

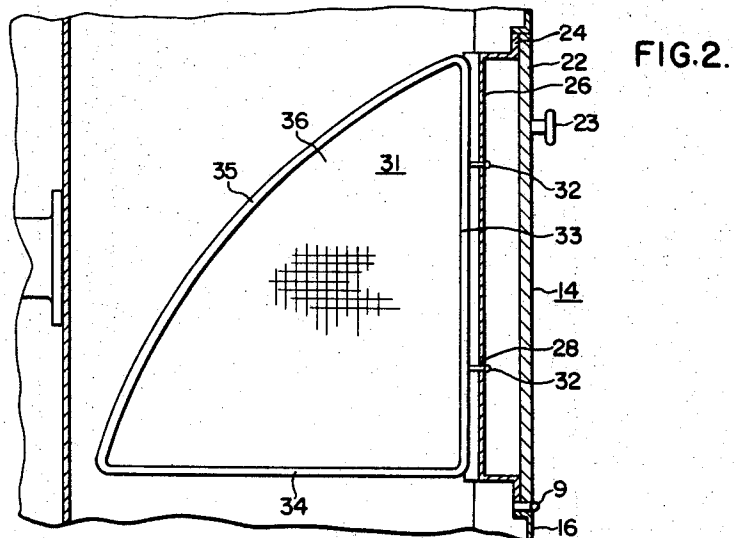
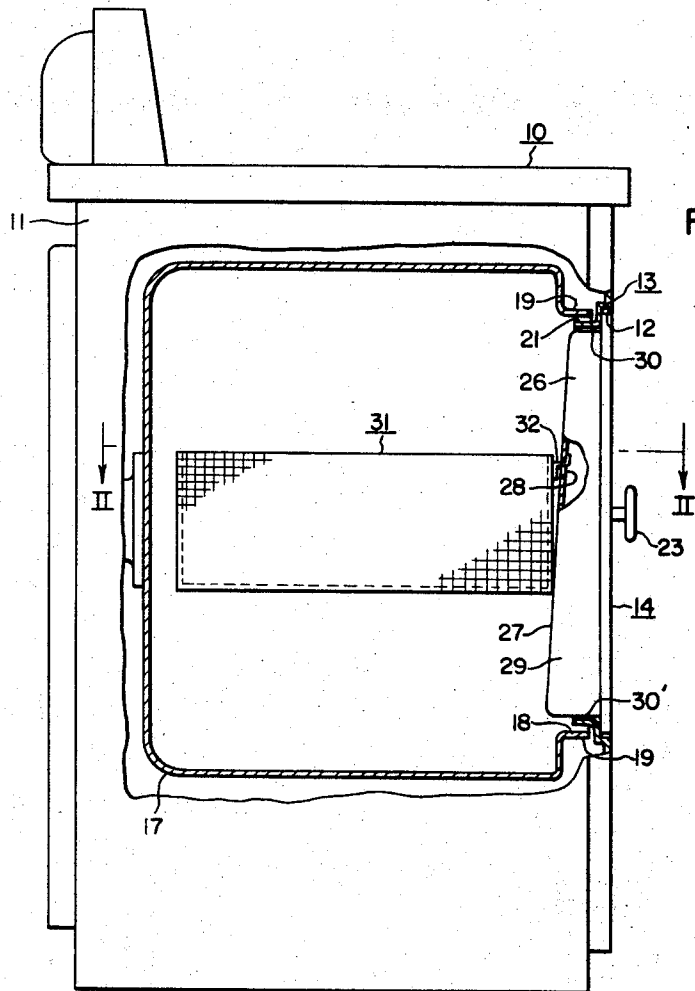
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DELICATE OBJECT CONTAINER MOUNTED ON DRYER DOOR

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ABSTRACT OF THE DISCLOSURE

An accessory for a clothes dryer in the form of a rigid perforate container, which container is removably mounted on the rear panel of the door structure of the dryer and supported thereby within the confines of the rotating drum and which container supports delicate objects for drying thereof.

This invention relates, in general, to clothes dryers and, more particularly, to clothes dryer construction for drying clothes or the like with or without tumbling action.

