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(54) **LAUNDRY TREATMENT APPARATUS**

(57) A laundry treating apparatus is provided, and comprises: a rear support (1), laundry treating drums (7, 8), and a condensation drying module. The rear ends of the laundry treating drums (7, 8) are installed on the rear support (1), and the laundry treating drums (7, 8) are in communication with the condensation drying module. The condensation drying module comprises a base (4) and a condenser (2), and the rear support (1) is provided with an opening for allowing the condenser (2) to be inserted and installed into the base (4). By forming the opening in the rear side of the laundry treating apparatus, the integral structure of a front panel of the whole apparatus is reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support (1) facilitates enhancing of the structural strength of the front panel.

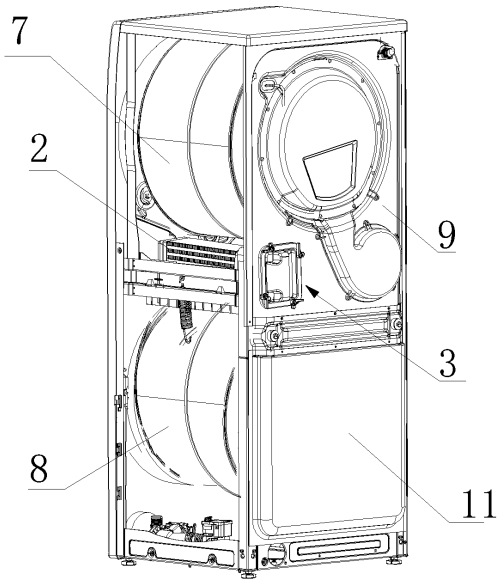

FIG. 1

EP 3 683 352 A1

Description

TECHNICAL FIELD

[0001] The present disclosure relates to the field of household appliances, in particular to a laundry treating apparatus with an integrated appearance.

BACKGROUND

[0002] With the development of the society, people's requirements on the product appearance of the household appliances are increasing. In the highly competitive market in sales of the household appliances, people may choose the household appliances having the appearance they like. Thus, the structural design of the household appliances may affect whether the household appliances are sold well or not. There are a variety of existing laundry treating apparatuses, especially the dryers. Due to differences in the drying principle, the dryers may comprise condensation dryers, heat pump dryers and straight emission type dryers. Thus, the difference in the principle may cause the dryers to have different structures. For example, since the condenser of the condensation dryer is located in the drying air duct, impurities are likely to accumulate. Thus, the condenser shall be cleaned regularly, which thereby requires to design an opening through which a user can take the condenser out. In the prior art, considering the design of the internal air duct or in order to facilitate the installation and removal of the condenser, an opening for removing or installing the condenser is arranged on the front panel. However, although the structure facilitates the installation and removal of the condenser, the overall appearance of the dryer is damaged, and people's satisfaction with the appearance of household appliances is difficult to achieve.

[0003] The utility model patent having an application number of 201420029148.3 discloses a condensation dryer, which comprises a base, a condenser, a condenser handle and a front support assembly. The condenser is arranged on the base; the condenser handle is arranged on the base and located on one side of the condenser; the base is provided with a condensed water tank under the condenser handle; and the front support assembly is arranged on the base. The condensed water produced on the condenser handle may be stored in a fixed place, so that the condensed water on the condenser handle can be reduced, and the phenomenon that condensed water on the condenser handle dribbles onto the floor from the condenser handle when the condenser is taken out is avoided, which thereby keeps the room clean, and facilitates utilization of the condensation dryer. Referring to FIGS. 1, 2, 4 and 5, it can be seen that the condenser handle is arranged on one side of the front panel, so the opening allowing the condenser to be taken out and put in is formed in the front panel. However, although it is convenient to take out and put in the condenser, the overall appearance design of the dryer is not facilitated.

[0004] The invention patent having an application number of 201510374811.2 discloses a condensing type dryer base and a dryer. The dryer base is provided with a draining pump and a condenser; and the dryer base is provided with a water collecting tank corresponding to the lower part of the condenser. The water collecting tank is in communication with the draining pump and is internally provided with a filtering structure for filtering the thread scraps. By arranging the filtering structure in the water collecting tank that is in communication with the draining pump, of the dryer base, the thread scraps can be blocked by the filtering structure during the process of the condensed water flowing to the draining pump, so that the condition that the thread scraps enter the draining pump, thereby causing blockage or even damage to the draining pump can be avoided. Referring to FIG. 2 of the Description, it can be seen that an opening for the condenser is formed in the front panel, and a cover plate clamped into the front panel needs to be arranged on the front panel to close the opening. In this kind of structural design, the front panel of the dryer is formed by splicing multiple small panels in the appearance. Thus, the front panel has a complicated structure and cannot meet the requirements of consumers. In addition, the opening for the condenser and an opening for the cooling air duct of the condenser are both formed in the front panel, which reduces the structural strength of the front panel.

[0005] By forming the opening for allowing the condenser to be inserted and installed into the base in the front panel, the strength of the front panel is weakened, and the front panel is easy to deform. Since the structural strength of the rear support is excellent, the problem that the strength of the front panel is reduced caused by the fact that the opening is formed in the front panel can be solved by forming the opening in the rear support.

[0006] If the opening for allowing the condenser to be inserted and installed into the base is formed in the front panel, a cover plate with a delicate structure needs to be provided to cover the opening, and the cover plate needs to be matched with the front panel, which may increase the design cost and complicate the installing structure. In addition, if the opening for allowing the condenser to be inserted and installed into the base is formed in the front panel, a gap structure is left on the front panel, which may attract the attention of children and easily cause safety accidents.

[0007] In view of this, the present disclosure is proposed.

SUMMARY

[0008] The technical problem to be solved by the present disclosure is to overcome the defects of the prior art and provide a laundry treating apparatus, in which an opening for allowing a condenser to be inserted and installed into a base is formed in the rear side of the laundry treating apparatus, so that the integral structure of the

front panel of the whole apparatus is reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support facilitates enhancing of the structural strength of the front panel.

