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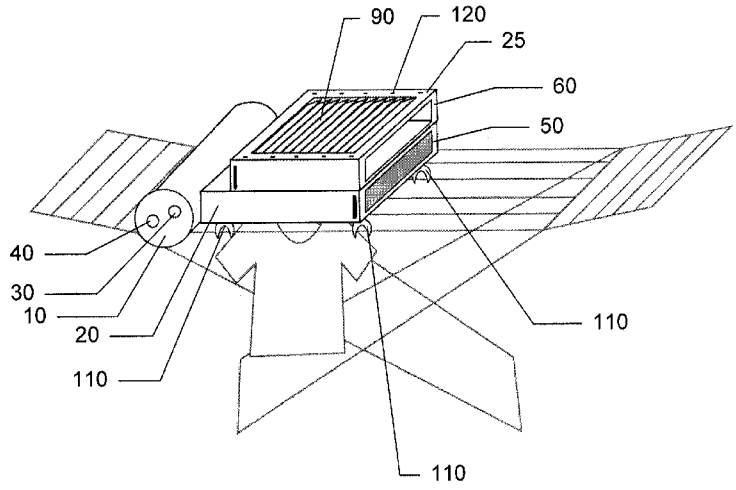
(54) **Title**: AIR BLOWER FOR DRYING HANGING LAUNDRY

Fig. 7



(57) **Abstract**: A foldable air blower for drying humid, hanging laundry placed on a laundry hanging device. The air blower comprises an air inlet; a first air conduit unit comprising a bottom air outlet with a plurality of shutters; a second air conduit unit attached to the first air conduit unit, and that can be folded together with the first air conduit unit when the air blower is not in use. One or more legs allow holding the foldable air blower a short distance above hanging laundry. An engine unit sucks air from the outside through the air inlet such that when the foldable air blower is positioned a short distance above the humid, hanging laundry, air is blown from the bottom air outlet into the hanging laundry in order to speed the drying process of the hanging laundry.

WO 2012/107923 A2

AIR BLOWER FOR DRYING HANGING LAUNDRY

TECHNICAL FIELD

The present invention relates to air blowers in general and in particular to air blowers adapted for drying hanging laundry.

BACKGROUND ART

Wet laundry can be dried either by placing it in a drier machine or by hanging the wet laundry and waiting for it to dry naturally when all the humidity evaporates. Drier machine are a practical solution, though not all homes are equipped with drier machines, and drier machines can in some cases deteriorate the fabric due to the excessive heat applied and the movement of the laundry where articles can get tangled together.

Wet laundry can be hanged outside and when the weather is warm and dry the wet laundry can usually be dry within a day. Some garments though can be adversely affected when exposed to direct sunlight for long periods of time. In addition, not all people have access to outside laundry hanging facilities, and in any case when it rains or is about to rain, laundry is not placed to dry outside.

Another solution commonly used by many people to dry wet laundry is to use an in-house laundry hanging device. Such a device is usually foldable for storage purposes and has the advantage that the laundry is protected from the outside whether. Such a laundry hanging device can be used even when it is rainy and humid outside. On the other hand, many people don't have a dedicated place for hanging the laundry in the home and end up with a laundry hanging device inconveniently placed in the living room, bathroom etc. In humid conditions, the laundry may take a long time to dry inside the house thus burdening the household. In addition, if the household has a single laundry hanging device, new laundry cannot be hung to dry until the laundry on the hanging device is dry and ready.

Thus there has been an ongoing need to provide a convenient solution for accelerating the drying time of wet laundry in the house.

SUMMARY OF INVENTION

It is an object of the present invention to provide an air blower for drying humid, hanging laundry.

It is another object of the present invention to provide an air blower for drying humid, hanging laundry placed indoor in a laundry hanging device.

It is a further object of the present invention to provide a foldable air blower for drying humid, hanging laundry.

