

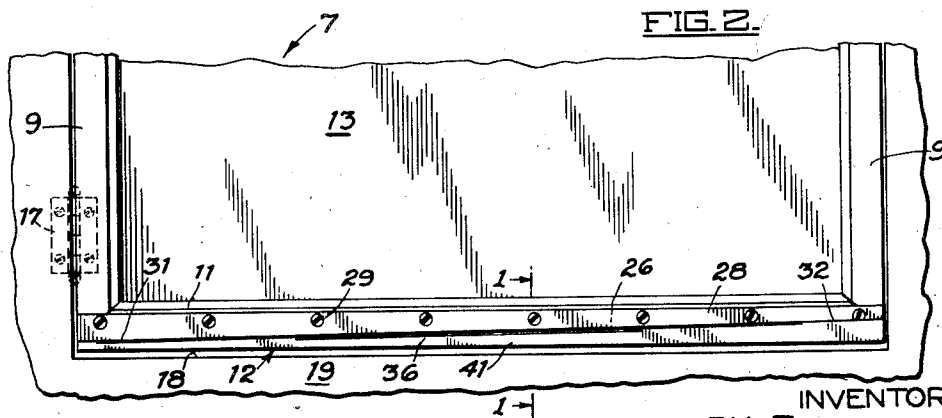
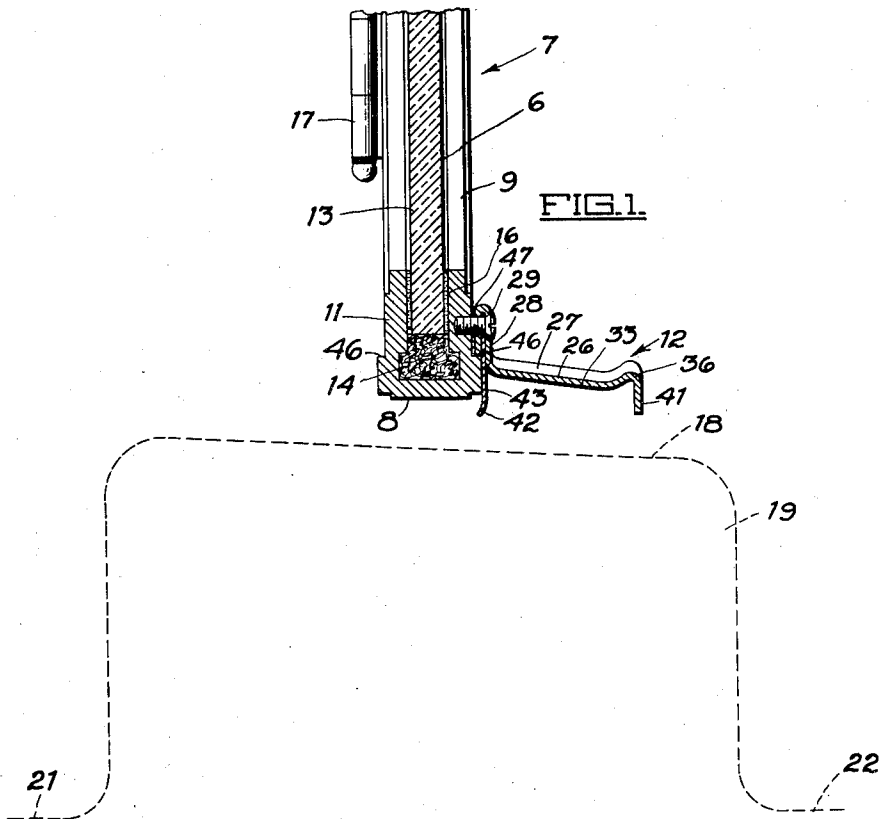
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ANTIDRIP AND ANTISPLASH DEVICE FOR SHOWER BATH DOORS

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ANTIDRIP AND ANTISPLASH DEVICE FOR
SHOWER BATH DOORS

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This invention relates to shower bath or shower stall doors and contemplates the provision of an attachment for doors of this general class adapted to afford protection to the floor of the bathroom outside the shower stall from water splashing under the door when the door is closed and the shower stall is being used, and also from water dripping from the door after the door has been swung to open position extending outwards over the floor of the bathroom.

