# July 5, 1955



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# July 5, 1955



# United States Patent Office

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# 2,712,354 Patented July 5, 1955

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## SHOWER BATH CURTAIN DEVICE

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Continuation of application Serial No. 133,982, December 20, 1949. This application June 16, 1954, Serial No. 437,221

### 1 Claim. (Cl. 160-330)

My invention relates to a new and improved shower 15bath curtain, and to a new and improved installation whereby a bathtub shower can be converted to have the same advantages as a stall shower with a glass door.

According to my invention, I provide the vertical edges of an ordinary flexible shower curtain with clamping 20 reinforcing means, which extend along the entire vertical edges or along only the upper parts of said vertical edges. I provide the inner and outer faces of said clamping reinforcing means with one or more handles at one or both vertical edges of the curtains. I also provide the inner 25 face of said clamping reinforcing means, at one or both vertical edges of the curtain, with a catch which can releasably engage a holding device which is provided in the wall of the installation.

I can thus simply and easily convert a bathtub shower 30 so that the reinforced and rigid vertical edges of the curtain are latched to the wall of the installation close to said wall, thus preventing or minimizing spattering, with the lower part of the curtain located in the bathtub. I can also replace the glass door which is customarily 35used in stall showers, so that the invention can be applied to stall showers.

Other objects and advantages and features of my invention are disclosed in the annexed description and drawings, which disclose a preferred embodiment thereof.

Fig. 1 is a top plan view of the improved installation, with the wall shown in horizontal section. The bathtub is located in an angular recess of the wall. One vertical and rigidly reinforced edge of the curtain is shown connected to the wall. The other vertical and rigidly reinforced edge of the curtain is shown unconnected to the 45wall. In use, both vertical and rigidly reinforced edges of the curtain are connected to the wall.

Fig. 2 is a section on the line 2-2 of Fig. 1, certain parts being shown in side elevation.

Fig. 3 is similar to Fig. 1, showing the invention applied to a stall shower. This installation may also be used when the bathtub is located in a U-shaped recess of a

Fig. 4 is a front elevation of Fig. 3.

Fig. 5 is a section on the line 5-5 of Fig. 4.

Fig. 6 is an enlarged broken fragmentary elevation which shows a part of the outer face of the curtain, a part of its supporting means, and the outer clamping reinforcing member at a vertical edge of the curtain.

Fig. 7 is a section on the line 7-7 of Fig. 6.

Fig. 8 is an elevation of a part of the inner face of the

curtain. This shows the inner handle and the inner catch. Fig. 9 is a fragmentary detail of Fig. 5, drawn to an enlarged scale.

The curtain 4 is made of the usual flexible and easily bendable material.

Said curtain 4 is provided with an upper reinforced edge-portion 7, a lower reinforced edge-portion 7a, and identical vertical reinforced edge-portions 7b. reinforced edge-portions may be provided by inwardly These 70 bending the material of curtain 4 in one or more plies,

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and fixing said plies to the body of curtain 4 by adhesive, stitching, or in any other manner. The curtain is easily bendable at these reinforced edge-portions 7, 7a, and 7b.

The top edge-portion 7 is provided with the usual holes, which are reinforced by the usual eyes or rings 6. The curtain 4 is slidably suspended from the usual rod 3, whose ends are fixed to the wall 2, by means of the usual loops or rings 5, which extend through the eyes 6.

In this embodiment, the curtain 4 is optionally assem-10 bled with a bathtub 1, and the lower parts of the vertical edges of the curtain 4 are not provided with the clamping reinforcing means, so that the lower ends of said clamping reinforcing means are located slightly above the top of the bathtub 1. The lower and flexible portion of the curtain, which is below the clamping reinforcing means is insertable into the bathtub 1, if this is part of the in-

As best shown in Figs. 4, 5 and 9, a vertical edge-zone of the curtain 4, which includes the associated vertical part of the reinforced edge-portion 7b, is clamped between an inner reinforcing member 8 and an outer reinforcing

clamping member 9, each of which has vertical rigidity. At each vertical edge thereof, the inner reinforcing member 8 has inturned cam flanges 8a, of general cylindrical shape, which extend through the entire height of said inner reinforcing member 8. Said inturned flanges face the outer reinforcing member 9.

The outer reinforcing member 9 has a horizontally or laterally arched body or wall, which is provided at each vertical edge thereof with inwardly bent clamping flanges 9a, which extend through the entire height of said outer reinforcing member 9.

Optionally and preferably, the inner member 8, which has a planar body, is laterally or horizontally rigid, in addition to being vertically rigid, and said flanges 8a are laterally rigid.

The arched body or wall of the outer reinforcing member 9 is horizontally or laterally resilient.

When the reinforcing members 8 and 9 are assembled 40 under transverse pressure with the curtain 4 therebetween, the resilient, horizontally arched wall or body of the outer member 9 yields horizontally and resiliently so that its flanges 9a can be moved past the cam flanges 8a and the intermediate parts of curtain 4 by a snap action. When finally assembled, the free vertical edges of flanges 9a are maintained pressed towards each other by the horizontal resilience of the arched wall or body of the outer reinforcing member 9, thus providing a clamped assembly of the inner and outer reinforcing members 8 and 9 and the intermediate clamped part of the curtain 4. When the final assembly of Fig. 5 is made, the edges of flanges 9a are wholly or partially aligned with the planar body of inner reinforcing member 8. In said final assembly, the edges of flanges 9a are horizontally further away from each other than in the normal unstressed shape of the horizontally arched wall or body of the outer reinforcing member 9. If members 8 and 9 are assembled without the curtain 4, the cam flanges Sa spread the edges of flanges 9a horizontally away from each other, until said edges are sprung beyond the peaks of flanges 8a. The arched body of member 9 preferably remains under horizontal flexure in such final assembly, so that the edges of flanges 9a are urged horizontally towards each other.