The present invention thus relates to a foldable air blower for drying humid, hanging laundry on a laundry hanging device, comprising:

(i) an air inlet;

(ii) a first air conduit unit comprising a bottom air outlet with a plurality of shutters;

(iii) a second air conduit unit attached to the first air conduit unit, and that can be folded together with the first air conduit unit when the air blower is not in use;

(iv) one or more legs adapted to hold the foldable air blower a short distance above hanging laundry; and

(v) an engine unit for sucking air from the outside through the air inlet such that when the foldable air blower is positioned a short distance above the humid, hanging laundry, air is blown from the bottom air outlet into the hanging laundry in order to speed the drying process of the hanging laundry.

In some embodiments the foldable air blower comprises a heat regulator for selecting the temperature of the air coming out of the air outlet.

In some embodiments the foldable air blower comprises a speed regulator for selecting the velocity of the air coming out of the air outlet.

In some embodiments the shutters of the bottom air outlet of each air conduit unit can perform a swinging motion in order to disperse the outgoing air in multiple directions.

In some embodiments the one or more legs are adapted to hold the foldable air blower 5 to 10 centimeters above hanging laundry.

In some embodiments the size of the legs extended from the air blower can be varied according to the user's preferences.

In some embodiments the foldable air blower comprises one or more air conduit units that can be attached to another air conduit unit, and that can be folded together with the one or more air conduit units when the air blower is not in use.

In some embodiments each air conduit unit has a top air outlet with a plurality of shutters.

In some embodiments each air conduit unit has a removable side cover, wherein the side cover can be removed when an air conduit is attached to another air conduit unit, or the side cover can be a closed side cover in order to prevent air exit from the side, or the side cover can be a side cover with shutters in order to enable air outlet from the side of the air conduit unit.

BRIEF DESCRIPTION OF DRAWINGS

Fig. 1 is a front view of an embodiment of an air blower of the invention showing the engine unit and two air conduits in a folded position. The lower air conduit has air outlets on the bottom and on the side.

Fig. 2 shows the air blower of **Fig. 1** unfolded with air outlets on the bottom of each of the two air conduits and an air outlet on the side of the distal air conduit.

Fig. 3 shows equipped with shutters.

Fig. 4 shows the side air outlet of the distal air conduit with its cover open. In this position the air conduit can be attached to another air conduit or air can exit through the open air outlet.

Fig. 5 shows the front side of the air blower showing the engine unit and the two folded air conduits.

Fig. 6 is a bottom perspective view of the air blower showing 4 legs that can fit a hanging laundry device so that the air blower is placed a short distance above the hanging laundry.

Fig. 7 is an illustration of an air blower of the invention place on a hanging laundry device.

MODES FOR CARRYING OUT THE INVENTION

In the following detailed description of various embodiments, reference is made to the accompanying drawings that form a part thereof, and in which are shown by way of illustration specific embodiments in which the invention may be practiced. It is understood that other embodiments may be utilized and structural changes may be made without departing from the scope of the present invention.

The present invention relates to a foldable air blower for drying humid, hanging laundry placed on a laundry hanging device. The air blower of the invention has at least one air inlet and at least one air outlet. Air is sucked in by an engine unit which also warms the air. Then the air passes through one or more air conduits and exits the one or more air conduits through air outlets placed at the bottom in the direction of the hanging laundry.

Reference is now made to **Fig. 1** showing an embodiment of an air blower comprising an engine unit **10** which sucks air (shown as arrows on the left) via an air inlet (not shown). The air is then warmed by the engine unit **10** before the air moves to a first air conduit **20**. **Fig. 1** shows an embodiment of an air blower having two air conduits, a first air conduit **20** attached to the engine unit **10** and a second air conduit **25** folded on top of the first air conduit **20**. Each air conduit **20**, **25** has a bottom air outlet (not shown) from which the warmed air exits in the direction of the humid, hanging laundry to be dried. The air exiting the air conduit **20** through the bottom air outlet is illustrated with the arrows pointing down.

In some embodiments the engine unit **10** has a heat regulator **30** for selecting the temperature of the air exiting the air blower (warmer or colder). In some embodiments the engine unit **10** has a speed regulator **40** for selecting the velocity of the air exiting the air blower (stronger or weaker air stream).