[0009] In order to solve the technical problem, the basic concepts of the technical solution adopted by the present disclosure are as follows:

A laundry treating apparatus comprises: a rear support, laundry treating drums and a condensation drying module. The rear ends of the laundry treating drums are installed on the rear support, and the laundry treating drums are in communication with the condensation drying module; and the condensation drying module comprises a base and a condenser, and an opening for allowing the condenser to be inserted and installed into the base is formed in the rear support.

[0010] In the aforesaid solution, the laundry treating drums are preferably drying drums. By forming the opening for allowing the condenser to be inserted and installed into the base in the rear support, the integral structure of the front panel of the whole apparatus is reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support facilitates enhancing of the structural strength of the front panel.

[0011] Of course, in the present disclosure, the opening for allowing the condenser to be inserted and installed into the base can also be formed in the side surface of the laundry treating apparatus, that is, in the side surface of one of the left and right sides of the laundry treating apparatus. This also helps to significantly improve the aesthetics of the laundry treating apparatus and enhance the structural strength of the front panel.

[0012] Preferably, the opening is provided with a condenser fixing seat for fixing the condenser when the condenser is inserted and installed into the base.

[0013] In the aforesaid solution, the condenser fixing seat is matched with the corresponding end of the condenser in shape. When the condenser is installed into the base, the condenser fixing seat and the corresponding end of the condenser are in hermetic connection to prevent the drying air from leaking out therefrom.

[0014] Preferably, the condenser is provided with clamping pieces, the condenser fixing seat is provided with clamping slots, and the clamping pieces are clamped and fixed into the clamping slots when the condenser is inserted and installed into the base.

[0015] Preferably, the condenser fixing seat comprises a body, and an installation port is arranged in the center of the body; screw seats which are fixed on the rear support by screws are arranged in the periphery of the body; one end of the condenser is inserted and installed into the base through the installation port, the other end of the condenser is provided with a plurality of rotatable clamping pieces, the side wall of the installation port is provided with clamping slots corresponding to the clamping pieces, and the clamping pieces can be clamped and fixed into the clamping slots by adjusting positions of the clamping pieces.

[0016] Preferably, the condenser is of a rectangular parallelepiped structure, and the clamping pieces are respectively arranged at four corners of the end face of one end of the rectangular parallelepiped structure; the side wall of the installation port is provided with clamping slots at positions corresponding to the clamping pieces; and each clamping slot is provided with at least one slot opening facing the center of the installation port for clamping and fixing the condenser when the corresponding clamping piece rotates into the clamping slot.

[0017] In the aforesaid solution, clamping portions of the clamping pieces can be clamped into or separated from the clamping slots by rotation, and the clamping pieces are arranged at four corners of the end face of one end of the rectangular parallelepiped structure, so that the condenser can be stably fixed.

[0018] Preferably, the rear support is further detachably installed with a cover plate for covering the outer surface of the rear support.

[0019] In the aforesaid solution, the opening is formed in the rear support, so that the appearance of the rear portion of the laundry treating apparatus is affected. Thus, in the present disclosure, the cover plate is further detachably arranged on the rear support for covering the opening, so that the appearance of the whole machine is integrated, which is favorable for the integrated design of the laundry treating apparatus.

[0020] Preferably, the laundry treating apparatus is internally provided with a first laundry treating drum and a second laundry treating drum in the up-down direction, and the base is installed between the first laundry treating drum and the second laundry treating drum.

[0021] In the aforesaid solution, according to the characteristics of the twin-tub washing machine, the base is arranged between the first laundry treating drum and the second laundry treating drum, which saves the internal space of the laundry treating apparatus. Compared with the mode that the base is arranged at the bottom of the drying drum in the prior art, the present disclosure increases the installation height of the condenser and thereby facilitates the installation and removal of the condenser by arranging the base between the first laundry treating drum and the second laundry treating drum.

[0022] Preferably, the rear portion of the laundry treating apparatus is provided with a first rear support corresponding to the first laundry treating drum and a second rear support corresponding to the second laundry treating drum, wherein the opening is formed in the first rear support.

[0023] In the aforesaid solution, the opening is formed in the first rear support, which increases the height of the opening and facilitates the installation and removal of the condenser by users.

[0024] Preferably, the laundry treating apparatus is

provided with a first cover plate and a second cover plate corresponding to the first rear support and the second rear support, respectively, wherein the first cover plate covers the outer surface of the first rear support, and the second cover plate covers the outer surface of the second rear support.

[0025] In the aforesaid solution, the first cover plate covers both the first rear support and the opening in the first rear support, and the second cover plate covers the second rear support. The first cover plate and the second cover plate cooperate with each other to cover the back portion of the whole laundry treating apparatus. The back surface of the laundry treating apparatus is generally arranged in a manner of facing the wall, so the requirement on the appearance is relatively small.

[0026] In another aspect, compared with merely arranging one cover plate, arranging the first cover plate and the second cover plate in the present disclosure makes it more convenient for users to install and remove the condenser. In the actual removing process, the user only needs to remove the first cover plate for replacing the condenser, and does not need to remove the second cover plate, thereby greatly reducing the difficulty in replacing the condenser.

[0027] Preferably, the opening is formed in the edge of one side of the rear support, the base is provided with a condenser installing chamber corresponding to the opening, and an installation opening of the condenser installing chamber is formed in the rear side of the base and directly faces the opening.

[0028] In the aforesaid solution, by forming the opening in the edge of one side of the rear support, the condenser is installed between the first laundry treating drum and the second laundry treating drum at a position close to the edge of the left or right side of the laundry treating apparatus. According to the structure of the first and second laundry treating drums, it can be seen that the largest gap between the first and second laundry treating drums in the laundry treating apparatus is the gap close to edges of the left and right sides. Thus, forming the opening in the edge of one side of the rear support allows the condenser to be installed at this position, which fully utilizes the structural characteristics of the twin-tub laundry treating apparatus, and thereby saves the internal space of the twin-tub laundry treating apparatus.

