrawing bar group, so as to better withstand the side pressure of the concrete. Due to gravity force, the extrusion pressure of the concrete on the wall bottom template is greater than the extrusion pressure on the templates corresponding to other places of the wall. Therefore, the density of via-holes on the template corresponding to the wall bottom is greater, so there must be more pair wiredrawing bar groups mounted in a certain range to withstand the side pressure of the concrete. At the top of the wall, due to the weight of the floor concrete, the floor template system also needs to have stable structure strength, to avoid problems like crack in the floor. In the existing structural template system, the widths of wallboards are the same. When being placed, wallboards are successively placed from one direction to another direction, until the remaining space is not big enough to place one wallboard, then wallboards with another width can be placed. However, when the height or thickness of the wall changes, the extrusion pressure from the wall and the floor to the wallboard also changes. The greater height or thickness of the wall causes more problems like cracks in the wall corner position and the floor. Therefore, there is a need to adjust the via-hole spacing on the wallboard according to specific situations. One solution is to fill old via-holes on the wallboard and then open new via-holes. But this solution will damage the template and cost a lot of labor and materials to fill old via-holes and open new via-holes, thus increasing the cost of labor and materials and delaying construction schedule. Of course, we can make the width of each wallboard small enough to reduce the

via-hole distance on two wallboards in the horizontal direction, or make the hole spacing in the vertical direction small enough to mount more interactive wiredrawing bar groups and obtain enough force to withstand the extrusion pressure from the higher wall concrete to the wallboard. However, it needs to mount a lot of pair wiredrawing bar groups, which also cost a lot of labor and materials.

[0003] Furthermore, in the existing template system, the bottom surface of each interior-wallboard is pre-assembled in factory to connect with one bottom angle plate. The length of each bottom angle plate is the same with the length of the connected interior-wallboard bottom surface, and there is no connection between two adjacent bottom angle plates, so that the overall structural rigidity of the template system cannot be enhanced.

Summary of the Invention

[0004] The technical problem that the present invention solves is to provide an assembling and dismantling-beforehand structural template system and construction method thereof. It aims to solve problems of the existing assembling and dismantling-beforehand structural template system, such as damaged templates, high cost of labor and material, delayed construction schedule and the overall structural rigidity of the template system that cannot be enhanced.

[0005] The present invention is achieved by providing an assembling and dismantling-beforehand structural template system, comprising a vertical structural template system, a horizontal structural template system and a support system; the vertical structural template system comprises an interior-wallboard, an exterior-wallboard, an interactive wiredrawing bar group, a vertical internal-corner template, a vertical external-corner template and a back beam, the back beam is horizontally mounted at the relative position of the interior and exterior-wallboards, the vertical internal-corner template is mounted at the internal-corner of the building structure, the vertical external-corner template is mounted at the external-corner of the building structure, the adjacent two sides of the vertical internal-corner template both have connectors, the adjacent two sides of the vertical external-corner template also both have connectors; wherein the interior-wallboard comprises a first standard interior-wallboard, a second standard interior-wallboard, a third standard interior-wallboard and a non-standard interior-wallboard, the exterior-wallboard comprises a first standard exterior-wallboard, a second standard exterior-wallboard, a third standard exterior-wallboard, a first non-standard exterior-wallboard and a second non-standard exterior-wallboard; the width of the second standard interior-wallboard is greater than the width of the non-standard interior-wallboard, and the width of the second standard exterior-wallboard is greater than the width of the second non-standard exterior-wallboard; the vertical internal-corner template comprises a first ver-

tical internal-corner template and a second vertical internal-corner template which are top and bottom docked, the first and second vertical internal-corner templates are detachably connected with each other; the horizontal structural template system comprises a bottom angle plate; two connectors of the second vertical internal-corner template are detachably connected to ends of one bottom angle plate, two connectors of the first vertical internal-corner template are detachably connected to one first standard interior-wallboard, the bottom surfaces of the first standard interior-wallboard, the second standard interior-wallboard, the third standard interior-wallboard and the non-standard interior-wallboard are all detachably connected to one bottom angle plate; two connectors of the vertical external-corner template are detachably connected to one side of one first non-standard exterior-wallboard, another side of two first non-standard exterior-wallboards are detachably connected to one first standard exterior-wallboard;

the first standard interior-wallboard, the third standard interior-wallboard, the first standard exterior-wallboard and the third standard exterior-wallboard all have via-holes, and the via-hole position of the first standard interior-wallboard is corresponding to the via-hole position of the first standard exterior-wallboard, the via-hole position of the third standard interior-wallboard is corresponding to the via-hole position of the third standard exterior-wallboard, the interactive wiredrawing bar group crosses through two opposite via-holes and two opposite back beams of the interior and exterior-wallboards.

[0006] Furthermore, the horizontal structural template system further comprises horizontal and vertical internal-corner template and a floor template, the floor template comprises a first standard floor template, a second standard floor template, a non-standard floor template and a keel, the support system comprises an adjustable support bar and a meteor hammer; one side of the horizontal and vertical internal-corner template is detachably connected to the top of the interior-wallboard, another side of the horizontal and vertical internal-corner template is detachably connected to one side of the floor template, the keel is detachably connected between two opposite horizontal and vertical internal-corner templates, the keel is set along the length direction of the horizontal and vertical internal-corner template at intervals, its length direction is parallel with the width direction of the floor template; the first standard floor template is connected between the horizontal and vertical internal-corner template and the keel, the second standard floor template and the non-standard floor template are detachably connected between two adjacent keels, the meteor hammer is connected between two adjacent keels, the top of the adjustable support bar is detachably connected to the meteor hammer, and the bottom of the adjustable support bar is in contact with the floor.

[0007] Furthermore, the width of the first non-standard exterior-wall template is equal to the sum of the width of the vertical internal-corner template and the thickness of

the wall.

