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(54) **CLOTHING TREATING DEVICE**

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(57) **ABSTRACT**

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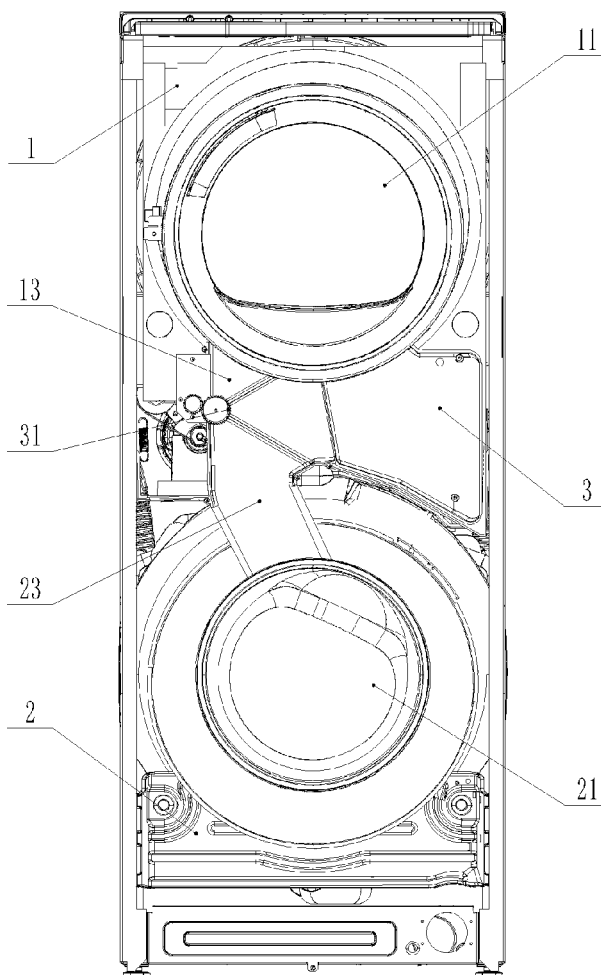
§ 371 (c)(1),

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A clothing treating device, including a clothes dryer, a washing machine, and a drying system. The drying system includes a switching apparatus, and the drying system may generate drying air flow. The drying air flow may be selectively delivered to the clothes dryer or the washing machine by means of switching the state of the switching apparatus. Therefore, the clothing treating device may dry clothing within the clothes dryer and the washing machine by way of the drying system, thereby improving user experience.