[0029] Preferably, the condenser is of a rectangular parallelepiped structure, and is disposed in parallel to axes of the two laundry treating drums.

[0030] In the aforesaid solution, the condenser is designed as a rectangular parallelepiped structure, and is arranged in parallel with the axes of the two laundry treating drums, which further saves the internal space of the laundry treating apparatus.

[0031] Preferably, the base is further provided with a condenser cooling air duct, and an air inlet of the condenser cooling air duct is formed in the side surface or rear surface of the laundry treating apparatus.

[0032] In the aforesaid solution, by forming the air inlet of the condenser cooling air duct in the side surface or rear surface of the laundry treating apparatus, the integral structure of the front panel of the whole apparatus is also reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, enhancing of the structural strength of the front panel is also facilitated.

[0033] After adopting the aforesaid technical solution, the present disclosure has the following beneficial effects compared with the prior art:

1. In the present disclosure, by forming the opening for allowing the condenser to be inserted and installed into the base in the rear side of the laundry treating apparatus, the integral structure of the front panel of the whole apparatus is reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support also facilitates enhancing of the structural strength of the front panel.
2. By forming the air inlet of the condenser cooling air duct in the side surface or rear surface of the laundry treating apparatus in the present disclosure, the integral structure of the front panel of the whole apparatus is also reserved, and the front panel has integrity, which is favorable for the aesthetics of the front panel, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support also facilitates enhancing of the structural strength of the front panel.
3. The laundry treating apparatus is internally provided with the first laundry treating drum and the second laundry treating drum in the up-down direction, and the base is installed between the first laundry treating drum and the second laundry treating drum. The rear portion of the laundry treating apparatus is provided with the first rear support corresponding to the first laundry treating drum and the second rear support corresponding to the second laundry treating drum, wherein the opening is formed in the first rear support. The opening is formed in the first rear support, which increases the height of the opening and facilitates the installation and removal of the condenser by users. The laundry treating apparatus is provided with the first cover plate and the second cover plate corresponding to the first rear support and the second rear support, respectively, wherein the first cover plate covers the outer surface of the first rear support, and the second cover plate covers the outer surface of the second rear support. Thus, compared with merely arranging one cover plate, providing the first cover plate and the second cover plate in the present disclosure makes it more convenient for users to install and remove the condenser. In the actual removing process, the user only

needs to remove the first cover plate for replacing the condenser, and does not need to remove the second cover plate, thereby greatly reducing the difficulty in replacing the condenser.

4. In the present disclosure, by forming the opening in the edge of one side of the rear support, the condenser is installed between the first laundry treating drum and the second laundry treating drum at a position close to the edge of the left or right side of the laundry treating apparatus. According to the structure of the first and second laundry treating drums, it can be seen that the largest gap between the first laundry treating drum and the second laundry treating drum in the laundry treating apparatus is the gap close to edges of the left and right sides. Thus, forming the opening in the edge of one side of the rear support allows the condenser to be installed at this position, which fully utilizes the structural characteristics of the twin-tub laundry treating apparatus, and thereby saves the internal space of the twin-tub laundry treating apparatus.

[0034] The specific embodiments of the present disclosure will be further illustrated in detail in combination with the accompanying drawings hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0035] As a part of the present application, the drawings are used to provide further understanding of the present disclosure. The exemplary embodiments of the present disclosure and the description thereof are used to explain the present disclosure, and do not constitute improper limit to the present disclosure. Apparently, the accompanying drawings in the following description merely show some embodiments, and a person of ordinary skill in the art may still derive other accompanying drawings from these accompanying drawings without creative efforts. In the accompanying drawings:

FIG. 1 is a schematic diagram of a structure of a laundry treating apparatus according to the present disclosure;

FIG. 2 is an exploded view of the upper half part of the structure in FIG. 1;

FIG. 3 is a schematic diagram of an installing structure of a laundry treating apparatus according to the present disclosure;

FIG. 4 is a schematic diagram of a structure of a first rear support; and

FIG. 5 is an enlarged view of the A portion in FIG. 4.

[0036] Reference signs: 1. Rear support; 2. Condenser; 3. Condenser fixing seat; 4. Base; 5. Clamping piece; 6. Screw seat; 7. First laundry treating drum; 8. Second laundry treating drum; 9. First rear support; 10. First cover plate; 11. Second cover plate; 12. Fan; 13. Volute casing; 14. Upper casing; 15. Motor; 16 Front panel; and 17. Side surface.

[0037] It should be noted that the drawings and written description are not intended to limit the scope of the concepts of the present disclosure in any way, but rather to illustrate the concepts of the present disclosure to a person skilled in the art by referring to specific embodiments.

DETAILED DESCRIPTION

[0038] In order to make the objects, technical solutions and advantages of embodiments of the present disclosure more clearly, the technical solutions of the embodiments will be clearly and completely described below in conjunction with drawings of the embodiments of the present disclosure. The following embodiments are used to illustrate the present disclosure, but not to limit the scope of the present disclosure.

[0039] In the description of the present disclosure, it should be understood that, orientation or position relationships indicated by the terms "upper", "lower", "inner", "outer", etc. are based on the orientation or position relationships as shown in the drawings, for ease of the description of the present disclosure and simplifying the description only, rather than indicating or implying that the indicated device or element must have a particular orientation or be constructed and operated in a particular orientation. Therefore, these terms should not be understood as a limitation to the present disclosure.

[0040] In the description of the present disclosure, it should be understood that, unless otherwise specified and defined, the terms "install" and "connected to" should be comprehended in a broad sense. For example, these terms may be comprehended as being fixedly connected, detachably connected or integrally connected; mechanically connected or electrically connected; or directly connected or indirectly connected through an intermediate medium. The specific meanings about the foregoing terms in the present disclosure may be understood by those skilled in the art according to specific circumstances.

