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A. ANFOSSI

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AIR SUPPLY FOR TUMBLERS

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Fig. 1.

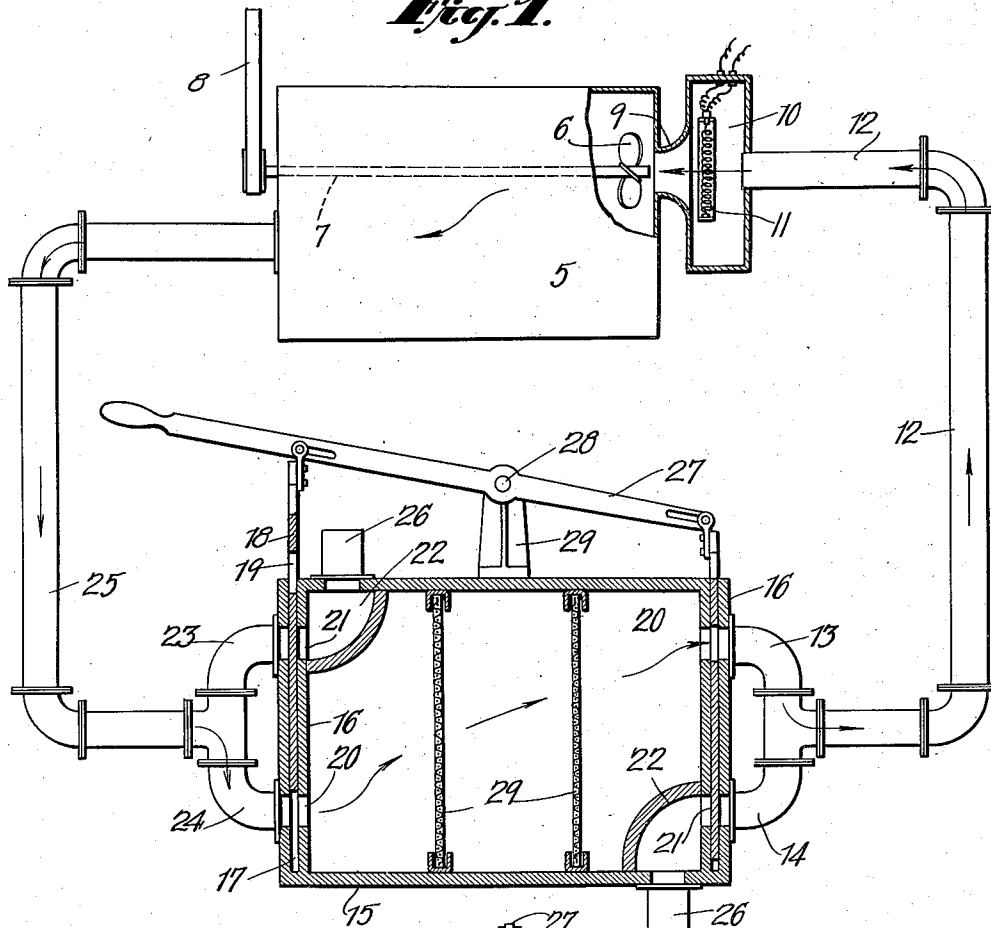
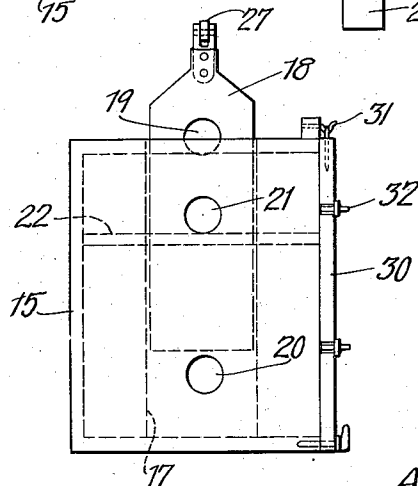


Fig. 2.



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AIR SUPPLY FOR TUMBLERS.

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This invention relates to air supply and apparatus therefor for drying receptacles.

A particular object of the invention is to provide in a drying receptacle, which is particularly adapted for the drying of clothes in laundries and the like, an air supply and means for regulating and directing such air supply to the receptacle so that certain objections will be overcome, which have heretofore appeared in the use of an ordinary hot room or drying room wherein clothes were dried.

A further object of the invention is to prevent in drying receptacles the quick condensation of the steam when the air is drawn from the outside atmosphere and also to do away with the necessity of heating a large volume of air, which is continually drawn from the outside atmosphere.

A further object of the invention is to provide a hot air supply for receptacles wherein clothes are dried by passing there-through a continuous current of warm or hot air to effectively and quickly dry the clothes.

A further object of the invention is to provide a device in combination with an air circulation system, which will change the cold air suction, which has been heretofore used to a hot air circulation, which more rapidly dries the clothes.

A further object of the invention is to maintain a constant volume of air flow so that the clothes will be thoroughly dried with a minimum of time and labor.

Referring to the drawings, wherein I have shown a preferred embodiment of my invention,

Figure 1 is a schematic view showing how the air is treated and passed through a drying receptacle and through the air chamber forming a part of my invention, the chamber itself being shown in cross-section to show the interior thereof, and a portion of the receptacle being broken away to show the heating element and suction device.

Figure 2 is a view in end elevation looking at the left hand end of the air chamber as shown in Figure 1 and illustrates the position of the air cut-off or valve.