[0008] Furthermore, one side of the first standard interior-wallboard is detachably connected to the first vertical internal-corner template, and another side is detachably connected to one side of the second standard interior-wallboard.

[0009] Furthermore, the third standard interior-wallboard is detachably connected between the adjacent second standard interior-wallboards or at two sides of the non-standard interior-wallboard, the positions of the first, second, and third standard exterior-wallboards are respectively corresponding to the positions of the first, second, and third standard interior-wallboards.

[0010] Furthermore, one end of the first standard floor template is detachably connected to the horizontal internal-corner template, and another end is detachably connected to the keel.

[0011] Furthermore, the second standard floor template and non-standard floor template are between two adjacent keels, and two ends of the second standard floor template and the non-standard floor template are detachably connected to the keel.

[0012] Furthermore, a vertical central plane of two spaced adjacent third standard interior-wallboards coincides with a central plane of the keel.

[0013] Furthermore, the detachable connection is pin or bolt connection.

[0014] Furthermore, the present invention also provides a construction method of the assembling and dismantling-beforehand structural template system, comprising following steps:

- a, placing one second vertical internal-corner template at the internal-corner of the building structure, and connecting two connectors to ends of one bottom angle plate, until the bottom angle plate and the second vertical internal-corner template together form a closed frame construction;
- b, docking the first vertical internal-corner template on the second vertical internal-corner template, connecting one first standard interior-wallboard on the connector of the first vertical internal-corner template toward the central direction of the wall plane;
- c, connecting one second standard interior-wallboard on the side of the first standard interior-wallboard toward the central direction of the wall plane;
- d, connecting one third standard interior-wallboard on the side of the second standard interior-wallboard toward the central direction of the wall plane, and connecting one second standard interior-wallboard on the sides of two third standard interior-wallboards toward the central direction of the wall plane;
- e, repeating the step d, until the gap between two adjacent third standard interior-wallboards is less than the width of the second standard interior-wallboard, then connecting one non-standard interior-wallboard according to the specific width of the gap;
- f, connecting all the bottom surfaces of the first stand-

ard interior-wallboard, the second standard interior-wallboard, the third standard interior-wallboard and the non-standard interior-wallboard to one bottom angle plate;

g, placing one vertical external-corner template at the external-corner of the building structure, and connecting one first non-standard exterior-wallboard on the connector of the vertical external-corner template toward the central direction of the wall plane; h, mounting the first, second, and third standard exterior-wallboards at the corresponding exterior-wall places of the first, second, and third standard interior-wallboards;

i, until the gap between the third standard exterior-wallboard adjacent to the exterior-wall plane is less than the width of the second standard exterior-wallboard, connecting one second non-standard exterior-wallboard according to the specific width of the gap, completing the connection of one wall template; then completing the connection of other wall templates with the same connection method;

j, mounting the back beam and the interactive wiredrawing bar group in the corresponding via-holes of the interior and exterior-wallboards;

k, mounting the horizontal internal-corner template on the top of the interior-wallboard, mounting the keel between two opposite horizontal internal-corner templates and aligning the keel to the vertical plane of the third standard interior-wallboard, mounting the adjustable support bar at intervals along the length direction under each keel, mounting the meteor hammer between two adjacent keels, connecting the top of the adjustable support bar to the meteor hammer, and connecting the bottom of the adjustable support bar to the floor;

l, connecting the first standard floor template at the gap between the keel and the horizontal internal-corner template;

m, in the direction from the floor to the centre thereof, connecting the second standard floor template between two adjacent keels;

n, repeating the step m, until the gap width of two adjacent keels is less than the length of the second standard floor template, then connecting the non-standard floor template according to the specific width of the gap.

[0015] Compared with the prior art, the benefits of the present invention are: the first standard interior-wall template of the present invention can be detachably connected to the internal-corner close to the building structure, and the first non-standard exterior-wall template can be detachably connected to the external-corner close to the building structure, so that the first vertical interactive wiredrawing bar group is closer to the corner position of the building structure, greatly improving the template stress state of the corner part of the building structure. There is no need for the second standard interior and exterior-

wallboards of the present template system to open interactive wiredrawing bar holes. In this template system, the horizontal spacing and the height spacing of the interactive wiredrawing bar group are fixed, standardized, and serialized, thus reducing the processing difficulty and cost of the template. Meanwhile, holes don't need to change their location repeatedly, improving the template turnover rate, extending the template service life, and greatly reducing the overall cost of the structural template. Meanwhile, the closed frame formed by the bottom angle plate and the second vertical internal-corner template as well as the integral structure of all interior-wallboards of the wall through the bottom angle plate and the first vertical internal-corner template greatly enhance the overall structural rigidity of the template system. Furthermore, the plane frame formed by the bottom angle plate and the second vertical internal-corner template simplifies the horizontal mode calibration procedure of the interior-wallboard in advance, and improves the building efficiency of the template system.

Brief Description of the Drawings

[0016]

Fig. 1 is a partial three-dimensional schematic diagram of concreting an assembling and dismantling-beforehand structural template system to form a wall, according to the embodiment of the present invention.

Fig. 2 is a vertical cross-section schematic diagram of concreting an assembling and dismantling-beforehand structural template system to form a wall, according to the embodiment of the present invention.

Fig. 3 is a horizontal cross-sectional schematic diagram of Fig. 2.

Fig. 4 is a partial enlargement schematic diagram of Fig. 3.

Fig. 5 is a top view schematic diagram of Fig. 2.

Fig. 6 is a schematic diagram of the mounting relation among the second vertical internal-corner template, the bottom angle plate, and the first vertical internal-corner template of the assembling and dismantling-beforehand structural template system in Fig. 1.