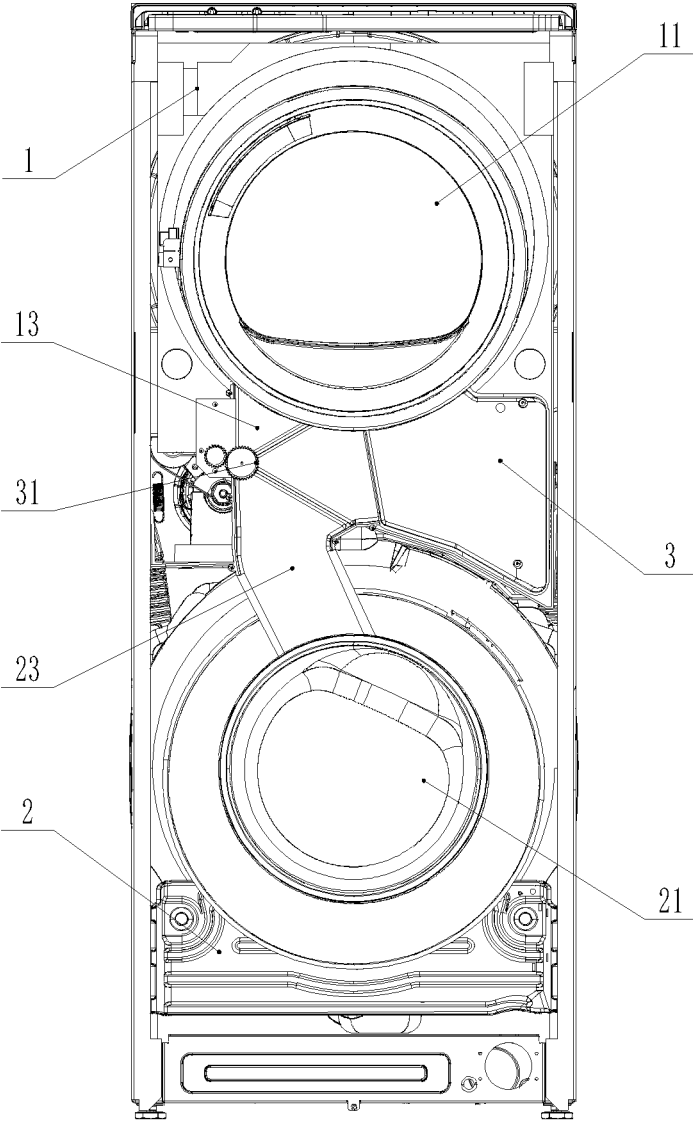


Fig.1

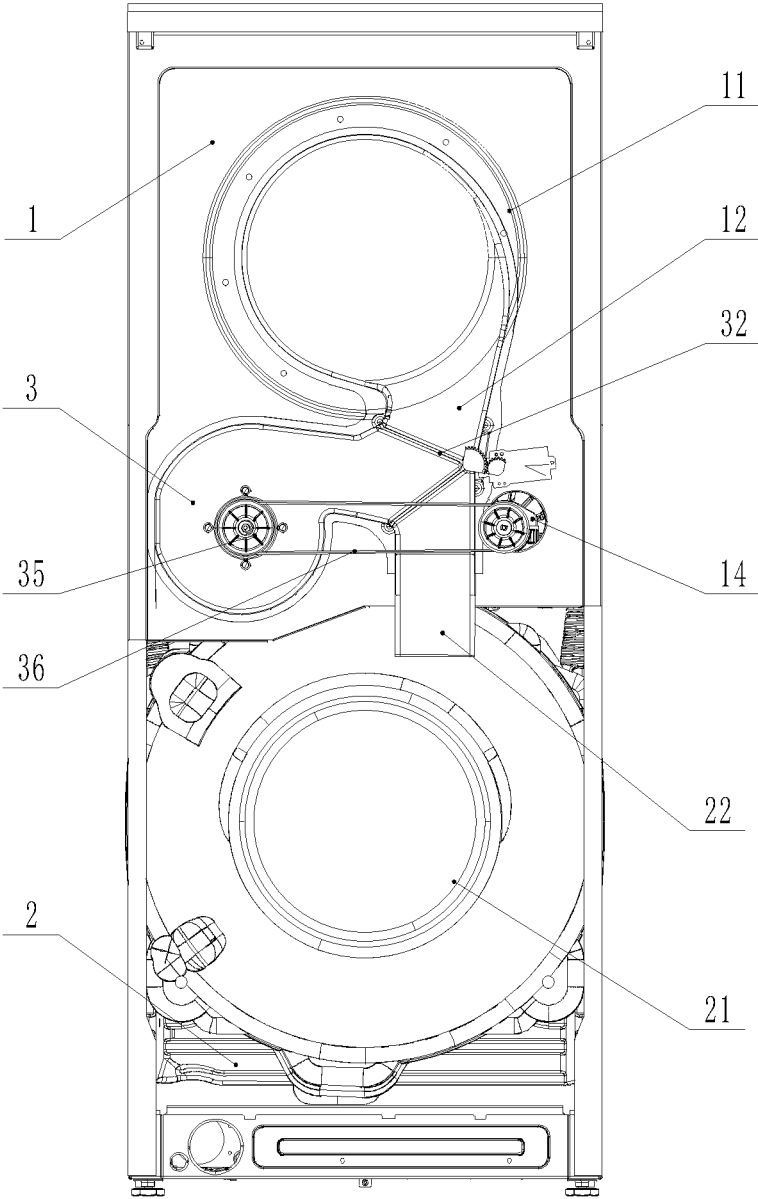


Fig.2

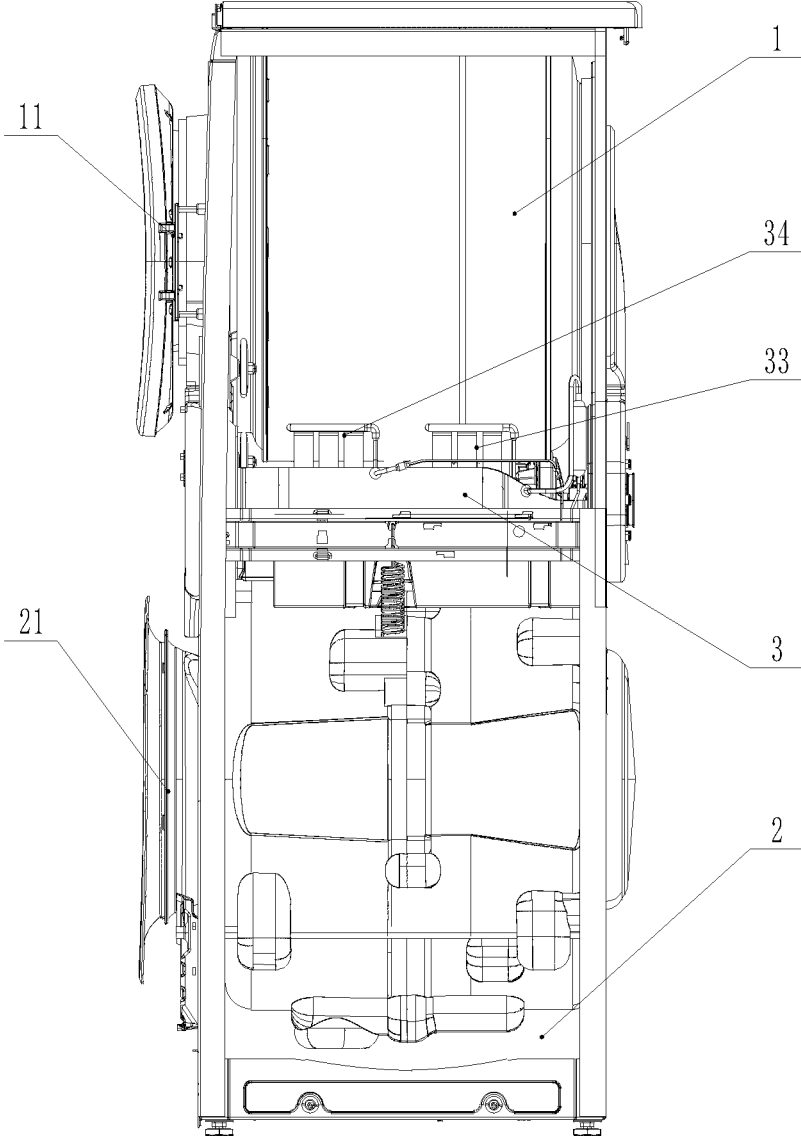


Fig.3

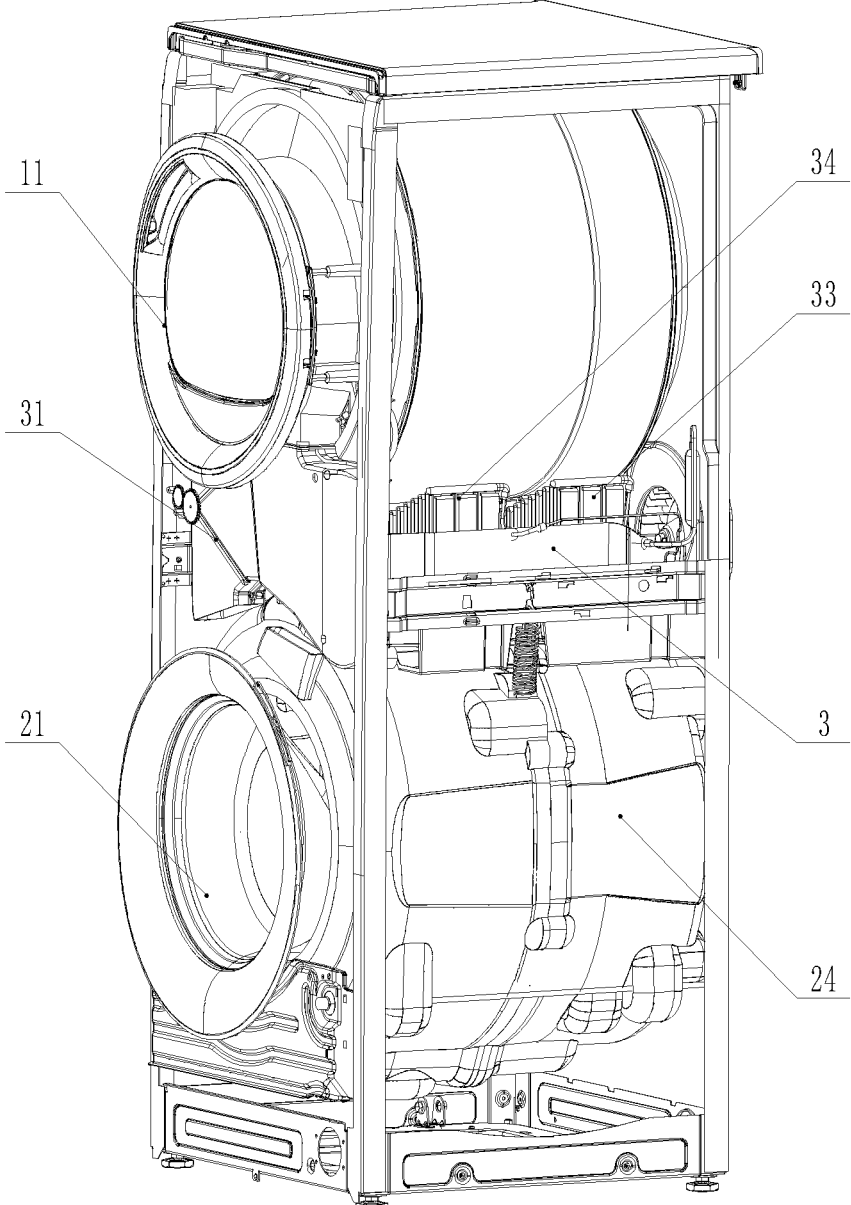


Fig.4

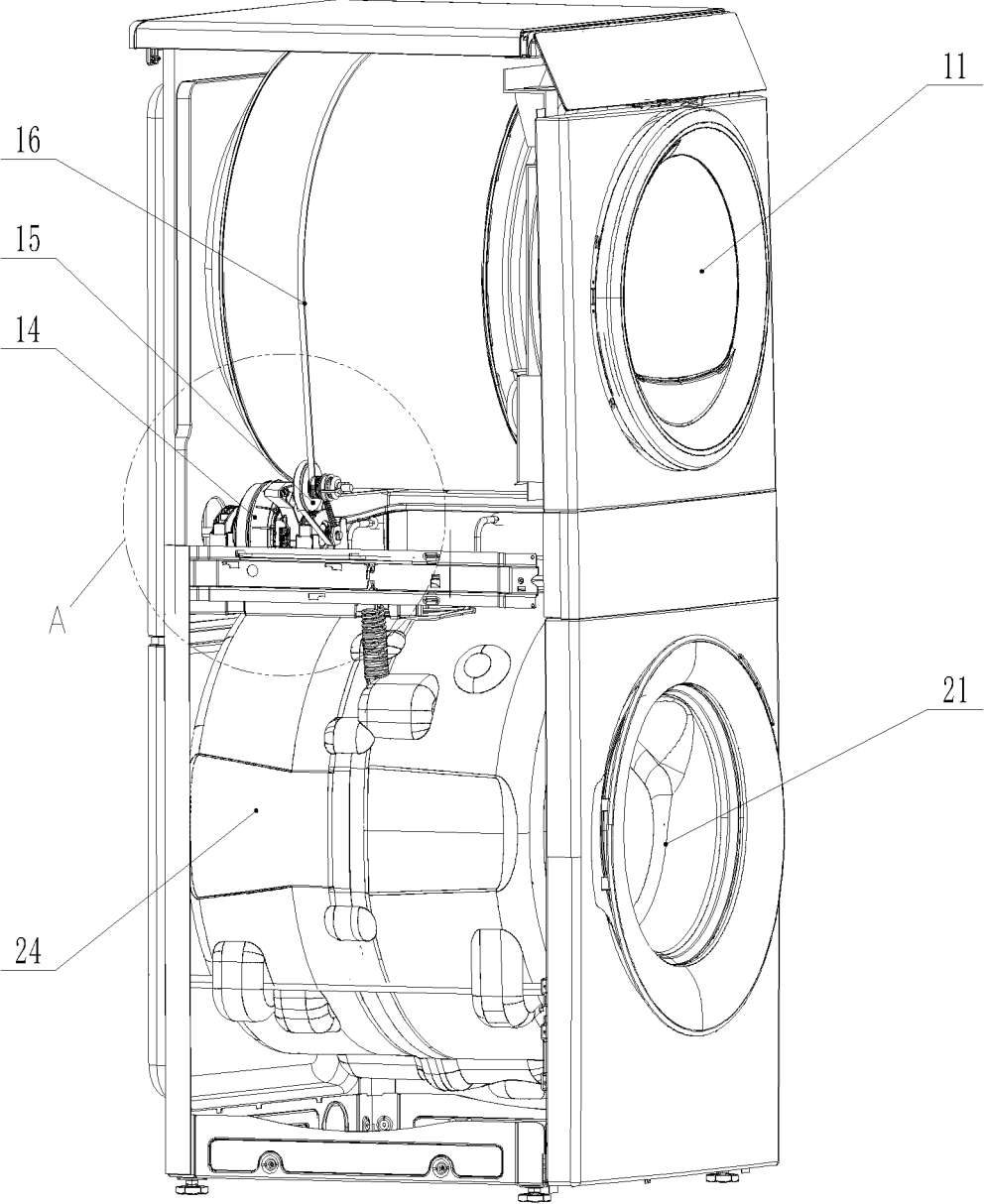


Fig.5

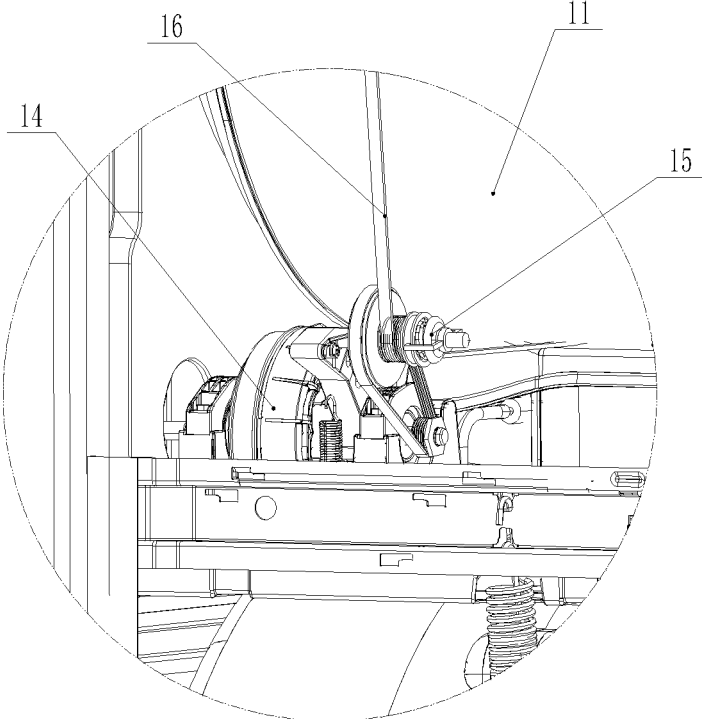


Fig.6

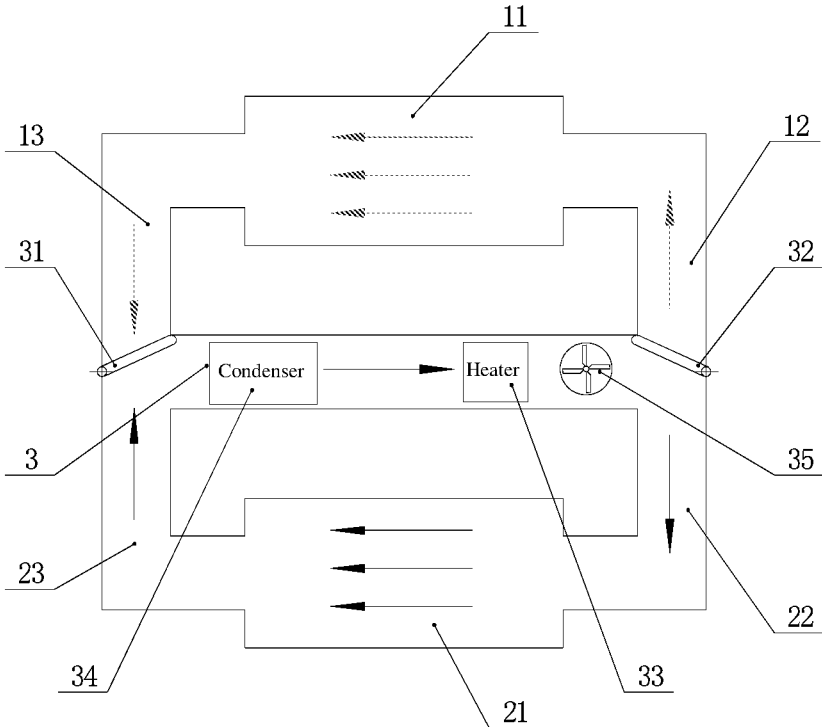


Fig.7

CLOTHING TREATING DEVICE

FIELD

[0001] The present disclosure belongs to the field of household appliances, and in particular provides a clothing treating device.

BACKGROUND

[0002] With the improvement of the quality of life, people are increasingly pursuing a high-quality delicate life. Cloth dryers have also been gradually used in more and more ordinary families and become an essential home appliance for a high-quality life. The dryer is usually stacked on top of a drum washing machine, but since the washing machine and the dryer are two systems independent from each other, it is impossible for the washing machine to dry the laundries by using heating and condensing devices of the dryer. If the washing machine wants to realize the function of drying laundries, it is necessary to provide a separate drying module for the washing machine, which will increase the cost of the washing machine.

[0003] Accordingly, there is a need in the art for a new laundry treatment apparatus to solve the above problems.

SUMMARY

[0004] In order to solve the above problems in the related art, that is, to solve the problem that it is impossible for an existing washing machine to use a drying system of a dryer to dry laundries, a laundry treatment apparatus is provided by the present disclosure, which includes a first laundry treatment device, a second laundry treatment device and a drying system, wherein the drying system is capable of generating a drying airflow, and the drying airflow can be simultaneously or separately delivered into the first laundry treatment device and the second laundry treatment device.

