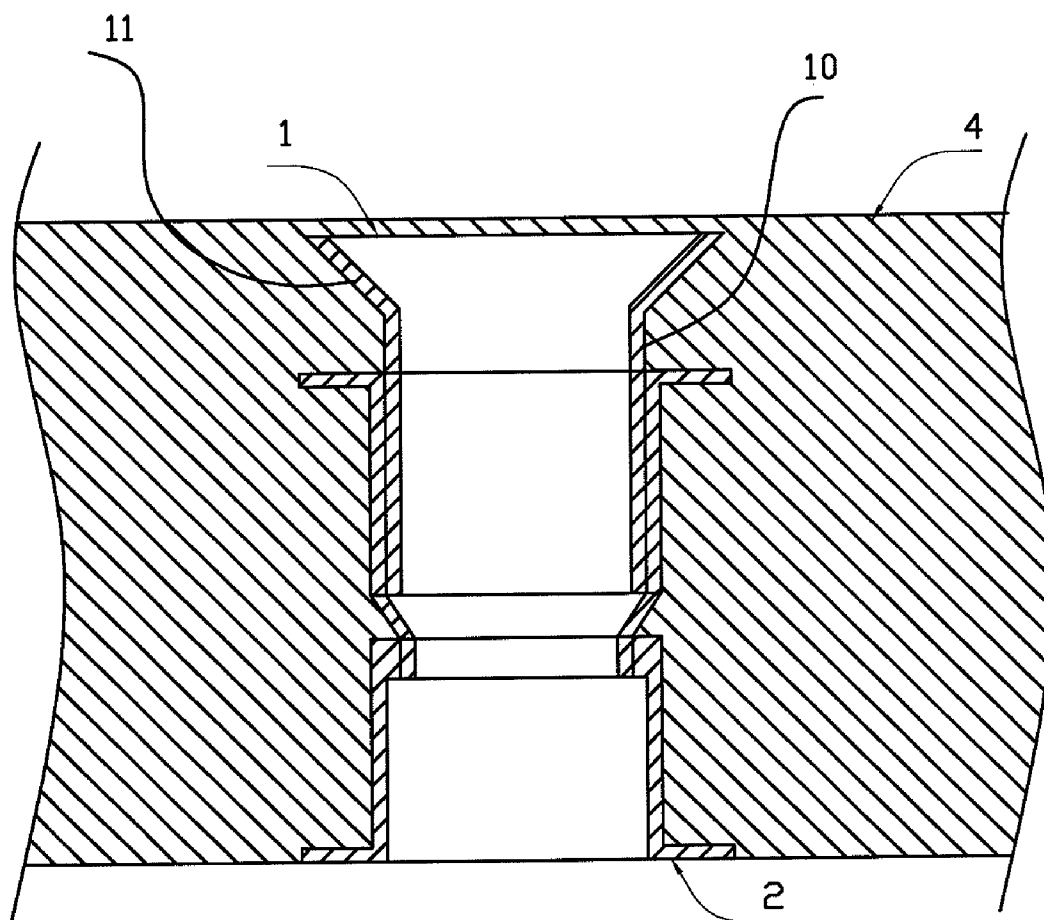




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(19) **United States**(12) **Patent Application Publication**
HSU(10) **Pub. No.: US 2012/0174526 A1**(43) **Pub. Date: Jul. 12, 2012**(54) **WATERPROOF CLADDING METHOD FOR A FLOOR CONNECTOR**(76) Inventor: **Chih-Feng HSU**, Taipei City (TW)(21) Appl. No.: **12/987,718**(22) Filed: **Jan. 10, 2011****Publication Classification**(51) **Int. Cl.**
E04B 1/66 (2006.01)(52) **U.S. Cl.** **52/741.4**(57) **ABSTRACT**

The present invention discloses a waterproof cladding method for a floor connector. A floor connector is first put between floor panels, a Y-shaped cladded connector is inserted into the floor connector and then glued, and next RC grouting is executed between floor panels. After that, excessive useless parts at an upper opening portion of the Y-shaped cladded connector are cut out, and then a tube unit is inserted, followed by cladding on the upper opening portion of the Y-shaped cladded connector with a waterproof material. By a design of the Y-shaped funnel-like cladded connector, similar to a letter Y in a side cutaway view, an obtuse angle is formed between tubing and floor concrete to increase a contact area among the tubing, floor concrete and waterproof material, thereby having an advantage of easy implementation.



