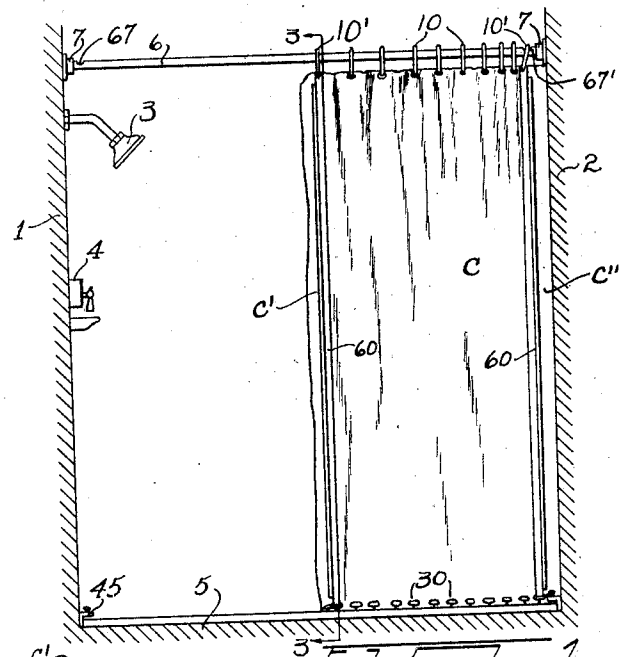
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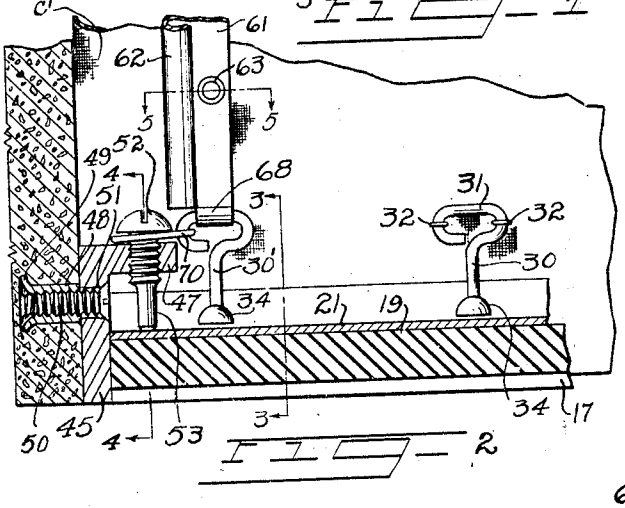
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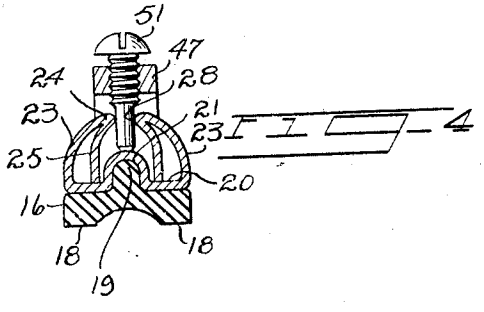
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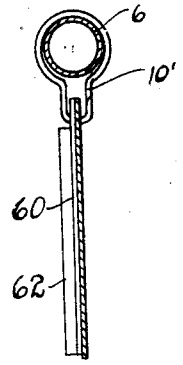
SHOWER BATH PROTECTOR

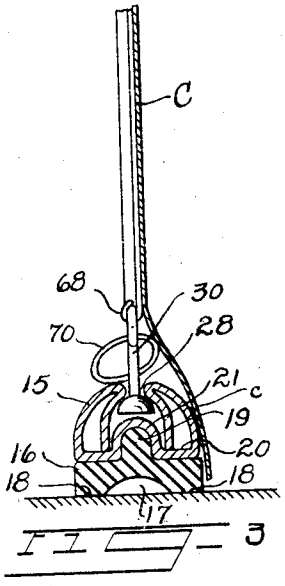
Filed Dec. 31, 1927

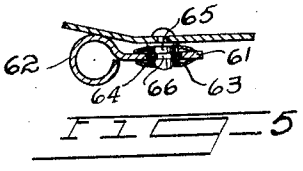












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UNITED STATES PATENT OFFICE.

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SHOWER-BATH PROTECTOR.

