

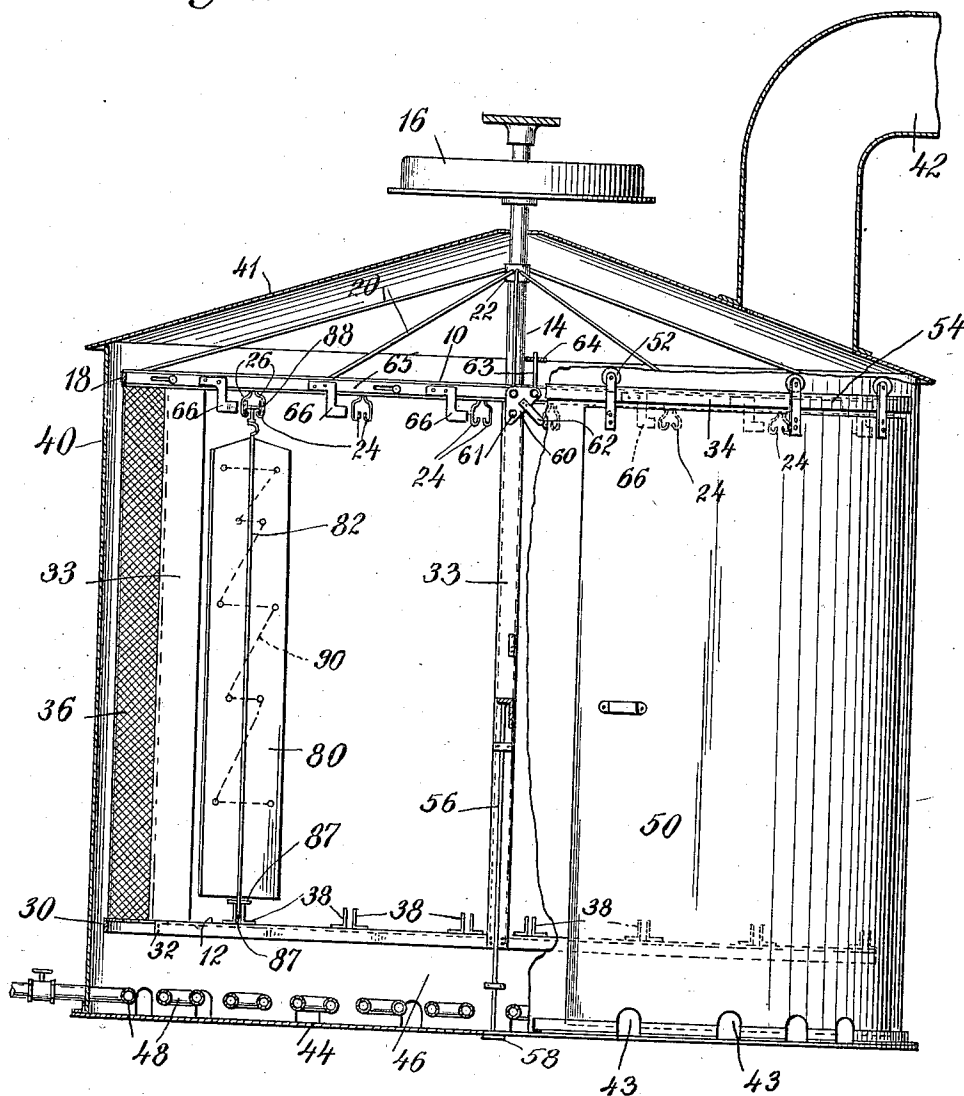
W. P. TARRANT.  
CLOTHES DRIER.  
APPLICATION FILED JAN. 16, 1912.

1,045,455.