Embodiment 1

[0041] Referring to FIGS. 1-5, this embodiment provides a laundry treating apparatus, which comprises: a rear support 1, laundry treating drums, and a condensation drying module. The rear ends of the laundry treating drums are installed on the rear support 1, and the laundry treating drums are in communication with the condensation drying module. The condensation drying module comprises a base and a condenser 2, and an opening for allowing the condenser 2 to be inserted and installed into the base is formed in the rear support 1.

[0042] In the aforesaid solution, the laundry treating drums are preferably drying drums. By forming the opening for allowing the condenser 2 to be inserted and installed into the base in the rear support 1, the integral structure of the front panel 16 of the whole apparatus is

reserved, and the front panel 16 has integrity, which is favorable for the aesthetics of the front panel 16, and significantly improves the aesthetics of the laundry treating apparatus. In addition, forming the opening in the rear support 1 facilitates enhancing of the structural strength of the front panel 16.

[0043] Of course, in the present disclosure, the opening for allowing the condenser 2 to be inserted and installed into the base can also be formed in a side surface 17 of the laundry treating apparatus, that is, in the side surface 17 of one of the left and right sides of the laundry treating apparatus. This also helps to significantly improve the aesthetics of the laundry treating apparatus and enhance the structural strength of the front panel 16.

[0044] For example, an installation hole is formed in the side surface 17 of the laundry treating apparatus to install the condenser 2 therein. Preferably, the condenser 2 is of a rectangular parallelepiped structure, so that a rectangular opening is correspondingly formed in the side surface 17 of the laundry treating apparatus, which facilitates the insertion of the condenser 2. At this point, the handle of the condenser 2 is arranged on the side surface in the length direction instead of the end.

[0045] Preferably, the rear support 1 is provided with the opening, and the opening is provided with a condenser fixing seat 3 for fixing the condenser 2 when the condenser 2 is inserted and installed into the base.

[0046] In the aforesaid solution, the condenser fixing seat 3 is matched with the corresponding end of the condenser 2 in shape. When the condenser 2 is installed on the base 4, the condenser fixing seat 3 and the corresponding end of the condenser 2 are in hermetical connection to prevent the drying air from leaking out therefrom.

[0047] Preferably, the condenser fixing seat 3 is an independent piece and fixed at the opening in the rear support 1 by a fastener.

[0048] Preferably, the condenser 2 is provided with clamping pieces 5, and the fixing seat of condenser 2 is provided with clamping slots. The clamping pieces 5 are clamped and fixed into the clamping slots when the condenser 2 is inserted and installed into the base.

[0049] Preferably, the condenser fixing seat 3 comprises a body, and an installation port is arranged in the center of the body; screw seats 6 which are fixed on the rear support 1 by screws are arranged in the periphery of the body; one end of the condenser 2 is inserted and installed into the base through the installation port; the other end of the condenser is provided with a plurality of rotatable clamping pieces 5, the side wall of the installation port is provided with clamping slots at positions corresponding to the clamping pieces 5, and the clamping pieces 5 can be clamped and fixed into the clamping slots by adjusting positions of the clamping pieces 5.

[0050] Preferably, the condenser 2 is of a rectangular parallelepiped structure, and the clamping pieces 5 are respectively arranged at four corners of the end face of one end of the rectangular parallelepiped structure; the side wall of the installation port is provided with the clamping slots at positions corresponding to the clamping pieces 5; and each clamping slot is provided with at least one slot opening facing the center of the installation port for clamping and fixing the condenser 2 when the corresponding clamping piece 5 rotates into the clamping slot.

[0051] In the aforesaid solution, clamping portions of the clamping pieces 5 can be clamped into or separated from the clamping slots by rotation, and the clamping piece 5 are arranged at four corners of the end face of one end of the rectangular parallelepiped structure, so that the condenser 2 can be stably fixed.

Embodiment 2

[0052] Referring to FIGS. 1-5, based on the Embodiment 1, the Embodiment 2 further discloses that the rear support 1 of the laundry treating apparatus is further detachably installed with a cover plate for covering the outer surface of the rear support 1.

[0053] In the aforesaid solution, the opening is formed in the rear support 1, so that the appearance of the rear portion of the laundry treating apparatus is affected. Thus, in the present disclosure, the cover plate is further detachably arranged on the rear support 1 for covering the opening, so that the appearance of the whole machine is integrated, which is favorable for the integrated design of the laundry treating apparatus.

[0054] Preferably, the laundry treating apparatus is internally provided with a first laundry treating drum 7 and a second laundry treating drum 8 in the up-down direction, and the base is installed between the first laundry treating drum 7 and the second laundry treating drum 8.

[0055] In the aforesaid solution, according to the characteristics of the twin-tub washing machine (provided with two laundry treating drums in the up-down direction), the base is arranged between the first laundry treating drum 7 and the second laundry treating drum 8, which saves the internal space of the laundry treating apparatus. Compared with the mode that the base 4 is arranged at the bottom of the drying drum in the prior art, the present disclosure increases the installation height of the condenser 2 and thereby facilitates the installation and removal of the condenser 2 by arranging the base 4 between the first laundry treating drum 7 and the second laundry treating drum 8.

[0056] Preferably, the rear portion of the laundry treating apparatus is provided with a first rear support 9 corresponding to the first laundry treating drum 7 and a second rear support corresponding to the second laundry treating drum 8, and the opening is formed in the first rear support 9. The base 4 is connected to the first rear support 9.

[0057] In the aforesaid solution, the opening is formed in the first rear support 9, which increases the height of the opening and facilitates the installation and removal of the condenser 2 by users.