[0005] In a preferred technical solution of the above-described laundry treatment apparatus, the first laundry treatment device includes a first laundry treatment cylinder, the second laundry treatment device includes a second laundry treatment cylinder, and the drying system delivers the drying airflow simultaneously or separately into the first laundry treatment cylinder and the second laundry treatment cylinder.

[0006] In a preferred technical solution of the above-described laundry treatment apparatus, the drying system includes: a driving device capable of driving the first laundry treatment cylinder and/or the second laundry treatment cylinder to rotate; a drying assembly configured to generate a drying airflow; and a drying airflow circulation device configured to deliver the drying airflow generated by the drying assembly into the first laundry treatment cylinder and/or the second laundry treatment cylinder.

[0007] In a preferred technical solution of the above-described laundry treatment apparatus, the drying system further includes: a first air inlet duct and a first air outlet duct communicating with an inner cavity of the first laundry treatment cylinder respectively; a second air inlet duct and a second air outlet duct communicating with an inner cavity of the second laundry treatment cylinder respectively; a drying air duct including an air inlet end and an air outlet end, the air inlet end being connected with the first air outlet duct and the second air outlet duct, and the air outlet end being connected with the first air inlet duct and the second

air inlet duct; and a switching device, wherein the air inlet end of the drying air duct is capable of selectively communicating with the first air outlet duct or the second air outlet duct through the switching device, and the air outlet end of the drying air duct is capable of selectively communicating with the first air inlet duct or the second air inlet duct through the switching device.

[0008] In a preferred technical solution of the above-described laundry treatment apparatus, the drying assembly is disposed in the drying air duct, and the drying airflow circulation device is capable of directing the drying airflow to circulate in each of the air ducts.

