April 3, 1928.

1,664,809

E. DAVIS

DRYING ROOM TUMBLER

Filed Sept. 15, 1926

2 Sheets-Sheet 1

Fig. 1.

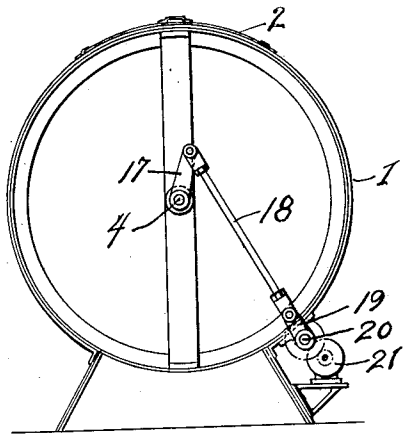


Fig. 5.

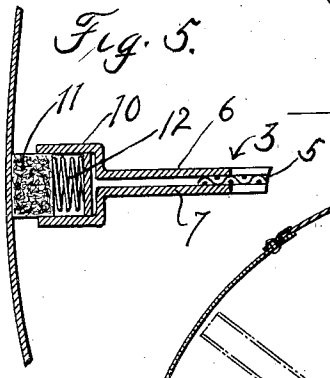
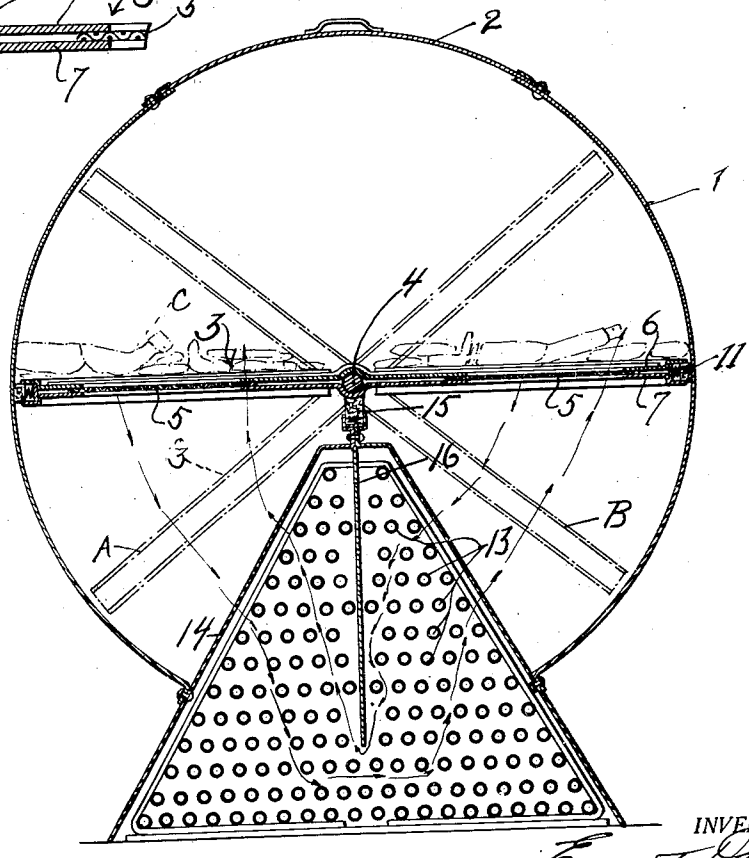


Fig. 2.



INVENTOR.

Ernest Davis

BY

Parsons Bridell

ATTORNEY.

April 3, 1928. 1,664,809

E. DAVIS

DRYING ROOM TUMBLER

Filed Sept. 15, 1926 2 Sheets-Sheet 2

Fig. 3.

