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(54) **PACKING AND SHIPPING MOUNTING STRUCTURE FOR HOUSEHOLD APPLIANCE AND
PACKING AND SHIPPING METHOD**

VERPACKUNG UND VERSANDBEFESTIGUNGSSTRUKTUR FÜR HAUSHALTSGERÄT SOWIE
VERPACKUNGS- UND VERSANDVERFAHREN

STRUCTURE DE MONTAGE POUR L'EMBALLAGE ET L'EXPÉDITION D'APPAREILS
ÉLECTROMÉNAGERS ET PROCÉDÉ D'EMBALLAGE ET D'EXPÉDITION

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Description

FIELD

[0001] The present disclosure relates to the technical field of packaging and transportation of household appliances, and more particularly, to a mounting structure for packaging and transporting a household appliance according to the preamble of claim 1 and a method for packaging and transporting a household appliance.

BACKGROUND

[0002] With growth in the standard of living, people put forward higher and higher requirements on domestic hot water, particularly at aspects such as comfort and energy conservation, which makes the industry of heat pumps wins users' good graces. Therefore, integral heat-pump water heaters are approved in the markets. Compared with a common water heater, a space and labor cost for mounting an integral heat-pump water rises to some extends and a weight of the whole machine is comparative heavy, after a system part and a water tank part of a whole integral heat-pump water heater are integrated. Particularly, stainless steel in the water tank is replaced by enamel with good anticorrosion property, which effectively reduces cost but also increases the weight, for example, a weight of an unloaded product of about 200 L is almost 130 KG. Since the enamel water tank is easy to break, a design of a package for transporting the integral heat-pump water heater should ensure that the product is effectively protected during transportation and transfer, besides the cost, convenience and safety for the user during disassembling and assembling should be taken into account.

[0003] The document US 7,555,879 B1 discloses an apparatus and method for the shipping and installation of an ATM. A pallet includes a plurality of readily separable components and a plurality of component fasteners. The pallet is equipped with a plurality of cantilever shipping brackets each having an open end shipping bracket slot through which a leveling leg of the ATM extends. The leveling leg is construed like a bolt fastener having a threaded shaft and a larger head. The ATM is attached to the pallet when the leveling leg is retracted fully upward and firmly engages the cantilever shipping brackets.

[0004] Document US 8,425,165 B2 is directed to a pallet apparatus having a pallet base and fixing members. The product is fixed on the fixing member by threading screw members. These screw members are installed -state adjusting members for adjusting the height or inclination of the product upon installation. The fixing member having a slit construction so that a head portion of the screw members can be attached and detached thereto in an easy manner (see for example Figs. 11 and 12).

[0005] Document DE29810013 U1 is directed to a pallet for supporting a kettle with feet. We also attach a com-

puter generated English translation of this document for your own review. The feet have a bigger head which, according to the description, may pass through openings in the cover elements and are secured by essentially lyra-shaped securing clips. Upon removal of the securing clips, the feet can be lifted upwardly and the heads pass through the opening.

[0006] The document CN204979522 U refers to a structure that facilitates a disassembly and assembly of a body and a mounting bracket by the use of screws. The body is provided at the lower side with mushroom-shaped holes so that the head portion of the screws can, in one position, pass therethrough and another position is secured therein. The bracket has a plurality of parallel apertures through which the screws can extend through. The screws are secured to the bracket by means of spring washers, flat washers, lock nuts and longitudinal plates. The longitudinal plates have a length sufficient that two screws arranged in distance can pass through corresponding holes in the plates.

[0007] In a further related art, a bottom wood frame with bottom foam is usually used for packaging and transporting a large-scale household appliance, particularly a household appliance having a comparatively heavy weight and fragile components. Specifically, first, the bottom form is prefixed on the bottom wood frame by wood screws, and then the household appliance is placed on the bottom foam. In order to ensure stability of the household appliance during transportation and transfer, the bottom foam is provided with a heightened profiling section, i.e. a part of a body of the household appliance can be embedded and attached in the bottom foam. It is tested in long-term market that with this kind of scheme, a household appliance with comparatively heavy weight and comparatively high height, such as the integral heat-pump water heater, is hard to disconnect and carry off from the bottom foam when the user mounts the appliance. Moreover, that the machine is toppled down happens quite regularly, resulting in big negative influence on products. Worse still, the foam pollutes the environment. Therefore, there is need to provide a more environmentally friendly and effective structure suitable for packaging and transporting a household appliance having a heavy weight.

SUMMARY

[0008] The present disclosure seeks to solve at least one of the problems existing in the related art.

[0009] A mounting structure for packaging and transporting a household appliance according to embodiments of a first aspect of the present disclosure includes: a bottom pedestal provided with a through hole running through in an up-down direction and configured to be arranged on a bottom of the household appliance; a fastener including a head portion and a connecting portion connected sequentially from a lower to an upper, an area of a cross section of the head portion being greater than

an area of a cross section of the connecting portion, an upper end of the connecting portion passing through the through hole to be connected to the household appliance, and the area of the cross section of the head portion being no greater than an area of a cross section of the through hole; and a washer arranged between a bottom surface of the bottom pedestal and an upper surface of the head portion, wherein the washer is provided with a clamping groove extending in a radial direction and running through an outer circumferential wall of the washer, and the clamping groove runs through an upper surface and lower surface of the washer.

[0010] With the mounting structure for packaging and transporting a household appliance of embodiments of the present disclosure, convenience is greatly improved during mounting, dismounting, and carrying, the possibility that the household appliance is toppled over during lifting is reduced, and the safety of operation is ensured. A layer of bottom foam which is needed to be arranged on the bottom pedestal in the related art is saved, therefore the mounting structure for packaging and transporting is simpler, which helps to reduce the cost and package, transport, and dismount a heavy household appliance, and the material is more environmentally friendly. According to some embodiments of the present disclosure, a width of the clamping groove is less than a minimum radial width of the head portion.