The distal wall **50** of the air conduit **20** has a side cover, optionally equipped with shutters. If the air blower is left in a folded position, for example, for drying a small quantity of laundry, then if the side cover is equipped with shutters, leaving the shutters open lets hot air exit also from the distal wall **50** as illustrated by the arrows pointing to the right of **Fig. 1**.

The air conduit **25** has a distal wall **60** and a proximal wall **70**. The distal wall **60** can either be permanently open or it can have a removable side cover. The removable covers of the distal walls **50**, **60** can either be removed and separated from the air blower, or they can be removed and folded to the side of the air blower. The proximal wall **70** can optionally have a shutter system.

Fig. 2 illustrates the air blower in an open position where the 2 air conduits **20**, **25** have been unfolded. The side covers of the distal walls **50**, **60** have been removed so that the two air conduits **20**, **25** are joined and form a single interior spacing for moving air. When unfolded, the proximal wall **70** becomes the exterior wall of the air blower.

Fig. 3 illustrates the proximal wall **70** with a side air outlet equipped with a side shutter **80** system such that leaving the side shutters **80** open allows air to exit from the side of the air blower, as illustrated by the arrows pointing to the right on **Fig. 2** and the down arrows on **Fig. 3**. The air exiting to the side of the air blower can serve either to dry laundry hung to the side of the air blower and/or to heat the room. When the side shutters **80** are closed all the air exits from the bottom air outlets (not shown).

Fig. 4 is a side perspective view of the air blower showing the side cover of the wall **70** in an open position where side shutters **80** have been removed. Air will now exit from the open side **70** of the air blower. In some embodiments, it is possible to use more than two air conduits **20**, **25**, and in this case the open wall **70** will connect to a third air conduit. The invention is not limited by the number of air conduits used.

In some embodiments, the shutters of the bottom air outlet **90** can perform a swinging lateral motion in order to cover a wider range of hanging laundry. The swinging motion is operated by an engine which can be either a dedicated engine (not shown) or part of the engine unit **10**.

Fig. 5 is a top perspective view of the air blower. The air conduit **25** has an air shown on top. When unfolded, the air outlet will serve as a bottom air outlet **90** of the air blower. The engine unit **10** has an air inlet **100** typically equipped with a

shutter system, though any air inlet known in the art can be used in the present invention.

Fig. 6 is a bottom perspective view of the air blower. Adaptable legs **110** enable the air blower to be positioned a short distance above the hung laundry on a laundry hanging device. The term "leg" as referred to herein should be interpreted in a broad sense as to any element that can enable the air blower to be positioned a short distance above the hanging laundry. **Fig. 6** shows four legs **110**. In some embodiments, the legs **110** can be removed and placed in preconfigured holes **120** along the bottom of the air blower, in order to adapt the air blower to different hanging laundry devices. In some embodiments, the legs' **110** position can be changed by moving the legs **110** along a rail, track or any similar setting known in the art in order to change the position of a leg **110**.

The term short distance separating the air blower and the hanging laundry can be 5 to 10 centimeters in some embodiments, though the invention encompasses any range. If the air blower is placed too close to the laundry, for example, less than 1 centimeter, hot air might burn or damage the fabric of the laundry. If the air blower is too far from the humid laundry, for example, more than 75 centimeters away, the efficiency of the air blower will be diminished.

In some embodiments, a leg **110** connects the air blower to a wall such that the air blower can be either attached to a wall or unfolded from the wall to a height that it is a short distance above the hanging laundry.

In some embodiments, the leg **110** is made of a flexible material such as a rope and attached to the top of the air blower. The air blower can then be mounted to the ceiling when not in use, and brought down above the drying laundry when in use.

Fig. 7 is an illustration of an air blower of the invention sitting on top of a laundry hanging device via the air blower's legs **110**.

In some embodiments the legs **110** can be extractable from the air blower, thus their size can be varied. In some embodiments the legs **110** are longer and

reach the floor such that the air blower stands independently on the floor and the legs **110** are not in contact with the top of the laundry hanging device.

Although the invention has been described in detail, nevertheless changes and modifications, which do not depart from the teachings of the present invention, will be evident to those skilled in the art. Such changes and modifications are deemed to come within the purview of the present invention and the appended claims.