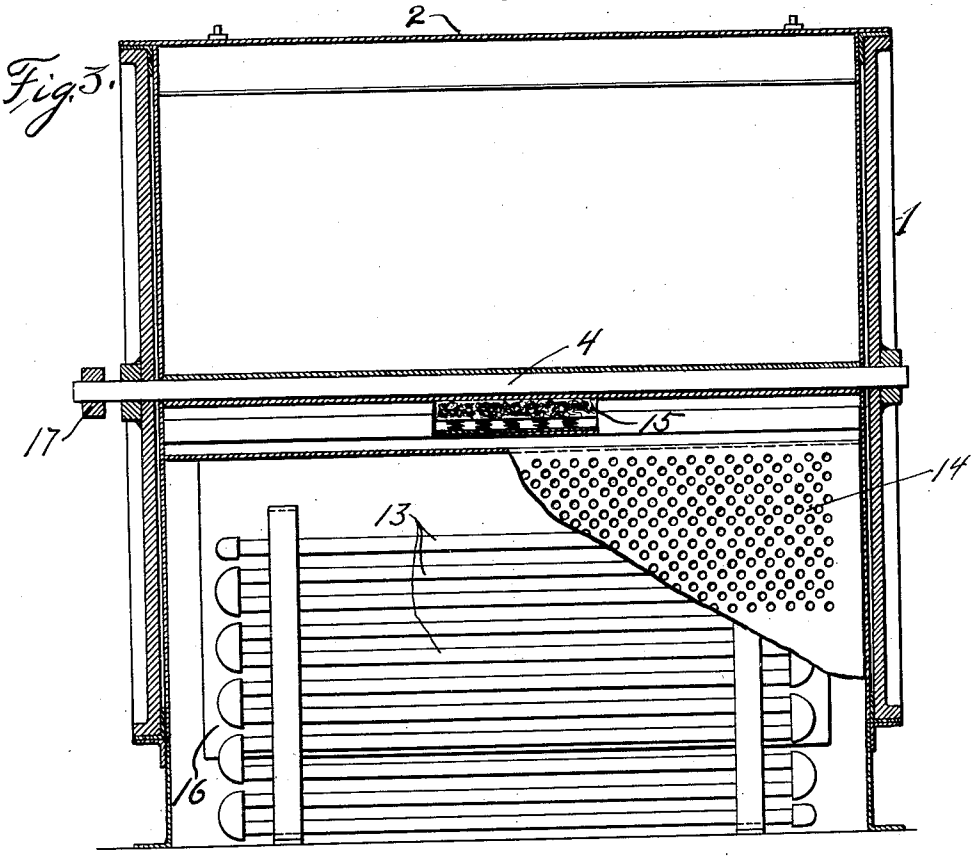
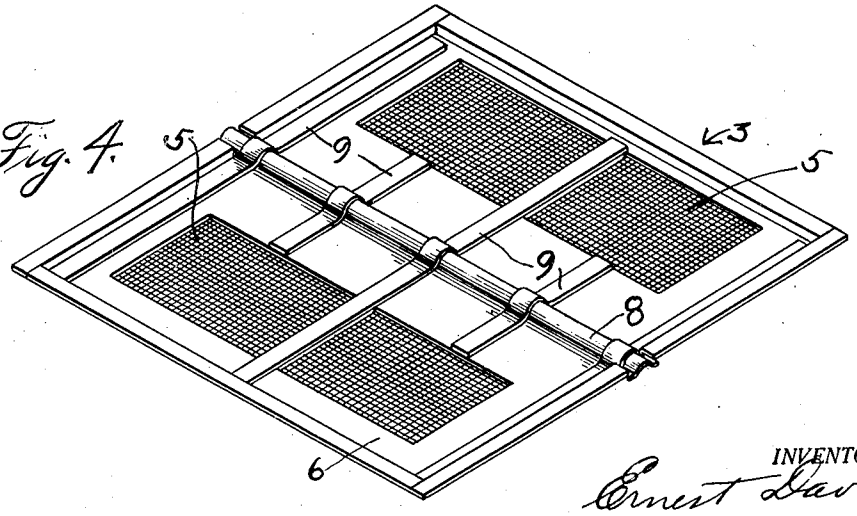


Fig. 4.



INVENTOR.
Ernest Davis
BY
Parmele & Bradbury
ATTORNEY.

Patented Apr. 3, 1928. 1,664,809

UNITED STATES PATENT OFFICE.

ERNEST DAVIS, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE PROSPERITY COMPANY INC., OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

DRYING-ROOM TUMBLER.

Application filed September 15, 1926. Serial No. 135,556.

This invention has for its object a drying room tumbler or a device for drying clothes which is particularly simple in construction, economical in operation and highly efficient and durable in use.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 is an end elevation of this tumbler.

Figure 2 is an enlarged vertical cross sectional view taken centrally on Figure 1.

Figure 3 is a central, vertical, longitudinal, sectional view taken at a right angle to Figure 2.

Figure 4 is a perspective view of the clothes support.

Figure 5 is a fragmentary detail view illustrating the joint between each outer edge of the support and the inner face of the casing.

This drying room tumbler comprises generally, a horizontal casing, an oscillating clothes support mounted in the casing to rock about the axis of the casing, the support being formed with passages through which the air passes during the oscillating of the support, means for drying the air in the casing during the movement of the air by the support or during the movement of the support and means for oscillating the clothes support.

1 designates the casing which may be of any suitable form, size and construction, it being a cylinder lying or supported on one side and having a door 2 at its top. This door is suitably mounted to slide into open position in order that clothes may be placed in and removed from the casing. Also, after the drying operation is started, this door is opened more or less to permit a circulation of air and the escape of moist air.

3 designates the clothes support which is in the nature of a pivoted platform mounted on a shaft 4 arranged coaxially with the cylinder or casing 1 and extending at one end to the outside thereof.

The clothes support is here shown as provided with a perforate portion 5 which provides the passages for the air, this perforate portion being formed by panels of wire mesh. The wire mesh is held between upper and lower plates 6, 7 and these plates are formed along their middle portions with cylindrical corrugations 8 which form a hub on the shaft 4. The plates are further reinforced by straps 9. The upper and lower plates 6, 7 are secured together in any suitable manner and at their outer margins are shaped to form a channel 10, see Figure 5. In the channel is provided means for wiping on the inner walls of the casing and providing a sliding sealed joint. This sliding sealed joint is provided by strips of a packing material 11 slidable in the channel 10 and being constantly pressed into engagement with the inner walls of the casing by springs 12.