[0011] According to some embodiments of the present disclosure, the mounting structure for packaging and transporting a household appliance further includes a lock-elastic pad, and the lock-elastic pad is provided between the head portion and the washer.

[0012] According to some embodiments of the present disclosure, a plurality of fasteners and a plurality of washers are provided, the plurality of fasteners and the plurality of washers correspond to each other one to one, and are spaced apart from each other on the bottom pedestal.

[0013] According to some embodiments of the present disclosure, the fastener is a fastening bolt.

[0014] According to some embodiments of the present disclosure, the bottom pedestal is a wood bottom pedestal.

[0015] According to some embodiments of the present disclosure, the bottom of the household appliance is provided with a supporting bottom leg, and an upper end of the connecting portion passes through the through hole to be connected to the supporting bottom leg.

[0016] According to some embodiments of the present disclosure, a mounting leg is fitted over the fastener.

[0017] According to some embodiments of the present disclosure, the mounting leg defines a groove for receiving the head portion, and an interference fit is provided between the head portion and the groove.

[0018] According to some embodiments of the present disclosure, a plurality of antiskid protrusions are spaced apart from each other on a bottom of the mounting leg.

[0019] According to some embodiments of the present

disclosure, the mounting leg is made of rubber or plastic.

[0020] According to some embodiments of the present disclosure, the household appliance is an integral heat-pump water heater, and a weight of the household appliance is no less than 100 kg.

[0021] According to some embodiments of the present disclosure, the household appliance includes a fragile structure.

[0022] A method for packaging and transporting a household appliance according to embodiments of a second aspect of the present disclosure includes packaging and transporting the household appliance using the mounting structure according to embodiments of a first aspect of the present disclosure at a packaging and transporting step.

[0023] According to some embodiments of the present disclosure, the method further includes a dismounting step, in which the fastener is unscrewed, and the washer is removed; and the household appliance is lifted, such that the fastener connected to the household appliance moves upwards and passes through the through hole, and the household appliance is separated from the bottom pedestal.

[0024] According to some embodiments of the present disclosure, the dismounting step further includes fitting the mounting leg over the fastener on the bottom of the household appliance.

[0025] Additional aspects and advantages of embodiments of present disclosure will be given in part in the following descriptions, become apparent in part from the following descriptions, or be learned from the practice of the embodiments of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] These and/or other additional aspects and advantages of embodiments of the present disclosure will become apparent and more readily appreciated from the following descriptions made with reference to the drawings.

FIG. 1 is a schematic view showing that a structure for packaging and transporting a household appliance according to embodiments of the present disclosure and a household appliance, such as an integral a heat-pump water heater, are fitted together. FIG. 2 is another schematic view showing that a structure for packaging and transporting a household appliance according to embodiments of the present disclosure and a household appliance, such as an integral a heat-pump water heater, are fitted together, in which a water tank casing and a water tank base of the integral a heat-pump water heater are removed and a water tank liner and a liner supporting leg of the integral a heat-pump water heater are shown.

FIG. 3 is an enlarged view of part I circled in FIG. 2. FIG. 4 is a perspective view of a washer.

FIG. 5 is bottom view of a mounting leg.

FIG. 6 is left view of a mounting leg.

FIG. 7 is top view of a mounting leg.

Reference numerals

[0027] 1: bottom pedestal 11: through hole 2: fastener 3: washer 31: clamping groove 4: supporting bottom leg 41: mounting hole 5: lock-elastic pad 6: mounting leg 61: antiskid protrusion 62: groove 7: water tank casing 8: water tank bottom cover 9: water tank liner assembly

DETAILED DESCRIPTION

[0028] The embodiments of the present disclosure are described in detail, examples of the embodiments are shown in the drawings. The same or similar elements and the elements having same or similar functions are denoted by like reference numerals throughout the descriptions. The embodiments described herein with reference to drawings are explanatory and intend to understand the present disclosure. The embodiments shall not be construed to limit the present disclosure.

[0029] In the specification, unless specified on the contrary, terms related to orientation such as "upper," "lower," "top," "bottom," etc., should be construed to refer to the orientation as shown in the drawings or refer to mutual position relations of components in a vertical direction, or a perpendicular direction, or the direction of gravity discussion. It should be noted that these relative terms should be construed to refer to the orientation as then described or as shown in the drawings under discussion for simplifying the description of the present disclosure, but do not alone indicate or imply that the device or element referred to must have a particular orientation, is constructed or operated in a particular orientation, which shall not be construed to limit the present disclosure. In addition, the term "a plurality of" means two or more than two, unless specified otherwise.

[0030] The present disclosure provides a novel mounting structure for packaging and transporting a household appliance, aiming at problems in the related art that a mounting structure for packaging and transporting a household appliance in the related art is inconvenient to dismount, as shown in FIG. 1 to FIG. 3, the mounting structure includes a bottom pedestal 1, a fastener 2, and a washer 3.

[0031] A bottom of a household appliance, such as an integral heat-pump water heater, can be provided with a mounting hole 41, the bottom pedestal 1 defines a through hole 11 running through in an up-down direction. The bottom pedestal 1 is configured to be arranged at the bottom of the household appliance. During installation, the fastener 2 passes through and links the through hole 11 and the mounting hole 41 to fasten the household appliance on the bottom pedestal 1. In such manner, the household appliance is fixed on the bottom pedestal 1 to form an integral structure, since the bottom pedestal 1 is

good in shakeproof and buffered effect, the household appliance can be protected well during transportation, and also is convenient to dismount.