Application filed December 31, 1927. Serial No. 243,859.

This invention relates to a shower bath chamber curtain and the primary object is to provide a curtain support which will effectively cooperate with the curtain in preventing the escape of water from the shower chamber proper. A further object is to provide a device including slidable fastening means at two opposite ends of a curtain, in which the various elements are so associated that the curtain may be easily manipulated to open and close it without binding at the fastening means.

In modern hotel and apartment buildings the shower bath is usually made an adjunct of a bathroom proper by placing the shower appliances (spray water feed controls, etc.) in a recess or chamber opening into the bathroom and adapted to be at least partially shut off from such room, when in use, by means of a curtain suspended from a rail. Such an arrangement is only partially effective in preventing water from splashing out of the recess or chamber, because there is usually no provision whatever for securing the curtain at its bottom edge and in consequence, water is splashed out onto the adjoining floor where it occasions obvious annoyance. I believe that one reason no adequate provision has heretofore been made to prevent the objectionable escape of water from the shower is because no fastening means has been found which will permit the curtain to be easily moved to open and closed position, yet which will not considerably obstruct the passageway into and out of the chamber.

Obviously the use of the rail and sliding ring arrangement commonly used at the top of such curtains would be very inconvenient because one would not only have to step over such rail in entering and leaving the chamber, but such construction would not afford sufficient obstruction to water splash because the rail would have to be spaced above the floor to allow free movement of the rings.

There is a further problem to overcome in attaching a curtain at both ends, which arises because the curtain is flexible and limp, wherefore simply shoving on the edge of the curtain intermediate its attached ends would ordinarily cause the fastening members to bind against the rails because such shoving effectively reduces the length of the curtain. With the present arrangement I have provided a bottom attachment for a curtain which attachment permits the curtain to be easily moved, which affords a water tight seal adjacent the floor, and which does not objectionably obstruct the passageway leading into the shower chamber.

The device shown in the drawings consists of the usual upper rail from which the curtain is suspended, as by rings, and a removable bottom rail providing a slideway, which slideway is engaged by a plurality of rigid and slidable securing members attached to the curtain at various points near its bottom edge, and there are stiffening bars provided at the vertical edges of the curtain. A further refinement consists in the provision of brackets for holding the lower rail, which brackets may be easily fastened to the walls of the chamber either at the time the building is constructed or afterward, as for installation in already existing buildings; this refinement affording a quick and easy means for detaching the curtain when it is desired to remove and clean or replace it.

In the drawing, Fig. 1 is a sectional side elevation of a shower bath chamber with the curtain arrangement, etc. forming the subject matter of the present invention; Fig. 2 is a detailed longitudinal sectional view through the bottom rail and showing the means for attachment of the rail to a wall; Fig. 3 is a sectional view taken at right angles to Fig 1 as indicated by the line 3—3 on Fig. 1; Fig. 4 is a detailed cross-sectional view as indicated by the line 4—4 on Fig. 2, and Fig. 5 is a cross sectional detail view as indicated by the line 5—5 on Fig. 2.

Referring in detail to the drawing, 1 and 2 designate side walls of a chamber or recess containing the shower bath appliances, consisting, for example, of a spray nozzle 3, and a mixing valve 4 for controlling the supply and temperature of water to the nozzle. 5 indicates the floor of the recess. Suspended across from one side wall to the other is a rail 6 held in place as by brackets 7. The curtain may be suspended from the rail 6 as by means of the usual clasp rings 10.

Directly below the rail 6 and resting upon

the floor 5, I show a tubular rail 15 which is shown as supported by a cushion strip 16 of rubber or other suitable material, the latter contacting directly with the floor as shown in Figs. 2 and 3. The cushion preferably extends the entire length of the rail 15, and is recessed as at 17 so as to increase the pressure of the edge surfaces 18 on the floor. In its preferred form the rail consists of a bottom portion 20 having a raised rib 21 fitting over a longitudinal rib 19 on the strip 16 and pressing flat against the strip above the surfaces 18. The mutually engaging ribs prevent the rubber strip from slipping sidewise with reference to the rail. Means to be later described maintain vertical pressure on the strip. The rail is adapted to be formed of sheet metal, the bottom portion having contiguous therewith side walls 23, each of which is folded inwardly as at 24 to provide a smooth slot 28 at the top of the rail, the inwardly folded edge portions 25 diverging as shown to provide overhanging surfaces adjacent the slot and being of such length as to rest on the bottom member 20 and serve as vertical reinforcements for the rail. The arrangement in the proportions shown will sustain considerable weight; hence, there is little danger of the sheet metal being bent by a person standing on the rail.