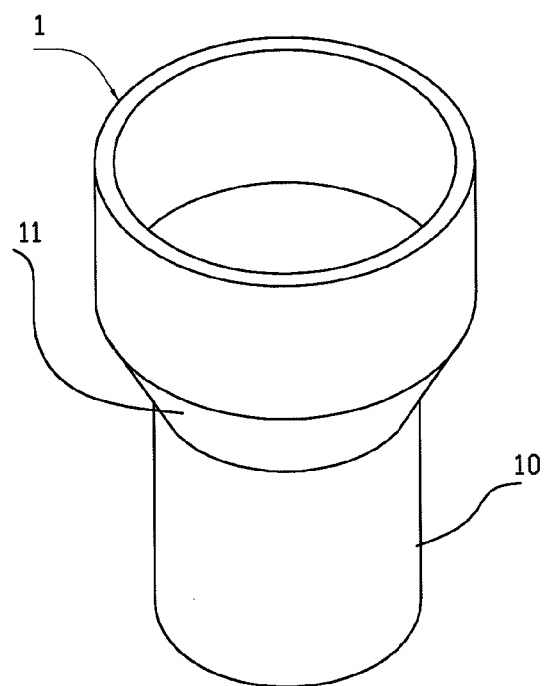


Fig 1

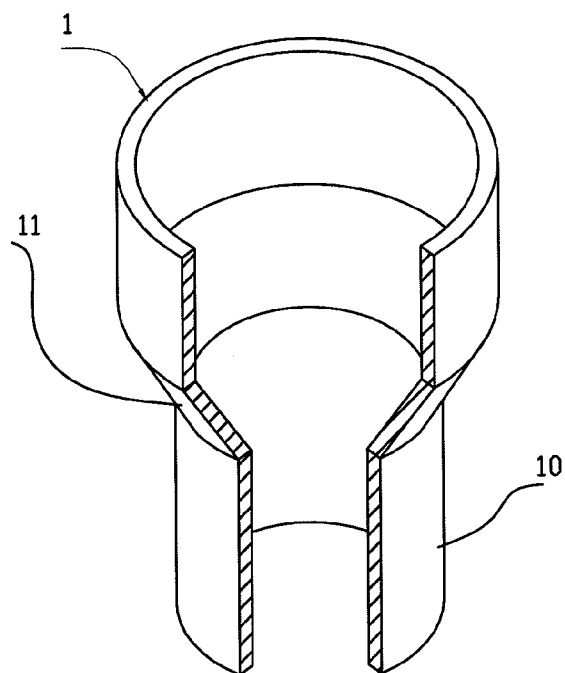


Fig 2

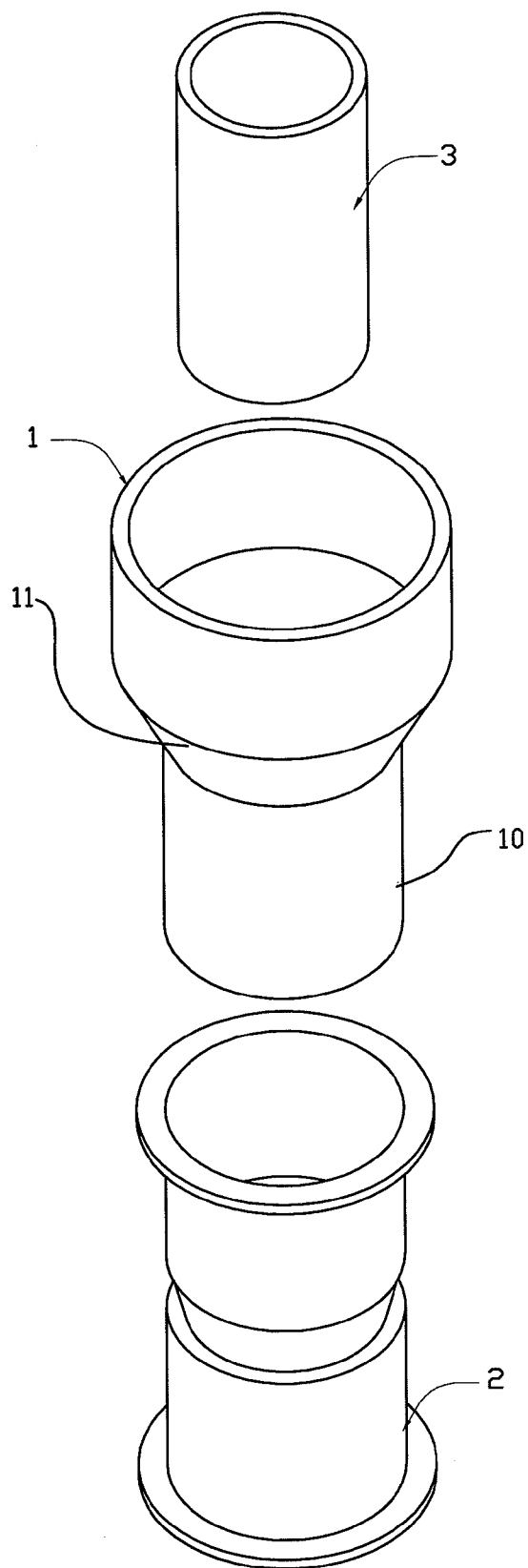


Fig 3

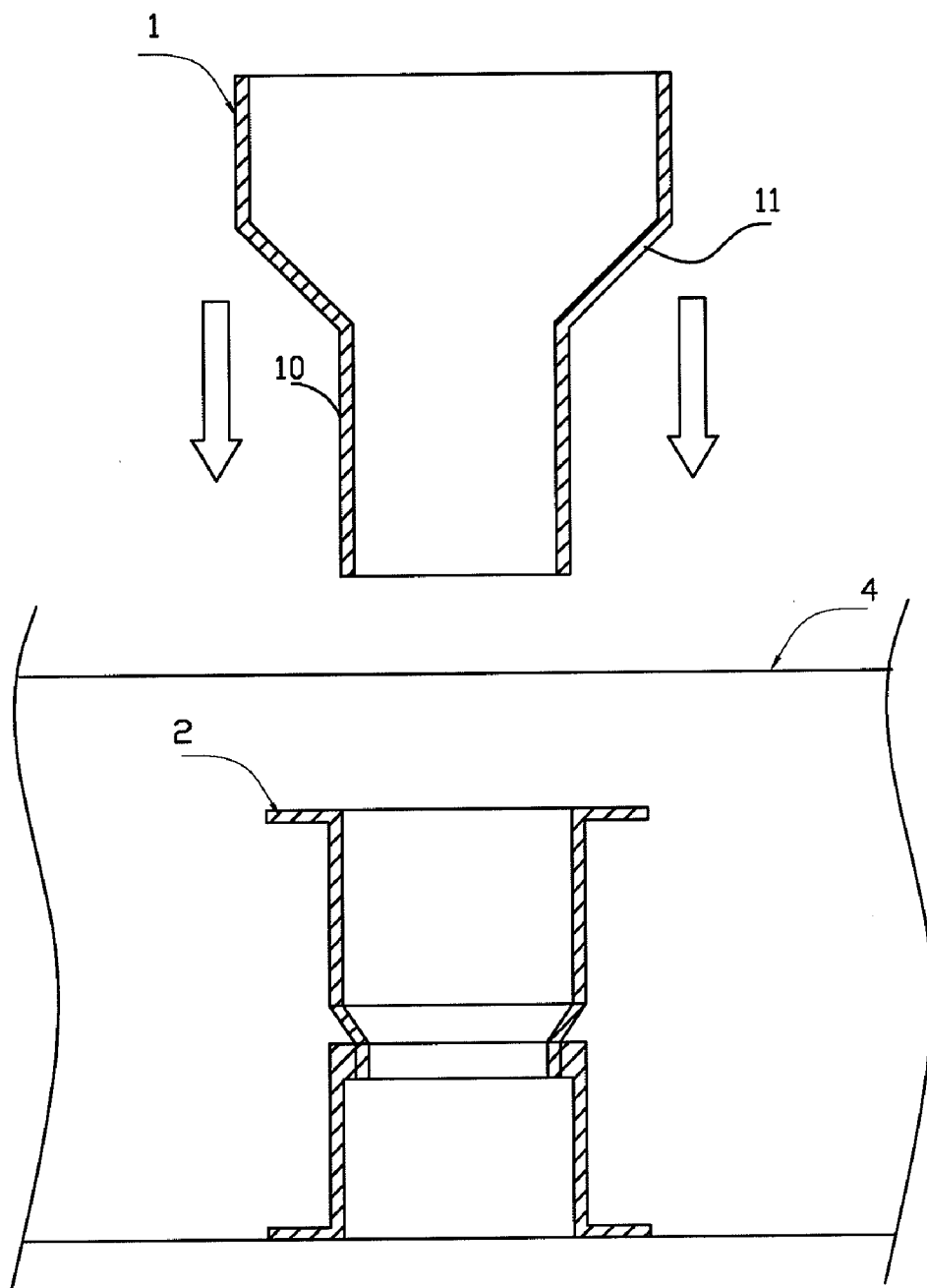


Fig 4

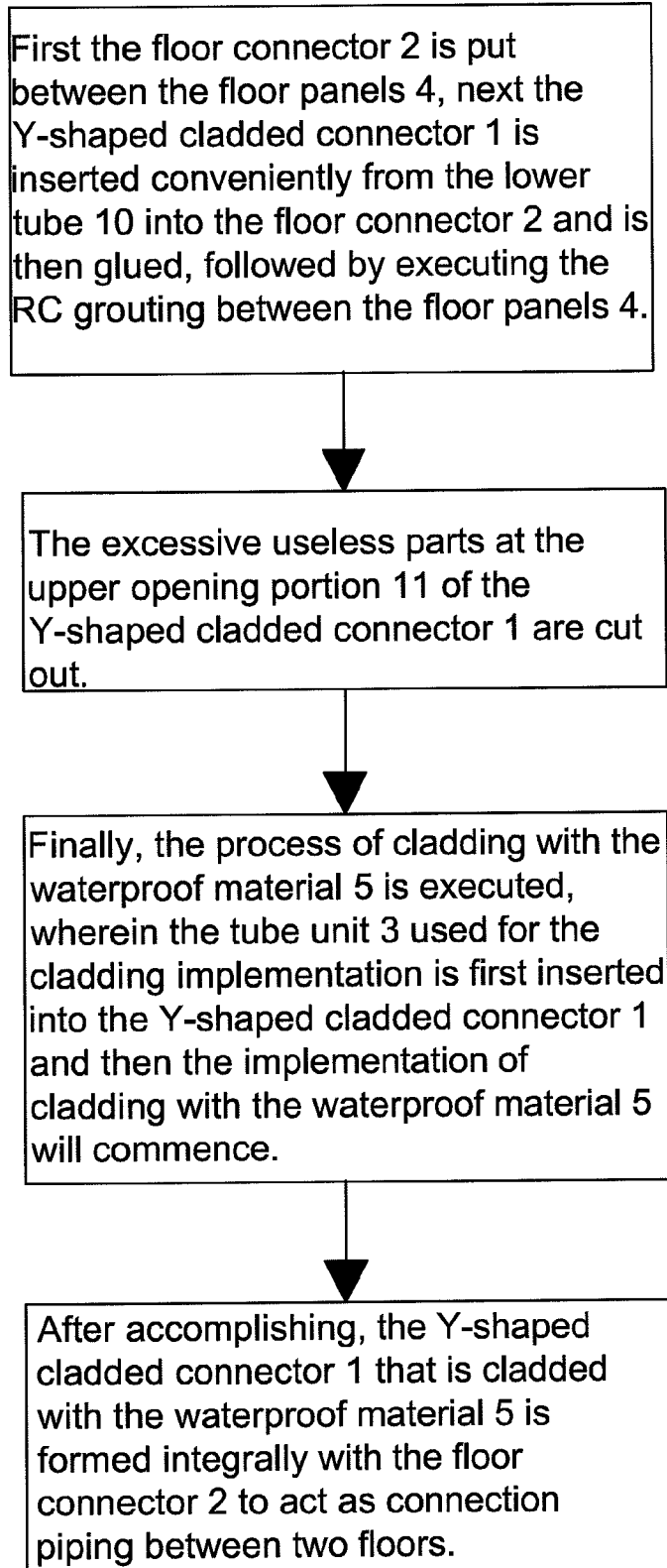


Fig 5

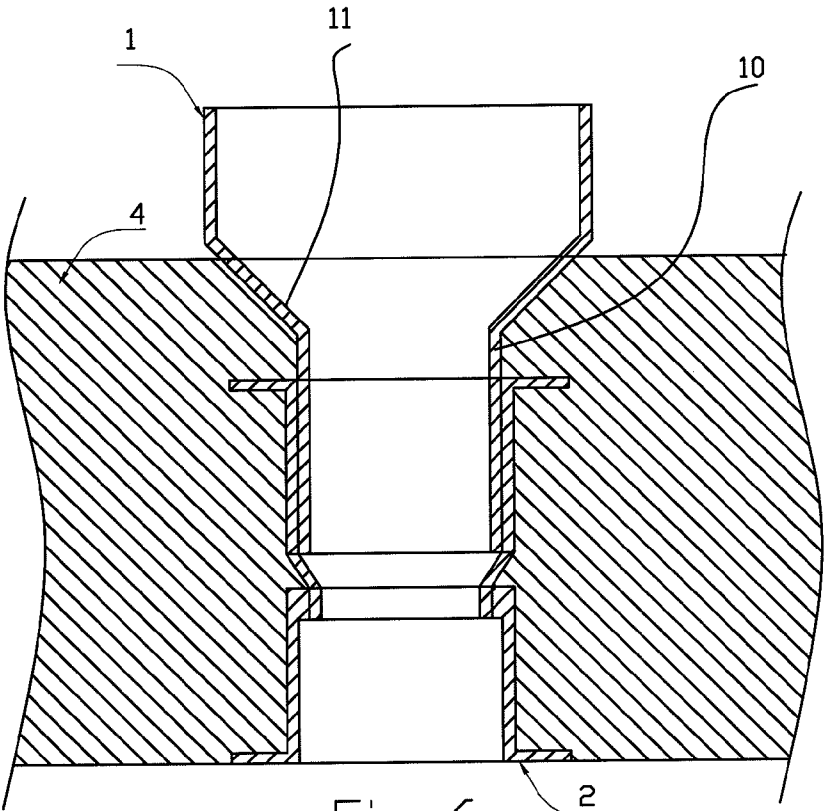


Fig 6

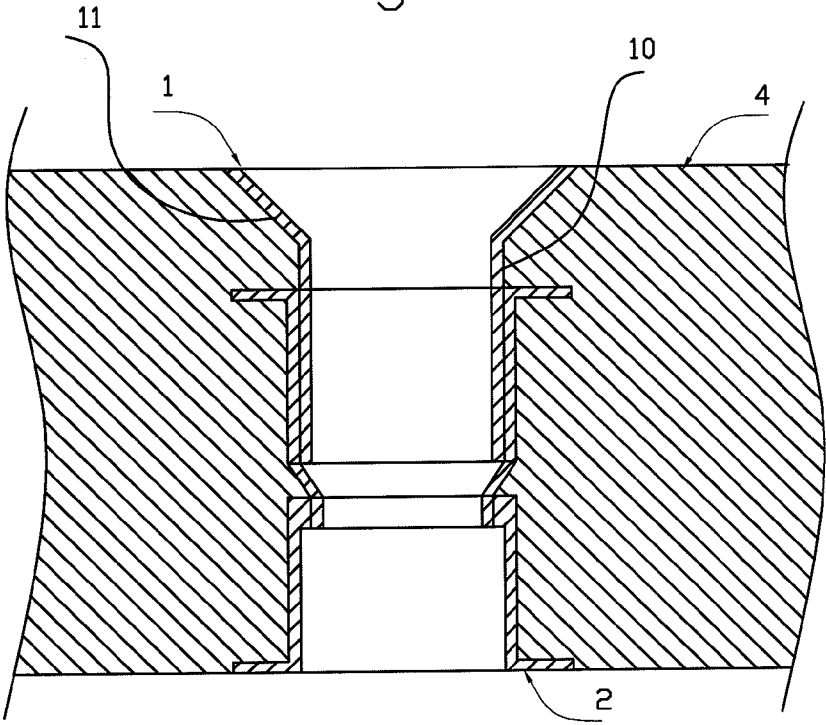


Fig 7

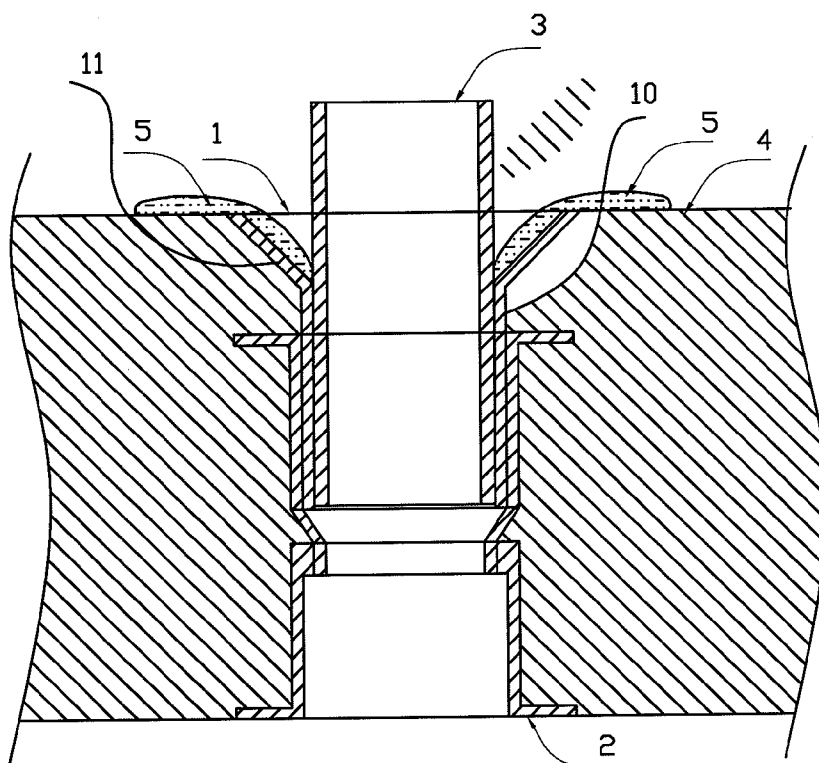


Fig 8

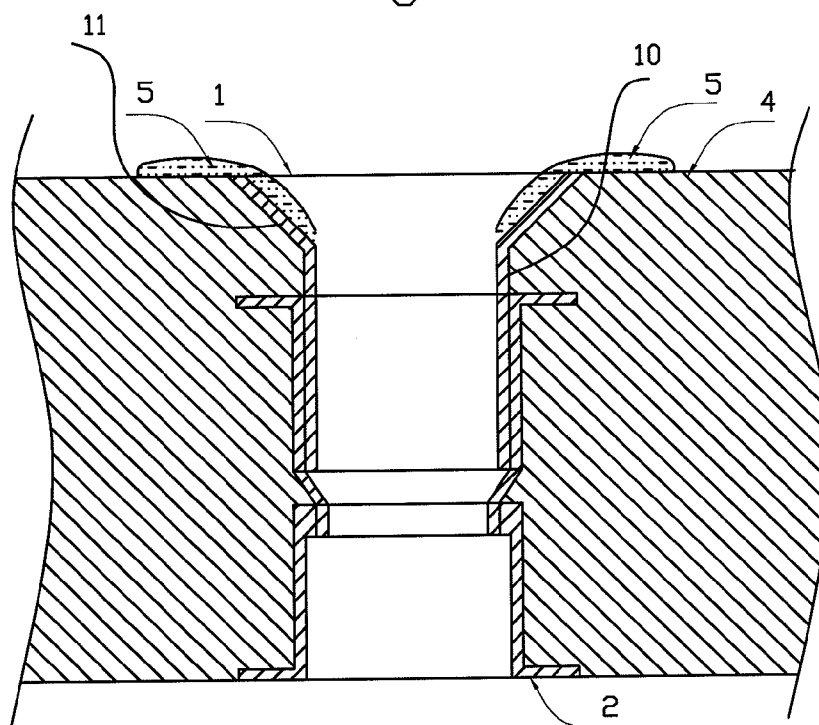