[0032] The fastener 2 includes a head portion and a connecting portion which are connected sequentially from a lower to an upper. An area of a cross section of the head portion of the fastener 2 is greater than an area of a cross section of the connecting portion. An upper end of the connecting portion of the fastener 2 passes through the through hole 11 of the bottom pedestal 1 to be connected to the household appliance. The area of the cross section of the head portion of the fastener 2 is no greater than an area of a cross section of the through hole 11 of the bottom pedestal 1. For example, as shown in FIG. 3, a diameter D of the through hole 11 is no less than an outer diameter d of a bottom end of the fastener 2.

[0033] The washer 3 is arranged between a bottom surface of the bottom pedestal 1 and an upper surface of the head portion of the fastener 2, to prevent the head portion of the fastener 2 from falling down into the through hole 11. In such manner, the household appliance together with the fastener 2 can be directly dismounted from the bottom pedestal 1 when the washer 3 is dismounted.

[0034] Since the mounting structure for packaging and transporting a household appliance of the present disclosure adopts a fixing manner in which a household appliance, such as an integral heat-pump water heater, is directly fixed to the bottom pedestal 1 by the fastener 2, a layer of bottom foam which is needed to be arranged on the bottom pedestal 1 in the related art is saved, therefore this scheme is a novel mounting structure, and the foam adopted by the related art which pollutes environment is no longer needed in this scheme, types of materials are simplified, therefore, the mounting structure of the present disclosure is more environmentally friendly with a lowered usage cost.

[0035] The mounting structure for packaging and transporting a household appliance of the present disclosure is convenient to dismount and mount, which is particularly suitable for household appliance product having a comparatively heavy whole weight. Particularly, the mounting structure for packaging and transporting is particularly provided with the washer 3, as shown in FIG. 4, the washer 3 is provided with a clamping groove 31 extending in a radial direction and running through an outer circumferential wall of the washer 3. The clamping groove 31 runs through an upper surface and lower surface of the washer 3, and a top end of the fastener 2 passes through the clamping groove and extends into the through hole 11. Since the washer is provided between the bottom end of the fastener 2 and a bottom surface of the bottom pedestal 1, and the diameter D of the through hole 11 is no greater than the outer diameter d of the bottom end of the fastener 2, a user just loosens the fastener 2 with a tool first and takes the washer 3 away in a direction opposite to an opening of the clamping groove 31, when dismounting a household appliance,

such as an integral heat-pump water heater, on the bottom pedestal 1, at this time the fastener 2 is still on the mounting hole 41 of the household appliance, such as an integral heat-pump water heater, the fastener 2 can be taken away from the through hole 11 of the bottom pedestal 1 by only slightly moving the household appliance, such as an integral heat-pump water heater, which is different from that a household appliance, such as an integral heat-pump water heater, only can be separated from a mounting structure when the household appliance, such as an integral heat-pump water heater, is lofted up to some extents, higher than the bottom foam, and since a large force of friction is generated between the foam and the household appliance, such as an integral heat-pump water heater, it is hard to separate the household appliance, such as an integral heat-pump water heater, from the bottom foam. Therefore, with the mounting structure for packaging and transporting a household appliance of the present disclosure, convenience is greatly improved during mounting, dismounting, and carrying, the possibility that the household appliance is toppled over during lifting is reduced, and the safety of operation is ensured.

[0036] In order to make sure that the washer 3 can be effectively clamped between the bottom pedestal 1 and the fastener 2, a width of the clamping groove 31 is less than a minimum radial width of the head portion of the fastener 2. For example, the width L of the clamping

groove 31 的 can be less than the diameter d of the bottom end of the fastener 2.

[0037] Furthermore, referring to FIG. 3, in order to ensure reliability of this mounting structure, this mounting structure further includes a lock-elastic pad 5, the lock-elastic pad 5 is arranged between the head portion of the fastener 2 and the washer 3, which can effectively prevent the fastener 2 fixed to the bottom pedestal 1 from loosening and failure due to shake during transportation.

[0038] As shown in FIG. 1 and FIG. 2, a plurality of fasteners 2 and a plurality of washers 3 can be provided, the plurality of fasteners 2 and the plurality of washers 3 correspond to each other one to one, and are spaced apart from each other on the bottom pedestal 1. For example, four corners of the bottom of the household appliance are all provided with the mounting holes 41, four fasteners 2 and four washers 3 are provided, and the bottom of the household appliance is fastened to the bottom pedestal 1 by the four fasteners 2 and the four washers 3.

[0039] As shown in FIG. 3, the fastener 2 is a fastening bolt with a screw rod extending upwards, which can be used for convenient fastening and loosening in time.

[0040] In order to ensure safe and reliable transportation and make it easy to obtain material, the bottom pedestal 1 can be a wood bottom pedestal.

[0041] The bottom of the household appliance can be provided with a supporting bottom leg 4, an upper end of the connecting portion of the fastener 2 passes through

the through hole 11 of the bottom pedestal 1 to be connected to the supporting bottom leg 4. The supporting bottom leg 4 is provided with the mounting hole 41, otherwise, the supporting bottom leg 4 can be added to the bottom of the household appliance. It should be noted that the supporting bottom leg 4 can have various of structures, as long as the supporting bottom leg 4 can bear the weight of the household appliance and the fastener 2 can pass through the supporting bottom leg 4 and fixedly connects the supporting bottom leg 4 to the bottom pedestal 1.

[0042] The household appliance shown in FIG. 1 and FIG. 2 is an integral heat-pump water heater, a weight of the integral heat-pump water heater is no less than 100kg. Certainly, the household appliance can be other types of household appliances and is not limited to the, integral heat-pump water heater.

[0043] The household appliance, such as an integral heat-pump water heater, can include a fragile structure, such as, a fragile enamel water tank liner assembly 9. Therefore, the mounting structure of this scheme is more suitable for the integral heat-pump water heater.