The curtain C as shown extends downwardly beyond the sides of the rail 15 as at C, Fig. 3, in order to deflect shower water away from the rail. Near the bottom edge of the curtain as shown in Figs. 1 and 2 are secured, a series of substantially rigid hook-like members 30, the hooked portions 31 being attached as by means of stitching or small staples 32, one at each side of the hook. At the lower end of each member 30 is a knob 34 lying within the confines of the inwardly folded edges 25 of the rail and retained against outward movement by reason of the relative size of the knobs and the slot 28. The knobs are substantially spherical at the top in order to present smooth surfaces to the rail members 25 and flattened off at the bottom to clear the rib 21 for the sake of vertical compactness. It will be seen that by reason of the rigidity of the hooks 30, and the two-point attachment thereof to the curtain, there will be no tendency for the hooks 30 to become displaced in such manner as to stick and not move freely along the rail.

My preferred means for securing the rail 15 in place consists of a pair of L-shaped brackets 45, each having an overhanging arm 47 positioned above respective ends of the rail. These brackets may be secured to the wall of the chamber or recess in any convenient manner, but preferably by means of threaded nuts or ferrules embedded in the wall. Such a ferrule is indicated at 48, and has jagged lugs 49 also embedded in the wall material to prevent the ferrules from turning. As shown in Fig. 2 a machine screw 50 is shown as extending through an opening 51 in the upright portion of one of the brackets into threaded engagement with such ferrule 48.

The brackets 45 hold the rail in place by reason of a removable screw 52, one for each bracket, in threaded engagement with the overhanging arm of the bracket, and having a reduced end 53 closely fitting the slot 28 and bearing against the rib 21. When both screws are tightened in place, the reduced ends 53 force the rubber strip 16 tightly against the floor, while the lateral engagement between the reduced ends and the slot prevent sidewise movement of the rail.

Whenever it is desired to remove the curtain, as in order to clean or replace it, the procedure is to loosen one of the screws 52 until it is disengaged from the rail, then remove the rail sidewise from beneath the overhanging arm of the bracket, and finally slide the curtain securing members 30 out of one end of the slot 28. In doing this, it is ordinarily necessary to raise but one of the screws 52, since the end clearance between the rail and bracket may be such as to permit one end of the rail to be swung out of engagement with a bracket, thereby permitting the rail to be slid off the other screw end 53, without raising this screw.

Ordinarily, when a curtain is attached at both ends, any shoving on the edge of the curtain will, in effect, shorten it. This will cause the attaching members to bind against the supporting rails. For example, even though the securing means comprises rings such as 10 and stiff members such as 30 the effect of shoving on a limp curtain would be to cause the rings to be forced against the upper rail 6 and the knobs 34 of the members 30 to be forced against the overhanging surfaces of the lower rail. To overcome this difficulty I have provided the vertical edge reinforcing or stiffening members above mentioned. These are preferably associated with both vertical edges of the curtain as shown at 60. The members 60 may comprise sheet metal strips formed as shown in Fig. 5 with a tubular bead 62 at one side adjacent the substantially flat body portion 61.

To secure these reinforcing members to the curtain, I preferably employ devices similar to glove fasteners, the female elements 63 of the fasteners being secured to the flat portions 61 of the members 60 and the male elements 65 to the curtain. The female element of each fastener may comprise the usual sheet metal eyelet (see Fig. 5) having a wire spring 64 incorporated in its construction for engaging a grove 66 on the male fastener element. In order that the reinforcing members 60 may be formed exactly alike, thereby minimizing production cost, while permitting the members to be secured to the curtain

with the tubular portions 63 adjacent the respective edges of the curtain in each case, the eyelets are formed to receive the projections 65 from either side. In other words, the arrangement permits the projections 65 to extend into the female fastener elements from one direction at one edge of the curtain and from the opposite direction at the other edge.