A more detailed object is to provide a trough or gutter attachment for the lower edge of a door of the general class indicated, whereby water running down the inner surface of the door will be collected before it has had opportunity to drip off the door, and conducted toward that edge of the door with which its hinges are associated, where the water is permitted to drip onto the upper and usually sloping surface of the curb of the shower stall, the result being that this water is caused to return to the shower stall itself instead of being permitted to drip onto the floor of the bathroom outside the shower stall.

A further object is to so construct the antidrip device that the amount of water that it is enabled to conduct toward hinged edge of the door is limited. Consequently, when the door is closed and the shower stall in use, large volumes of water running down the inside surface of the door will be returned directly to the shower stall instead of being conducted to the hinged edge of the door. The advantage of this feature is that if a relatively large volume of water were to be carried to the hinged edge of the door and permitted to flow onto a relatively small area of the upper surface of the shower stall curb, there would be considerable tendency for at least some of the water to flow to the outside of the curb and hence onto the bathroom floor; and inasmuch as whenever the door is opened only a relatively small amount of water will be running down the inner surface of the door, there is no need for conducting any but quite small quantities of water toward the hinged edge of the door.

A further object is to provide as an antisplash feature preferably a plurality of flanges extending downwards from the under surface of the antidrip trough. These flanges are spaced apart so as to deflect a maximum amount of water splashing on the upper surface of the shower stall curb and in this manner afford additional protection for the floor of the bathroom outside the shower stall.

A still further object is to provide these anti-splash flanges with relatively thin lower edges,

thereby resisting the tendency for drops of water to collect thereon and cling thereto, but instead to cause any water impinging against the under surface of the antidrip and antisplash device to drip therefrom immediately, i. e., before the door is opened.

Another object is to provide an attachment for a shower bath door having the above described characteristics, which not only is a very simple and hence relatively inexpensive construction, but one which can be manufactured and attached in operative relation upon the door with the greatest facility and which when so added materially enhances the ornamental appearance of the entire door.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the embodiment of my invention which is illustrated in the drawing accompanying and forming a part of this specification. It is to be understood that I do not limit myself to the showing made by the said drawing and description, as I may adopt variations of the described form within the scope of my invention as set forth in the claims.

Referring to the drawing:

Figure 1 is a vertical sectional view taken through a shower bath door having the antidrip and antisplash device of my invention operatively installed thereupon. The door is illustrated in its closed position and the curb of the shower stall with which it is associated is indicated in broken lines. This figure may be considered a sectional view taken upon the line 1-1 of Figure 2 with the direction of view as indicated.

Figure 2 is a view in elevation of the inner surface of the door showing the antidrip and antisplash device in operative position thereupon. Portions of the figure are broken away to reduce its size.

In terms of broad inclusion, the device of the present invention comprises means providing a gutter or trough which is adapted to be secured to a shower bath door adjacent the lower edge thereof and upon its inner surface and in position to intercept water running down the inner surface of the door. The device provides a channel extending transversely of the door whereby, owing to the sloping nature of the bottom of the channel, water intercepted by the channel will be conducted to a side edge of the door, preferably the hinged side, the result being that when the door is open any water running down the inner surface of the door and which would otherwise drip upon the floor of the bathroom outside the shower

stall, will be deposited upon the upper surface of the curb of the shower stall, which slopes inwards in most installations, thereby causing such water to be returned to the inside of the shower stall.

5 The channel, however, is of limited depth, the result being that when a large volume of water runs down the inner surface of the door, as when the door is closed and the shower stall in use, this large volume of water will flow over the curb which defines the inner edge of the channel and hence return immediately to the shower stall without being conducted to a side edge of the door. The device is further provided with anti-splash flanges, spaced apart and extending downwards from the under surface of the channel.

10 When the door is closed these channels are in such position with respect to the upper surface of the curb of the shower stall that the tendency for water to splash upon the upper surface of the shower stall curb and hence to the exterior of the shower stall is reduced to a minimum. Moreover, these flanges have relatively thin lower edges, which reduces to a minimum the tendency for drops of water to cling thereto.

15 Proceeding now with a more particular description of the device of my invention, I have illustrated that embodiment of my antidrip and anti-splash device which may be considered as preferred, as being operatively installed upon the inner surface 6 of a shower door 7 adjacent the lower edge 8 thereof. These doors are usually constructed of side mouldings 9, a bottom moulding 11 and a top moulding (not shown); and the bottom moulding 11 affords convenient means for attaching the antidrip and anti-splash device, which is indicated in its entirety at 12, in operative position upon the door 7. In the usual shower bath door construction, the mouldings 9 and 11 serve as a support for a panel 13, which usually is of glass.

