The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of invention will be indicated in the following claims.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

In the accompanying drawing, in which are shown various illustrative embodiments of this invention,

FIG. 1 is a vertical cross-sectional view illustrating one form of device embodying the invention, with the clothes supporting bars in position of use;

FIG. 2 is a partial view of the structure of FIG. 1 showing the bars moved to vertical position and then moved part of the way down;

FIG. 3 is a cross-sectional view taken on line 3-3 of FIG. 1;

FIG. 4 is a partial perspective view illustrating part of the device shown in FIG. 1;

FIG. 5 is a cross-sectional view taken on line 5-5 of FIG. 3;

FIG. 6 is a bottom view of a device embodying another form of the invention;

FIG. 7 is a cross-sectional view taken on line 7-7 of FIG. 6;

FIG. 7a is a cross-sectional view taken on line 7a-7a of FIG. 7;

FIG. 8 is a view similar to FIG. 7 but illustrating a further modified construction; and

FIG. 9 is a top view of the structure shown in FIG. 8, but comprising a complete round ring, and showing some bars in horizontal and some in vertical positions, and with part of the ring and a bar, broken away and in cross section.

Referring now in detail to the drawing and particularly to FIGS. 1-5 thereof, numeral 10 designates an indoor clothes drier embodying the invention, which may be mounted or installed between a floor 11 and the ceiling 12 of a bathroom or stall shower. The device may also be installed between the top of a bathtub and the ceiling.

Said device 10 comprises a pole 13 which, as will appear hereinafter, may be resiliently clamped between the floor and the ceiling. The pole 13 comprises a lower tube 14. A rubber or plastic cap 15 may be fitted over the lower end of the tube 14 for engagement of the floor 11 or with the top of a bathtub. The tube 14 is formed with an upper end portion 16 reduced in outer diameter by double the thickness of the tubular stock. At the lower end of the reduced portion 16 is an external annular shoulder 17. Fitted onto the upper end of the reduced portion 16 is the lower end of an upper tube 18. The tubes 14 and 18 may be of similar tubular stock and of similar outer diameter. Between the shoulder 17 of the tube 14 and the lower edge 19 of the tube 18, is an annular ring 20 made of substantially rigid plastic material. The ring is clamped between the tubes.

Fixed within the tube 18 in any suitable manner, below the upper end 22 thereof, is a disc 23 having a central upward extending boss or peg 24. Mounted on the disc 23 is a coil compression spring 25 surrounding the boss 24. Extending into the upper end of the tube 18 is a fitting 26 comprising a central stem 27 to the lower end of which is fixed a disc 28 contacting the upper end of the coil compression spring 25. At the upper end of the stem 27 is a disc 29 which may be provided at its upper end with a rubber gasket 30 contacting the underside of the ceiling 12. The spring 25 thus presses upward against the fitting 26 and downwardly against the disc 23 to retain the pole in resiliently clamped vertical position. If desired, the stem 27 may comprise an internally
threaded portion 27a fixed to the disc 29 and receiving an externally threaded portion 27b fixed to the disc 23. With such construction the tension of the spring may be adjusted.

The ring 20 comprises an annular flange 40 of greater diameter than the tube 14 and concentric therewith. Flange 40 has an internal cylindrical surface 41. At the upper end of the cylindrical surface 41 is a horizontal under surface 42. The outer surface 43 of the flange 40 extends to a level higher than the under surface 42. At the upper end of the outer cylindrical surface 43 is an outwardly extending annular under surface 44 from which extends upwardly, an outer cylindrical surface 45. Extending from the upper end of the outer cylindrical surface 45 is an upwardly converging conical surface 46 terminating in a short, tapering, horizontal surface 47.

At the inside of the ring is an annular inner cylindrical portion 48 surrounding the reduced tube portion 16 and snugly slideable thereon.