If desired, I may further simplify the construction of the reinforcing members 60 by providing the necessary spring in the male members of the snap fasteners. In such case simple openings in the flat portions 61 of the members 60 would be used in place of the eyelet construction illustrated.

In order to direct the shower water splash inwardly toward the interior of the shower chamber at the vertical edges of the curtain enough margin of curtain extends beyond the members 60 to be against the adjacent wall of the shower recess or chamber when the members 60 are brought to curtain closing position, (see Fig. 2). These margins are indicated at C′ and C″ and are given a tendency to curl inwardly (toward the interior of the chamber) by reason of the tubular portions 62 of the members 60, (see Fig. 5).

It is obviously desirable to provide for maintaining one of the vertical edges of the curtain in closed position at all time. I have shown a simple device to effect this, which will permit either edge to be moved to open the passage into the shower chamber. This is especially desirable since the curtain installation may thus be the same for every shower chamber of a given size without regard to the position of the shower apparatus. With the shower apparatus placed as shown in Fig. 1 with reference to the chamber, it will be more desirable to open the curtain at its left-hand edge, always leaving the curtain secured at the other vertical edge. If the shower apparatus were located on the opposite wall it would then be better to open the curtain at the right-hand edge leaving the left-hand edge secured. This is because in the majority of instances the user will not take the trouble to fasten the edge of the curtain past which he enters the chamber even though a convenient fastening means is provided, and because that edge should be left secured which, if unsecured, would ordinarily permit the escape of shower water.

With the above in view, I have provided a simple means associated with the reinforcing member 60 to effect retention of either edge of the curtain. The upper ends of the reinforcing members 60 carry clasp rings 10′ extending through openings in the flat portions of the members 60 as shown in Fig. 3. Near the ends of the upper rail or curtain supporting rod 6 are shown recesses 67 and 67′ which the clasp rings 10′ may engage when the members 60 are adjacent the shower chamber wall; for example, as at the right in Fig. 1. Supported by the lower end of each member 60, as by a curled-over portion 68 of the sheet metal, I have shown a member 30′, substantially like the hook members 30. The primary function of the members 30′ is to provide a sliding engagement between the reinforcing members 60 and the rail 15. In addition these members 30′ serve to support rings such as 70, see Fig. 2, adapted to overlap and be retained by respective heads of the screws 52 on the rail holding brackets 45. With either of the rings in place over the respective screwhead, the side of the curtain so held cannot be displaced from the chamber wall until the ring is raised; hence, by the arrangement described, the curtain may be securely fastened at one edge to the chamber wall, while the other edge may be temporarily retained, while the shower is occupied, simply by the engagement between the corresponding clasp ring 10′ and the recess 67 or 67′. If the user of the shower wishes more privacy than this will afford, he may, of course, see that both rings 70 are in overlapping relation to the respective screwheads.

I claim:

1. In combination, an upper and lower rail, a curtain, spaced means at the upper and lower edges of the curtain in sliding engagement with respective rails, and rigid means reinforcing one edge of the curtain and arranged to impart movement to the spaced means when manipulated to move the curtain to thereby prevent binding between said means and the rails.

2. In a device of the class described, a pair of rails one above the other and adapted to support a flexible curtain, means connecting the curtain with each rail, said means being slidably guided and retained by the rails, there being a substantially rigid member slidably engaging both said rails and attached to the curtain at or near one of its vertical edges.

3. In combination with a curtain, means including slide-ways for holding the curtain at its top and bottom edges, and a substantially rigid member provided with means engaging the slideways, this member being attached to the curtain at or near one of its vertical edges.

4. In combination, an upper and a lower rail, a curtain movably suspended from the upper rail, a plurality of substantially rigid members each having a two point attachment to the curtain, said members being retained by the lower rail and in sliding relation thereto.

5. In a device of the class described, a pair of substantially parallel rails, one mounted over the other, a plurality of sets of members secured to the curtain, each set slidably engaging a respective rail, the lower rail hav-

ing water sealing means on its lower side, and means to force the first named means against a floor surface, the lower edge of the curtain being extended past the lower set of slidable members to overlie one side of the lower rail as a water shed.

6. Curtain securing means for the bottom of a depending curtain comprising a rail adapted to be attached to a building adjacent the floor thereof, said rail having inwardly overhanging parts, there being members adapted to be spaced along and attached near the lower edge of the curtain and having enlargements slidably interengaging with the overhanging parts of the rail, said curtain having its lower margin depending in overlapping relation to the rail to deflect water away from the rail in a given direction.

