

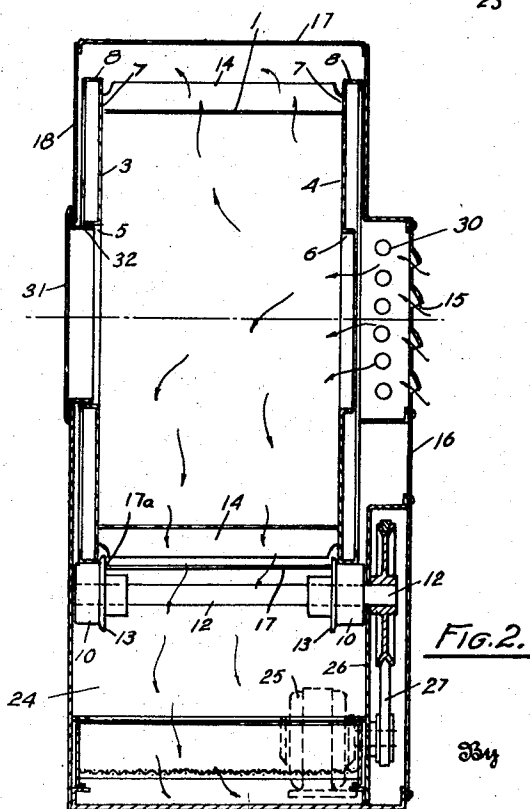
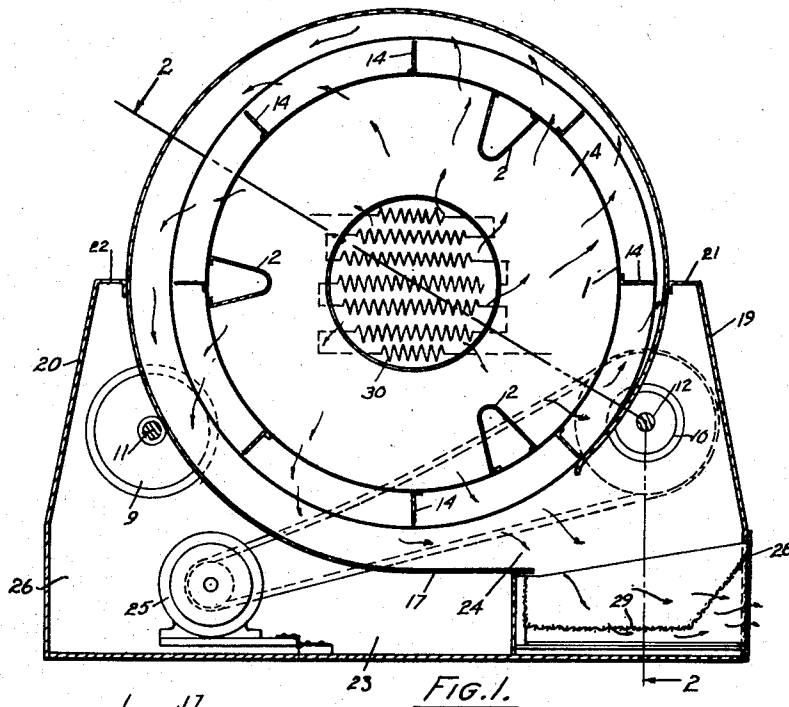
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DRIER

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DRIER

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This invention is intended to simplify the construction of tumbler type clothes driers by utilizing the drum as the blower for circulating air through the drum. In one form the heater radiates through one end of the drum and the door for loading and unloading clothes is at the other end of the drum. Further objects and advantages appear in the specification and claims.

In the drawing,

Fig. 1 is a sectional elevation of a drier, and Fig. 2 is a section on line 2—2 of Fig. 1.

Referring to the drawing, 1 indicates a horizontal perforate drum having on its inner surface axially extending ribs 2 for increasing the tumbling action of the clothes. At opposite ends of the drum are heads 3 and 4 having coaxial openings 5 and 6 at the center of the drum. The heads are of larger diameter than the drum and the projecting portions 7 are bent outward to provide circular flanges 8 by which the drum is rotatably supported in a cradle comprising wheels 9 and 10 fixed to shafts 11 and 12. The wheels 9 are idle wheels and the wheels 10 are driving wheels which drive the drum through frictional engagement with the flanges 8. Each of the wheels is provided with a flange 13 riding against the inner edge of the adjacent head and preventing axial movement of the drum.