CLAIMS

1. A foldable air blower for drying humid, hanging laundry on a laundry hanging device, comprising:

(i) an air inlet;

(ii) a first air conduit unit comprising a bottom air outlet with a plurality of shutters;

(iii) a second air conduit unit attached to the first air conduit unit, and that can be folded together with the first air conduit unit when the air blower is not in use;

(iv) one or more legs adapted to hold the foldable air blower a short distance above hanging laundry; and

(v) an engine unit for sucking air from the outside through the air inlet

such that when the foldable air blower is positioned a short distance above the humid, hanging laundry, air is blown from the bottom air outlet into the hanging laundry in order to speed the drying process of the hanging laundry.

2. The foldable air blower according to claim 1, comprising a heat regulator for selecting the temperature of the air coming out of the air outlet.

3. The foldable air blower according to claim 1, comprising a speed regulator for selecting the velocity of the air coming out of the air outlet.

4. The foldable air blower according to claim 1 wherein the shutters of the bottom air outlet of each air conduit unit can perform a swinging motion in order to disperse the outgoing air in multiple directions.

5. The foldable air blower according to claim 1, wherein said one or more legs are adapted to hold the foldable air blower 5 to 10 centimeters above hanging laundry.

6. The foldable air blower according to claim 1, further comprising one or more air conduit units that can be attached to another air conduit unit, and that can be folded together with the first air conduit unit when the air blower is not in use.

7. The foldable air blower according to claim 1, wherein each air conduit unit has a top air outlet with a plurality of shutters.

8. The foldable air blower according to claim 1, wherein each air conduit unit has a removable side cover, wherein the side cover can be removed when an air conduit is attached to another air conduit unit, or the side cover can be a closed side cover in order to prevent air exit from the side, or the side cover can be a side cover with shutters in order to enable air outlet from the side of the air conduit unit.