[0044] After the household appliance, such as an integral heat-pump water heater, is transported in position, the washer 3 is removed, the household appliance, such as an integral heat-pump water heater, is lifted, the fastener 2 connected to the bottom of the household appliance, such as an integral heat-pump water heater, entirely passes through the through hole 11, such that the household appliance, such as an integral heat-pump water heater, is separated from the bottom pedestal 1. Furthermore, a mounting leg 6 shown in FIG. 5 to FIG. 7 can be fitted over the fastener 2.

[0045] Specifically, as shown in FIG. 7, the mounting leg can define a groove 62 for receiving the head portion of the fastener 2, and an interference fit is provided between the head portion and the groove 62. The fastener 2 is mounted in the groove 62 of the mounting leg 6 by interference fit.

[0046] Furthermore, referring to FIG. 5 and FIG. 6, a plurality of antiskid protrusions 61 are spaced apart from each other on a bottom of the mounting leg 6 for antiskid function.

[0047] Optionally, the mounting leg 6 is made of rubber or plastic. For example, preferably, the mounting leg 6 is made of PP having a certain strength and hardness or rubber having comparatively hardness, which can be used for supporting, thermal insulation, preventing from face to face scratch due to that the supporting bottom leg 4 is in direct contact with the fastener 2, and also can reduce energy loss because of thermal insulation.

[0048] In addition, the present disclosure further provides a method for packaging and transporting a household appliance, the method includes steps as follows.

[0049] At a packaging and transporting step, a household appliance, such as an integral heat-pump water heater, is packaged and transported according to the mounting structure for packaging and transporting a

household appliance.

[0050] Furthermore, the method further includes a dismounting step.

[0051] The fastener 2 is unscrewed, and the washer 3 is removed.

[0052] The household appliance is lifted, such that the fastener 2 connected to the household appliance moves upwards and passes through the through hole 11 of the bottom pedestal 1, and the household appliance is separated from the bottom pedestal 1.

[0053] For example, the method for packaging and transporting a household appliance can include a packaging and transporting step and a dismounting step.

[0054] First, at the packaging and transporting step, a household appliance is packaged and transported according to the mounting structure for packaging and transporting a household appliance.

[0055] After that, the dismounting step is as follows when the household appliance reaches at a user and needs mounting.

[0056] After the fastener 2 is unscrewed with a dismounting tool, the washer 3 is removed in a direction opposite the clamping groove 31, the household appliance is lifted, such that the fastener 2 connected to the household appliance entirely passes through the through hole 11 of the bottom pedestal 1, and the household appliance is separated from the bottom pedestal 1. The optimized dismounting structure is convenient for mounting, transportation, dismounting and can reduce the cost.

[0057] When the household appliance is separated from the bottom pedestal 1, the fastener 2 is only unscrewed and loosened but still connected to the supporting bottom leg 4 of the household appliance, and then the mounting leg 6 shown in FIG. 5 to FIG. 7 can be fitted over the fastener 2.

[0058] Reference throughout this specification to terms "an embodiment," "some embodiments," "exemplary embodiment," "a specific example," or "some examples," means that a particular feature, structure, material, or characteristic described in connection with the embodiment or example is included in at least one embodiment or example of the present disclosure. Thus, the appearances of the above terms in various places throughout this specification are not necessarily referring to the same embodiment or example of the present disclosure. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

Claims

1. A mounting structure for packaging and transporting a household appliance, comprising:

a bottom pedestal (1);
a fastener (2) comprising a head portion and a connecting portion connected sequentially in a

bottom-up direction, with the cross sectional area of the head portion being greater than the cross sectional area of the connecting portion; and

a washer (3) provided with a clamping groove (31) extending in a radial direction and running through an outer circumferential wall of the washer (3), and the clamping groove (31) runs through an upper surface and lower surface of the washer (3); **characterized in that** the bottom pedestal (1) is provided with a through hole (11) running through in an up-down direction and configured to be arranged on a bottom of the household appliance, an upper end of the connecting portion passing through the through hole (11) to be connected to the household appliance, the cross sectional area of the head portion being no greater than the cross sectional area of the through hole (11), and the washer (3) is arranged between a bottom surface of the bottom pedestal (1) and an upper surface of the head portion.

2. The mounting structure according to claim 1, wherein a width of the clamping groove (31) is less than a minimum radial width of the head portion.
3. The mounting structure according to claim 1 or 2, further comprising a lock-elastic pad (6), and the lock-elastic pad (6) is provided between the head portion and the washer (3).
4. The mounting structure according to any one of claims 1 to 3, wherein a plurality of fasteners (2) and a plurality of washers (3) are provided, the plurality of fasteners (2) and the plurality of washers (3) correspond to each other one to one, and are spaced apart from each other on the bottom pedestal (1).
5. The mounting structure according to any one of claims 1 to 4, wherein the fastener (2) is a fastening bolt.
6. The mounting structure according to any one of claims 1 to 5, wherein the bottom pedestal (1) is a wood bottom pedestal.
7. The mounting structure according to any one of claims 1 to 6, wherein the bottom of the household appliance is provided with a supporting bottom leg (4), and an upper end of the connecting portion passes through the through hole (11) to be connected to the supporting bottom leg (4).
8. The mounting structure according to any one of claims 1 to 7, wherein a mounting leg (6) is fitted over the fastener (3).

