A rotatable shower expander rod assembly is herein described, for a shower stall or tub enclosure having an access opening for the ingress and egress of the user, and which includes a curved rotatable shower expander rod, two retaining rings, two fasteners or set screws, and two detents, each with a spring and ball bearing, so as to have two fixed, yet movable positions, a shower bar or tension rod, and a shower curtain or liner. And, wherein the function of the rotatable shower expander rod assembly is to reconfigure and repurpose a straight shower rod into a curved shower rod that is rotatable, so that when the rod portion of the assembly is rotated outward to the first or operable position, it comes into contact with a shower curtain and moves it away from the shower area, thereby greatly increasing usable shower space for the comfort of the user. The rotatable shower expander rod assembly also has an additional function. When rotated into the second or nonuse position it serves as a rod from which to hang wet items from, so that they may drip dry, and the excess water runs safely down into the shower or tub basin to drain.
ROTABLE SHOWER EXPANDER ROD ASSEMBLY

[0001] This application claims priority of Provisional Patent Application Ser. No. 60/899,700 filed on Feb. 6, 2007.

REFERENCES CITED
U.S. PATENT DOCUMENTS

FIELD OF THE INVENTION
[0003] The present invention relates to shower compartments, shower stalls, or tub enclosures and more specifically relates to a rotatable shower expander rod assembly to reconfigure and repurpose a traditional straight shower rod, and to improve the state of the art of stationary curved shower rods. The functions of the rotatable shower expander rod assembly, in the first or operable position, are to both expand the shower curtain, in order to keep it away from and coming into contact with or touching the users clean body, and also to increase the usable interior area of shower compartments, shower stalls, or tub enclosures so as to provide more comfort for the user. Once the shower is finished, the device may be rotated so that the shower curtain returns to a straight hanging position and conserves bathroom space outside of the shower compartment, shower stall or tub enclosure. An additional means, not known prior to the art, provides for more practical use for the rotatable shower expander rod assembly when it is in the second or nonuse position, by also serving as a means for the drying of wet items, when they are hung from the rotatable shower expander rod, so that the excess water from them goes down the shower or tub drain. When the rotatable shower expander rod is in the second or nonuse position it is also out of sight, inside the shower stall or tub enclosure, and thus more aesthetically pleasing when not in use, than ordinary curved shower rods.

BACKGROUND OF THE INVENTION
[0004] Since the invention of the bathtub, and more particularly the apparatus used for holding a shower curtain to cover and protect the bathing area from water leakage, little has changed to increase the amount of space needed to shower and thereby improve the comfort level for the user. Various attempts in the past have been made, such as the curved shower rod, that permanently extends the shower curtain outside of the access opening. That device is used primarily in some hotels for the convenience of the guests. However, that invention has limitations for use in the home as it takes away usable space from the bathroom outside of the shower stall or tub enclosure and is less aesthetically pleasing. This severely limits the practical appeal and broader application for that invention. Yet another drawback is that the curved shower rod requires that it be permanently mounted or affixed to the shower stall or tub enclosure walls, which presents installation problems that may damage existing tiles, and often interferes with normal opening of the bathroom door, by bumping into the curved shower rod.

[0005] A standard size tub having a shower stall or tub enclosure, and having a shower curtain to cover the access opening is very limited in size and comfort, as is the case in most homes over twenty or thirty years old. The demand for larger size accommodations for bathing is relatively new in homes today, and therefore most existing homes and even many of the newer construction, still employ a standard size tub or shower area and would benefit greatly from increased area in the shower stall or tub enclosure which this invention can provide. A small shower stall or tub enclosure with a typical shower bar or tension rod and shower curtain severely limits the movement of the users upper torso and impedes their forward and backward movement within the shower area because of the nature of the shower environment which causes the shower curtain to billow in or attach itself to the users body when it is wet. This lack of usable area inside of a shower and the limitations of the tub and shower due to their size greatly detracts from the comfort level of the user.