The ring is formed with a plurality of radial slots 50 extending from the surfaces 45, 46 and 47 to the inner cylindrical portion 48. Said slots 50 each forms a lower horizontal shoulder 52 parallel to and spaced above the annular under surface 44. The portions of the ring between the under surface 42 and a horizontal plane passing through the lower edges 52 of the slots 50 are formed with vertical key shaped slots or openings 55, each having an outer cylindrical enlarged portion ending in an opening 56 associated with each slot 50 and aligned therewith. The smaller portions 57 of the openings 55 are aligned with and are of the same width as the slots 50. The cylindrical openings 56 form pairs of opposed undercut shoulders 60 on opposite sides of each slot 50 and disposed substantially at the level of the bottom 52 of said slots 50.

Although only four radial slots 50 are shown, it will be understood that there may be any suitable number of such radial slots 50, each accompanied by associated openings 55. It will be noted that the openings 55 extend to the under surface 42 of the ring.

Mounted on the ring are a plurality of radiating clothes supporting bars 62. The bars 62 may have opposite parallel edges 63, 64 and curved ends 65 which curve down from edges 63 to edges 64. At the lower ends of the edges 64 are outwardly extending wings 66. The wings may be formed by upsetting the metal whereby the portion beneath the wings 66 is somewhat curved upwardly as shown at 67. The bars 62 are of a thickness that they may slide through the slots 50 and the openings 55. The wings 67, when the bars are in horizontal position, engage the under shoulders 60 at the upper ends of the openings 56. The lower edges 64 in such position rest on the lower ends 52 of the slots 50. The bars are hence supported in horizontal outwardly extending or radiating positions and clothes may be hung on the bars for drying. When the bars are not in use, said bars may be swung upwardly and inwardly to vertical positions. During such movement the wings 67 will move to vertical positions and will be located at the upper ends of the openings 56. When in vertical position they may be engaged in vertical position downwardly so that the wings 67 at the opposite ends of the bars will engage the upper surface 46 of the ring to support said bars in hanging down position.

In FIGS. 6, 7 and 7a there is illustrated a device 10a embodying a modified form of the invention comprising a pole 10b whose upper portion is substantially the same as in FIG. 1. Between the lower and upper pole members 14 and 18 is clamped a hard plastic ring 70. The ring 70 however may fit in a corner of a room formed by walls 71 and 72. The pole may extend between the top of a bathtub and the ceiling of the bathroom, at a corner of said room. The ring may rest on the shoulder 57 and is engaged by the under edge 19 of the upper tube 18. In this case, however, the ring is squared-off and is not a complete circle. It has vertical surfaces 76 and 77 at right angles to one another, contacting or lying close to the walls 71, 72. The ring 70, like the ring 20, has radiating slots to be described hereinafter, for supporting radiating bars 80. However while in FIGS. 1-5 the radiating slots may extend all around the ring, the device 10a has the radiating slots extend only partially around the ring and substantially at only a 90° segment thereof, so that every bars are parallel to the walls 71 and 72.

The ring 70 has a top surface 81 and under surface 82 and a part-cylindrical outer surface 83 joining surfaces 76, 77. It may be formed with a central opening leaving an inner cylindrical surface 84 slidably received on the reduced portion 16 of the lower tube 14. Ring 70 is formed with a plurality of radiating slots 85 extending upwardly from the under surface 82 and to the outer surface 83. The slots 85 have vertical inner edges 86. Said slots extend upwardly to an under surface 87. Extending radially inwardly from each slot 85 to the inner surface 84, is a horizontally extending slot 88. The slot 88 is key shaped in cross-section having an under enlarged circular portion 89 and a lower narrower portion 90. The upper ends of slot 88 is on the level of the under surface 87. Extending upwardly from each slot 85 is a slot portion 91 having a central enlarged circular portion 92 and narrower diametrically opposed wing portions 93.