Patented Nov. 26, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



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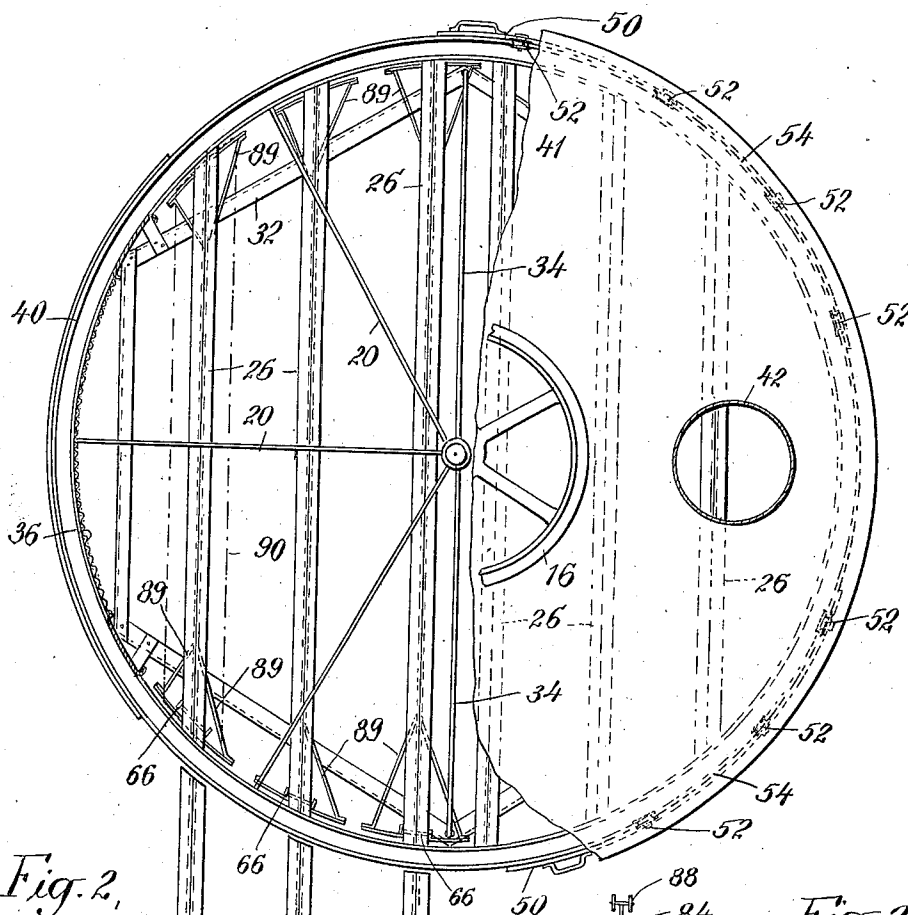


Fig. 2.

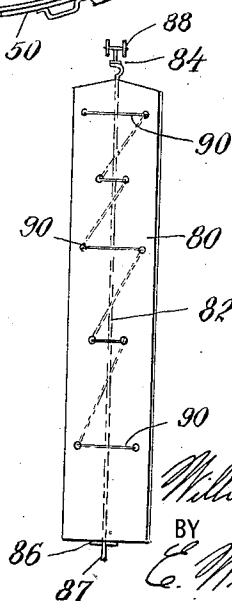


Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## CLOTHES-DRIER.

1,045,455.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed January 16, 1912. Serial No. 671,485.

*To all whom it may concern:*

Be it known that I, WILLIAM P. TARRANT, a citizen of the United States of America, and a resident of Saratoga Springs, county of Saratoga, and State of New York, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to improvements in clothes driers, and its object is to provide a simple and inexpensive apparatus for this purpose, and to improve upon such devices as have heretofore been known.

I will describe the invention in the following specification and point out the novel features thereof in the appended claims.

In the accompanying drawing Figure 1 is a fragmentary sectional elevation of the drier with parts broken away. Fig. 2 is a plan view with parts broken away. Fig. 3 is a front elevation of one of the clothes racks.