Detailed Description of the Embodiments

[0017] To clarify the technical problem solved by the present invention, technical scheme and its beneficial effects, the present invention is further described in details in conjunction with the accompanying drawings and embodiments. It should be understood that the specific embodiment described here is merely used to explain general principles of the invention, instead of limiting the scope of the invention.

[0018] As shown in Fig. 1 to Fig. 5, according to one preferred embodiment of the present invention, an assembling and dismantling-beforehand structural tem-

plate system comprises a vertical structural template system, a horizontal structural template system, and a support system.

[0019] The vertical structural template system comprises an interior-wallboard 1, an exterior-wallboard 2, an interactive wiredrawing bar group 3, a vertical internal-corner template 4, a vertical external-corner template 5 and a back beam 6.

[0020] The back beam 6 is horizontally mounted at the relative position of the interior and exterior-wallboards 1, 2. The vertical internal-corner template 4 is mounted at the internal-corner of the building structure. The vertical external-corner template 5 is mounted at the external-corner of the building structure. Two adjacent sides of the vertical internal-corner template 4 both have connectors 41, and two adjacent sides of the vertical external-corner template 5 also both have connector 51.

[0021] The interior-wallboard 1 comprises a first standard interior-wallboard 11, a second standard interior-wallboard 12, a third standard interior-wallboard 13 and a non-standard interior-wallboard 14. The exterior-wallboard 2 comprises a first standard exterior-wallboard 21, a second standard exterior-wallboard 22, a third standard exterior-wallboard 23, a first non-standard exterior-wallboard 24 and a second non-standard exterior-wallboard 25. The width of the second standard interior-wallboard 12 is greater than the width of the non-standard interior-wallboard 14, and the width of the second standard exterior-wallboard 22 is greater than the width of the second non-standard exterior-wallboard 25.

[0022] In particular, the vertical internal-corner template 4 comprises a first vertical internal-corner template 40a and a second vertical internal-corner template 40b which are top and bottom docked. The first and second vertical internal-corner templates 40a, 40b are detachably connected. The horizontal structural template system comprises a bottom angle plate 10; two connectors 401b of the second vertical internal-corner template 40b are detachably connected to ends of one bottom angle plate 10.

[0023] Two connectors 401a of the first vertical internal-corner template 40a are detachably connected to one first standard interior-wallboard 11. The bottom surfaces of the first standard interior-wallboard 11, the second standard interior-wallboard 12, the third standard interior-wallboard 13 and the non-standard interior-wallboard 14 are all detachably connected to one bottom angle plate 10. Two connectors 51 of the vertical external-corner template 5 are detachably connected to one side of one first non-standard exterior-wallboard 24. Another side of two first non-standard exterior-wallboards 24 are detachably connected to one first standard exterior-wallboard 21.

[0024] The first standard interior-wallboard 11, the third standard interior-wallboard 13, the first standard exterior-wallboard 21 and the third standard exterior-wallboard 23 all have via-holes (not shown in figures). The via-hole position of the first standard interior-wallboard

11 is corresponding to the via-hole position of the first standard exterior-wallboard 21, and the via-hole position of the third standard interior-wallboard 13 is corresponding to the via-hole position of the third standard exterior-wallboard 23. The interactive wiredrawing bar group 3 crosses through two opposite via-holes and two opposite back beams 6 of the interior and exterior-wallboards 1, 2.

[0025] The above horizontal structural template system further comprises a horizontal and vertical internal-corner template 7 and a floor template 8. The floor template 8 comprises a first standard floor template 81, a second standard floor template 82, a non-standard floor template 83 and a keel 84. The support system comprises an adjustable support bar 301 and a meteor hammer (not shown in figures).

[0026] One side of the horizontal and vertical internal-corner template 7 is detachably connected to the top of the interior-wallboard 1, and another side is detachably connected to one side of floor template 8. The keel 84 is detachably connected between two opposite horizontal and vertical internal-corner templates 7. The keel 84 is set along the length direction of the horizontal and vertical internal-corner template 7 at intervals; its length direction is parallel with the width direction of the floor template 8.

The first standard floor template 81 is connected between horizontal and vertical internal-corner template 7 and the keel 84. The second standard floor template 82 and non-standard floor template 83 are detachably connected to two adjacent keels 84. The meteor hammer is connected between two adjacent keels 84. The top of the adjustable support bar 301 is detachably connected to the meteor hammer, and the bottom of the adjustable support bar 301 is in contact with the floor 200.

[0027] The width of the first non-standard exterior-wall template 24 is equal to the sum of the width of the vertical internal-corner template 4 and the thickness of the wall 100. One side of the first standard interior-wallboard 11 is detachably connected to the vertical internal-corner template 4, and another side is detachably connected to one side of the second standard interior-wallboard 12. The third standard interior-wallboard 13 is detachably connected between the adjacent second standard interior-wallboards 12 or two sides of the non-standard interior-wallboard 14. The positions of the first, second, and third standard exterior-wallboards 21, 22, 23 are respectively corresponding to the positions of the first, second, and third standard interior-wallboards 11, 12, 13. One end of the first standard floor template 81 is detachably connected to the horizontal internal-corner template 4, and another end is detachably connected to the keel 84.

[0028] The second standard floor template 82 and the non-standard floor template 83 are between two adjacent keels 84. Two ends of the second standard floor template 82 and the non-standard floor template 83 are detachably connected to the keel 84. A vertical central plane of two spaced adjacent third standard interior-wallboards 13 coincides with a central plane of the keel 84.

[0029] In this embodiment, the above-mentioned "de-

tachable connection" is pin or bolt connection.