9. The mounting structure according to claim 8, wherein the mounting leg (6) defines a groove (62) for receiving the head portion, and an interference fit is provided between the head portion and the groove (62). 5
10. The mounting structure according to claim 8 or 9, wherein a plurality of antiskid protrusions (61) are spaced apart from each other on a bottom of the mounting leg (6). 10
11. The mounting structure according to any one of claims 8 to 10, wherein the mounting leg (6) is made of rubber or plastic.
12. The mounting structure according to any one of claims 1 to 11, wherein the household appliance is an integrated heat pump water heater, and a weight of the household appliance is no less than 100 kg. 15
13. A method for packaging and transporting a household appliance, comprising: packaging and transporting the household appliance using the mounting structure according to any one of claims 1 to 12 at a packaging and transporting step. 20
14. The method according to claim 13, further comprising a dismounting step, wherein the fastener (2) is unscrewed, and the washer (3) is removed; and the household appliance is lifted, such that the fastener (2) connected to the household appliance moves upwards and passes through the through hole (11), and the household appliance is separated from the bottom pedestal (1). 25 30

Patentansprüche

1. Eine Befestigungskonstruktion zum Verpacken und Transportieren eines Haushaltsgeräts, umfassend:
 - einen Bodensockel (1);
 - ein Befestigungselement (2), das einen Kopfabchnitt und einen Verbindungsabschnitt aufweist, die in einer Aufwärtsrichtung in Reihe verbunden sind, wobei die Querschnittsfläche des Kopfabchnitts größer als die Querschnittsfläche des Verbindungsabschnitts ist; und
 - eine Unterlegscheibe (3), die mit einer Klemmnut (31) versehen ist, die sich in einer radialen Richtung erstreckt und durch eine äußere Umfangswand der Unterlegscheibe (3) verläuft, und wobei die Klemmnut (31) durch eine obere Oberfläche und eine untere Oberfläche der Unterlegscheibe (3) verläuft;
 - dadurch gekennzeichnet, dass** der untere Sockel (1) mit einem Durchgangsloch (11) versehen ist, das in einer Abwärtsrichtung hindurchgeht und so ausgebildet ist, dass es an einem

Boden des Haushaltsgeräts angeordnet werden kann, wobei ein oberes Ende des Verbindungsabschnitts durch das Durchgangsloch (11) hindurchgeht, um mit dem Haushaltsgerät verbunden zu sein, wobei die Querschnittsfläche des Kopfabchnitts nicht größer als die Querschnittsfläche des Durchgangslochs (11) ist, und wobei die Unterlegscheibe (3) zwischen einer Boden-Oberfläche des unteren Sockels (1) und einer oberen Oberfläche des Kopfabchnitts angeordnet ist.

2. Befestigungskonstruktion nach Anspruch 1, wobei eine Breite der Klemmnut (31) kleiner ist als eine minimale radiale Breite des Kopfabchnitts.
3. Befestigungskonstruktion nach Anspruch 1 oder 2, wobei die Befestigungskonstruktion ferner ein federelastisches Kissen (6) umfasst und das federelastische Kissen (6) zwischen dem Kopfteil und der Unterlegscheibe (3) vorgesehen ist.
4. Befestigungskonstruktion nach einem der Ansprüche 1 bis 3, wobei eine Vielzahl von Befestigungselementen (2) und eine Vielzahl von Unterlegscheiben (3) vorgesehen sind, wobei die Vielzahl von Befestigungselementen (2) und die Vielzahl von Unterlegscheiben (3) miteinander übereinstimmen und auf dem Bodensockel (1) voneinander beabstandet sind.
5. Befestigungskonstruktion nach einem der Ansprüche 1 bis 4, wobei das Befestigungselement (2) ein Befestigungsbolzen ist.
6. Befestigungskonstruktion nach einem der Ansprüche 1 bis 5, wobei der Bodensockel (1) ein Holzbohlensockel ist.
7. Befestigungskonstruktion nach einem der Ansprüche 1 bis 6, wobei der Boden des Haushaltsgeräts mit einem tragenden Bodenfuß (4) versehen ist und ein oberes Ende des Verbindungsabschnitts sich durch das Durchgangsloch (11) erstreckt, um mit dem tragenden Bodenfuß (4) verbunden zu sein.
8. Befestigungskonstruktion nach einem der Ansprüche 1 bis 7, wobei ein Montagefuß (6) mittels dem Befestigungselement (3) befestigt ist.
9. Befestigungskonstruktion nach Anspruch 8, wobei der Montagefuß (6) eine Nut (62) zur Aufnahme des Kopfteils definiert und ein Presssitz zwischen dem Kopfteil und der Nut (62) vorgesehen ist.
10. Befestigungskonstruktion nach Anspruch 8 oder 9, wobei eine Vielzahl von rutschhemmenden Vorsprüngen (61) an einer Unterseite des Montagefußes

ßen (6) voneinander beabstandet sind.

11. Befestigungskonstruktion nach einem der Ansprüche 8 bis 10, wobei der Montagefuß (6) aus Gummi oder Kunststoff hergestellt ist.
12. Befestigungskonstruktion nach einem der Ansprüche 1 bis 11, wobei das Haushaltsgerät ein integrierter Wärmepumpen-Wasserehrhitzer ist und ein Gewicht des Haushaltsgeräts nicht weniger als 100 kg beträgt.
13. Verfahren zum Verpacken und Transportieren eines Haushaltsgeräts, umfassend:
Verpacken und Transportieren des Haushaltsgeräts unter Verwendung der Befestigungskonstruktion nach einem der Ansprüche 1 bis 12 in einem Verpackungs- und Transportschritt.
14. Verfahren nach Anspruch 13, ferner umfassend einen Demontageschritt, bei dem das Befestigungselement (2) losgeschraubt und die Unterlegscheibe (3) entfernt wird; und das Haushaltsgerät angehoben wird, so dass sich das mit dem Haushaltsgerät verbundene Befestigungselement (2) nach oben bewegt und durch das Durchgangsloch (11) hindurchgeht, und wobei das Haushaltsgerät von dem unteren Sockel (1) getrennt wird.