[0058] Preferably, the laundry treating apparatus is

provided with a first cover plate 10 corresponding to the first rear support 9 and a second cover plate 11 corresponding to the second rear support. The first cover plate 10 covers the outer surface of the first rear support, and the second cover plate 11 covers the outer surface of the second rear support.

[0059] In the aforesaid solution, the first cover plate 10 covers both the first rear support 9 and the opening in the first rear support 9, and the second cover plate 11 covers the second rear support. The first cover plate 10 and the second cover plate 11 cooperate with each other to cover the back portion of the whole laundry treating apparatus. The back surface of the laundry treating apparatus is generally arranged in a manner of facing the wall, so the requirement on the appearance is relatively small.

[0060] In another aspect, compared with merely arranging one cover plate, arranging the first cover plate 10 and the second cover plate 11 in the present disclosure makes it more convenient for users to install and remove the condenser 2. In the actual removing process, the user only needs to remove the first cover plate 10 for replacing the condenser 2, and does not need to remove the second cover plate 11, thereby greatly reducing the difficulty in replacing the condenser 2.

[0061] Preferably, in order to better facilitate installation and removal of the condenser 2, the first cover plate 10 is provided with an operating port corresponding to the opening in the first rear support 9. The operating port is not smaller than the installation port in the condenser fixing seat 3, and is used for realizing removal or insertion of the condenser 2 through the operating port when the condenser 2 is removed.

[0062] Preferably, the opening is formed in the edge of one side of the rear support 1, and the base 4 is provided with a condenser installing chamber corresponding to the opening. An installation opening of the condenser installing chamber is formed in the rear side of the base and directly faces the opening.

[0063] In the aforesaid solution, by forming the opening in the edge of one side of the rear support 1, the condenser 2 is installed between the first laundry treating drum 7 and the second laundry treating drum 8 at a position close to the edge of the left or right side of the laundry treating apparatus. According to the structure of the first laundry treating drum 7 and the second laundry treating drum 8, it can be seen that the largest gap between the first laundry treating drum 7 and the second laundry treating drum 8 in the laundry treating apparatus is the gap close to edges of the left and right sides. Thus, forming the opening in the edge of one side of the rear support 1 allows the condenser 2 to be installed at this position, which fully utilizes the structural characteristics of the twin-tub laundry treating apparatus, and thereby saves the internal space of the twin-tub laundry treating apparatus.

[0064] Preferably, the condenser installing chamber comprises a condenser installing groove formed on the base 4. The top of the installing groove is covered with an upper casing 14 to form an air duct. One side of the condenser installing chamber communicates with the front air duct of the drying air duct of the laundry treating apparatus, and the other side of the condenser installing chamber communicates with the rear air duct of the drying air duct. A fan 12 is installed on the rear support 1.

[0065] Preferably, the condenser 2 is of a rectangular parallelepiped structure, and is disposed in parallel to axes of the two laundry treating drums.

[0066] In the aforesaid solution, the condenser 2 is designed as a rectangular parallelepiped structure, and is provided in parallel with the axes of the two laundry treating drums, which further saves the internal space of the laundry treating apparatus.

[0067] Preferably, the base 4 is further provided with a condenser cooling air duct, and an air inlet of the condenser cooling air duct is formed in a side surface 17 or rear surface of the laundry treating apparatus.

[0068] In the aforesaid solution, by forming the air inlet of the condenser cooling air duct in the side surface 17 or rear surface of the laundry treating apparatus, the integral structure of the front panel 16 of the whole apparatus is also reserved, and the front panel 16 has integrity, which is favorable for the aesthetics of the front panel 16, and significantly improves the aesthetics of the laundry treating apparatus. In addition, enhancing of the structural strength of the front panel 16 is also facilitated.

[0069] The cooling air duct comprises a volute casing 13 arranged on the base 4. The inlet of the volute casing 13 is arranged opposite to the air inlet of the cooling air duct, and the impeller in the volute casing 13 is driven to rotate by a motor 15 installed on the base 4.

[0070] In the prior art, by forming the opening for allowing the condenser to be inserted and installed into the base in the front panel, the strength of the front panel is weakened and the front panel is easy to deform. In the present disclosure, since the structural strength of the rear support is excellent, the problem that the strength of the front panel is reduced caused by the fact that the opening is formed in the front panel can be solved by forming the opening in the rear support.

[0071] The above description is only the preferred embodiments of the present disclosure, and is not intended to limit the present disclosure in any form. Although the preferred embodiments according to the present disclosure are disclosed as foregoing, they are not intended to limit the disclosure. For a person skilled in the art, the technical solutions of the disclosure may be improved and modified or be changed as equivalent embodiments by use of the aforesaid technical contents without departing from the scope of the technical solutions of the present disclosure. Therefore, any simple improvement, equivalent change and modification made to the aforesaid embodiment according to the technical contents of the present disclosure without departing from the contents of the technical solutions of the present disclosure, falls into the protection scope of the technical solutions

of the present disclosure.

Claims

1. A laundry treating apparatus comprising: a rear support, a laundry treating drum and a condensation drying module, wherein a rear end of the laundry treating drum is installed on the rear support, and the laundry treating drum is in communication with the condensation drying module; the condensation drying module comprises a base and a condenser, and the rear support is provided with an opening for allowing the condenser to be inserted and installed into the base.

2. The laundry treating apparatus according to claim 1, **characterized in that** the opening is provided with a condenser fixing seat for fixing the condenser when the condenser is inserted and installed into the base.

3. The laundry treating apparatus according to claim 1 or 2, **characterized in that** the condenser is provided with a clamping piece, the condenser fixing seat is provided with a clamping slot, and the clamping piece is clamped and fixed into the clamping slot when the condenser is inserted and installed into the base.