[0006] Also, with persons having disabilities, or the elderly, the small shower environment is even more limiting in comfort and scope of use while showering. For many, getting into a small shower stall or tub enclosure and then positioning and repositioning oneself inside while showering is very problematic and often extremely difficult for many in this state, as tub seats, hand rails and other equipment are usually necessary in the tub or shower environment to assist the handicapped or the elderly. These items tend to always come into contact with the shower curtain when wet from the shower environment and the shower curtain will either stick to the equipment or to the user.

[0007] However, it can be very impractical to alleviate this situation, either because of the small size of the existing bathroom or that it is cost prohibitive to remodel or enlarge a small tub or shower enclosure in many of these cases. It is the intent of the present invention to particularly address the many disadvantages and drawbacks of a typical small shower stall or tub enclosure and provide relief in the form of a device that increases the usable space inside the shower stall or tub enclosure without the need for expensive remodeling costs. It is also beneficial that the present invention provides an additional use for the rotatable shower expander rod, when it is in the nonuse position, by utilizing the rod portion as a means for the hanging and drying of wet items from, so that the water drains back down into the shower or tub basin.

SUMMARY OF THE INVENTION
[0008] The present invention provides for a rotatable shower expander rod assembly that can be retrofitted to an existing shower rod or tension bar, or provided as a complete assembly in combination with a shower curtain and a shower bar or tension rod, for converting a straight shower bar or tension rod into a curved rotatable shower expander rod. In use, the rotatable shower expander rod assembly rotates on its axis, when attached to a shower bar or tension rod, by utilizing two retaining rings, two set screws or fasteners, and two spring-loaded ball-bearing detents. In the first or operable position, the rotatable shower expander rod contacts and projects the shower curtain or liner outward near the top of the shower curtain or liner with a pushing force, thus moving the shower curtain away from the user in the shower stall or tub enclosure, and outward through the access opening of the shower.
stall or tub enclosure, so as to effect an increase of usable space within the shower stall or tub enclosure, and then selectively maintains that position during the use of the shower. When the rod portion of the assembly is rotated into the second or nonuse position, the shower curtain returns to a normal position, again, hanging straight down within the access opening, so as to conserve space in the bathroom outside of the shower stall or tub enclosure, and to be more aesthetically pleasing when not in use. An additional feature of the invention allows for more practical use of the rod portion of the assembly when rotated and maintained in the second or nonuse position, by serving as a hanger for drying of wet items, and allowing the excess water to drip back into the shower or tub basin to drain.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The descriptions herein makes reference to the accompanying drawings wherein like reference numerals refer to like parts in the several views throughout, and wherein:

[0010] FIG. 1 is a perspective view of a shower stall or tub enclosure showing the rotatable shower expander rod assembly according to the present invention in the first or operable position, moving and maintaining a shower curtain at a set distance outward;

[0011] FIG. 2 is an elevational end view of a shower stall or tub enclosure, having the rotatable shower expander rod assembly, according to the preferred embodiment, in the second or nonuse position, for use as a rod to put hangers on or to hang wet items from. The shower curtain is shown in a straight hanging position;

[0012] FIG. 3 is an elevational end view of a shower stall or tub enclosure, having the preferred embodiment of the rotatable shower expander rod assembly in the first or operable position, moving and maintaining a shower curtain at a set distance outward;

[0013] FIG. 4 is a elevational top view of the preferred embodiment of the rotatable shower expander rod assembly in a shower stall or tub enclosure in the first or operable position;

[0014] FIG. 5 is an elevational front view of the preferred embodiment of the rotatable shower expander rod assembly in a shower stall or tub enclosure in the first or operable position;

[0015] FIG. 6 is a schematic end view of an enlarged right-hand portion of the rotatable shower expander rod in the second or nonuse position with a right-hand retaining ring, FIG. 8, 15, inserted into the end portion of the rod;

[0016] FIG. 7 is a schematic end view of an enlarged right-hand portion of the rotatable shower expander rod, without a retaining ring;

[0017] FIG. 8 is a schematic front and side view of the right-hand retaining ring;

[0018] FIG. 9 is a schematic front and side view of the left-hand retaining ring;

[0019] FIG. 10 is a top and end view of the preferred embodiment of the rotatable shower expander rod showing the right and left hand position for the rod ends;