20 This glass panel 13 should be cushioned from the mouldings 9 and 11, which usually are of metal, such as brass or aluminum, as by a strip of resilient and preferably fibrous matter 14 such as cotton wicking and by grouting 16 of suitable mastic material. Doors of this general character are usually supported, as by any convenient type of hinge 17, in such position that when closed it is disposed at suitable elevation above the upper surface 18 of a curb 19 which extends upwards from the floor 21 of the bathroom and the floor 22 of the shower stall. Preferably, the upper surface or sill 18 of the curb 19 slopes inwards towards the shower stall 22 so that any water deposited thereupon will be returned to the shower stall. The hinge 17 is usually so arranged that the door swings outward to open position, where it extends over the floor 21 of the bathroom instead of extending inwards over the floor 22 of the shower stall.

25 That embodiment of my anti-drip and anti-splash device which has been used for illustration comprises an elongated strip 26 so shaped that its upper surface presents a channel or trough 27 extending transversely with respect to the door 7. This strip 26 is preferably of the same metal as the door mouldings, its principal requirement being, however, that it be possessed of the necessary inherent strength and tendency to resist deterioration by corrosion and the like; and it is preferably suitably plated, as by nickel or chromium, so as to protect it further against deterioration and also to impart to it the desired ornamental appearance to cause it to harmonize satisfactorily with the material of which the remainder of the door 7 is composed. An attaching flange 28 extends upwards from that edge of the trough or channel which is to be secured to the door 7; and this flange 28 is preferably reversely bent upon itself to provide a double thickness of material through which the screws 29 used for attaching the device in operative position can extend. These screws are preferably threaded into the lower moulding 11, as clearly shown upon Figure 1. The flange 28 is preferably formed higher at one end 31 than at the other end 32, the result being that when the device is attached to the door 7 with the upper edge of the flange 28 disposed horizontally, the bottom 33 of the trough will slope downwards from the end 32 to the end 31, as best shown upon Figure 2. In order to accommodate both right and left hand doors, it is therefore desirable to provide two forms of the device, one where the slope is from right to left and the other where the slope is from left to right.

30 Another flange or curb 36 extends upwards from that edge of the bottom 33 of the channel 27 which is opposite the flange 28; and the parts are so arranged that the bottom 33 slopes not only from one edge to the other of the door, but it also slopes downwards and away from the door, i. e., towards the curb 36, as clearly shown upon Figure 1. Moreover, the curb 36 is relatively low and instead of rising abruptly from the bottom 33 of the channel 27, curves gradually upwards and outwards therefrom, the result being that when any large volume of water rushes down the inner surface of the door 7 and into the channel 27 it will flow over the curb 36 and hence directly onto the upper surface 18 of the curb 19 and into the stall 22. However, when any small quantity of water runs down the inner surface of the door 7 and thence into the channel 27, such, for example, as the relatively small amount of water in a form of drops which cling to the door after the shower has been in use and the door swung open, it will find sufficient obstruction to its movement transversely with respect to the channel 27 when it encounters the curb 36, and hence will be caused to run downwards along the bottom 33 of the channel 27 toward the lower end 31; i. e., toward the hinged edge of the door, where it is permitted to drop upon the upper surface of the curb 18, regardless of whether the door is open or closed. The reason for so constructing the antidrip device that relatively large volumes of water such as ordinarily run down the inner surface in a substantially continuous flow when the shower is in use, will not be conducted to a side edge of the door is that this would cause such a large volume of water to be deposited in a relatively small area upon the upper surface of the curb 18 that at least a portion of it would tend to flow upward upon the sloping upper surface 18 and thence down the outer surface of the curb 19 and onto the floor 21 of the bathroom, whereas, if the relatively large volume of water which is apt to run down the inner surface of the door when the shower is being used is distributed throughout the entire length of the curb 19, this tendency for the water to rush up the surface 18 and onto the floor of the bathroom is overcome.

