May 26, 1925. 1,539,779

C. F. SELPH

DRIER AND DEODORIZER

Filed Aug. 22, 1924

Fig. 1.

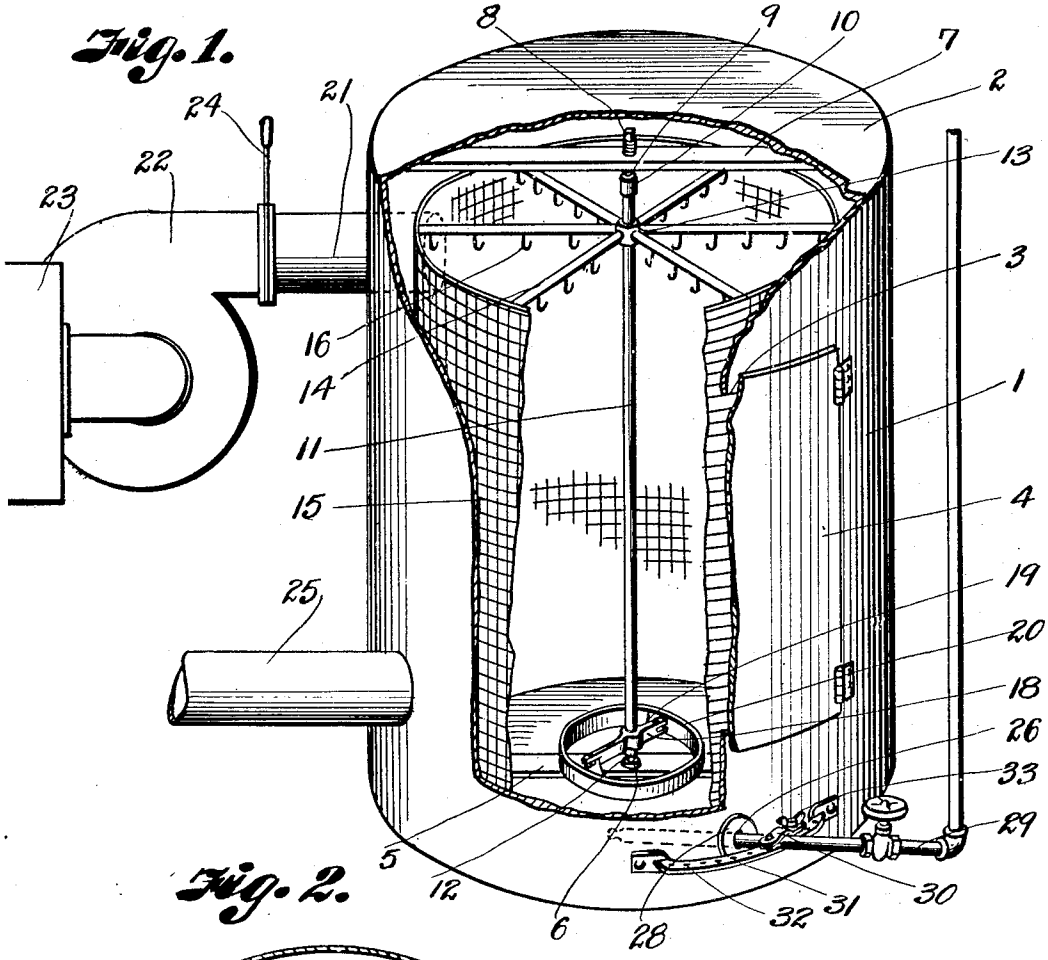


Fig. 2.

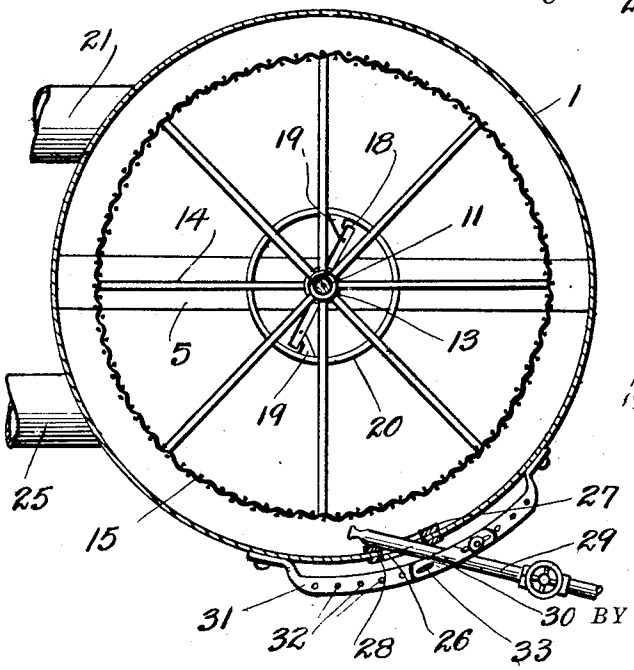
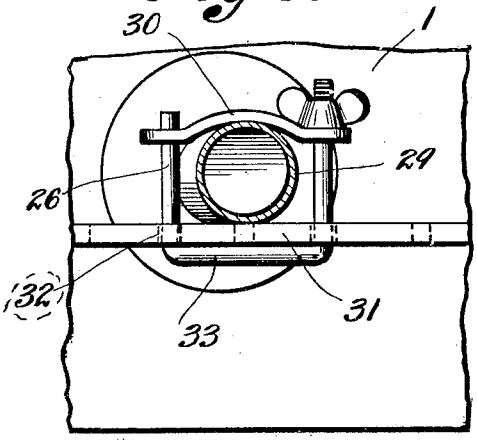


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DRIER AND DEODORIZER.