[0009] In a preferred technical solution of the above-described laundry treatment apparatus, the drying airflow circulation device is disposed in the drying air duct.

[0010] In a preferred technical solution of the above-described laundry treatment apparatus, the drying assembly includes a heating device configured to generate a drying airflow, and a condensing device configured to remove moisture from the drying airflow.

[0011] In a preferred technical solution of the above-described laundry treatment apparatus, the switching device includes a first switching valve disposed at the air inlet end of the drying air duct and a second switching valve disposed at the air outlet end of the drying air duct, wherein the first switching valve is configured to selectively communicate the air inlet end of the drying air duct with the first air outlet duct or the second air outlet duct, and the second switching valve is configured to selectively communicate the air outlet end of the drying air duct with the first air inlet duct or the second air inlet duct.

[0012] In a preferred technical solution of the above-described laundry treatment apparatus, the laundry treatment apparatus includes a plurality of second laundry treatment devices, and the drying system is capable of simultaneously or separately delivering the drying airflow into the first laundry treatment cylinder of the first laundry treatment device and the second laundry treatment cylinder of each of the second laundry treatment devices.

[0013] In a preferred technical solution of the above-described laundry treatment apparatus, the laundry treatment apparatus further includes an engagement device, and the driving device is connected to the first laundry treatment cylinder and/or the second laundry treatment cylinder through the engagement device so as to selectively drive the first laundry treatment cylinder and/or the second laundry treatment cylinder to rotate.