35 The anti-splash feature of the device of my invention is attained through the expedient of a plurality, preferably two, flanges 41 and 42, extending downwards from the under surface of the trough and spaced a material distance from each other, as clearly shown upon Figure 1. The flange 41 can most conveniently be formed by

extending the outer edge of the metal forming the curb 36 far enough for it to project a material distance below the bottom 33 of the trough or channel 27. The flange 42, however, is preferably provided by means of an additional strip 43 of metal, the upper edge of which is clamped between the two opposed portions of the reversely bent flange 28. Both these flanges 41 and 42 extend preferably throughout the entire length of the trough, i. e., substantially throughout the entire width of the door 7. Moreover, the parts are so proportioned and arranged that the lower edges of both flanges 41 and 42 are in substantially horizontal alinement and preferably not more than an eighth or a quarter of an inch higher than the highest point of the curb 19 of the shower stall. The fact that the two flanges 41 and 42 are spaced a material distance from each other reduces to a minimum any tendency for water to splash to the outside of the shower stall by passing under the flange 41, impinging against the upper surface 18 of the flange 19, and splashing upwards and outwards from the point of impingement. Moreover, the lower edges of both flanges 41 and 42 are quite thin, the purpose being to reduce to an absolute minimum any tendency for drops of water to cling thereto by capillary attraction, and in this manner cause such drops of water to drop immediately onto the upper surface of the curb 19 and not to wait until the door has been swung open before they drop from the under surface of the door or from the under surface of the antidrip device. It is preferred that the extreme lower edge of the flange 42 be deflected outward slightly, as is best shown upon Figure 1.

It is preferred that the moulding 11 employed in conjunction with the antidrip and antisplash device be provided with a shoulder 46 against which the extreme edge of the flange 28 may rest, thereby insuring that the proper pitch will be imparted to the bottom 33 of the channel 27. Moreover, I prefer that a suitable grouting of any satisfactory mastic material 47 be interposed between the flange 28 and the moulding 11, to which it is attached.

I claim:

1. An antidrip device for a shower bath door, comprising a trough, means for attaching said trough along one edge thereof to a shower bath door in operative position thereon, the bottom of said trough sloping downwards away from said attaching means, and also sloping with respect to its length, and a curb extending upwards from the bottom of said trough along the other edge thereof, said curb being low and curving gradually upwards from said bottom to pass large volumes of water over the curb but being adapted to deflect small volumes to flow along the bottom of the trough to an end thereof.

2. An antidrip and antisplash device for a shower door, comprising a trough secured to said door adjacent the lower end thereof and adapted to conduct water therealong toward a side edge of the door, and a splash deflector extending downwards from said trough.

3. An antidrip and antisplash device for a

shower door disposed over a sloping sill when closed, comprising a trough secured to said door adjacent the lower end thereof and adapted to conduct water therealong toward a side edge of the door, and a plurality of spaced splash deflectors extending downwards from said trough, both of said deflectors being disposed over said sill when the door is closed.

4. An antidrip and antisplash device for a shower door disposed over a sloping sill when closed, comprising a trough secured to said door adjacent the lower end thereof and adapted to conduct water therealong toward a side edge of the door, and a flange extending downwards from adjacent each lateral edge of said trough, both of said flanges being disposed over said sill when the door is closed, said flanges being spaced from each other to deflect a maximum amount of splash.

5. An antidrip and antisplash device for a shower door disposed over a sloping sill when closed, comprising a trough secured to said door adjacent the lower end thereof and adapted to conduct water therealong toward a side edge of the door, and a flange extending downwards from adjacent each lateral edge of said trough, both of said flanges being disposed over said sill when the door is closed, said flanges being spaced from each other to deflect a maximum amount of splash, and each presenting a thin bottom edge to reduce the tendency for drops of water to cling thereto.

6. An antidrip and antisplash device for a shower bath door, comprising a trough, means for attaching said trough to a shower bath door in operative position thereon, the bottom of said trough sloping downwards away from said attaching means and also sloping with respect to its length, a curb extending upwards from the bottom of said trough along an edge thereof spaced from said door, said curb being low and curving gradually upwards from said bottom to pass large volumes of water over the curb but being adapted to deflect small volumes to flow along the bottom of the trough to an end thereof, and a splash deflector extending downwards from said trough.

7. An antidrip and antisplash device for a shower bath door, comprising a trough, means for attaching said trough to a shower bath door in operative position thereon, the bottom of said trough sloping downwards away from said attaching means and also sloping with respect to its length, a curb extending upwards from the bottom of said trough along an edge thereof spaced from said door, said curb being low and curving gradually upwards from said bottom to pass large volumes of water over the curb but being adapted to deflect small volumes to flow along the bottom of the trough to an end thereof, and a flange extending downwards from adjacent each lateral edge of said trough, said flanges being spaced from each other to deflect a maximum amount of splash and presenting thin bottom edges to reduce the tendency for drops of water to cling thereto.

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