Application filed August 22, 1924. Serial No. 733,610.

To all whom it may concern:

Be it known that I, CARL FRANCIS SELPH, a citizen of the United States, residing at De Queen, in the county of Sevier and State of Arkansas, have invented certain new and useful Improvements in Driers and Deodorizers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to driers and deodorizers primarily intended for use in cleaning and dyeing plants, but also applicable for use in laundries as a clothes drier and deodorizer; the present application being for an improvement on the device illustrated in my application for patent filed August 22, 1923, Serial No. 658,839, the principal object of the present invention being to supplement the hot air jet with a steam jacket, whereby the deodorizing of the cleaned articles may be better effected, which may serve as a propelling medium for the cage, and which may serve as a fire extinguisher, should the fire occur in the device.

In accomplishing this and other objects of the invention, I provide improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a drier and deodorizer embodying my invention, part of the casing and interior cage being broken away for better illustration.

Fig. 2 is a horizontal section of the device, the top of the housing being removed.

Fig. 3 is an enlarged, detail view of a part of the housing, particularly illustrating the steam jet pipe and its attaching bracket.

Referring more in detail to the drawings: 1 designates a housing preferably constructed of sheet metal, cylindrical in form and having both ends closed, the upper end 2 being preferably removable to provide access to the interior for repairs, the housing having an opening 3 through which garments or articles to be dried and deodorized may be inserted into the device.

The opening 3 has a door 4 whereby it may be closed and the housing made substantially air tight. Extending across the bottom of the housing is a base bar 5 having a point bearing socket 6 at its center, and extending across the upper portion of the housing is a bar 7 through which a screw 8 is projected, the end of the screw having a bearing point 9 seating in a point socket 10 in the upper end of an axial rod 11, the lower end of the rod having a bearing point 12 seated in the socket 6 in the base bar 5.

Fixed to the upper end of the rod 11 is a collar 13, and radiating from the collar are arms 14 carrying a cage 15 of wire mesh or the like which is suspended from the rods to a point adjacent to the bottom of the housing.

The rods 14 are provided with hooks 16 from which garments or articles to be dried and deodorized may be suspended within the cage.

Fixed to the lower end of the rod 11 are governor arms 18 having pivoted heads or shoes 19 at their outer ends, adapted for frictional bearing against a ring 20 attached to the base bar 6 so that the speed of rotation of the cage may be controlled by the ordinary centrifugal governor action of the heads or shoes.

The cage 15 is spaced from the inner surface of the housing to form an annulus and to prevent contact of the cage with the housing that might interfere with rotation of the cage.

Opening tangentially into and through the housing, preferably adjacent the upper end thereof, is a hot air pipe 21 connected with a blower 22 and with a heater 23 and having a control valve 24 whereby hot air is drawn from the heater and forced through the pipe into the interior of the housing, serving as an impelling medium for the cage and as a drying and deodorizing medium for the garments or articles contained therein.

Opening from the housing, preferably near the bottom thereof, is a pipe 25 for the outlet of air that is delivered to the housing through the pipe 21. Also opening through the housing 1, preferably adjacent the bottom thereof, is a port 26 having protecting washers 27 and 28 at the outer and inner sides thereof and projecting tangentially through the port 26 is a steam pipe 29, the port 26 being of sufficiently greater diameter than the pipe 29 to permit the pipe to extend therethrough freely and at an angle which may be necessary to provide the desired

tangential contact of the steam with the rotatable cage.

The pipe 29 is supported and held in adjusted position by a clamp 30 which holds the pipe to a rail 31 that may be rigidly attached to the housing and is provided with spaced apertures 32 for receiving the screws 33 that hold the clamp to the rail.

In using the device, assuming the parts to be constructed and assembled as described, articles to be dried and deodorized are inserted through the door opening 3 which may extend through the cage 15, and suspended from the hooks 16 on the radial rods. The door is then closed and heated air delivered through the pipe 21 to contact the cage and rotate the same because of the tangential impact of the air against the cage, the air not only serving to impel the cage, but also passing therethrough to contact with the garments or other articles suspended in the cage to remove the moisture therefrom, rotation of the cage insuring application of the heated air to all of the garments so that they are uniformly dried and deodorized. The air, after passing over the garments, is exhausted through the pipe 25.

I have found that by using steam in conjunction with the heated air, the contents of the cage can be more completely and quickly deodorized than with the use of hot air alone. I preferably locate the steam intake at the bottom of the housing so that condensation liquid will not drip over the clothes, and also so that should fire occur when gasoline is used in the cleansing operation, the rising steam will serve to extinguish the flames. The steam jet further serves as an impeller for the case, although if desired, the steam jet may be directed radially and the cage rotated entirely by the current of heated air.

What I claim and desire to secure by Letters-Patent is:

1. In a drier and deodorizer, a housing having an air inlet and an air outlet, a reticulated cage rotatable in the housing, means for suspending articles within the cage, and a steam pipe projected through the casing at an angle to the radius of the cage.

2. In a drier and deodorizer, a housing having an air inlet and an air outlet and having a steam pipe opening, a reticulated cage rotatable in the housing, means for suspending articles within the cage, a steam pipe adjustably projected through the steam pipe opening, and means on the exterior of the casing for anchoring the steam pipe in adjusted position.

3. In a drier and deodorizer, a housing having an air inlet and an air outlet, and having a steam pipe opening located near the bottom of the housing, a reticulated cage rotatable in the housing, means for suspending articles within the cage, a steam pipe projected through the steam pipe opening at an angle to the radius of the cage, a rail adjacent the steam pipe opening supporting the steam pipe, and a clamp holding the steam pipe to the rail.

In testimony whereof I affix my signature.

CARL FRANCIS SELPH.