Certain of the details of the assembly are shown in Fig. 9. The peak of flange 8a, to which reference has 65been made in the preceding paragraph, is identified by the reference numeral 8b. Said peak 8b is the laterally outermost point on the convex outer portion of flange **8***a*. Said cam flange 8a has a rear cam portion 8c which extends forwardly and laterally outwardly from the body portion of member 8 to said peak portion 8b. Said cam flange  $\mathbf{S}_a$  has a front cam portion  $\mathbf{S}_d$  which extends forwardly and laterally inwardly from the peak portion 3b. It will be apparent that the distance between the peak portions 8b, together with the additional width resulting from the curtain edge portions 7b, produces a total width which is greater than the distance between the 5 inner edges of flanges 9a.

It will be apparent that as member 9 is pressed toward member  $\hat{s}$ , the effect of the two cam portions  $\hat{s}d$ is to spread flanges 9a apart and flex member 9. In the final assembly, the cam portions &d, together with the 10 curtain edge portions 7b, tension the assembly, said curtain edge portions 7b being frictionally clamped between the respective cam portions &d and the member 9, as well as between the cam portions c and flanges a.

Fig. 5 shows a part of the curtain 4 clamped between 15 one of the cam flanges 8a and the inner face of the arched body or wall of outer reinforcing member 9, in addition to the clamping engagement at the edge of the associated flange 9a. The curtain 4 may be thus clamped between the other flange a and the inner face of the 20 arched body or wall of outer reinforcing member 9, and in addition to a clamping engagement at the edge of the other flange 9a.

The clamping and reinforcing members 8 and 9 may be identical at each vertical edge of curtain 4.

Outer and inner handles 14 and 14a are fixed to each reinforcing means 8-9 by fastening members 15.

An angular catch 11 is provided at the inner face of each reinforcing means 8-9. The inner leg of each 30 catch 11 is fixed to the associated inner member 8 by fastening members 12. A recessed holding member 10 is fixed to each part of wall 2 at which an associated vertical edge of the curtain is to be held.

When the curtain 4 is slid to closed position, the re- 35 spective reinforcing means 8-9 are very close to or abut the respective adjacent parts of wall 2 and the respective catches 11 are releasably engaged with the respective holding members 10, thus providing good closure between the wall 2 and the reinforcements 8-9, while the flexible 40 and unreinforced lower part of the curtain 4 is located in the bathtub 1. When the curtain 4 is closed, the part thereof which is located above the bathtub 1 may optionally be taut and smooth.

As shown in Figs. 6 and 7, the members 8 and 9 have 45registering holes 20 near the top thereof. These holes 20 register with the eyelet 6 adjacent the side edge of the curtain, so that ring 5 can pass through both of said holes 20, as well as the eyelet 6. As a result, the relatively large weight of the side edge-zone structure can be suspended 50 directly from rod 3.

I have described a preferred embodiment of my invention, but numerous changes and omissions and additions

Q. and substitutions may be made without departing from its scope.

Thus, in the stall shower embodiment of Figs. 3 and 4, the reinforcing means and the curtain may extend to the floor of the stall shower.

This application is directed to the subject-matter of my abandoned U. S. application, Ser. No. 133,982, filed December 20, 1949.

ī claim:

In combination, a shower curtain having spaced openings along its top edge portion for reception of supporting hooks, at least one of said openings being included in a vertical side edge-zone of said curtain, and a rigidifying structure for said side edge-zone of said curtain, said structure comprising a front reinforcing member and a rear reinforcing member between which said vertical edgezone of said curtain is adapted to be held and clamped, said rear reinforcing member having horizontal and vertical rigidity and comprising a vertically extending, substantially planar body portion whose sides are forwardly inturned to form cam flanges which face said front member, each said cam flange being substantially convex and having a vertically extending peak portion which is positioned laterally beyond the side edge of said body portion, made of metal or other suitable material and they are 25 said cam flange having a rear cam portion which extends forwardly and laterally outwardly from said body portion to said peak portion, said cam flange having a front cam portion which extends forwardly and laterally inwardly from said peak portion, said front member having horizontal resiliency and vertical rigidity and comprising a convex body portion whose sides are turned inwardly to form opposed, vertically extending, substantially planar flanges, the distance between the inner edges of said front member flanges being normally less than the distance between said peaks, said curtain edge-zone being adapted to be placed proximate to the inner face of said front member, said curtain member being adapted to be forced within the inner edges of said front member flanges by a snap action, said front and rear members being adapted to be interengaged by forcing them toward each other, said inner edges of said front member flanges being thereby flexed horizontally outwardly by said cam flange front portions until said front member flanges reach said peaks, said inner edges of said front member flanges being located inwardly of said peaks in the final assembly and clamping respective parts of said curtain against said cam flange rear portions, said curtain being also held clamped between said cam flange front portions and said front member, said front member and said rear member having registering holes for reception of a hook through said holes and also through the curtain opening at said edgezone.

No references cited.