Revendications

1. Structure de montage pour l'emballage et l'expédition d'un appareil ménager, comprenant:

un socle inférieur (1);
un élément de fixation (2) comprenant une partie tête et une partie connexion reliées séquentiellement dans une direction ascendante, la section transversale de la partie tête étant supérieure à la section transversale de la partie connexion ; et
une rondelle (3) pourvue d'une rainure de serrage (31) s'étendant dans une direction radiale et traversant une paroi circonférentielle extérieure de la rondelle (3), et la rainure de serrage (31) traverse une surface supérieure et une surface inférieure de la rondelle (3);
caractérisé en ce que le socle inférieur (1) est muni d'un trou traversant (11) s'étendant dans une direction de haut en bas et configuré pour être agencé sur un fond de l'appareil ménager, une extrémité supérieure de la partie connexion passant à travers le trou traversant (11) pour se connecter à l'appareil ménager, la surface de section transversale de la partie tête n'étant pas supérieure à la surface de section transversale du trou traversant (11), et la rondelle (3) est

agencée entre une surface inférieure du socle inférieur (1) et une surface supérieure de la partie tête.

2. Structure de montage selon la revendication 1, dans laquelle une largeur de la rainure de serrage (31) est inférieure à une largeur radiale minimale de la partie tête.
3. Structure de montage selon les revendications 1 ou 2, comprenant en outre un tampon élastique de blocage (6), et le tampon élastique de blocage (6) est prévu entre la partie tête et la rondelle (3).
4. Structure de montage selon l'une quelconque des revendications 1 à 3, dans laquelle une pluralité d'éléments de fixation (2) et une pluralité de rondelles (3) sont prévues, la pluralité d'éléments de fixation (2) et la pluralité de rondelles (3) correspondent les unes aux autres une à une, et sont espacées les unes des autres sur le socle inférieur (1).
5. Structure de montage selon l'une des revendications 1 à 4, dans laquelle l'élément de fixation (2) est un boulon de fixation.
6. Structure de montage selon l'une des revendications 1 à 5, dans laquelle le socle inférieur (1) est un socle inférieur en bois.
7. Structure de montage selon l'une quelconque des revendications 1 à 6, dans laquelle le fond de l'appareil ménager est muni d'un pied de support (4), et une extrémité supérieure de la partie de liaison passe par le trou traversant (11) pour être reliée à la jambe inférieure d'appui (4).
8. Structure de montage selon l'une des revendications 1 à 7, dans laquelle une jambe de montage (6) est montée sur l'élément de fixation (2).
9. Structure de montage selon la revendication 8, dans laquelle la jambe de montage (6) définit une rainure (62) pour recevoir la partie tête, et un ajustement serré est prévu entre la partie tête et la rainure (62).
10. Structure de montage selon les revendications 8 ou 9, dans laquelle une pluralité de saillies antidérapantes (61) sont espacées les unes des autres sur une partie inférieure de la jambe de montage (6).
11. Structure de montage selon l'une des revendications 8 à 10, dans laquelle la jambe de montage (6) est en caoutchouc ou en plastique.
12. Structure de montage selon l'une des revendications 1 à 11, dans laquelle l'appareil ménager est un chauffe-eau à pompe à chaleur intégré, et un poids de

l'appareil ménager n'est pas inférieur à 100 kg.

- 13.** Procédé d'emballage et d'expédition d'un appareil ménager, comprenant: l'emballage et l'expédition de l'appareil ménager en utilisant la structure de montage selon l'une quelconque des revendications 1 à 12 à une étape d'emballage et d'expédition. 5
- 14.** Procédé selon la revendication 13, comprenant en outre une étape de démontage, dans laquelle l'élément de fixation (2) est dévissé et la rondelle (3) est retirée; et l'appareil ménager est soulevé, de sorte que l'élément de fixation (2) connecté à l'appareil ménager se déplace vers le haut et passe à travers le trou traversant (11), et l'appareil ménager est séparé du socle inférieur (1). 10 15

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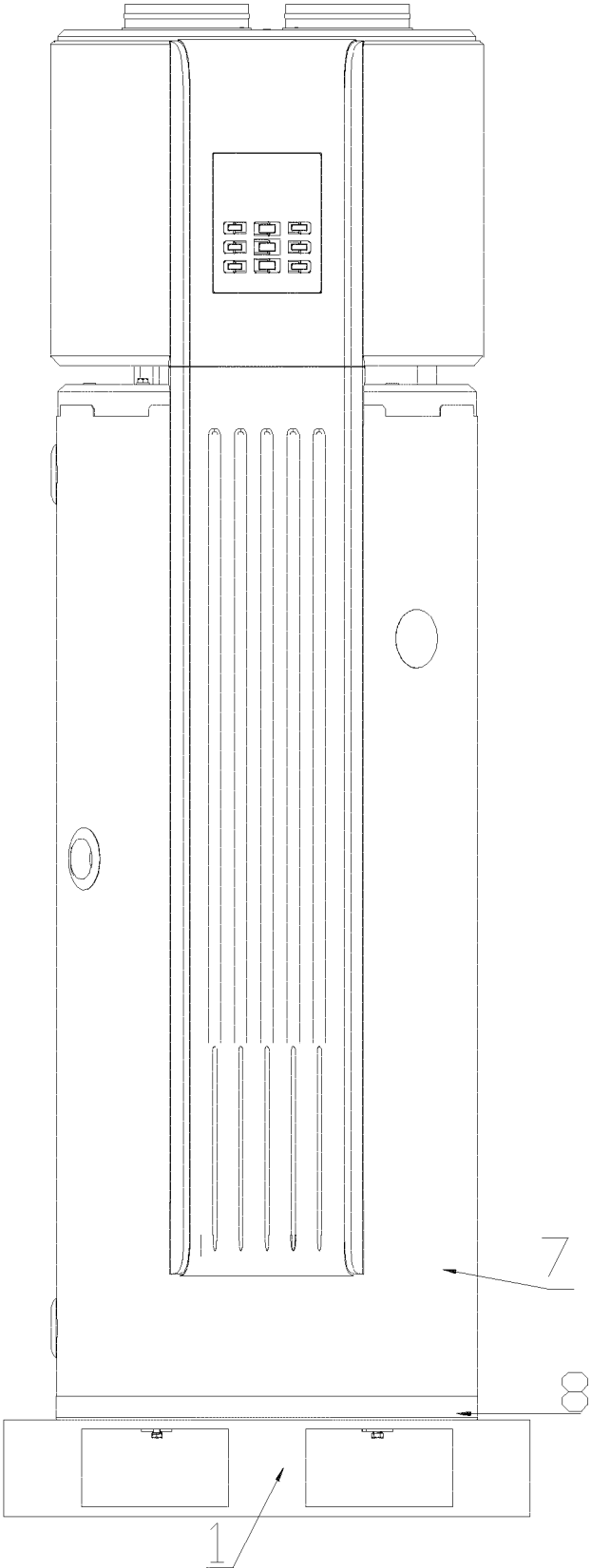