[0030] In this embodiment, the first standard interior-wall template 11 can be detachably connected to an internal-corner close to the building structure, and the first non-standard exterior-wall template 24 can be detachably connected to an external-corner close to the building structure, so that the first vertical interactive wiredrawing bar group 3 is closer to the corner position of the building structure, greatly improving the template stress state of the corner part of the building structure. In this template system, there is no need for the second standard interior and exterior-wallboards 12, 22 to open interactive wiredrawing bar holes. In this template system, the horizontal spacing and the height spacing of the interactive wiredrawing bar group 3 are fixed, standardized, and serialized, greatly reducing the processing difficulty and cost of the template. Meanwhile, holes don't need to change their location repeatedly, improving the template turnover rate, extending the template service life, and greatly reducing the overall cost of the structural template. In the actual use, walls can have many kinds of the height or thickness. When the height of the wall is greater or less than this height range, there can be another template system with different via-hole density. In practice, since there is little difference among the height or thickness of walls of each floor, designing a few template systems can handle different walls in the actual use.

[0031] Meanwhile, the closed frame formed by the bottom angle plate 10 and the second vertical internal-corner template 40b as well as the integral structure of all interior-wallboards 1 of the wall 100 through the bottom angle plate 10 and the first vertical internal-corner template 40a greatly enhance the overall structural rigidity of the template system. Furthermore, the plane frame formed by the bottom angle plate 10 and the second vertical internal-corner template 40b simplifies the horizontal mode calibration procedure of the interior-wallboard 1 in advance, and improves the building efficiency of the template system.

[0032] The construction method of the above-mentioned assembling and dismantling-beforehand structural template system comprises following steps:

- a, placing one second vertical internal-corner template 40b at the internal-corner of the building structure, and connecting two connectors 401b to ends of one bottom angle plate 10, until the bottom angle plate 10 and the second vertical internal-corner template 40b together form a closed frame construction;
- b, docking the first vertical internal-corner template 40a on the second vertical internal-corner template 40b, connecting one first standard interior-wallboard 11 on the connector of the first vertical internal-corner template 40a toward the central direction of the wall plane;
- c, connecting one second standard interior-wallboard 12 on the side of the first standard interior-wallboard 11 toward the central direction of the wall

plane 100;

d, connecting one third standard interior-wallboard 13 on the side of the second standard interior-wallboard 12 toward the central direction of the wall plane 100, and connecting one second standard interior-wallboard 12 on the sides of two third standard interior-wallboards 13 toward the central direction of the wall plane 100;

e, repeating the step d, until the gap between two adjacent third standard interior-wallboards 13 is less than the width of the second standard interior-wallboard 12, then connecting one non-standard interior-wallboard 14 according to the specific width of the gap;

f, connecting all the bottom surfaces of the first standard interior-wallboard 11, the second standard interior-wallboard 12, the third standard interior-wallboard 13 and the non-standard interior-wallboard 14 to one bottom angle plate 10;

g, placing one vertical external-corner template 5 at the external-corner of the building structure, and connecting one first non-standard exterior-wallboard 24 on the connector of the vertical external-corner template 5 toward the central direction of the wall plane 400;

h, mounting the first, second, and third standard exterior-wallboards 21, 22, 23 at the corresponding exterior-wall places of the first, second, and third standard interior-wallboards 11, 12, 13;

i, until the gap between the third standard exterior-wallboards 23 adjacent to the exterior-wall plane is less than the width of the second standard exterior-wallboard 22, connecting one second non-standard exterior-wallboard 25 according to the specific width of the gap, completing the connection of one wall template 100; then completing the connection of other wall templates 400 with the same connection method;

j, mounting the back beam 6 and the interactive wiredrawing bar group 3 in the corresponding via-holes of the interior and exterior-wallboards 1, 2;

k, mounting the horizontal internal-corner template 7 on the top of the interior-wallboard 1, mounting the keel 84 between two opposite horizontal internal-corner templates 7 and aligning the keel 84 to the vertical plane of the third standard interior-wallboard 13, mounting the adjustable support bar 301 at intervals along the length direction under each keel 84, mounting the meteor hammer between two adjacent keels 84, connecting the top of the adjustable support bar 301 to the meteor hammer, and connecting the bottom of the adjustable support bar 301 to the floor 100;

l, connecting the first standard floor template 81 at the gap between the keel 84 and the horizontal internal-corner template 7;

m, in the direction from the floor to the centre thereof, connecting the second standard floor template 82

between two adjacent keels 84;

n, repeating the step m, until the gap width of two adjacent keels 84 is less than the length of the second standard floor template 82, then connecting the non-standard floor template 83 according to the specific width of the gap.

[0033] The foregoing is only the preferred embodiment of the present invention, instead of limiting the present invention. Any alterations, equivalent replacements, and improvements, as long as not departing from the spirit and scope of the invention, should be within the protection scope of the invention.

Claims

1. An assembling and dismantling-beforehand structural template system, comprising a vertical structural template system, a horizontal structural template system and a support system; wherein the vertical structural template system comprises an interior-wallboard, an exterior-wallboard, an interactive wire-drawing bar group, a vertical internal-corner template, a vertical external-corner template and a back beam, the back beam is horizontally mounted at the relative position of the interior and exterior-wallboards, the vertical internal-corner template is mounted at the internal-corner of the building structure, the vertical external-corner template is mounted at the external-corner of the building structure, two adjacent sides of the vertical internal-corner template both have connectors, two adjacent sides of the vertical external-corner template also both have connectors; wherein the interior-wallboard comprises a first standard interior-wallboard, a second standard interior-wallboard, a third standard interior-wallboard and a non-standard interior-wallboard, the exterior-wallboard comprises a first standard exterior-wallboard, a second standard exterior-wallboard, a third standard exterior-wallboard, a first non-standard exterior-wallboard and a second non-standard exterior-wallboard; the width of the second standard interior-wallboard is greater than the width of the non-standard interior-wallboard, the width of the second standard exterior-wallboard is greater than the width of the second non-standard exterior-wallboard; the vertical internal-corner template comprises a first vertical internal-corner template and a second vertical internal-corner template which are top and bottom docked, the first and second vertical internal-corner templates are detachably connected with each other; the horizontal structural template system comprises a bottom angle plate; two connectors of the second vertical internal-corner template are detachably connected to ends of one bottom angle plate, two connectors of the first vertical internal-corner