The means for drying the air during a movement of the air by the support extends in the casing in a radial direction and is located between the extreme positions A and B assumed by the support when at the extreme ends of its movement. This means is here shown as a plurality of pipes 13 for a heating medium as steam, these pipes being located in a chamber 14 having perforations therethrough, the chamber is triangular in form and extends radially into the casing 1 with the apex thereof located beneath the shaft 4. Sealing means 15, similar to that formed by the channel 10, packing 11 and spring 12, are located at the apex of the chamber 14 to coact with the hub 8 of the clothes support. Also, a baffle plate 16 depends from the apex of the chamber 14 to near the base of the chamber so that the air must pass in contact with a maximum number of heated pipes 13.

The shaft 4 is oscillated in any suitable manner and as here shown is provided with a crank arm 17 at one end which is connected by a connecting rod 18 to a crank arm 19 mounted on a shaft 20, which shaft is

actuated from any prime mover as an electric motor 21. The crank 17 is longer than the crank 19 so that a rotation of the crank 19 oscillates the crank 17.

In operation, the clothes C are thrown into the casing 1 on the support. During the oscillating of the support, they roll from one end thereof to the other across the axis of the support and during the movement of the support, the air is circulated by the support which acts as a piston due to the fact that the wire screen first on one side and then on the other, is closed against the passage of air by the clothes thereon so that the movement of this side of the support with the passages so closed, acts as a blade to force the air through the heating chamber 13 where the moisture is removed therefrom, and also acts to create a suction above the blade. The suction acts to draw air through or from the heating chamber and through the opposite half of the support from which the clothes have tumbled and into the upper portion of the casing into the path of the clothes during the next movement of the support.

This drying room tumbler is not only particularly simple, but is very efficient and rapid in operation and can be built at a small cost.

What I claim is:

1. A drying room tumbler comprising a horizontal cylindrical casing, an oscillating clothes support mounted in the casing concentric with the axis of the casing and extending diametrically of the casing, the support having a perforate portion providing passages for air, means for oscillating the support about its axis, and means for drying the air in the casing during the circulation thereof by the movement of the support.

2. A drying room tumbler comprising a horizontal cylindrical casing, an oscillating support mounted in the casing to rock about the axis of the casing, the support extending diametrically of the casing and having means wiping on the inner faces of the walls of the casing to form a sliding sealed joint, a compartment extending into the casing into the space located between the extreme positions of the support, the compartment having means for heating and drying air and openings for receiving the air circulated by the support and means for rocking the support during the oscillating thereof.

3. A drying room tumbler comprising a horizontal cylindrical casing, an oscillating clothes support mounted in the casing to rock about the axis of the casing, the support extending diametrically of the casing and having a perforate portion providing passages for air, an air drying and heating means located in the chamber between the extreme positions assumed by the support and means for actuating the support.

4. A drying room tumbler comprising a horizontal cylindrical casing, an oscillating clothes support mounted in the casing to rock about the axis of the casing, the support extending diametrically of the casing and having a perforate portion providing passages for air, the support also having means at its margin for forming a sealed sliding joint between the support and the inner face of the casing, an air drying and heating means located in the chamber between the extreme positions assumed by the support and means for actuating the support

5. A drying room tumbler comprising a horizontal cylindrical casing, an oscillating clothes support mounted in the casing to rock about the axis of the casing, the support extending diametrically of the casing and having a perforate portion providing passages for air, the support also having means at its margin for forming a sealed sliding joint between the support and the inner face of the casing and an air drying and heating means located in the casing between the extreme positions assumed by the support, said means having a part coacting with the support at the axis thereof for forming a sliding sealed joint between said means and the support, all whereby the air circulated by the movement of the support with the clothes thereon passes through the heating and drying means, and means for actuating the support.

6. A drying room tumbler comprising a horizontal casing, an oscillating clothes support mounted in the casing to rock about the horizontal axis of the casing, the support having air passages therethrough, the support coacting with the wall of the casing whereby the support acts as a rotary piston, means located in the casing for drying the air during the movement thereof effected by the rocking of the support and means for actuating the support.

7. A drying room tumbler comprising a horizontal casing, an oscillating clothes support mounted in the casing to rock about the horizontal axis of the casing, the support having air passages therethrough, the support coacting with the wall of the casing whereby the support acts as a rotary piston, means located in the casing for drying the air during the movement thereof effected by the rocking of the support, said drying means extending in a general radial direction into the casing between the extreme positions assumed by the support, and means for oscillating the support.

8. A drying room tumbler comprising a horizontal casing, an oscillating clothes support mounted in the casing to rock about the horizontal axis of the casing, the support having air passages therethrough, and means located in the casing for drying the air during the movement thereof effected by

the rocking of the support, said drying means extending in a general radial direction into the casing between the extreme positions assumed by the support, the support having means for forming a sliding sealed joint with the casing and the drying and heating means also having means for forming a sealed joint with a support near the axis of the support.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and in the State of New York, this 25th day of August, 1926.

ERNEST DAVIS.