FIG 1

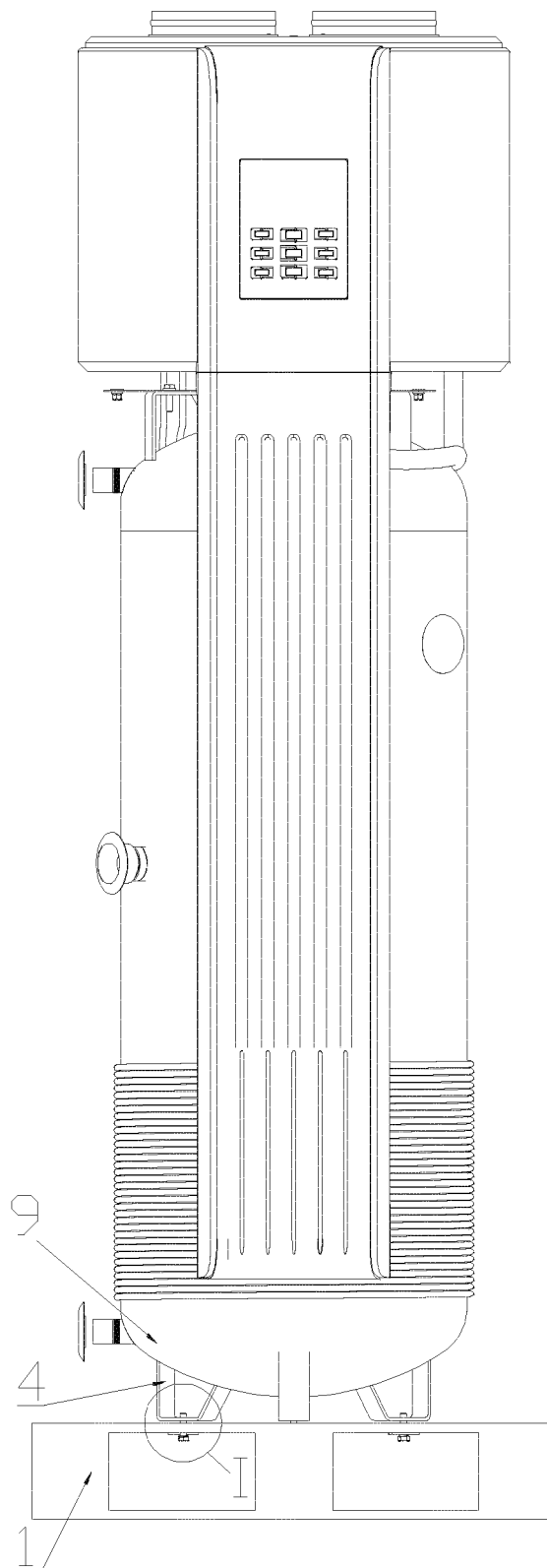


FIG. 2

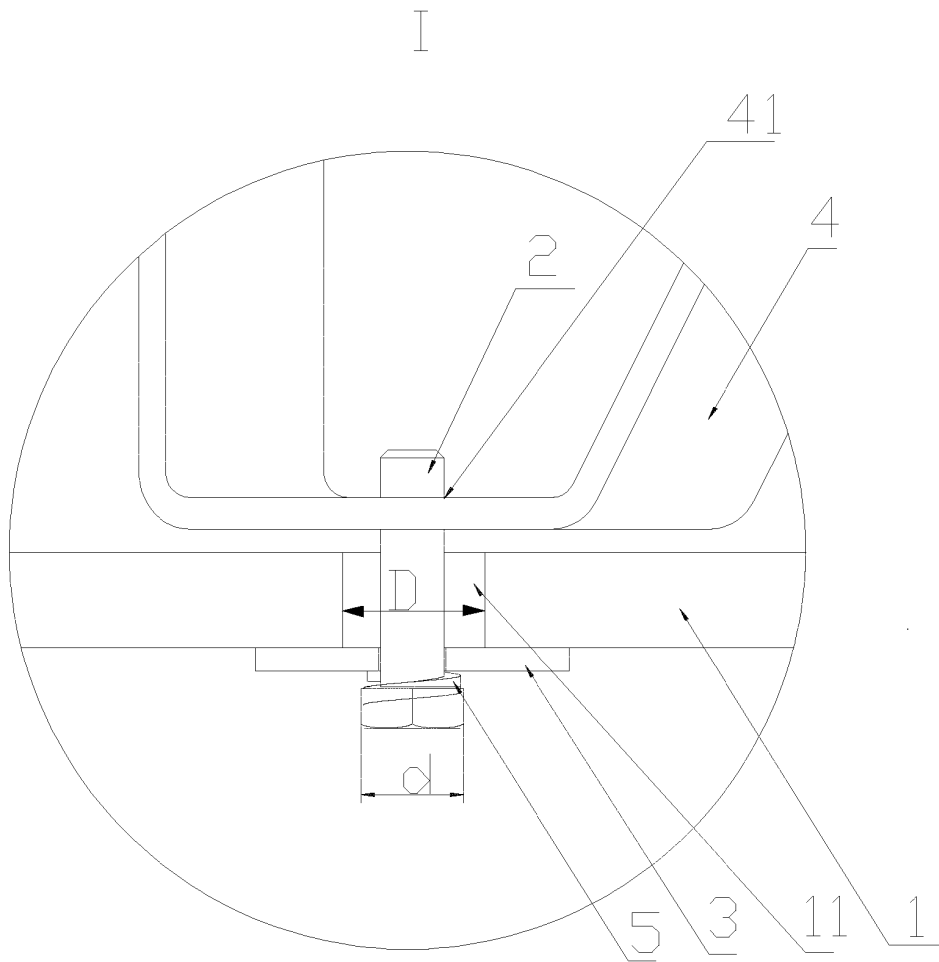


FIG 3

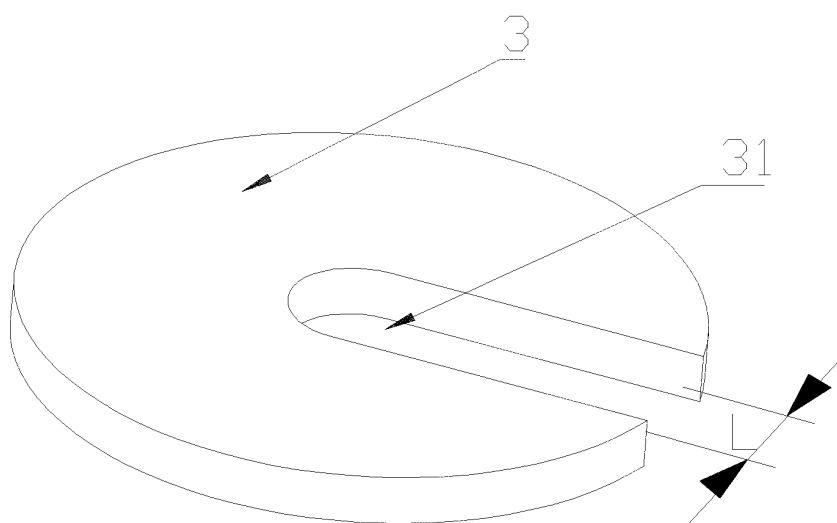


FIG 4

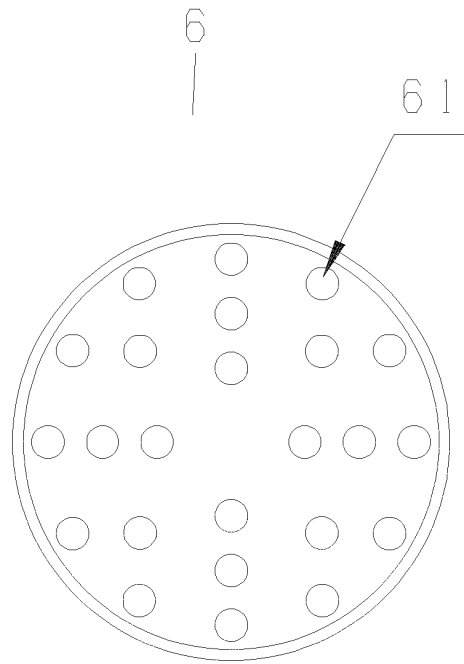