On the outer periphery of the drum are vanes 14 extending between the heads and serving as a blower for circulating air through the drum. Air flows into the opening 6 at the back of the drum through louvers 15 in a wall 16 forming the back of a cabinet enclosing the drier. Around the periphery of the drum is a scroll shaped sheet 17 forming the outer wall of an involute fan casing for the drum. The edges of the sheet are secured to the back wall 16 and to a front wall 18. The upper part of the sheet 17 forms the top wall of the drier cabinet. At the center of the drum are cabinet end walls 19 and 20 having top flanges 21 and 22 secured to the sheet 17 and having front and back edges secured to the walls 16 and 18. With this construction there is provided an enclosure 23 between the outlet 24 of the involute fan casing and the end wall 20 of the cabinet in which is located a motor 25 for driving the drum. The motor shaft extends through a wall 26 spaced from the cabinet back wall 16 and providing a housing for a belt and pulley drive 27 for the shaft 12 carrying the drive wheels 10. The shaft 11 for the idler wheels 9 extends across the cabinet walls 16 and 18 in the space 28 outside the involute fan casing. The

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sheet 17 forming the outer wall of the casing is cut away at 17a to provide clearance for the wheels 9 and 10.

The air discharged from the outlet 24 is filtered through a removable drawer 28 in the end wall 19 of the cabinet. The bottom and side walls of the drawer are made of a screen 29 which traps the lint released during the drying operation.

The clothes are heated by a radiant heater 30 arranged between the louvers 15 and the drum opening 6. Because the clothes are heated primarily by radiant heat, a large volume of air can be drawn through the drum without decreasing the drying efficiency. Clothes are loaded and unloaded to the drum through a door 31 on the front cabinet wall 18 having a flange 32 extending within the front drum opening 5 and providing a substantially air-tight seal preventing the flow of air out the opening 5 during the rotation of the drum.

What I claim as new is:

1. In a tumbler type clothes drier, a horizontal perforate drum in which the clothes are tumbled as the drum is rotated, heads at both ends of the drum, an involute casing around the drum, flanges projecting beyond the periphery of the drum, an air inlet to the center of the drum, vanes between the flanges serving as a blower for circulating air through the drum, a cradle for the drum comprising wheels engaging the flanges and supporting and driving the drum and openings in the casing through which the wheels extend into driving engagement with the flanges.

2. In a tumbler type clothes drier, a horizontal perforate drum in which the clothes are tumbled as the drum is rotated, means including a sheet around the drum forming an involute casing with its outlet at the bottom of the drum, an air inlet to the center of the drum, vanes on the drum serving as a blower circulating air through the drum, a cabinet enclosing the lower part of the casing and its outlet, and a drive for the drum between the cabinet and casing.

3. In a tumbler type clothes drier, a horizontal clothes receiving drum having a perforate axially extending peripheral wall and end walls, means for driving the drum at a speed causing tumbling of the clothes, a fan casing around and providing an air receiving space outside the peripheral walls of the drum, an air inlet to the center one end wall of the drum, a heater for the air and clothes, axially extending vanes on the drum serving as a blower for sucking air from the interior of the drum and moving it radially through the peripheral walls of the drum

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to the space between the drum and casing, and a fan casing outlet leading from said space.

4. In a tumbler clothes drier, a horizontal clothes receiving drum having a perforate axially extending peripheral wall, means for driving the drum at a speed causing tumbling of the clothes, a fan casing around and providing an air receiving space outside the peripheral wall of the drum, heads at both ends of the drum having coaxial openings at the center of the drum, a heater radiating through one of the openings, a door closing the other opening, and axially extending vanes on the drum serving as a blower for sucking air from the interior of the drum and moving it radially through the peripheral walls of the drum to the space between the drum and casing, and a fan casing air outlet leading from said space.

5. In a tumbler type clothes drier, a horizontal clothes receiving drum having a perforate axially extending peripheral wall and end walls, means for driving the drum at a speed causing tumbling of the clothes, an air inlet opening in one end wall of the drum, a scroll fan casing forming a space around the peripheral wall of the drum, an air outlet at the bottom of said casing, and axially extending vanes on the drum for sucking air from the interior of the drum and moving it radially through the peripheral walls of the drum to the space between the drum and casing.

6. In a tumbler type clothes drier, a horizontal clothes receiving drum having a perforate

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axially extending peripheral wall and end walls, means for driving the drum at a speed causing tumbling of the clothes, an air inlet to the center of one end wall of the drum, means including a sheet around the peripheral wall of the drum forming an involute fan casing spaced from the peripheral wall, vanes on the drum sucking air from the interior of the drum and moving it radially through the peripheral walls of the drum to the casing, and an air outlet from the casing.

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