[0014] In a preferred technical solution of the above-described laundry treatment apparatus, the engagement device is a multi-position engagement device, and the driving device is further connected to the second laundry treatment cylinder of each of the second laundry treatment devices through the multi-position engagement device so as to selectively drive the second laundry treatment cylinder to rotate.

[0015] In a preferred technical solution of the above-described laundry treatment apparatus, the first laundry treatment device is a dryer, and the second laundry treatment device is a washing machine; or the first laundry treatment device is a dryer, and the second laundry treatment device is also a dryer; or the first laundry treatment device is a washing machine, and the second laundry treatment device

is a dryer; or the first laundry treatment device is a washing machine, and the second laundry treatment device is also a washing machine.

[0016] In a preferred technical solution of the above-described laundry treatment apparatus, the driving device is a motor; and/or the drying airflow circulation device is a fan.

[0017] It will be understood by those skilled in the art that in a preferred technical solution of the present disclosure, the drying system of the first laundry treatment device is capable of generating a drying airflow, and the drying system is capable of delivering the drying airflow simultaneously or separately into the first laundry treatment device and the second laundry treatment device. Therefore, in a case that the first laundry treatment device is a dryer and the second laundry treatment device is a washing machine, the washing machine can use the drying system of the dryer to dry laundries, thereby reducing the number of hardware and lowering the cost the apparatus.

[0018] Specifically, the first laundry treatment device is provided therein with a first laundry treatment cylinder, and the second laundry treatment device is provided therein with a second laundry treatment cylinder. The drying system mainly includes a drying assembly capable of generating a drying airflow, a first air inlet duct and a first air outlet duct communicating with an inner cavity of the first laundry treatment cylinder, a second air inlet duct and a second air outlet duct communicating with an inner cavity of the second laundry treatment cylinder, a drying air duct and a switching device. By switching the state of the switching device, the drying air duct is capable of communicating with the first air inlet duct and the first air outlet duct so that the drying airflow generated by the drying assembly is delivered to the first laundry treatment cylinder, or the drying air duct is capable of communicating with the second air inlet duct and the second air outlet duct so that the drying airflow generated by the drying assembly is delivered to the second laundry treatment cylinder. Therefore, in a case that the first laundry treatment device is a dryer, and the second laundry treatment device is a washing machine, the laundry treatment apparatus of the present disclosure can dry the laundries in the dryer and the washing machine separately or simultaneously by one drying system, thereby greatly improving the user experience in use, reducing the number of hardware and lowering the manufacturing cost.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] FIG. 1 is a front view of a laundry treatment apparatus according to an embodiment of the present disclosure;

[0020] FIG. 2 is a rear view of a laundry treatment apparatus according to an embodiment of the present disclosure;

[0021] FIG. 3 is a side view of a laundry treatment apparatus according to an embodiment of the present disclosure;

[0022] FIG. 4 is a first perspective view of a laundry treatment apparatus according to an embodiment of the present disclosure;

[0023] FIG. 5 is a second perspective view of a laundry treatment apparatus according to an embodiment of the present disclosure;

[0024] FIG. 6 is an enlarged view of a portion A in FIG. 5; and

[0025] FIG. 7 is a principle view of a laundry treatment apparatus according to an embodiment of the present disclosure.

LIST OF REFERENCE SIGNS

[0026] 1: dryer; 11: drying drum; 12: first air inlet duct; 13: first air outlet duct; 14: motor; 15: clutch; 16: first belt; 2: washing machine; 21: washing drum; 22: second air inlet duct; 23: second air outlet duct; 24: outer cylinder; 3: drying air duct; 31: first switching valve; 32: second switching valve; 33: heater; 34: condenser; 35: fan; 36: second belt.

DETAILED DESCRIPTION

[0027] Preferred embodiments of the present disclosure will be described below with reference to the accompanying drawings. It will be understood by those skilled in the art that these embodiments are only used to explain the technical principles of the present disclosure, and are not intended to limit the scope of protection of the present disclosure. For example, although the components in the drawings are drawn based on certain proportional relationships, such proportional relationships are not constant and permanent, and those skilled in the art may adjust them as needed to adapt to specific applications. The adjusted technical solutions will still fall within the scope of protection of the present disclosure. Further, although the present application has been described in connection with a combination of a dryer and a washing machine, this is merely exemplary, and the technical solutions of the present disclosure may also be applied to situations of two dryers, two washing machines, a plurality of dryers and a plurality of washing machines. Any adjustment in this regard will not depart from the basic principles and scope of protection of the present disclosure.

[0028] It should be noted that in the description of the present disclosure, terms indicating a directional or positional relationship such as “center”, “upper”, “lower”, “left”, “right”, “vertical”, “horizontal”, “inner” and “outer” are based on the directional or positional relationship shown in the drawings. They only serve to facilitate description, and do not indicate or imply that the device or element must have a particular orientation, or must be constructed or operated in a particular orientation. Therefore, they should not be construed as limiting the present disclosure. Moreover, terms such as “first”, “second” and “third” are used for descriptive purposes only, and should not be construed as indicating or implying a relative importance.

[0029] In addition, it should be noted that in the description of the present disclosure, terms “install”, “connect” and “connect to” should be understood in a broad sense, unless otherwise explicitly specified and defined. For example, the connection may be a fixed connection, or a detachable connection, or an integral connection; it may be a mechanical connection, or an electrical connection; it may be a direct connection, or an indirect connection by means of an intermediate medium, or an internal communication between two elements. For those skilled in the art, the specific meanings of the above terms in the present disclosure may be interpreted according to the specific circumstances.

[0030] As shown in FIGS. 1 to 4, a laundry treatment apparatus of the present disclosure mainly includes a dryer 1 as a first laundry treatment device, a washing machine 2 as a second laundry treatment device, and a drying system

(not shown in its entirety in the figure). The drying system is capable of generating a drying airflow, and the drying airflow can be simultaneously or separately delivered into the dryer 1 and the washing machine 2 by the drying system.

[0031] Specifically, the dryer 1 further includes a drying drum 11 as a first laundry treatment cylinder, and the washing machine 2 includes a washing drum 21 as a second laundry treatment device. The drying system is capable of delivering the drying airflow simultaneously or separately into the drying drum 11 and the washing drum 21.

[0032] With continued reference to FIGS. 1 to 4, the drying system of the laundry treatment apparatus of the present disclosure mainly includes a driving device configured to drive the drying drum 11 to rotate, a drying assembly configured to generate a drying airflow, and a drying airflow circulation device driven by the driving device. The drying airflow circulation device is configured to deliver hot air generated by the drying assembly into the drying drum 11 or the washing drum 21. It will be appreciated by those skilled in the art that in addition to driving the drying drum 11 to rotate as shown in FIGS. 3 and 4, the driving device may be further configured to drive a washing drum 21 to rotate. Further, the driving device is connected to the drying drum 11 through an engagement device to selectively drive the drying drum 11 to rotate. Further, the driving device is preferably an electric motor 14, and the drying airflow circulation device is preferably a fan 35. Alternatively, other forms of driving devices and other forms of drying airflow circulation devices may be selected by those skilled in the art as needed.