4. The laundry treating apparatus according to claim 2 or 3, **characterized in that** the condenser fixing seat comprises a body, an installation port is arranged on a center of the body, one end of the condenser is inserted and installed into the base through the installation port, another end of the condenser is provided with a plurality of clamping pieces rotatable, and the clamping pieces are clamped and fixed into the clamping slots by adjusting positions of the clamping pieces;
preferably, the condenser is of a rectangular parallelepiped structure, and the clamping pieces are respectively arranged at four corners of an end face of one end of the rectangular parallelepiped structure; a side wall of the installation port is provided with clamping slots at positions corresponding to the clamping pieces; and each of the clamping slots is provided with at least one slot opening facing a center of the installation port for clamping and fixing the condenser when the clamping pieces rotates into the clamping slots.

5. The laundry treating apparatus according to any one of claims 1-4, **characterized in that** a cover plate is detachably installed on the rear support for covering an outer surface of the rear support.

6. The laundry treating apparatus according to any one of claims 1-5, **characterized in that** the laundry treating apparatus is provided with a first laundry treating drum and a second laundry treating drum under the first laundry treating drum, and the base is installed between the first laundry treating drum and the second laundry treating drum.

7. The laundry treating apparatus according to claim 6, **characterized in that** a first rear support corresponding to the first laundry treating drum and a second rear support corresponding to the second laundry treating drum are arranged on a back of the laundry treating apparatus, wherein the opening is formed in the first rear support.

8. The laundry treating apparatus according to claim 7, **characterized in that** the laundry treating apparatus is provided with a first cover plate and a second cover plate corresponding to the first rear support and the second rear support, respectively, wherein the first cover plate covers an outer surface of the first rear support, and the second cover plate covers an outer surface of the second rear support.

9. The laundry treating apparatus according to any one of claims 1-8, **characterized in that** the opening is formed in an edge of one side of the rear support, the base is provided with a condenser installing chamber corresponding to the opening, and an installation opening of the condenser installing chamber is formed at a rear side of the base and directly faces the opening;
preferably, the condenser is of a rectangular parallelepiped structure, and is disposed in parallel to axes of the first laundry treating drum and the second laundry treating drum.

10. The laundry treating apparatus according to any one of claims 1-9, **characterized in that** the base is further provided with a condenser cooling air duct, and an air inlet of the condenser cooling air duct is arranged on a side surface or a rear surface of the laundry treating apparatus.