Fig. 1

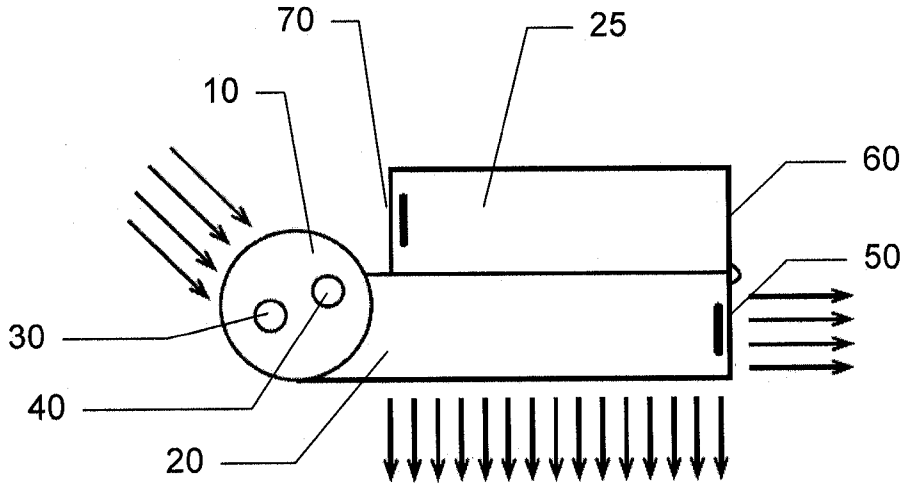


Fig. 2

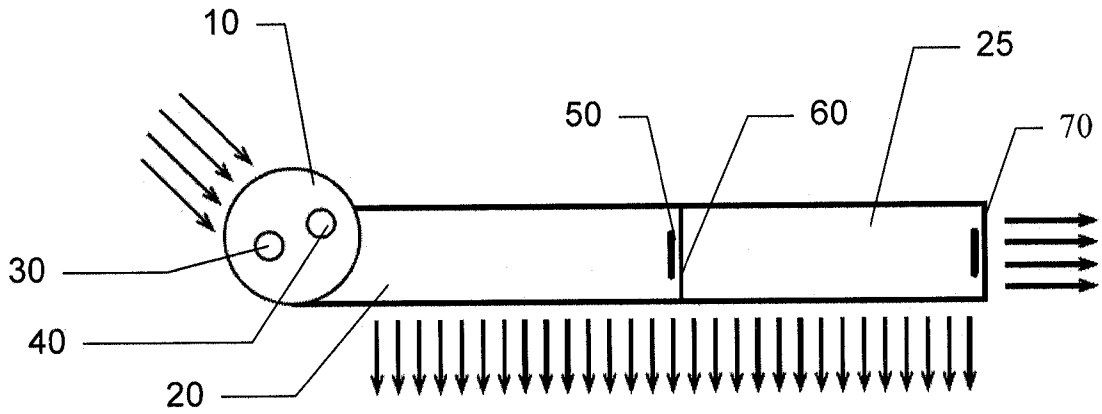


Fig. 3

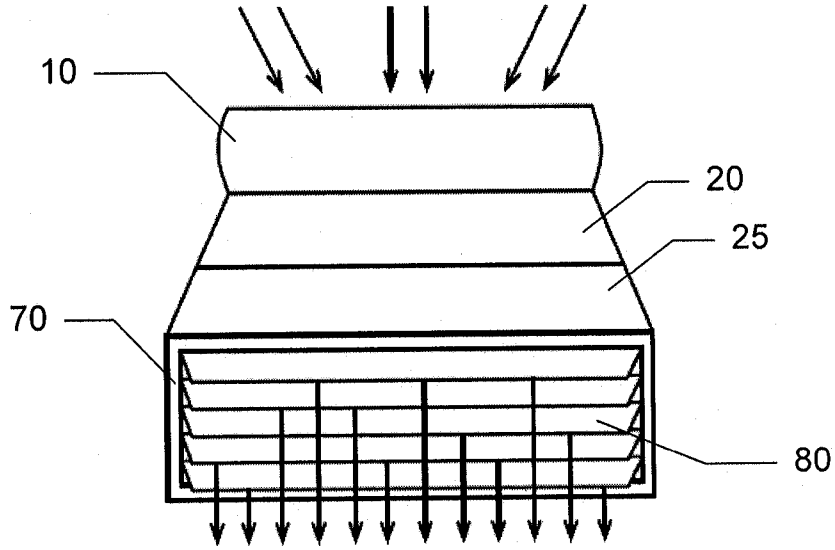


Fig. 4

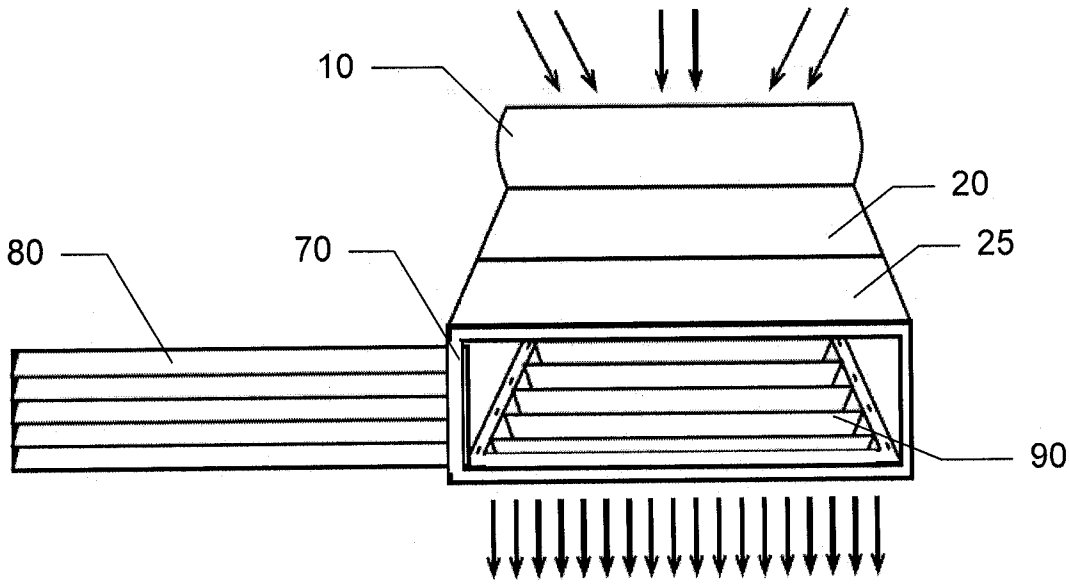
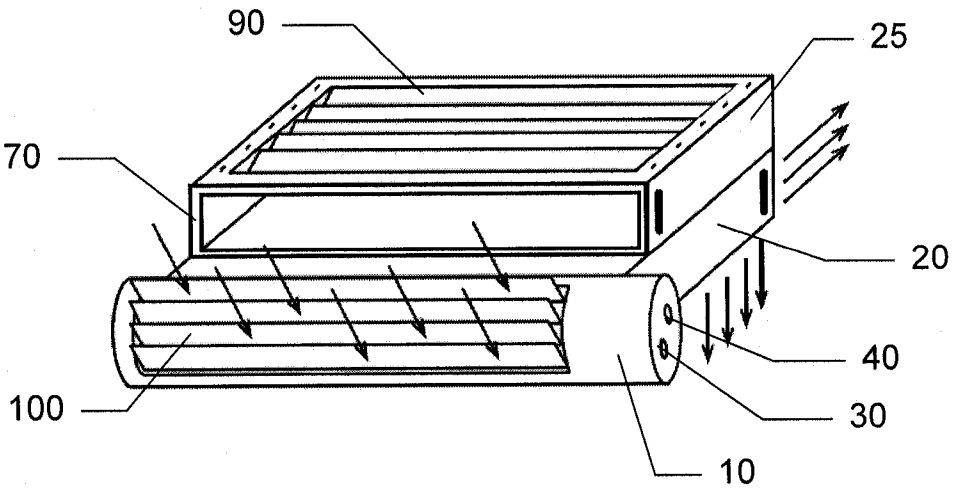


Fig. 5


90