As illustrated in the drawings the drier comprises a rotary cage composed of an upper frame 10 and a lower frame 12 mounted upon a vertical shaft 14 which is journaled in suitable bearings and is provided with a driving pulley 16. The upper frame comprises an annular rim 18 which is connected by rods 20 with a collar 22 on the shaft 14. Depending from the annular rim 18 are a series of parallel tracks or runways 24 extending as chords across the circle of the rim. These tracks are each composed of a pair of parallel troughs 26 which receive the trolleys on the clothes racks to be hereinafter described.

The lower frame 12 is composed of an annular rim 30 connected to a hexagonal angle-iron frame 32, and also connected to the upper rim 18 by vertical bars 33. A pair of rods or braces 34 extend diagonally from the collar 22 on the shaft 14 to this frame 32 to aid in supporting the frame. Opposite sides of the drier frame thus formed are covered by arcuate sheets of wire netting 36 extending between the upper and lower frames. Extending across the lower frame 32 are a series of parallel guides for the lower ends of the clothes racks. These guides are each preferably made of a pair of angle iron bars 38 affixed to the frame 32 and to the rim 30 directly below and parallel with the tracks 24 on the upper frame, said

angle irons having their vertical sides separated a slight distance apart.

The rotary drier frame or cage is inclosed within a drying chamber which is formed preferably by a cylindrical inclosing shell or casing 40 of sheet metal, closed at the top by a conical cover 41. A pipe 42 leads from this cover and leads to a stack, or itself forms a stack. The lower portion of this cylindrical shell is either raised slightly above the floor or else is provided with air inlet openings 43. Between the lower frame of the cage and the bottom 44 of the drying chamber is a space 46 in which steam coils 48 are located. A pair of doors 50, one for each side of the casing, and forming parts of the casing are provided, each having a series of rollers 52 adapted to run on a track 54 at the upper edge of the casing 40. These doors may be rolled to one side to allow the clothes racks to be rolled into or out of the drying chamber.

In order to hold the cage stationary and prevent movement during the loading or unloading thereof, a stop lock is provided which comprises a bolt 56 slidably mounted on the exterior of one of the vertical bars 33 and arranged to have its lower end received in a plate 58 in the floor of the drying chamber. This plate is in such a position that it insures the alinement of tracks 24 and 72. A safety stop 60 may also be provided at the top of the cage to hold the cage stationary while the clothes racks are removed from or placed in the cage. This stop comprises a bell crank lever pivoted at 61 and arranged to be actuated by a handle 62. A vertical bolt 63 is arranged to engage a plate 64 in a stationary part of the casing. The bell crank lever is also connected with a slidable bar 65 from which depend stop pieces 66 which are so positioned that when the bolt 63 is free from its plate they will be in alinement with the tracks 24, but when the bolt is pushed up into the plate 64 they will be back out of the way of the tracks in the positions in which they are shown in Fig. 1.

Located in front of the drying chamber are a series of parallel tracks 72, similar to the tracks 24 and in alinement therewith. The tracks 72 are suspended from frames 74 which may be secured overhead in any desired manner.

The clothes racks are formed of sheet metal end plates 80 affixed to rods 82, which

are connected at their upper and lower ends to parallel horizontal bars 84 and 86, respectively. The lower ends of the rods 82 extend below the bars 86 as at 87 and are adapted to pass between the angle irons 38 to hold the racks in place when they are in the drier. Attached to the upper bars 84 are a series of rollers or trolleys 88 which are adapted to travel in the tracks or troughs 24 and 72. The end plates 80 may be inclined to the bars 84 and 86 in opposite directions to conform approximately to the general contour of the cylindrical chamber. These end plates are held in position by stay rods 89 connected to their upper and lower corners and to the bars 84 and 86 respectively. A clothes line 90 is laced back and forth between holes in the end plates of each rack to provide a support for the clothes. These holes are preferably provided in pairs, the holes in each pair being in the same horizontal line, but those of each alternate pair being different distances apart. The stops 66 are adapted to be moved into the path of travel of the trolleys to prevent the racks from moving endwise while in the cage and during rotation.