The bars 80 are similar to the bars 62 except that they have outwardly extending wings 95 on one end. In FIG. 7 the bars 80 are shown in horizontal position for use. The bars 80 extends horizontally through the slot 85. Its edge 96 engages beneath the surface 87. Its inner end extends into the slot 88 with the wings 95 in the upper portion of the slot 91. The radiating slots 95 may abut against the reduced portion 16 of the lower tube 14. The width of the slots 85, the width of the wing portions 93 of the slots 91 and the width of the portion 90 of the slots 88 is just enough to permit sliding movement of the bars 80 therethrough. The height of slots 88 is just enough to permit sliding of the under ends of bars 80 thereinto, without tilting of the bars. The circular portions 89 of the openings 88 extend horizontally radially outwardly to the lower ends of the central circular portions 92 of the slots 91. For this reason, when the bars are engaged into the slots 91, said bars may be pulled radially outwardly until the wings 95 engage thinner portions of the slots 85. Said wings may move outwardly until they are disposed below the portions 92 of the slots 91. Thereafter the bars may be swung downwardly and the wings 95 will engage shoulders 98 located at the lower ends of the bars 92 and the bars will then hang in vertical position. If desired, the bars may then be removed by sliding said bars from vertical hang down position upwardly, and the wings 95 will move upwardly through the portions 92 of the openings 91. Since the outer ends of the bats are not offset and have no wings, the bars may be entirely slid out and removed from the ring.

In FIG. 8 there is shown a device 10b embodying another modified form of the invention. In the device 10b the pole is the same as heretofore described, and the ring 70 is the same as in FIG. 7. However, the ring is turned upside down from the position of FIGS. 6, 7 and 7a, so that the slots 85 extend upwardly and the slots 91 extend downwardly. In addition, a disc 10c is attached to the underside of the ring as by screw 101. The same bars 80 may be used in FIGS. 6, 7 and 7a. In FIG. 8, however, each bar 80 extends through the slots 85 with the wings 95 at the bottom. The reception of the inner ends of the bars in the slots 88 retains the bars in horizontal positions. The bars may be pulled out until wings 95 engage slots 89, and then swing up and allowed to drop so that the bars may move through slots 91 and rest on the disc 10c. In such case the bars are supported in vertical position extending upwardly from the ring, instead of hanging downwardly as in FIG. 7.
FIG. 9 shows a top view of the structure shown in FIG. 8 but showing a complete annular ring instead of a cut-out as shown in device 10z in FIG. 6.

Ring 20 of FIGS. 1-5 as well as ring 70 of FIGS. 6 and 7 may be either a full 360° circle or they may be cut-off as shown in FIG. 6.

It will thus be seen that there is provided an article in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use. Several possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings, is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In combination, a pole, a ring on said pole and having a through hole through which said pole passes, said ring having radiating slots of uniform width, a plurality of clothes supporting bars, each bar being slidable in one of said slots, only in its own plane, said slots preventing said bar from rotating, said bars about the center of said pole, and cooporative means in said ring and bars to support said bars in substantially horizontal positions radiating outwardly from said ring, to support said bars on the ring in positions parallel to said pole and outside of said pole, and to prevent said bars from being moved from the ring said bars are horizontal by pulling the bars radially outwardly, said ring being squared-off outside of said through hole to permit said ring to fit into a corner of a room.

2. The combination of claim 1, said pole comprising a pair of pole tubes, one of said tubes having a portion of reduced diameter at one end telescopically within one end of the other of said pole tubes, and having an annular external shoulder at one end of the portion of reduced diameter, said ring being received on said portion of reduced diameter and disposed between said annular shoulder and said end of said pole tube and held therebetween against vertical movement on said pole.

3. The combination of claim 1, said cooperative means comprising means on said bars and at said slots to support said bars in said horizontal positions, and in said positions parallel to said pole.

4. The combination of claim 2, and means on one of said pole tubes to resiliently clamp said pole between a pair of horizontal spaced surfaces.

5. The combination of claim 1, said cooperative means comprising radiating slots in the ring to receive said bars each slot comprising a narrow slot portion and an enlarged slot portion to provide abutment means between said narrow and enlarged slot portions, and enlarged means at an end of each bar to engage said abutment means, upon moving said bar in said slot in one direction and for permitting movement of said bar in said slot in an opposite direction.