7. Curtain securing means for the bottom of a depending curtain, comprising a rail, and means to attach the rail to a building adjacent the floor thereof, including means for forcing the rail downwardly, slidable means on the curtain and cooperating means on the rail to slidably retain the first named means, a compressible strip underlying the rail throughout substantially its entire length, and interengaging means comprising a rib on one of the last two mentioned elements, and a groove in the other to maintain the relationship of said elements.

8. In a device of the class described, means for movably retaining the lower end of a curtain, comprising a tubular member having a bottom wall and side walls, the latter being formed to provide a slot, means on the curtain engaging such slot, together with a cushion strip in dovetailed relation to the tubular member, and means adapted to be secured to a vertical wall adjacent the floor of a building, and having removable means associated therewith arranged to enter the slot and press downwardly upon the bottom wall of the tubular member to force the cushion strip tightly against the floor to form a water seal.

9. A detachable rail adapted to serve as a retainer for the bottom of a depending curtain, said rail comprising a tubular member having an upwardly facing slot, means slidably engaging the slot and attached to the curtain, a bracket for securing the rail in place having a portion overhanging the end of the rail, and removable means carried by said portion and arranged to enter the slot to hold the rail in place.

10. A retainer for a curtain, comprising a tubular member formed to provide a slot and overhanging surfaces inwardly from the slot, a plurality of members attached to the curtain and arranged to slide along such slot and be retained by such overhanging surfaces, and means for holding the rail comprising a bracket, and removable means associated therewith having a portion adapted to enter the slot to prevent sidewise movement of the rail and to press downwardly on the rail to hold the rail against the floor or an adjacent surface.

11. In a device of the class described, a sheet metal rail having a bottom portion and side walls curving toward each other and spaced apart to provide a slot, each wall having a portion adjacent the slot folded inwardly and toward the bottom portion to form a vertical reinforcement for the rail, and means adapted to be secured to a curtain and slidably engaging the rail at such slot.

12. A curtain retaining device comprising a member formed into a tube, open at the top to provide a slot and overhanging surfaces, the side of the member opposite the slot being depressed to form an inward rib and outward recess, and portions of the member being turned inwardly from the slot and engaging the said side adjacent the rib to provide reinforcement for said member, there being a cushion strip arranged to underlie the said member and having a rib engaging the said recess to prevent relative displacement of the strip and said member.

13. In a device of the class described, a substantially horizontally disposed curtain rail and a plurality of members attached to the curtain and slidably engaging the rail, the rail having an upwardly facing recess therein adapted to be engaged by one of the said members as a detent to hold the curtain in a predetermined position.

14. In a device of the class described, a curtain and means including rails and members slidably engaging the rails for movably retaining the curtain at its opposite edges, a reinforcing bar associated with the curtain at or near one of its free edges, and means carried by the bar and adapted to engage a recess in one of the rails for holding the curtain in closed position.

15. In combination with a curtain adapted to close a chamber or recess, means for movably guiding the curtain for movement across the recess including a rail and means associated with the wall of the recess for holding the rail in place, there being a series of members on the curtain to slidably engage the rail, a looped member carried by one of the first named members and adapted to be brought into engagement with a part of said rail holding means to hold the curtain in closed position.

16. In combination with a curtain adapted to close a chamber or recess, means for movably guiding the curtain for movement across the recess including a rail and bracket adapted to be attached to the wall of the recess for holding the rail in place, there being means on the curtain to slidably engage the rail, a reinforcing member associated with the curtain and extending transversely to the rails, and means carried by the rein-

forcing member adapted to engage part of said bracket to hold the curtain in closed position.

17. A closure for a shower bath chamber or the like, comprising a curtain, rails at the top and bottom edge of the curtain respectively for movably supporting the curtain, and a vertical reinforcing member removably attached near one edge of the curtain, the reinforcing member having an enlargement at one side thereof offset from the point of attachment to the curtain, for giving the vertical margin of the curtain a tendency to bend out of the plane of the curtain in a direction away from the reinforcing member, to provide a water deflecting means.

In testimony whereof, I hereunto affix my signature.

WILLIAM L. DEMING.