[0033] Further referring to FIG. 1 to FIG. 4, the drying system of the laundry treatment apparatus of the present disclosure further includes a first air inlet duct 12, a first air outlet duct 13, a second air inlet duct 22, a second air outlet duct 23 and a drying air duct 3. The first air inlet duct 12 and the first air outlet duct 13 communicate with an inner cavity of the drying drum 11 respectively, whereas the second air inlet duct 22 and the second air outlet duct 23 communicate with an inner cavity of the washing drum 21 respectively. Further, the drying air duct 3 has an air inlet end (the left end of the drying air duct 3 in FIG. 3) and an air outlet end (the right end of the drying air duct 3 in FIG. 3), wherein the air inlet end of the drying air duct 3 communicates with the first air outlet duct 13 and the second air outlet duct 23 respectively, and the air outlet end of the drying air duct 3 communicates with the first air inlet duct 12 and the second air inlet duct 22 respectively.

[0034] As shown in FIGS. 1 and 2, the drying system further includes a switching device (not shown in its entirety in the figures), and the switching device mainly includes a first switching valve 31 and a second switching valve 32. The first switching valve 31 is disposed at the air inlet end of the drying air duct 3, and the second switching valve 32 is disposed at the air outlet end of the drying air duct 3. The drying air duct 3 is capable of selectively communicating with the first air outlet duct 13 or the second air outlet duct 23 through the first switching valve 31, and the drying air duct 3 is capable of selectively communicating with the first air inlet duct 12 or the second air inlet duct 22 through the second switching valve 32. Further, by switching the positions of the first switching valve 31 and the second switching valve 32, the drying air duct 3 is capable of communicating with the drying drum 11 of the dryer 1 or with the washing drum 21 of the washing machine 2. Therefore, the hot air in

the drying air duct 3 is capable of selectively drying the laundries in the drying drum 11 or the laundries in the washing drum 21 when the drying assembly (described later in detail) disposed in the drying air duct 3 is operating. Further, those skilled in the art may also configure the switching device in such a way that it enables the drying system to provide the drying airflow to the drying drum 11 and the washing drum 21 simultaneously as needed, such as by removing the switching device.

[0035] As shown in FIGS. 5 and 6, in a preferred embodiment of the present disclosure, the motor 14 of the dryer 1 is connected to a clutch 15 serving as an engagement device through a belt which facilitates installation of the motor 14 with the clutch 15. Alternatively, those skilled in the art may also connect the motor 14 with the clutch 15 by other means, such as coaxially fixing the motor 14 with the clutch 15 through a coupling. The clutch 15 is also connected to the drying drum 11 through a first belt 16. It will be understood by those skilled in the art that the drying drum 11 can selectively rotate or keep stationary by switching a state of the clutch 15 in a case that the motor 14 is rotating.

[0036] Further, a bottom of the drying drum 11 is provided with a vent hole (not shown) that communicates with the first air inlet duct 12. A drum opening of the drying drum 11 (specifically, at the position of a door seal) is sealingly connected with the first air outlet duct 13 (the left end of the drying drum 11 in FIG. 3); that is, when the door of the dryer 1 is closed, hot air in the drying air duct 3 can enter the drying drum 11 from the first air inlet duct 12 and flow out of the first air outlet duct 13 without leakage.

[0037] In a possible embodiment, a front end of the drying drum 11 (the end having the drum opening) is fixed to the body of the laundry treatment apparatus through a roller, and a rear end of the drying drum 11 is fixed to the body of the laundry treatment apparatus through a rolling shaft so that the drying drum 11 is rotatable about an axis center thereof. Further, a rear plate is disposed on the body of the laundry treatment apparatus, and a through hole is disposed in the rear plate. An end of the through hole communicates with the vent hole of the drying drum 11, and the other end of the through hole communicates with the first air inlet duct 12. The front end of the drying drum 11 is provided with a through hole in the radial direction for communicating the inner cavity of the drying drum 11 with the first air outlet duct 13. For example, the first air outlet duct 13 has an annular air duct disposed around the drying drum 11, the annular air duct is sealingly connected with the drying drum 11, and the through hole at the front end of the drying drum 11 is located in the annular air duct. Of course, the technical solution of the present disclosure is not limited to this specific arrangement of air duct, and any air duct structure that is capable of delivering hot air in the drying air duct 3 into the drying drum 11 and delivering humid hot air in the drying drum 11 back to the drying air duct 3 can be applied to the technical solution of the present disclosure.

[0038] As shown in FIGS. 1, 2, 4, and 5, the washing machine 2 mainly includes the washing drum 21 as the second laundry treatment device, and an outer cylinder 24. The washing drum 21 is disposed inside the outer cylinder 24, and a plurality of vent holes are provided in a circumferential direction of the washing drum 21 so that an annular cavity between the washing drum 21 and the outer cylinder 24 communicates with the inner cavity of the washing drum 21. A front end of the outer cylinder 24 (an end close to the

drum opening of the washing drum 21) is sealingly connected with the second air outlet duct 23, and a rear end of the outer cylinder 24 is sealingly connected with the second air inlet duct 22 to prevent the hot air inside the drying air duct 3 from being leaked when it enters the outer cylinder 24 from the second air inlet duct 22 and is discharged from the second air outlet duct 23, which would otherwise allow high-temperature humid air to enter the room and cause discomfort to indoor personnel.

[0039] As shown in FIG. 3 to FIG. 5, the air outlet end of the drying air duct 3 is connected to the first air inlet duct 12 and the second air inlet duct 22 respectively, and the air inlet end of the drying air duct 3 is connected to the first air outlet duct 13 and the second air outlet duct 23 respectively. Moreover, the first switching valve 31 is disposed at the communication position between the drying air duct 3 and the first air inlet duct 12 and the second air inlet duct 22, and the second switching valve 32 is disposed at the communication position between the drying air duct 3 and the first air outlet duct 13 and the second air outlet duct 23. By changing the states of the first switching valve 31 and the second switching valve 32, the drying air duct 3 is capable of communicating with the drying drum 11 through the first air inlet duct 12 and the first air outlet duct 13, or the drying air duct 3 is capable of communicating with the outer cylinder 24 through the second air inlet duct 22 and the second air outlet duct 23.