Referring to the drawings in detail, 5 indicates in schematic manner a receptacle, such for instance, as a clothes dryer which is used in laundries to dry clothes that have been washed, and through which is passed a current of hot air, the circulation of the air

being maintained through the medium of the fan 6 mounted on the end of a power shaft 7 which is operated by the belt 8 in well known manner. The end of the receptacle 5, adjacent the fan 6, is provided with an inlet 9 having formed at the front thereof a housing 10 in which is provided a heater 11 of any suitable type. In this instance, one is shown, which comprises electrical coils so arranged that they are in the path of the air drawn in by the fan 6 through the pipe 12 which opens into the housing 10. The pipe 12 is provided with two branches 13, and 14 which are connected to the upper and lower portions of air chamber 15. This air chamber may be of any convenient size and may even be embodied in a whole room.

The ends 16 of the chamber 15 are provided with slots 17 in which operate the valve plates 18, said plates having suitable openings therein 19, which control the flow of air through the pipes connected to said chamber. The walls 16 of the chamber are provided with openings 20 and 21, there being formed in the chamber 15, compartments 22 from which lead the branch 14 of pipe 12 and the branch 23 of pipe 25. The branches 13 and 24 respectively of these pipes opening directly into the chamber 15. The top and bottom of the chamber is provided with outlets 26 which open out of the compartments 22.

In order to operate the slide valve 18, I provide an operating lever 27, pivoted as at 28 to the standard 29, which is mounted on top of the chamber 15. It is evident therefore that by manipulation of the lever 27 to the position shown in Figure 1, the openings 20 in the chamber 15 will be uncovered and the openings 21 thereof will be closed so that, as shown by the arrow, the air will flow through the chamber in the direction toward the inlet side of the receptacle. In order to cleanse this air in its passage through the chamber 15, I provide in the interior of said chamber a plurality of screens 29 which may be of any material, such as wire netting or fabric. When the operating handle 27 is depressed, it will of course close the openings 20 in the chamber and uncover the openings 21 in the compartments 22 so that the air will flow to atmosphere, that is, being forced out of the receptacle and the air that is being drawn into the tumbler will be drawn from atmosphere. It is evident that any change of air necessary in the receptacle

can be obtained by manipulation of the lever 27, that is, a continuous circulation of hot air is had when the lever is in the position shown in Figure 1, but if it is desired to change the air in the receptacle, the lever is depressed so that the air flowing in pipe 25 is exhausted to atmosphere and the air drawn in through the pipe 12 is drawn from atmosphere. The heating element 11 is in the path of the air and heats the air passing therethrough.

The chamber 15 is closed through the medium of a suitable door 30, which is suspended from the hook 31 and is secured in position through the medium of the bolts 32.

It will be evident therefore that I have arranged a hot air supply to a clothes drying receptacle which will retard the condensation of steam, which took place rapidly in the old form of receptacle when air was drawn from atmosphere directly into the receptacle, thereby wasting the steam. Also, my improved apparatus does away with the heating of a large volume of air by using the heated air over again. The old drying receptacle used a continuous supply of cold air and continually discharged the same after it was heated. My idea overcomes this and thereby economizes in the operation of drying the clothes. The use of my improved air chamber also allows for a flow of a constant volume of air, which aids in rapidly drying the clothes. Also, when fresh air is desired in the receptacle, the same can be had without disturbing the temperature of the hot air in the chamber and my chamber changes the cold air suction to a hot air circulation, which more rapidly dries the clothes.

Having described my invention, what I claim is:—

1. The combination with a clothes drying device having an air inlet and an outlet of a chamber through which said air passes in circulation to and from the drying device, adapted to accumulate air and valve members in each of the end walls of said chamber for diverting the air discharged from said drying device into the chamber or into atmosphere.

2. In a drying device, the combination of a drying receptacle through which air is adapted to circulate, said receptacle having

an air inlet and an outlet, a heating element adjacent said inlet and a chamber disposed between said inlet and said outlet at a point remote from the receptacle through which the air in circulation to and from the receptacle is adapted to pass a plurality of valve members associated with the end walls of said chamber whereby the passage of air in circulation is controlled, and a pivoted member for operating said valves simultaneously.

3. In the air supply system of a drying device, a chamber having inlets and outlets in the opposite end walls thereof, valve members operable in unison in the end walls of said chamber, said valve members being provided with openings whereby when they are operated, they close some of said inlets and some of said outlets and a cleaning element in said chamber through which the air in circulation is adapted to pass.

4. In a hot air circulation system adapted for use in a clothes drying device, an air chamber in connection with said drying device, having inlets and outlets, compartments opening to atmosphere in said chamber and valve members between said inlets and said outlets whereby the flow of air through said compartments is regulated, and means for operating said valve members in unison.

5. In an air circulating system, comprising a drier having a fan opening in one end thereof, a chamber, the end walls of which are spaced to provide valve guide slots, valve members slidable in said slots, the walls of said chamber and said valve members being provided with orifices which match to provide openings through the walls of the chamber, compartments in said chamber, each of said compartments having an outlet and a lever for operating said valve members simultaneously whereby the flow of air can be diverted through the compartments or through the chamber itself.

6. The combination with a clothes drying system of a housing interposed in said system for holding a large volume of air necessary for use in drying clothes and valves in the opposite ends of said housing for diverting the air through the housing or into atmosphere, said valves being operable in unison.

In testimony whereof I affix my signature.
ADOLPH ANFOSSI. [L. S.]