Fig 9

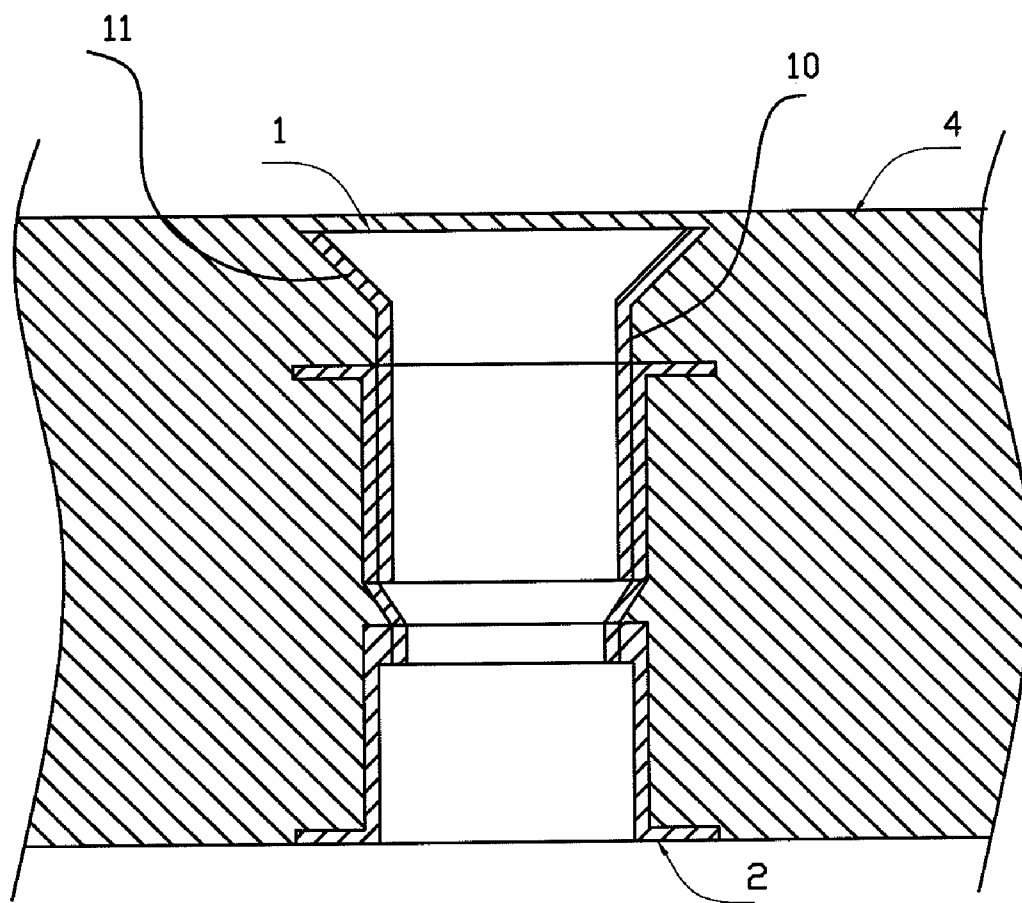


Fig 10

WATERPROOF CLADDING METHOD FOR A FLOOR CONNECTOR

BACKGROUND OF THE INVENTION

[0001] a) Field of the Invention

[0002] The present invention relates to a waterproof cladding method for a floor connector, being able to be applied to a floor connector which is cladded with a waterproof material and is required relatively in a modern architecture, wherein by a design of a Y-shaped funnel-like cladded connector similar to a letter Y in a side cutaway view, when assembling, the floor connector is first put in a floor panel, next, the Y-shaped cladded connector is transfixed into the floor connector and is then glued; after that, RC (Reinforced Concrete) grouting is executed between the floor panels and next, excessive useless parts at an upper opening portion of the Y-shaped cladded connector are cut out, followed by inserting a tube unit and then cladding with a waterproof material on the upper opening portion of the Y-shaped cladded connector.

[0003] b) Description of the Prior Art

[0004] Most of existing patents related to the floor connector structure focus primarily on how to effectively prevent water leak between the floor panels, and then in turn to increase resistance to water flow; therefore, these patents can be only used for leak-proofing and are unable to make a proper treatment to the cladding of waterproof material, so as to avoid that the waterproof material can easily flow into and clog a piping, after being cladded. Besides, in order to remove the overflowed waterproof material, it is forced to use knocking or grinding, resulting in a shortcoming that the waterproof material is ruptured and fails to work.