Prior art dryer constructions of the type herein contemplated, are provided with various means for drying delicate clothes without and less delicate clothes with tumbling, for example, one such construction provides spaced shelves between the front and rear panels of a dryer door structure in addition to the conventional rotating drum. Another prior art construction is provided with an open-end box which holds delicate fabrics and is positioned in the hot-air duct. In addition to having limited capacity, the efficiency of the constructions just described is somewhat minimized because the supporting surfaces of the open-end box and shelves contacting the clothes or other objects to be dried without tumbling are imperforate, consequently, there is a dead-air space between the clothes and the supporting surface.

Drying delicate fabrics without tumbling may be accomplished in the normally rotating drum by providing suitable clutch mechanism or other means for stopping rotation of the drum, however, the cost of such an arrangement is disproportionate to the utility received. Moreover, the reliability of the dryer, overall, would be decreased.

Accordingly, it is the general object of this invention to provide a new and improved clothes dryer.

It is a more particular object of this invention to provide a new and improved clothes dryer adapted to dry clothes with or without tumbling action.

Another object of the invention is to provide an inexpensive, stationary drying receptacle incorporated in a rotating drum type of dryer.

Still another object of the invention is to provide a dryer construction having a detachable receptacle which may be used for drying delicate fabrics or other objects, for example, silverware or the like and which may serve as a carrying device to be loaded remote from the dryer location.

Briefly, the above-cited objects are accomplished by providing a perforate receptacle adapted to be detachably mounted on the inside of the dryer door structure such that the receptacle is suspended within the interior of a rotatable drum.

Further objects and advantages of the invention will become apparent as the following description proceeds and features of novelty which characterize the invention will be pointed out in particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the invention, reference may be had to the accompanying drawings, in which:

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FIGURE 1 is a side elevational view of a dryer construction, partly broken away, representing the invention; and

FIG. 2 is a cross-sectional view taken on the line II—II of FIG. 1.

Referring to the drawings, especially FIG. 1, reference character 10 designates generally a dryer construction which may employ either gas or electricity for heating circulated air. It is to be understood that the heating and air circulating means do not form a part of the invention, therefore, any conventional heater and air circulator may be employed. The dryer 10 comprises a sheet metal body or cabinet 11 having an opening 12 which is framed by an inturned flange means 13. A door structure 14 hingedly mounted on a front wall 16 of the body 11 serves to close the opening 12 and provides access to the interior of a clothes receptacle in the form of a drum 17, rotatably supported within the body 11 by means of a conventional bearing (not shown).

The rotatable drum 17 is provided with an open end 18 which is framed by an annular flange 19. The opening 12 in the front wall 16 confronts the open end 18 and the flange means 13 is provided with an annular horizontally extending rim portion 21 which is of a smaller diameter than the annular flange 19 and is disposed concentrically therewith.

The door structure 14 (see FIG. 2) which is attached to the front wall 16 by hinge means 9 comprises a front panel or wall 22 having a door-knob 23 mounted thereon to facilitate opening of the door structure 14. Attached to the front panel 22 in a conventional manner, for example, by spot welding, is a rear panel 24 having a centrally disposed dish-shaped element 26. The dish-shaped element 26, with the door structure 14 in the closed position (as shown in FIG. 1) extends through the annular rim 21 and into the interior of the open end drum 17.

The dish-shaped element 26 comprises an inclined wall 27 (see FIG. 1) having a pair of apertures 28. The dish-shaped element 26 has an annular wall 29 formed integrally and at right angles with the inclined wall 27. The annular wall 29 is trapezoidal in vertical cross section, having its opposite parallel portions 30 and 30' of unequal length lying in the horizontal plane.

A perforate receptacle 31 (see FIGS. 1 and 2) is provided with a pair of Z-shaped hooks 32 on a front wall 33 thereof. The Z-shaped hooks are insertable in the apertures 28 and serve to detachably mount the receptacle 31 to the door structure 14 for movement therewith. The horizontal parts of the hooks 32 (see FIG. 1) are of suitable length for facilitating mounting of the receptacle in the loaded or unloaded condition. The bottom area of the front wall 33 abuts the inclined wall 27 of the dish-shaped element 26 below the position of apertures 28 thereby cooperating with the hooks 32 to support the receptacle 31 horizontally. A side wall 34 perpendicularly attached to the front wall 33 extends rearwardly into the drum 17 and is substantially parallel to the side walls of the body 11. A wall 35 is attached to the front wall 33 and side wall 34, the walls 33, 34 and 35, in turn, being secured to a bottom wall 36. As shown, the wall 35 is arcuate in shape to provide maximum capacity without interference in opening and closing the door structure.