ner template are detachably connected to one first standard interior-wallboard, the bottom surfaces of the first standard interior-wallboard, the second standard interior-wallboard, the third standard interior-wallboard and the non-standard interior-wallboard are all detachably connected to one bottom angle plate; two connectors of the vertical external-corner template are detachably connected to one side of one first non-standard exterior-wallboard, another side of two first non-standard exterior-wallboards are detachably connected to one first standard exterior-wallboard; the first standard interior-wallboard, the third standard interior-wallboard, the first standard exterior-wallboard and the third standard exterior-wallboard all have via-holes, and the via-hole position of the first standard interior-wallboard is corresponding to the via-hole position of the first standard exterior-wallboard, via-hole position of the third standard interior-wallboard is corresponding to the via-hole position of the third standard exterior-wallboard, the pair wiredrawing bar group crosses through two opposite via-holes and two opposite back beams of the interior and exterior-wallboards.

2. The assembling and dismantling-beforehand structural template system of claim 1, wherein the horizontal structural template system further comprises a horizontal and vertical internal-corner template and a floor template, the floor template comprises a first standard floor template, a second standard floor template, a non-standard floor template and a keel, the support system comprises an adjustable support bar and a meteor hammer; one side of the horizontal and vertical internal-corner template is detachably connected to the top of the interior-wallboard, another side of the horizontal and vertical internal-corner template is detachably connected to one side of the floor template, the keel is detachably connected between two opposite horizontal and vertical internal-corner templates, the keel is set along the length direction of the horizontal and vertical internal-corner template at intervals, its length direction is parallel with the width direction of the floor template; the first standard floor template is connected between the horizontal and vertical internal-corner template and the keel, the second standard floor template and the non-standard floor template are detachably connected between two adjacent keels, the meteor hammer is connected between two adjacent keels, the top of the adjustable support bar is detachably connected to the meteor hammer, and the bottom of the adjustable support bar is in contact with the floor.
3. The assembling and dismantling-beforehand structural template system of claim 1 or 2, wherein the width of the first non-standard exterior-wall template is equal to the sum of the width of the vertical internal-

corner template and the thickness of the wall.

4. The assembling and dismantling-beforehand structural template system of claim 1 or 2, wherein one side of the first standard interior-wallboard is detachably connected to the first vertical internal-corner template, and another side is detachably connected to one side of the second standard interior-wallboard. 5
5. The assembling and dismantling-beforehand structural template system of claim 1 or 2, wherein the third standard interior-wallboard is detachably connected between the adjacent second standard interior-wallboards or at two sides of the non-standard interior-wallboard, the positions of the first, second, and third standard exterior-wallboards are respectively corresponding to the positions of the first, second, and third standard interior-wallboards. 10
6. The assembling and dismantling-beforehand structural template system of claim 2, wherein one end of the first standard floor template is detachably connected to the horizontal internal-corner template, and another end is detachably connected to the keel. 15
7. The assembling and dismantling-beforehand structural template system of claim 2, wherein the second standard floor template and the non-standard floor template are between two adjacent keels, and wherein two ends of the second standard floor template and the non-standard floor template are detachably connected to the keel. 20
8. The assembling and dismantling-beforehand structural template system of claim 2, wherein a vertical central plane of two spaced adjacent third standard interior-wallboards coincides with a central plane of the keel. 25
9. The assembling and dismantling-beforehand structural template system of claim 1 or 2, wherein the detachable connection is pin or bolt connection. 30
10. A construction method for the assembling and dismantling-beforehand structural template system of claim 2, comprising following steps: 35
 - a, placing one second vertical internal-corner template at the internal-corner of the building structure, and connecting two connectors to ends of one bottom angle plate, until the bottom angle plate and the second vertical internal-corner template together form a closed frame construction; 40
 - b, docking the first vertical internal-corner template on the second vertical internal-corner template, connecting one first standard interior-wall-

board on the connector of the first vertical internal-corner template toward the central direction of the wall plane;

c, connecting one second standard interior-wallboard on the side of the first standard interior-wallboard toward the central direction of the wall plane;

d, connecting one third standard interior-wallboard on the side of the second standard interior-wallboard toward the central direction of the wall plane, and connecting one second standard interior-wallboard on the sides of two third standard interior-wallboards toward the central direction of the wall plane;

e, repeating the step d, until the gap between two adjacent third standard interior-wallboards is less than the width of the second standard interior-wallboard, then connecting one non-standard interior-wallboard according to the specific width of the gap;

f, connecting all the bottom surfaces of the first standard interior-wallboard, the second standard interior-wallboard, the third standard interior-wallboard and the non-standard interior-wallboard to one bottom angle plate;

g, placing one vertical external-corner template at the external-corner of the building structure, and connecting one first non-standard exterior-wallboard on the connector of the vertical external-corner template toward the central direction of the wall plane;

h, mounting the first, second, and third standard exterior-wallboards at the corresponding exterior-wall places of the first, second, and third standard interior-wallboards;

i, until the gap between the third standard exterior-wallboards adjacent to the exterior-wall plane is less than the width of the second standard exterior-wallboard, connecting one second non-standard exterior-wallboard according to the specific width of the gap, completing the connection of one wall template; then completing the connection of other wall templates with the same connection method;

j, mounting the back beam and the pair wire-drawing bar group in the corresponding via-holes of the interior and exterior-wallboards;

k, mounting the horizontal internal-corner template on the top of the interior-wallboard, mounting the keel between two opposite horizontal internal-corner templates and aligning the keel to the vertical plane of the third standard interior-wallboard, mounting the adjustable support bar at intervals along the length direction under each keel, mounting the meteor hammer between two adjacent keels, connecting the top of the adjustable support bar to the meteor hammer, and connecting the bottom of the adjustable support

bar to the floor;

l, connecting the first standard floor template at the gap between the keel and the horizontal internal-corner template;

m, in the direction from the floor to the centre thereof, connecting the second standard floor template between two adjacent keels; 5

n, repeating the step m, until the gap width of two adjacent keels is less than the length of the second standard floor template, then connecting the non-standard floor template according to the specific width of the gap. 10