[0005] On the other hand, the conventional floor connector structure is actually unable to overcome an issue of reserving an implementation space, which is also indeed a topic to be solved and accomplished by pioneers of research and development in architecture industries.

[0006] Furthermore, when implementing cladding with a waterproof material on the conventional floor connector structure, it is unable to increase a contact area among tubing, floor concrete and the waterproof material, resulting in that the process of cladding implementation will be more complicated and troublesome; therefore, practicability of the floor connector structure will be reduced substantially.

SUMMARY OF THE INVENTION

[0007] A primary object of the present invention is to provide a waterproof cladding method for a floor connector, wherein as the cross section of the Y-shaped cladded connector is like a letter Y, an obtuse angle will be formed between the tubing and the floor concrete, which increases the contact area among the tubing, floor concrete and waterproof material, thereby having an advantage of easy implementation and a function of preventing the waterproof material or dirt from dropping into and clogging a tube unit while carrying out the cladding implementation.

[0008] A second object of the present invention is to provide a waterproof cladding method for a floor connector, wherein when implementing, there is no need to knock out or grind out the waterproof material that is provided with an inferior cladding effect to cause clogging, thereby improving an efficiency of implementation process. In addition, it can prevent from damage to a cladding layer of the waterproof material by knocking or grinding, resulting in that the water-

proofing effect is not valid enough, thereby achieving a better effect of cladding with the waterproof material.

[0009] A third object of the present invention is to provide a waterproof cladding method for a floor connector, wherein an implementation space is reserved to facilitate re-implementation.

[0010] To achieve the abovementioned objects, the present invention discloses a waterproof cladding method for a floor connector, which is applied to a floor connector that is cladded with a waterproof material and is required relatively by a modern architecture, including a Y-shaped funnel-like cladded connector similar to a letter Y in a side cutaway view; a floor connector which can be embedded between floor panels to connect with piping; and a tube unit which can be inserted into the Y-shaped cladded connector before cladding with the waterproof material, so as to prevent the waterproof material from dropping into the tube unit while executing the cladding implementation.

[0011] Accordingly, an outer diameter of a lower tube of the Y-shaped cladded connector fits exactly with an inner diameter of the floor connector, so that the lower tube can be inserted into the floor connector to act as a connector between two floors.

[0012] Accordingly, an outer diameter of the tube unit used for the cladding implementation fits exactly with an inner diameter of the lower tube of the Y-shaped cladded connector, so that the tube unit can be inserted to the lower tube for use in cladding with the waterproof material.

[0013] On the other hand, in the waterproof cladding method for a floor connector, according to the present invention, the floor connector is first put in the floor panel and the Y-shaped cladded connector is transfixed into the floor connector and is then glued; after that, the RC grouting is executed between the floor panels, the excessive useless parts of the upper opening portion of the Y-shaped cladded connector are cut out and then the tube unit for the cladding implementation is inserted, followed by cladding on the upper opening portion of the Y-shaped cladded connector with the waterproof material.

[0014] 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

[0015] FIG. 1 shows a three-dimensional external view of a Y-shaped cladded connector of the present invention.

[0016] FIG. 2 shows an external cutaway view of the Y-shaped cladded connector the present invention.

[0017] FIG. 3 shows a three-dimensional external view of the present invention before being easily assembled.

[0018] FIG. 4 shows a side cutaway view of an embodiment of the present invention before being assembled.

[0019] FIG. 5 shows a flow diagram of an implementation of the present invention.

[0020] FIG. 6 shows a side cutaway view of the embodiment of the present invention after being assembled.

[0021] FIG. 7 shows a side cutaway view of the embodiment of the present invention after being cut out.

[0022] FIG. 8 shows a side cutaway view of the embodiment of the present invention, which is executed with a cladding implementation.

[0023] FIG. 9 shows side cutaway view of the embodiment of the present invention after being executed with the cladding implementation.

[0024] FIG. 10 shows a side cutaway view of an embodiment of the present invention, wherein an implementation space is reserved.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] The waterproof cladding method for a floor connector, according to the present invention, is applied to the floor connector that is cladded with a waterproof material and is required relatively by a modern architecture. The method enables primarily the process of cladding with the waterproof material to be smooth and is provided with the function of preventing the waterproof material or dirt from dropping into and clogging the piping while executing the cladding implementation, thereby avoiding the trouble of difficulty in cleaning and the knocking that results in the damage to the cladding layer of the waterproof material, so that the waterproofing will not be valid enough.

[0026] Referring to FIGS. 1 to 4, a Y-shaped funnel-like cladded connector is like a letter Y in a side cutaway view. An outer diameter of a lower tube 10 fits exactly with an inner diameter of a floor connector 2, so that the lower tube 10 can be inserted into the floor connector 2 to be used as a connector between two floors. An upper opening portion 11 can be exposed out of a surface of a floor 4 after implementation, and excessive useless parts of the upper opening portion 11 can be cut out.