6. In combination, a pole, a ring on said pole, said ring having a through hole and clothes supporting bars on said ring, each bar comprising an elongated flat body and having opposed faces and parallel edges spaced apart a greater distance than said faces, one end of each bar having wings at one edge, extending outwardly of said faces, said ring having opposite faces and the surface, and formed with a plurality of radiating slots, each comprising a first slot portion of a width through which the body of a bar may slide, said first slot portion being radial of the ring and extending to said outer surface of the ring and also to one face of said ring, said first slot portion forming a horizontal edge extending to the outer surface of the ring and disposed between said faces of said ring, each slot being formed with a second slot portion extending from said first slot portion to said other face of said ring and having a wide part through which said wings of the bar may pass and a narrow part through which the body of the bar may pass, but not the wings, and providing shoulders between said first slot portion and the wide part of said second slot portion, the body of each bar passing through said first slot portion and having an edge engaging said horizontal edge of the ring when said bar is in radially extended, horizontal position, said wings engaging said shoulders in one position of said bars, said bars being swingable to vertical position, and each bar being slidingly vertically of the ring with the wings of the bar moving through the wide part of the second slot portion, and the body of the bar slidably moving through the narrow part of said second slot portion, said ring having radial slots extending from said first slot portions to the hole in said ring, and each having a wider portion to receive said wings and a narrower portion to receive said body of said bars.

7. The combination of claim 5, and a face disc attached to said other face of said ring and covering said second slot portions.

8. The combination of claim 5, said ring being squared-off outside of said through hole to permit said ring to fit into a corner of a room.

9. The combination of claim 5, said pole comprising a pair of pole members having telescoping portions, and said ring being clamped between said pole members, and means to resiliently clamp said pole members between a floor and ceiling.

10. The combination of claim 5, said ring being squared-off outside of said through hole to permit said ring to fit into a corner of a room.

11. The combination of claim 5, said pole comprising a pair of pole members having telescoping portions, and said ring being clamped between said pole members.

12. The combination of claim 9, said pole comprising a pair of pole members having telescoping portions, and said ring being clamped between said pole members, and means to resiliently clamp said pole members between a floor and ceiling.

13. In combination, a pole, a ring on said pole, said ring having a through hole and clothes supporting bars on said ring, each bar comprising an elongated flat body and having opposed faces and parallel edges spaced apart a greater distance than said faces, one end of each bar having wings at one edge, extending outwardly of said faces, said ring having opposite faces and the surface, and formed with a plurality of radiating slots, each comprising a first slot portion of a width through which the body of a bar may slide, said first slot portion being radial of the ring and extending to said outer surface of the ring and also to one face of said ring, said first slot portion forming a horizontal edge extending to the outer surface of the ring and disposed between said faces of said ring, each slot being formed with a second slot portion extending from said first slot portion to said other face of said ring and having a wide part through which said wings of the bar may pass and a narrow part.
receive said wings and a narrower portion to receive said body of said bars.

**References Cited**

<table>
<thead>
<tr>
<th>UNITED STATES PATENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>306,319 10/1884 Carpenter ------- 211—171 XR</td>
</tr>
<tr>
<td>115,250 5/1871 Snyder -------- 211—171</td>
</tr>
<tr>
<td>217,515 7/1879 Dame ---------- 211—100</td>
</tr>
<tr>
<td>561,210 6/1896 Downey -------- 211—100 XR</td>
</tr>
<tr>
<td>743,758 11/1903 Schrader ------ 211—171</td>
</tr>
<tr>
<td>744,901 11/1903 Butterworth ---- 211—171</td>
</tr>
</tbody>
</table>

| 8 |
| 2,621,802 12/1952 Storer --------- 211—172 |
| 2,664,210 12/1953 Roger ---------- 211—100 |
| 2,941,669 6/1960 Palay --------- 211—163 XR |
| 3,115,435 12/1963 Abramson ------ 211—172 XR |

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211—100; 248—222