[0040] As shown in FIG. 3 and FIG. 4, a drying assembly is provided in the drying air duct 3, and the drying assembly mainly includes a heater 33 and a condenser 34, wherein the heater 33 is disposed at a position adjacent to the first air inlet duct 12 and the second air inlet duct 22, and the condenser 33 is disposed at a position adjacent to the first air outlet duct 13 and the second air outlet duct 23. As an example, in the drying air duct 3, a fan 35 (see FIG. 2) is disposed on a side of the heater 33 that is remote from the condenser 34, and the fan 35 is connected to the motor 14 through a second belt 36. In addition, those skilled in the art may also connect the fan 35 with the motor 14 by other means of fixing as needed. For example, the fan 35 and the motor 14 are coaxially fixed by a coupling. It is easily understood that when the fan 15 is driven by the motor 14 to rotate, the hot air in the drying air duct 3 can be delivered to the first air inlet duct 12 or the second air inlet duct 22. Further, those skilled in the art may also change the positions of the heater 33, the condenser 34, and the fan 35 as needed to blow the hot air toward the first air outlet duct 13 or the second air outlet duct 23. It should be noted that the fan 15 may be any type of fan, such as a centrifugal fan, an axial-flow fan, a reciprocating fan, and a rotary fan, as long as it can circulate the drying airflow in each of the air ducts. It should also be noted that the heater 33 may be any form of heating means such as a resistive heater, provided that the air in the drying air duct 3 can be heated. It should be further noted that the condenser 34 may be any form of condensing device such as a water-cooled condenser and an air-cooled condenser, provided that the moisture in the air in the drying air duct 3 can be condensed.

[0041] Furthermore, although not shown in the drawings, in a preferred embodiment of the present disclosure, a filter screen is further provided in the drying air duct 3 on a side of the condenser 34 that is remote from the heater 33, and the filter screen is configured to filter floccules in the drying drum 11 and the washing drum 21 that enter the drying air

duct 3 with the airflow to prevent the floccules from entering the drying air duct 3 and accumulating, especially to avoid an adverse effect on the fan 35 and further on a drying effect of the laundry treatment apparatus.

[0042] The working principle of the laundry treatment apparatus of the present disclosure will be described in detail below with reference to FIG. 7.

[0043] As shown in FIG. 7, the drying drum 11, the washing drum 21, and the drying air duct 3 located between the drying drum 11 and the washing drum 21 are illustrated. Two ends of the drying drum 11 in FIG. 7 communicate with the first air inlet duct 12 and the first air outlet duct 13 respectively, and two ends of the washing drum 21 communicate with the second air inlet duct 22 and the second air outlet duct 23 respectively. An end of the drying air duct 3 communicates with the first air inlet duct 12 and the second air inlet duct 22 respectively, and the other end communicates with the first air outlet duct 13 and the second air outlet duct 23 respectively. The first switching valve 31 and the second switching valve 32 are disposed at two ends of the drying air duct 3 respectively, and the heater 33, the condenser 34 and the fan 35 are further disposed in an intermediate portion of the drying air duct 3.

[0044] When the user uses the washing drum 21 of the washing machine 2 to dry the laundry, the first switching valve 31 and the second switching valve 32 are switched to the positions shown in FIG. 7, so that a communication between the drying air duct 3 and the first air inlet duct 12 and the first air outlet duct 13 is disconnected. At this point, the clutch 15 is disconnected (disengaged), the drying drum 11 is in a stationary state, the motor 14 only drives the fan 35 to rotate, and the fan 35 delivers the airflow heated by the heater 33 to the second air inlet duct 22. The hot airflow enters the washing drum 21 so that the moisture in the laundry is evaporated, and the airflow having a relatively high humidity enters the drying air duct 3 through the second air outlet duct 23. When the hot airflow having a relatively high humidity contacts the condenser 34, the moisture in the air is liquefied to dry the air. Further, the dried air is heated again by the heater 33 to proceed to the next cycle.

[0045] When the user uses the drying drum 11 of the dryer 1 to dry the laundry, the first switching valve 31 and the second switching valve 32 are switched from the positions shown in FIG. 7 to lower ends, so that a communication between the drying air duct 3 and the second air inlet duct 22 and the second air outlet duct 23 is disconnected. The clutch 15 is closed (engaged), the motor 14 drives the drying drum 11 and the fan 35 to rotate simultaneously, and the fan 35 delivers the airflow heated by the heater 33 to the first air inlet duct 12. The hot airflow enters the rotating drying drum 11 so that the moisture in the laundry is evaporated, and the airflow having a relatively high humidity enters the drying air duct 3 through the first air outlet duct 13. When the hot airflow having a relatively high humidity contacts the condenser 34, the moisture in the air is liquefied to dry the air. Further, the dried air is heated again by the heater 33 to proceed to the next cycle.

[0046] In summary, in a preferred embodiment of the present disclosure, a drying system is shared by the dryer 1 and the washing machine 2, so that the washing machine 2 can directly dry the laundry after washing of the laundry is completed. As compared to the existing technologies in which the washed laundry in the washing machine is taken out and then placed in the dryer for drying, the present

disclosure is more convenient, simplifies the operation of the user, and improves the user experience in use. By providing the clutch **15** between the motor **14** and the drying drum **11**, the motor **14** can selectively drive the drying drum **11** to rotate or to keep stationary at the same time of driving the fan **35** to rotate. The number of motors is reduced as compared to a situation where motors are provided separately for driving the drying drum **11** and the fan **35** respectively. Further, those skilled in the art may also configure the motor **14** to selectively drive the washing drum **21** to rotate through the clutch **15** as needed, thereby omitting the motor on the washing machine **2** and further reducing the number of motors. Further, through the technical solution in which the dryer **1** and the washing machine **2** are provided as one piece, the operation of the dryer **1** and the washing machine **2** can be controlled simultaneously by one set of control panels, which simplifies the operation and improves the user experience in use.

[0047] Further, the laundry treatment apparatus of the present disclosure can dry the laundry by the dryer **1** at the same time the user is using the washing machine **2** to wash the laundry, thereby saving the washing and drying time for the user.

[0048] Moreover, in addition to the above preferred embodiments of the present disclosure, in another possible embodiment, the first air outlet duct **13**, the second air outlet duct **23** and the air inlet end of the drying air duct **3** may also directly communicate with the outside so that external air directly enters the drying air duct **3** to be heated, and the heated airflow enters the dryer **1** or the washing machine **2** and then directly reaches the outside through the first air outlet duct **13** or the second air outlet duct **23**. The arrangement of the condenser **34** may be omitted in this embodiment, but since the airflow from the dryer **1** or the washing machine **2** is not condensed in this embodiment, the airflow directly enters the room, the warm and humid air will bring inconvenience to the indoor personnel, and will also corrode the parts of the laundry treatment apparatus, thus reducing the service life of the laundry treatment apparatus. In this embodiment, condensers **34** may be separately disposed in the first air outlet duct **13** and the second air outlet duct **23** to prevent humid air from entering the room.