[0020] FIG. 11 is a top and end view of an alternate embodiment of the rotatable shower expander rod.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0021] A typical shower stall or tub enclosure 35 is rectangular or square in configuration, having three walls surrounding a tub or base pan, and an access opening for the ingress and egress of the user. A shower bar or tension rod 20 extends the width of the access opening near the top and is held in place against the two end walls of the shower stall or tub enclosure 35. The shower bar or tension rod 20, as are commonly well known, are typical of those used in most homes for holding a shower curtain 30 stationary between the access opening of a shower stall or tub enclosure 35 for the purpose of showering or bathing and keeping the water within the tub or shower area. A shower curtain 30 is connected to the shower bar or tension rod 20 by hooks or rings 25 that can slide along the length of the shower bar or tension rod 20 to selectively close and open the access opening.

[0022] The rotatable shower expander rod 5 of the present invention is curved with strength and holes or apertures 5a at both ends. Two retaining rings 10, 15, one left-hand 10 and one right-hand 15, are provided as part of the rotatable shower expander rod assembly 100. The retaining rings 10, 15 are enclosed, one within each end of the rod 5, and having through holes 10d, 15d, so as to provide a means for sliding and attaching the rotatable shower expander rod assembly 100 onto a straight shower bar or tension rod 20. Within each of the two retaining rings 10, 15 are threaded holes 10c, 15c for set screws 12 to be inserted into. Through holes or apertures 5a are provided in the circumference of each round end of the rotatable shower expander rod 5, as a means of access for inserting set screws 12, and to allow clearance for an Allen wrench or screwdriver for turning of the set screws 12 into the threaded holes 10c, 15c on the retaining rings 10, 15 and then tightening the retaining rings 10, 15 onto the straight shower bar or tension rod 20. In this manner, the retaining rings 10, 15 are affixed or stationary, and only the rotatable shower expander rod 5 is rotatable or movable on the retaining rings 10, 15. Additionally, a round lip or edge 10e, 15e, having a larger circumference on one side of each of the two retaining rings 10, 15 both aligns and secures the rotatable shower expander rod 5 in place on the straight shower bar or tension rod 20, and keeps it centered between the sides or ends of the shower stall or tub enclosure 35. The two retaining rings 10, 15 also serve as an axis upon which the rotatable shower expander rod 5 rotates on the smaller circumference and is positioned at fixed set points.

[0023] By means of further description; the two retaining rings 10, 15, are located within each through hole or aperture 5a at each end of the rotatable shower expander rod 5, and are affixed to the straight shower bar or tension rod 20 by means of two set screws 12, one for each of the two retaining rings 10, 15, and which set screws 12, when tightened onto the straight shower bar or tension rod 20, hold the retaining rings 10, 15 stationary and fixedly in place on the straight shower bar or tension rod 20. Each of the two retaining rings 10, 15 has two concave indentations or cavities 10a, 15a on its smaller circumference. The two concave indentations or cavities 10a, 15a combine with detents 13 to hold the rotatable shower expander rod assembly 100 in the first or operable position FIG. 3. Alternately, concave indentations or cavities 10b, 15b, when combined with detents 13, are set a prescribed space apart from the first two indentations or cavities 10a, 15a, and are used to hold the rotatable shower expander rod assembly in the second or nonuse position FIG. 2. Through holes or apertures 10d, 15d in each of the two retaining rings 10, 15, provide a means for sliding and then usably affixing the rotatable shower expander rod assembly 100 onto the shower bar or tension rod 20.
In detailing the description and function of the two detents 13 within the rotatable shower expander rod assembly 100; one detent 13 is inserted into each of the two through threaded holes or apertures 5c, on each round end of the curved rotatable shower expander rod 5. The detents 13, each, contain a spring-loaded ball bearing assembly, as is well known to the art. An exposed portion of the curved surface of the ball-bearings, on the ends of the detents 13, extends inside each of the selected concave indentations or cavities 10a, 15a on the two retaining rings 10, 15 and fills the selected concave indentations or cavities 10a, 15a when the rotatable shower expander rod 5 is rotated into the first or operable position FIG. 3. When the ball bearings rest in the selected concave indentations or cavities 10a, 15a, the springs in each of the detents 13 exert downward pressure on the ball bearings and together they act as a positive stop for the outward movement of the rotatable shower expander rod 5, and also as a means to hold it in place to a set extended distance outward, away from the access opening of the shower stall or tub enclosure 35.