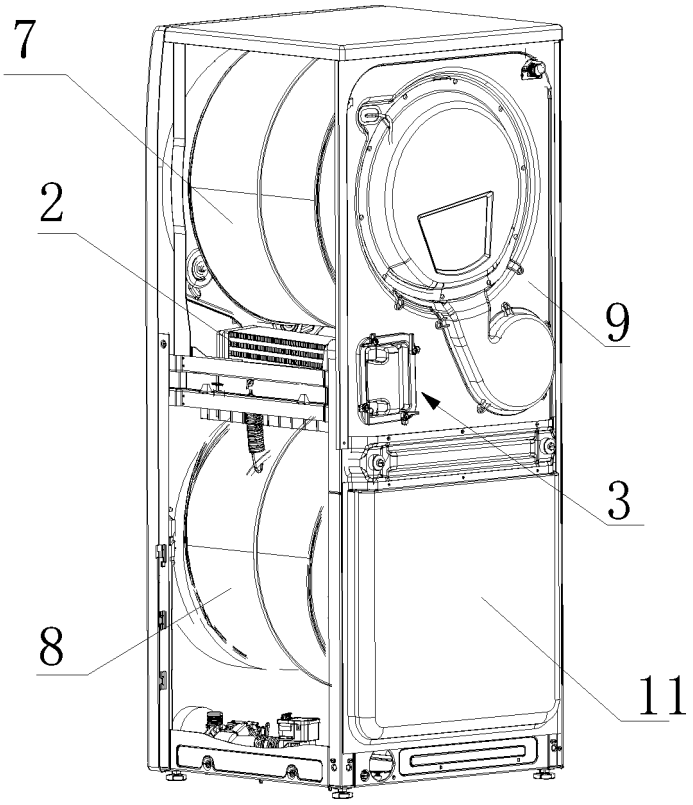

FIG. 1

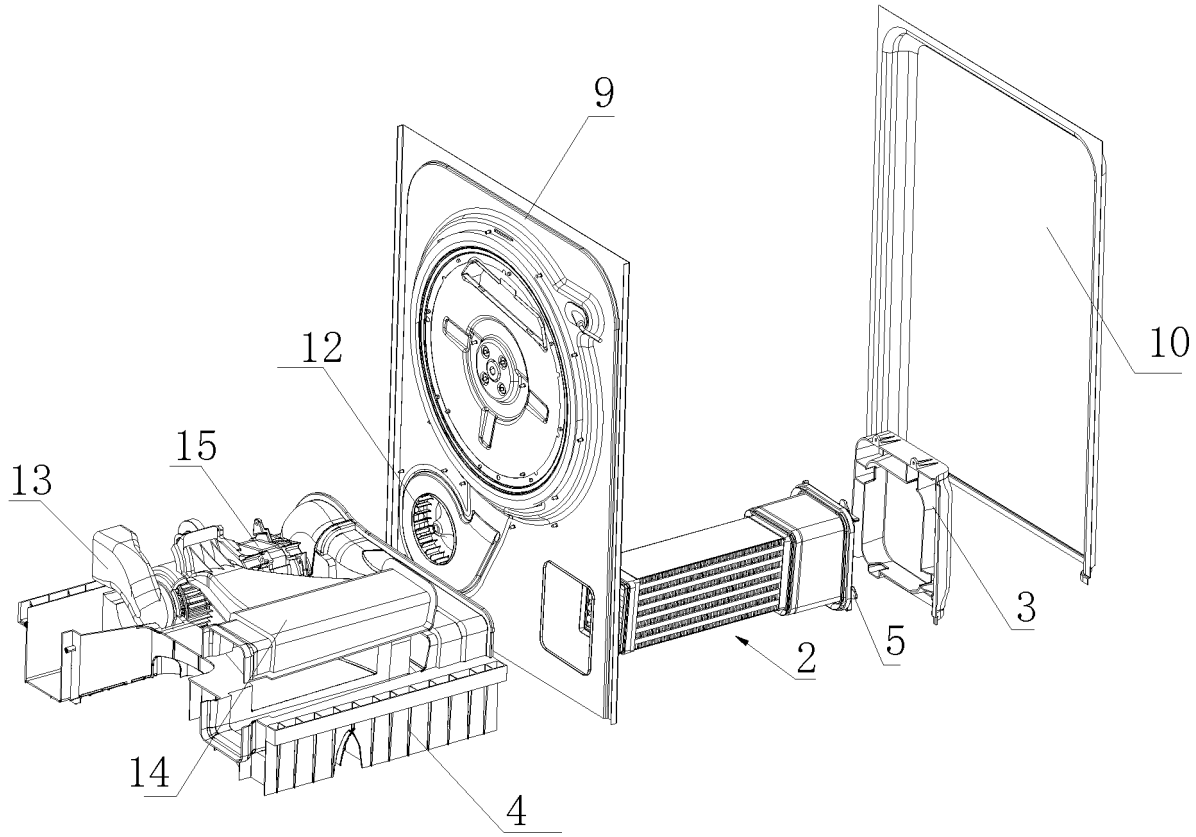

FIG. 2

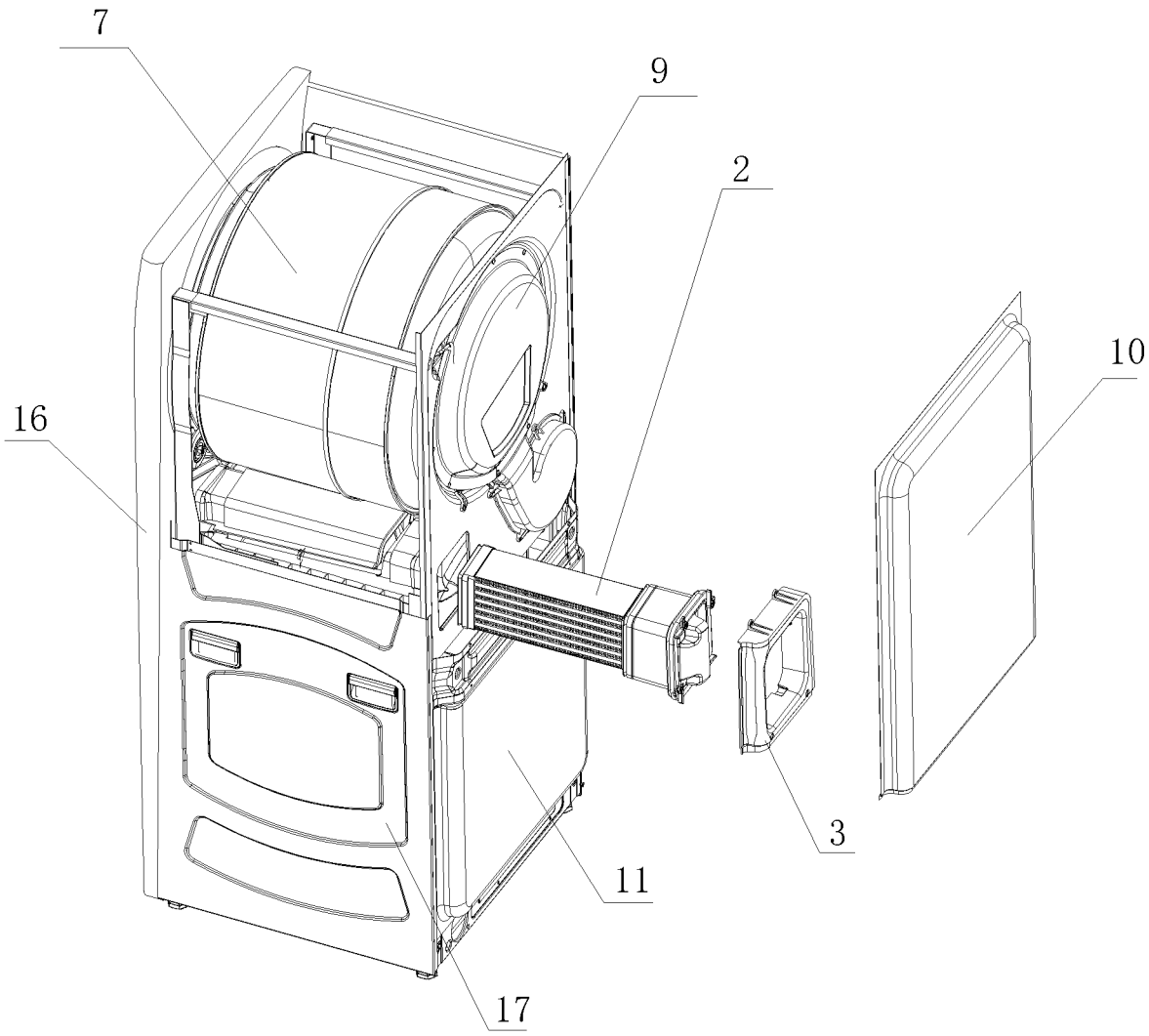

FIG. 3

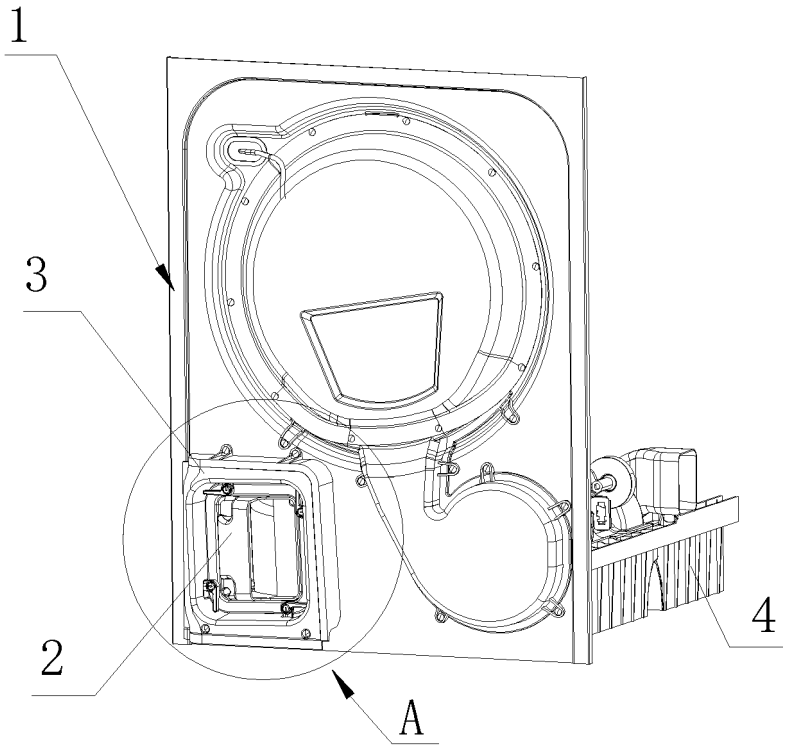

FIG. 4

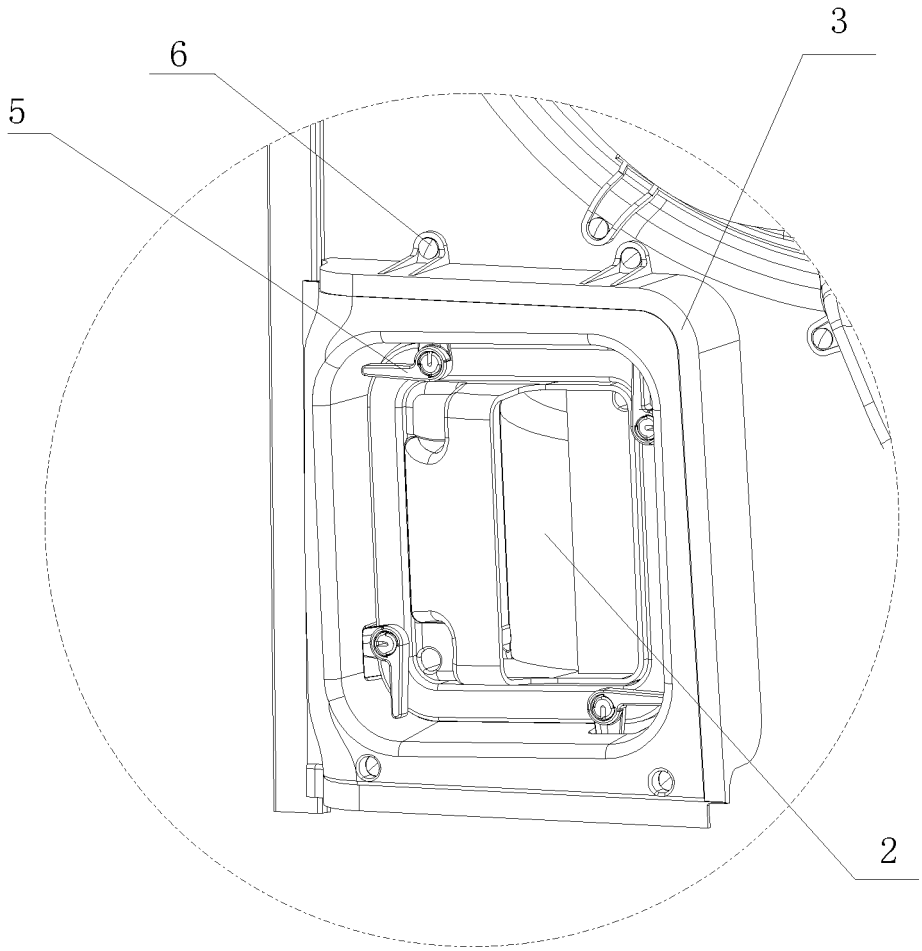

FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2018/103882

A. CLASSIFICATION OF SUBJECT MATTER

D06F 58/24(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)

D06F

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)

CNPAT, CNKI, EPODOC, WPI: 青岛海尔滚筒洗衣机有限公司, 衣物, 衣服, 冷凝, 冷却, 烘干,干燥, clothing, wearing, condensation, cooling, drying, desiccation, dryness

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 1637204 A (LG ELECTRONICS INC.) 13 July 2005 (2005-07-13) description, page 4, line 12 to page 8, line 26, and figures 1-3	1-10
A	CN 107034645 A (HANGZHOU SANHUA HOME APPLIANCE THERMAL MANAGEMENT SYSTEM CO., LTD.) 11 August 2017 (2017-08-11) entire document	1-10
A	CN 202380300 U (SHANGHAI KAIAO MACHINERY CO., LTD.) 15 August 2012 (2012-08-15) entire document	1-10
A	CN 102535127 A (HAIER ELECTRONICS GROUP CO., LTD. ET AL.) 04 July 2012 (2012-07-04) entire document	1-10

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

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 November 2018	**05 December 2018**

Name and mailing address of the ISA/CN	Authorized officer
State Intellectual Property Office of the P. R. China **No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088** **China**	
Facsimile No. **(86-10)62019451**	Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2018/103882

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		AU 2004242448 A1	07 July 2005
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		JP 4476115 B2	09 June 2010
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CN 102535127 A	04 July 2012	CN 102535127 B	23 November 2016

Form PCT/ISA/210 (patent family annex) (January 2015)

REFERENCES CITED IN THE DESCRIPTION

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- WO 201420029148 A **[0003]**
- WO 201510374811 A **[0004]**