[0027] The floor connector 2 can be embedded between the floors 4 to connect with piping.

[0028] A tube unit 3 can be inserted into the Y-shaped cladded connector 1 before cladding with a waterproof material 5 (as shown in FIG. 8) to prevent the waterproof material 5 from dropping into the tube unit 3 when executing the cladding implementation.

[0029] Referring to FIGS. 5 to 9, one of the advantages of the present invention over the conventional floor connector lies in that the present invention is merited in forming an obtuse angle to increase a contact area among the tubing, floor concrete and waterproof material, so that the cladding implementation with the waterproof material can be easily executed to increase a quality and an effect of implementation. In addition, a high-efficiency waterproof cladded connector used for a floor is provided, which facilitates reserving an implementation space for the procedure of re-implementation.

[0030] The method of the present invention (as shown in FIG. 5) includes primarily the following process.

[0031] In a first step, when the present invention is applied practically (as shown in FIG. 6), a user first puts the floor connector 2 between the floors 4 and next inserts conveniently the Y-shaped cladded connector 1 from the lower tube 10 into the floor connector 2 and then applies glue, followed by executing the RC grouting between the floors 4.

[0032] In a second step, the excessive useless parts at the upper opening portion 11 of the Y-shaped cladded connector 1 are cut out if necessary (as shown in FIG. 7).

[0033] In a third step, the process of cladding with the waterproof material 5 is executed finally (as shown in FIG. 8), wherein the tube unit 3 used for the cladding implementation

is first inserted into the Y-shaped cladded connector 1, and then the implementation of cladding with the waterproof material 5 will commence.

[0034] After accomplishing (as shown in FIG. 9), the Y-shaped cladded connector 1 that is cladded with the waterproof material 5 will be formed integrally with the floor connector 2 to act as the connection piping between two floors.

[0035] For the process of cladding with the waterproof material, it is primarily based upon the structure design of the Y-shaped funnel-like cladded connector 1 similar to a letter Y in a side cutaway view that the Y-shaped cladded connector 1 can be divided into the upper opening portion 11 and the lower tube 10. When assembling, the user only needs to insert the lower tube 10 of the Y-shaped cladded connector 1 into the floor connector 2 and squeeze it downward; the process is relatively convenient, simple and practical. Moreover, the excessive parts of the upper opening portion 11 of the Y-shaped cladded connector 1 that are exposed out of the floor surface and are of no use can be cut out if necessary, followed by cladding the waterproof material on a rim of the Y-shaped cladded connector 1. Accordingly, a large contact area can be formed by the Y-shaped obtuse angle that a better effect of cladding with the waterproof material is achieved, and the shortcomings of implementation that the waterproof material or dirt drops into the tube unit or the waterproof material is damaged by knocking can be avoided.

[0036] On the other hand, as shown in FIG. 10, when cutting out the excessive parts of the Y-shaped cladded connector 1, the Y-shaped cladded connector 1 can be made a little lower than the floor plane which is then paved on. Therefore, the floor panel can be removed in a future when a reconstruction work is needed, and then the reserved connector can be connected to piping for use, thereby achieving a good effect of reserving the implementation space.

[0037] It is of course to be understood that the embodiments described herein is merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims.

What is claimed is:

1. A waterproof cladding method for a floor connector comprising steps of:

- a), having a Y-shaped funnel-like cladded connector in shape of a letter Y in a side cutaway view with an outer diameter of a lower tube of the Y-shaped cladded connector fitted exactly with an inner diameter of a floor connector;
- b), having the lower tube inserted into the floor connector to act as a connector between two floors, an upper opening portion of the Y-shaped cladded connector being exposed out of a floor surface after implementation;
- c), having the floor connector embedded in a floor panel; and
- d), having a tube unit inserted into the Y-shaped cladded connector before cladding with a waterproof material.

2. The waterproof cladding method for a floor connector according to claim 1, wherein excessive useless parts of the upper opening portion are cut out.

3. A waterproof cladding method for a floor connector, comprising steps of:

- a), placing the floor connector between floor panels;
- b), inserting the Y-shaped cladded connector from the lower tube into the floor connector;
- c), applying glue, followed by executing RC (Reinforced Concrete) grouting between the floor panels;
- d), cutting off the excessive useless parts of the upper opening portion of the Y-shaped cladded connector;
- e), executing cladding with the waterproof material, wherein a tube unit for the cladding implementation is first inserted into the Y-shaped cladded connector and then the implementation of cladding with the waterproof material commences;

- f), having the Y-shaped cladded connector cladded with the waterproof material being integrally formed with the floor connector to act as connection piping between two floors.

4. The waterproof cladding method for a floor connector according to claim 3, wherein when cutting out the excessive parts of the Y-shaped cladded connector, the Y-shaped cladded connector is made a little lower than a floor plane which is then paved on, with the floor plane being removed in a future when a reconstruction work is needed and the reserved connector being connected to piping, thereby achieving a good effect of reserving an implementation space.

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