FIG. 5

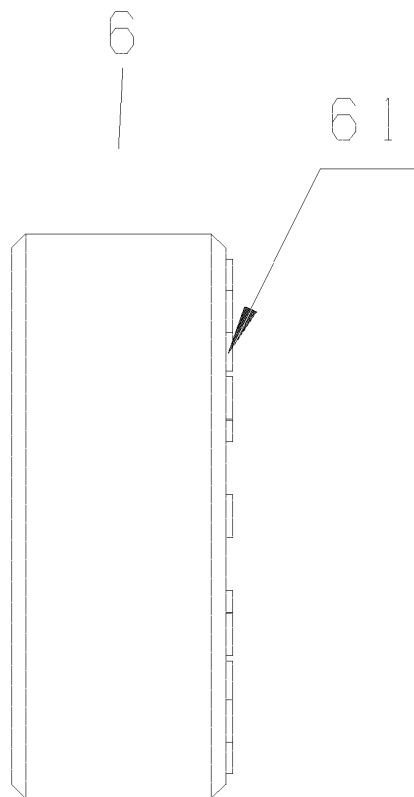


FIG. 6

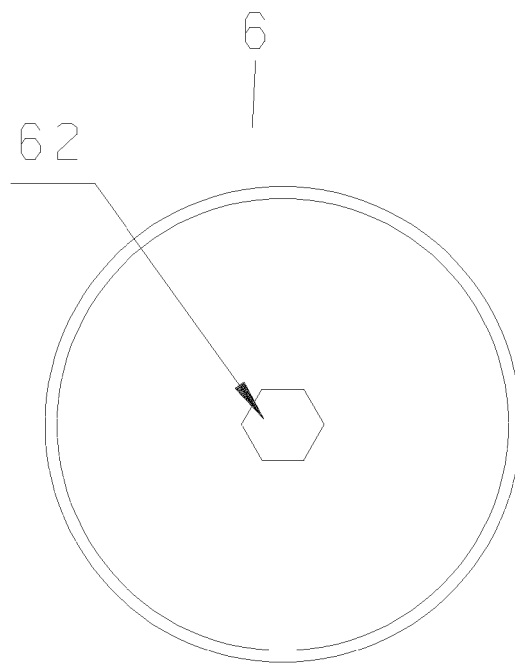


FIG. 7

REFERENCES CITED IN THE DESCRIPTION

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