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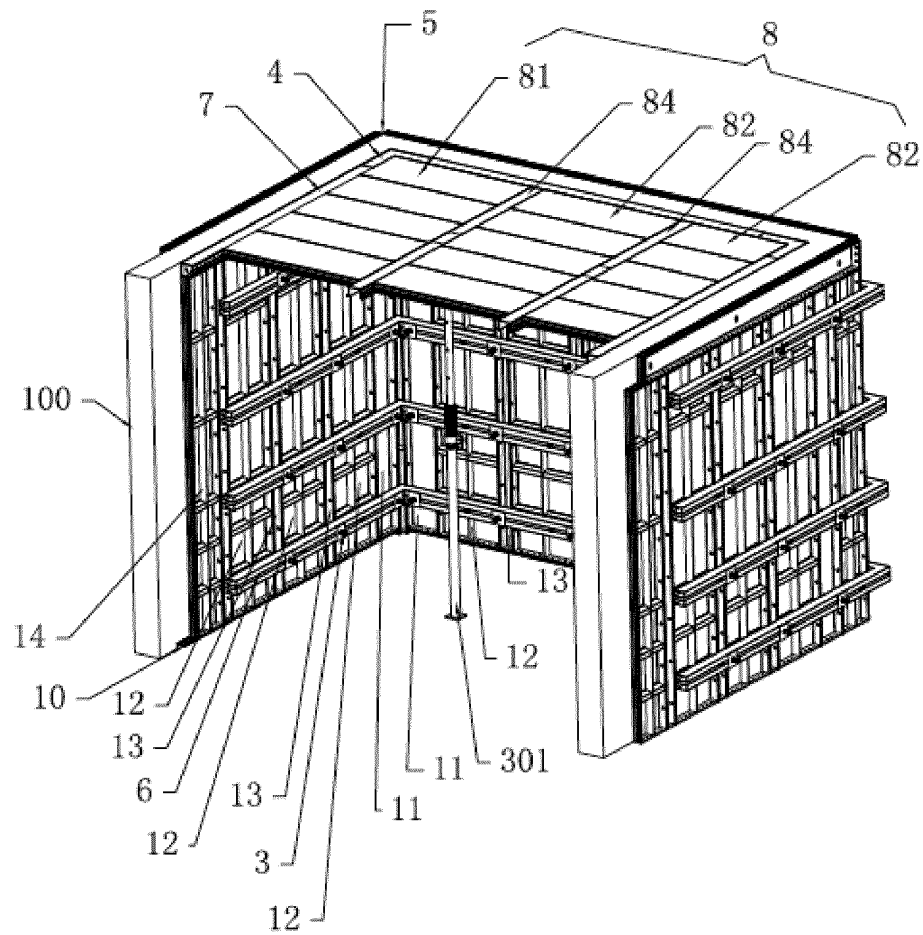