While the racks are on the tracks 72, which of course may be carried any desired distance into a laundry, they may be filled with damp clothes, bedding or other articles. The arrangement of the clothes lines is such as to permit each rack to hold a large number of such articles without interfering with each other. Then by opening one of the doors 50, these filled racks may be run into the rotatable cage of the drier. A half revolution of the cage will bring the other set of tracks 24 into alinement with the tracks 72 and the racks on this other set of tracks whether empty or filled with dried articles may be run out onto tracks 72. It is to be understood that the steam coils 48 are shown as illustrative of but one of the means which may be used for getting hot air for the drying chamber.

Now with both of the doors 50 closed and with steam turned onto the pipes 48, the cage with the filled racks in it is rotated. The damp articles are thus subjected to currents of dry hot air which enter at 43, are heated by the pipe coils and escape through the pipe 42. The guard screens 36 prevent the articles from swinging outward too far. Thus the articles are quickly dried without any wear and tear such as they are subjected to in ordinary centrifugal driers.

The cage is intended preferably to be rotated at a comparatively low rate of speed, for example, about sixty revolutions per minute. Moreover the rotary parts are inclosed so that there is no danger of bystanders being injured by them. When the clothes are sufficiently dried the rotating cage is stopped and locked against rotation.

One of the doors 50 is then opened and the racks rolled out onto the tracks 72 in front of the drier.

What I claim is:

1. A clothes drier comprising a circular casing, a rotary cage within said casing, a plurality of longitudinally extending removable clothes racks supported in parallel relation in said cage, and means for passing dry air up through said casing.
2. A clothes drier comprising a circular casing, a rotary cage within said casing, a plurality of removable clothes racks supported in said cage, steam coils below the rotary cage and a stack leading from the top of the casing.
3. A clothes drier comprising a rotary cage having an upper and a lower frame, a plurality of parallel tracks on said upper frame, a plurality of guides on said lower frame, and removable clothes racks movable on said tracks and held laterally by said guides.
4. A clothes drier comprising a casing, a rotary cage within said casing, a plurality of parallel tracks supported at the top of said cage, a corresponding set of tracks outside of said casing but in alinement with said cage tracks when the cage is in one of its positions, and clothes racks adapted to be supported from and movable along said tracks.
5. A clothes drier comprising a casing, a rotary cage within said casing, two sets of parallel tracks supported at the top of said cage, a set of tracks outside of said casing corresponding in number and with one set of said cage tracks, and clothes racks adapted to be supported from and movable along said tracks.
6. A clothes drier, comprising a casing, a rotary cylindrical cage suspended within said casing comprising an upper and a lower frame, tracks depending from the under side of said upper frame, guides on said lower frame, and heating coils mounted within said casing below said lower frame.
7. A clothes rack for a drier, comprising a pair of oppositely inclined end plates, bars to which said end plates are affixed, and a clothes line laced across said rack between the end plates.
8. A clothes rack for a drier, comprising an upper and a lower longitudinally extending bar, a plurality of sets of rollers mounted on said upper bar, a pair of sheet metal end plates oppositely inclined with respect to the longitudinal axis of the rack, and a clothes line laced across said rack between the end plates.
9. A clothes drier comprising a casing, a rotary cylindrical cage suspended within said casing comprising an upper and a lower circular frame, a pair of oppositely disposed arcuate sheets of wire netting extending be-

tween said frames and forming a portion of the periphery of the cage, and a plurality of removable clothes racks suspended from the upper frame, said racks having ends inclined to conform substantially with the peripheries of said frames.

10. A clothes drier comprising a rotary frame, a track thereon, a removable clothes rack adapted to be supported on said track,

and a locking device arranged to hold the frame from rotation when in one of its positions, and to hold the clothes rack on the track, when it is in another position.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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