When the rotatable shower expander rod 5 is again rotated, inward, toward the second or nonuse position FIG. 2, the constant tension effect from the springs on the ball bearings is overcome, momentarily, and the springs retract back inside each of the detents 13 as they are compressed. When the rotatable shower expander rod assembly reaches the second or nonuse position FIG. 2, the ball-bearings are tensioned outward by the springs inside the detents 13, forcing the ends of the ball-bearings to contact and fill the corresponding concave indentations or cavities 10b, 15b in the smaller circumference of the two retaining rings 10, 15. In this manner the rotatable shower expander rod assembly 100 is rotated and maintained in the second or nonuse position FIG. 2.

To further clarify the two distinct and separate detent 13 positions and their functions; one of the fixed, set detent 13 stopping points 10a, 15a is for the first or operable position FIG. 3 for the rotatable shower expander rod assembly, and is used to expand and maintain the shower curtain 30 outward, away from the access opening of the shower stall or tub enclosure 35. When the rotatable shower expander rod assembly 100 is manually rotated, the curve of the rotatable shower expander rod 5 comes into contact with the shower curtain 30 and pushes it outward into the bathroom area outside of the shower stall or tub enclosure 35, thus providing a greatly increased amount of usable space inside the shower stall or tub enclosure 35. As the rotatable shower expander rod assembly 100 continues to be manually rotated, the detents 13 engage the concave indentations or cavities 10b, 15b in the retaining rings 10, 15 and together they stop the rotatable shower expander rod assembly 100 from moving further. The rotatable shower expander rod assembly 100 is thus maintained in the first or operable position FIG. 3, keeping the shower curtain 30 at a fixed or set distance away, from touching or billowing in on the users clean body.

When showering is finished, the rotatable shower expander rod assembly 100 is then rotated inward, toward the second or nonuse position FIG. 2, inside the shower stall or tub enclosure 35. The shower curtain 30 returns once again to a straight hanging position in the access opening of the shower stall or tub enclosure 35. As the rotatable shower expander rod assembly 100 continues to be manually rotated, the detents engage the concave indentations or cavities 10b, 15b. The rotatable shower expander rod assembly 100 is thus maintained in the second or nonuse position FIG. 2. In the second or nonuse position FIG. 2 the rotatable shower expander rod assembly 100 serves as a means for hanging nylons, both clothes and other similar items, for the purpose of drying and allowing the water to drip back into the shower stall or tub enclosure 35 base to drain.

This mechanical process, then, allows for selective positioning of the rotatable shower expander rod assembly 100. When used in this manner, the rotatable shower expander rod assembly 100 both provides much needed space inside the shower stall or tub enclosure and conserves much needed space in the bathroom area outside of a shower stall or tub enclosure 35, and is more esthetically pleasing than stationary curved shower rods, and does not bump or interfere with the inward motion of the bathroom door.

Although size and materials used in making the rotatable shower expander rod assembly 100 are not relevant to the claims, the preferred embodiment of the present invention would be: 1" inch diameter with a hollow center, and being 36" overall dimension and 12" from the center of the bow to the shower bar or tension rod and made of ABS plastic, anodized aluminum, or stainless steel.