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20
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100
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Fig. 6

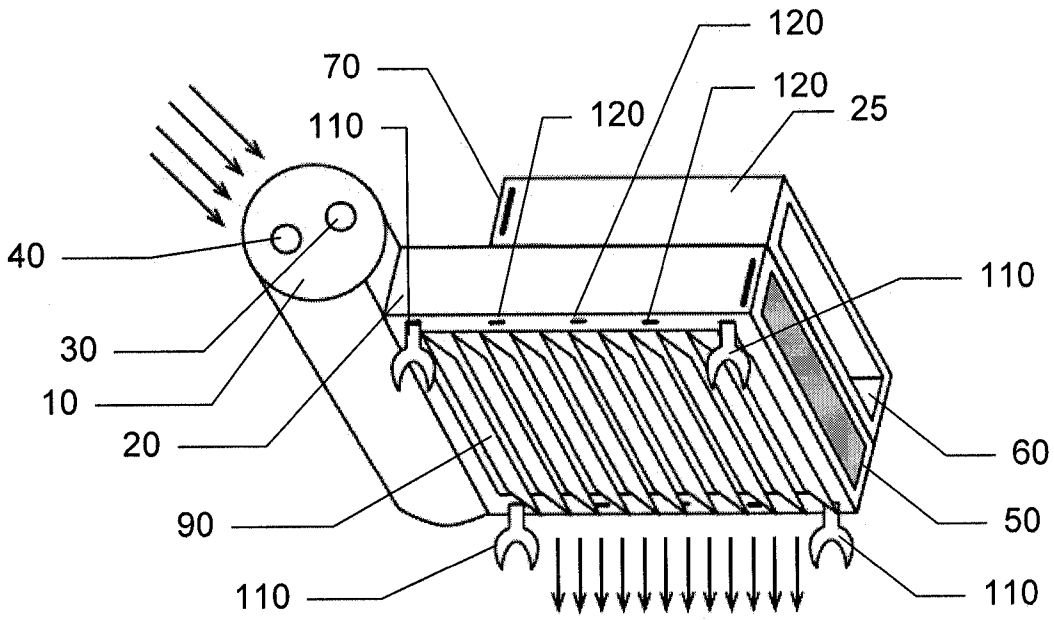
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Fig. 7