[0049] Further, although not shown in the drawings, a plurality of the second laundry treatment devices of the present disclosure may be provided, and the switching device may be appropriately adjusted so that the drying airflow generated by the drying assembly can be delivered simultaneously or separately to the second laundry treatment cylinder of each of the second laundry treatment devices through the adjusted switching device.

[0050] Further, the engagement device of the present disclosure is not limited to the one form of the clutch shown in the drawings, and it may also be any other feasible engagement device as long as connection/disconnection of power transmission between the motor and the drying drum or the washing drum can be realized. In addition, the engagement device of the present disclosure may also be configured as a multi-position engagement device such that the driving device (e.g., the motor **14**) can selectively drive a plurality of second laundry treatment cylinders to rotate through the multi-position engagement device. For example, the motor **14** may also be selectively connected to the washing drum **21** through the clutch **15**, and when the washing drum **21** is used to dry the laundry, the clutch **15**

may be switched to a position where it is connected with the washing drum **21**, thereby keeping the washing drum **21** rotating at the same time hot air is supplied. Preferably, the number of positions of the multi-position engagement device is equal to the sum of the number of the first laundry treatment devices and the number of the second laundry treatment devices, so that the driving device can selectively drive each of the laundry treatment cylinders to rotate through the multi-position engagement device. In this way, the laundry treatment apparatus of the present disclosure is capable of driving all of the laundry treatment cylinders to rotate by only one motor.

[0051] Further, those skilled in the art may select the types of the first laundry treatment device and the second laundry treatment device according to actual requirements. For example, the first laundry treatment device and the second laundry treatment device may respectively be any one of a washing machine, an integral washing and drying machine, or a drying machine.

[0052] Heretofore, the technical solutions of the present disclosure have been described in conjunction with the preferred embodiments shown in the drawings, but it is obvious to those skilled in the art that the scope of protection of the present disclosure is obviously not limited to these specific embodiments. Those skilled in the art can make equivalent changes or replacements to the related technical features without departing from the principle of the present disclosure. The technical solutions after the modification or replacement will fall within the scope of protection of the present disclosure.

1-13. (canceled)

14. A laundry treatment apparatus, comprising:

a first laundry treatment device, a second laundry treatment device and a drying system, wherein the drying system is capable of generating a drying airflow, and the drying airflow can be simultaneously or separately delivered into the first laundry treatment device and the second laundry treatment device.

15. The laundry treatment apparatus according to claim **14**, wherein the first laundry treatment device comprises a first laundry treatment cylinder, the second laundry treatment device comprises a second laundry treatment cylinder, and the drying system delivers the drying airflow simultaneously or separately into the first laundry treatment cylinder and the second laundry treatment cylinder.

16. The laundry treatment apparatus according to claim **15**, wherein the drying system comprises:

a driving device capable of driving the first laundry treatment cylinder and/or the second laundry treatment cylinder to rotate;

a drying assembly configured to generate a drying airflow; and

a drying airflow circulation device configured to deliver the drying airflow generated by the drying assembly into the first laundry treatment cylinder and/or the second laundry treatment cylinder.

17. The laundry treatment apparatus according to claim **16**, wherein the drying system further comprises:

a first air inlet duct and a first air outlet duct in communication with an inner cavity of the first laundry treatment cylinder, respectively;

a second air inlet duct and a second air outlet duct in communication with an inner cavity of the second laundry treatment cylinder, respectively;

- a drying air duct comprising an air inlet end and an air outlet end, the air inlet end being connected with the first air outlet duct and the second air outlet duct, and the air outlet end being connected with the first air inlet duct and the second air inlet duct; and
- a switching device, wherein the air inlet end of the drying air duct is capable of selectively communicating with the first air outlet duct or the second air outlet duct through the switching device, and the air outlet end of the drying air duct is capable of selectively communicating with the first air inlet duct or the second air inlet duct through the switching device.

18. The laundry treatment apparatus according to claim **17**, wherein the drying assembly is disposed in the drying air duct, and the drying airflow circulation device is capable of directing the drying airflow to circulate in each of the air ducts.

19. The laundry treatment apparatus according to claim **18**, wherein the drying airflow circulation device is disposed in the drying air duct.

20. The laundry treatment apparatus according to claim **19**, wherein the drying assembly comprises a heating device configured to generate a drying airflow, and a condensing device configured to remove moisture from the drying airflow.

21. The laundry treatment apparatus according to claim **17**, wherein the switching device comprises a first switching valve disposed at the air inlet end of the drying air duct and a second switching valve disposed at the air outlet end of the drying air duct, and wherein the first switching valve is configured to selectively communicate the air inlet end of the drying air duct with the first air outlet duct or the second air outlet duct, and the second switching valve is configured to selectively communicate the air outlet end of the drying air duct with the first air inlet duct or the second air inlet duct.

22. The laundry treatment apparatus according to claim **15**, wherein the laundry treatment apparatus comprises a

plurality of second laundry treatment devices, and the drying system is capable of simultaneously or separately delivering the drying airflow into the first laundry treatment cylinder of the first laundry treatment device and the second laundry treatment cylinder of each of the second laundry treatment devices.

23. The laundry treatment apparatus according to claim **22**, wherein the laundry treatment apparatus further comprises an engagement device, and the driving device is connected to the first laundry treatment cylinder and/or the second laundry treatment cylinder through the engagement device so as to selectively drive the first laundry treatment cylinder and/or the second laundry treatment cylinder to rotate.

24. The laundry treatment apparatus according to claim **23**, wherein the engagement device is a multi-position engagement device, and the driving device is further connected to the second laundry treatment cylinder of each of the second laundry treatment devices through the multi-position engagement device so as to selectively drive the second laundry treatment cylinder to rotate.

25. The laundry treatment apparatus according to claim **14**, wherein the first laundry treatment device is a dryer, and the second laundry treatment device is a washing machine; or

the first laundry treatment device is a dryer, and the second laundry treatment device is also a dryer; or

the first laundry treatment device is a washing machine, and the second laundry treatment device is a dryer; or

the first laundry treatment device is a washing machine, and the second laundry treatment device is also a washing machine.

26. The laundry treatment apparatus according to claim **25**, wherein the driving device is a motor; and/or the drying airflow circulation device is a fan.

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