FIG. 1

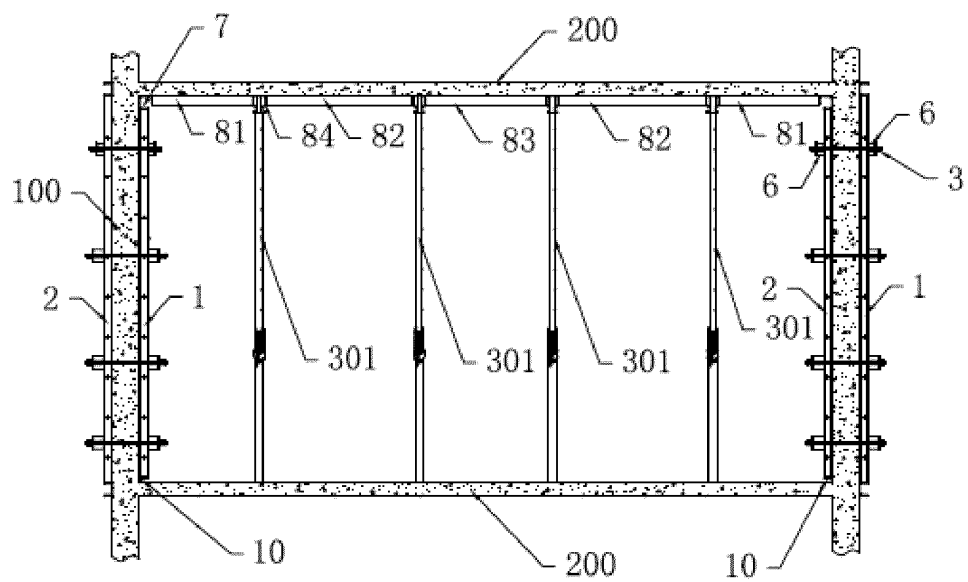


Fig. 2

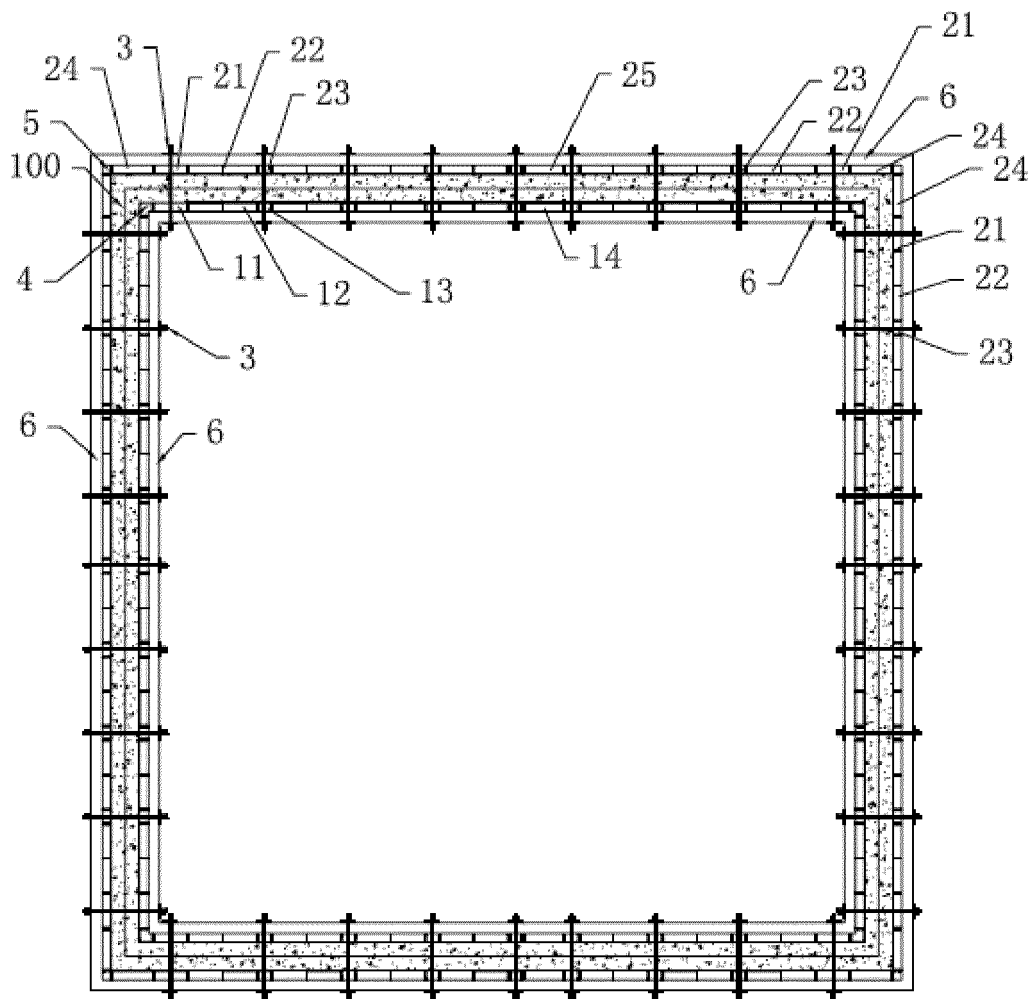


Fig. 3

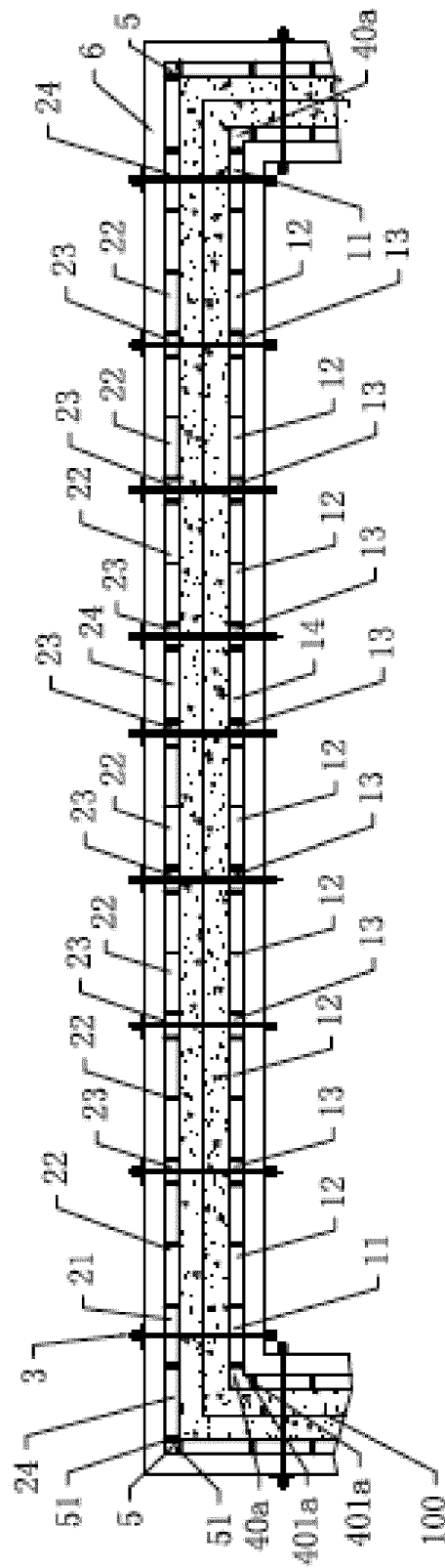


FIG. 4

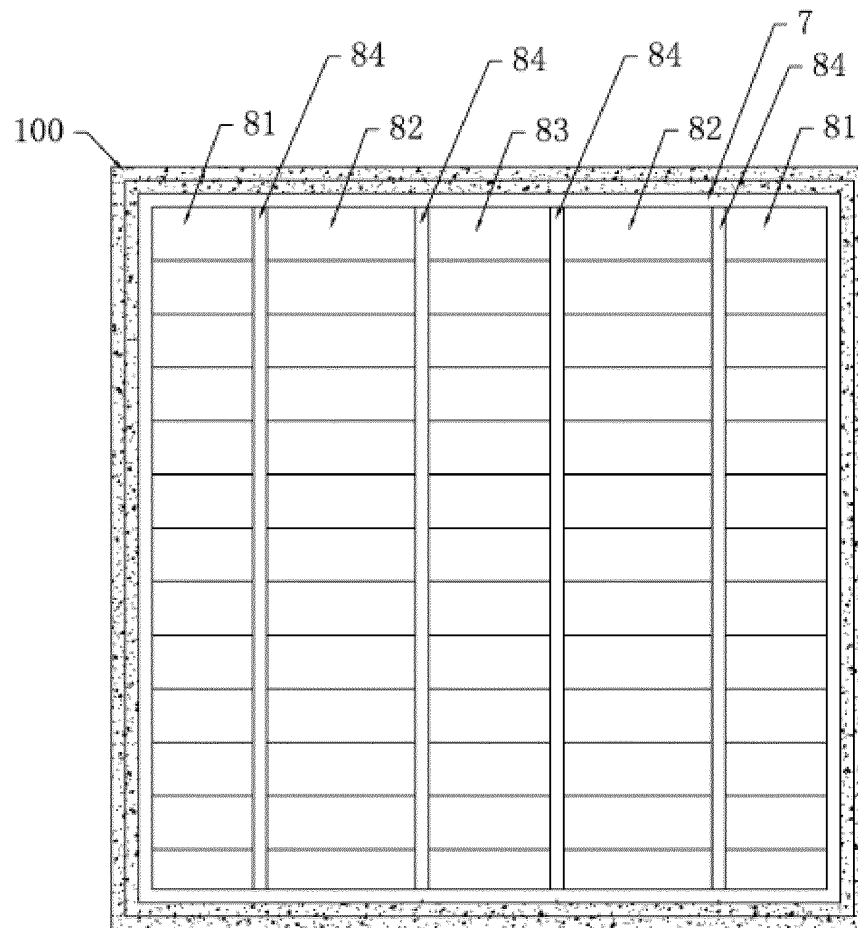


Fig. 5

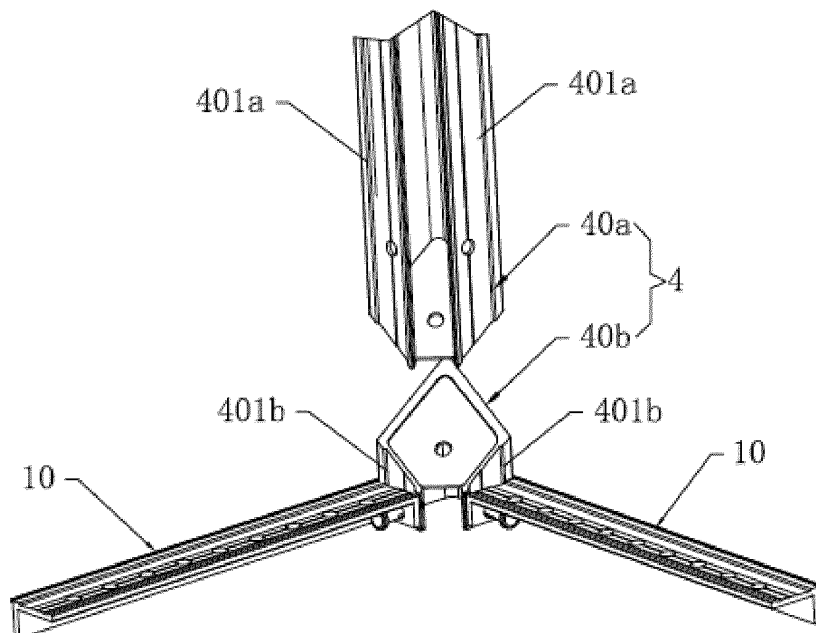


Fig. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2014/091243

A. CLASSIFICATION OF SUBJECT MATTER

E04G 11/02 (2006.01) i; E04G 11/08 (2006.01) i; E04G 11/36 (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)

E04G 11/-; E04G 9/-; E04G 21/00; E04B 1/-

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: mould, dismantle, put together, split, bolt, screw rod, hole, internal corner, exposed corner, angle plate, backridge, keel, floor, adjustable, adjust, strut
WPI, EPODOC: mo?ld, dismantl???, strip+, screw?, thread?, inside, outside, corner, angle, keel?, batten, adjust+, support

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	CN 204163397 U (SHENZHEN HUILINDA TECHNOLOGY CO., LTD.), 18 February 2015 (18.02.2015), claims 1-9	1-9
A	CN 102828611 A (SHENZHEN HUILINDA TECHNOLOGY CO., LTD.), 19 December 2012 (19.12.2012), description, paragraphs [0036]-[0074], and figures 1-9	1-10
A	CN 104060819 A (CCFED THE CONSTRUCTION & ENGINEERING CO.), 24 September 2014 (24.09.2014), the whole document	1-10
A	EP 2075391 A1 (TB KIKAKU CO., LTD.), 01 July 2009 (01.07.2009), the whole document	1-10
A	GB 273510 A (TROIEL, A.E.), 07 July 1927 (07.07.1927), the whole document	1-10
A	WO 2007/079596 A1 (POLYWHEELS MANUFACTURING LTD.), 19 July 2007 (19.07.2007), the whole document	1-10

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2014/091243

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 204163397 U	18 February 2015	None	
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CN 104060819 A	24 September 2014	None	
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		JP 2008101417 A	01 May 2008
		WO 2008047903 A1	24 April 2008
GB 273510 A	07 July 1927	None	
WO 2007/079596 A1	19 July 2007	US 2007193170 A1	23 August 2007

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