To dry delicate fabrics or other articles that cannot withstand being rotated in a drum, such articles are placed in the perforate receptacle 31 while it is removed from or while it is supported by the door structure 14. Once the receptacle has been loaded and is in place on the door structure, the door is swung to the closed position whereby the receptacle is suspended within the interior of the rotatable drum 17, then, operation of the dryer 10 is initiated in a conventional manner at which time the heater

is energized and the drum starts to rotate, no complicated clutch mechanism being required to prevent rotation of the drum since it in no way affects the articles in the perforate container.

While there has been shown and described what is at present considered to be the preferred embodiment of the invention, modifications thereto will readily occur to those skilled in the art. It is not desired, therefore, that the invention be limited to the specific arrangements shown and described and it is intended to cover in the appended claims all such modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. In apparatus for drying clothes or the like, a cabinet, an open-end drum rotatably supported in said cabinet, said cabinet having an opening in one wall opposite the open end of said drum, door structure closing said opening in said body and providing access to the interior of said drum, said door structure comprising a front wall and a substantially imperforate rear wall having a dish-shaped portion extending into said drum through its open end, a perforate receptacle, and means mounting said receptacle on the rear wall of said door structure thereby supporting said receptacle for movement with said door structure.

2. In a clothes dryer, a body, an open-end drum rotatably supported in said body, said body having an opening therein, a door structure for closing said opening in said body and providing access to the interior of said drum, said door structure comprising a front wall and a rear wall having a dish-shaped element extending into said drum, a receptacle having perforate vertical and bottom walls, and means for detachably mounting said receptacle on the dish-shaped element of said rear wall.

3. Structure as specified in claim 1, wherein said receptacle comprises mutually perpendicular front and side walls, said front wall being coextensive with the rear wall of said door and the side wall being coextensive with the side walls of said cabinet when said door is in the closed position, and an arcuate wall joining the front and side walls, said door being pivotable from the fully closed position to the full open position with the receptacle mounted thereon.

4. Structure as specified in claim 3, wherein said dish-shaped element of the rear wall of said door is provided with a pair of apertures and said mounting means comprises a pair of Z-shaped hooks insertable in said apertures.

5. Structure as specified in claim 4, wherein said dish-shaped element is substantially trapezoidal in cross section and having upper and lower parallel portions, the

lower portion being somewhat longer than the upper portion whereby the wall joining the upper and lower portions is inclined with the horizontal.

6. In apparatus for drying clothes or the like, a cabinet, an open-end drum rotatably supported in said cabinet, said cabinet having an opening in one wall aligned with the open end of said drum, door structure movable between a first position closing said cabinet opening and a second position providing access to the interior of said drum, and a rigid perforate container removably mounted on said door structure in such a manner that when said door structure is in its said first position said container is positioned within said drum and when said door structure is in its said second position said container is positioned exteriorly of said cabinet for ready loading and unloading thereof.

7. Structure as specified in claim 6, wherein said perforate container comprises a substantially triangular structure having two mutually perpendicular straight walls.

8. Structure as specified in claim 7, wherein the third wall of said triangular container has an arcuate configuration thereby providing a container having optimum capacity without causing physical interference with opening and closing said door structure.

9. In apparatus for drying clothes or the like, a body, a drum having an open end and rotatably supported within said body, said body having an opening therein in axial alignment with the open end of said drum, a door closing said opening and providing access to the interior of said drum through its open end, a receptacle, and means for mounting said receptacle on said door thereby suspending said receptacle within the interior of said drum when said door is in the closed position, said receptacle comprising a substantially triangular structure having perpendicular front and side walls, said front wall being somewhat longer than the side wall and coextensive with the rear wall of said door, said door being pivotable from the fully closed to the fully open position with the receptacle mounted thereon.

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