In summary, the rotatable shower expander rod assembly 100 of the present invention creates an increased shower space which is alternately expandable or retractable, and is adaptable so as to fit various size shower stalls or tub enclosures 35 within homes or dwellings. In the first or operable position FIG. 3, the rotatable shower expander rod assembly 100 will effectively increase the usable area inside a shower stall or tub enclosure 35 to a large degree. In the second, or nonuse position, the rotatable shower expander rod assembly 100 serves as a means for hanging of wet items, so that the water may drip safely back into the shower stall or tub enclosure to drain, while the rotatable shower expander rod assembly remains unseen. The second or nonuse position FIG. 2 also conserves bathroom space outside of the shower stall or tub enclosure 35 and is much more aesthetically pleasing than curved stationary shower rods. In addition it does not pose an obstruction to the opening of the bathroom door as does a curved stationary shower rod. The rotatable shower expander rod assembly 100 of the present invention can be retrofitted to any existing shower bar or tension rod 20 and effectively turn it into a curved shower rod. The rotatable shower expander rod assembly 100 can be installed on any existing shower bar that is permanently mounted to the bathroom walls 30 without risk of damage to the existing tiles or the need for expensive installation costs, or, also as in the case of portably mounted tension rods.

Although the invention has been described in the context of what is perceived to be the most practical and preferred embodiment, it should be understood that these embodiments shall not limit other disclosures, but, on the contrary, the invention is intended to include various modifications and other arrangements that are equivalent within the scope and spirit of the appended claims, and which scope thereof is to be accorded the broadest interpretation permitted under the law, so as to encompass all such modifications and equivalent structures. Further, while the retractable shower expander assembly 100 is described with reference to a shower stall or tub enclosure 35 within a home or dwelling, it should be understood that the retractable shower expander assembly 100 of the present invention can also be used in a recreational vehicle, boat, hospital, or any other environment where applicable and beneficial.
What is claimed is:

1. A rotatable shower expander rod assembly for increasing usable shower space in a shower stall or tub enclosure, and for holding a shower curtain at a fixed set distance outward from the access opening in a first or operable position, away from the user, so as to prevent it from billowing into the shower environment, and alternately rotatable or movable into a second position, inward, at a fixed set distance into the shower stall or tub enclosure, for use as a holder or hanger for wet items to drip dry into a shower stall or tub enclosure basin, and to conserve bathroom space outside of a shower stall or tub enclosure, and to be more aesthetically pleasing, and comprising:

- a rotatable shower expander rod, with through openings at both ends; and
- two retaining rings; each retaining ring containing a set screw or fastener and a spring-loaded ball-bearing detent, for incorporation within the through ends of the rotatable shower expander rod, and acting together in unison with the rotatable shower expander rod to make an assembly, so that when fastened onto a straight shower bar or tension rod it has the same effect as that of a stationary curved shower bar or tension rod; and
- a shower curtain, as part of the assembly, located in the access opening and attached to the shower bar or tension rod by rings or hooks, and which opens or closes the access opening for the ingress and egress of the user and prevents water from leaking outside of a shower stall or tub enclosure.

2. The rotatable shower expander rod assembly of claim 1 having two fixed yet movable positions; a first or operable position for engaging and moving a shower curtain outward through the access opening, and a second nonuse position when the rod is rotated inside the tub or shower area, for the hanging of wet items from, so that they may drip dry into the shower stall or tub enclosure basin.

3. The rotatable shower expander rod assembly of claim 1, wherein the shower expander rod is curved or bowed, with through openings at both ends in which the two retaining rings are seated and which secure and center the rotatable shower expander rod onto the shower bar or tension rod by means of set screws or fasteners.

4. The rotatable shower expander rod assembly of claim 1, further, having two spring-loaded ball-bearing detents, one inserted into each end of the rotatable shower expander rod, and which rod, when usuasly attached to and positioned on a straight shower bar or tension rod and combined with the two retaining rings, forms an assembly and is rotatable on the axis of the two retaining rings, thereby contacting and moving the top portion of the shower curtain outwardly through the access opening, and thus increasing usable space in the shower stall or tub enclosure.

5. The rotatable shower expander assembly of claim 1, wherein two retaining rings provide a means of securing, positioning, maintaining, and rotating the rotatable shower expander rod on the shower bar or tension rod, when incorporated into each of the two through openings of the rotatable shower expander rod ends, so as to make a complete assembly.

6. The rotatable shower expander rod assembly of claim 5, whereby the lips or edges of the two retaining rings center and hold the rotatable shower expander rod onto the straight shower bar or rod, at a set distance between the two end walls of the shower or tub enclosure, and allow the rotatable shower expander rod to rotate on the axis of the two retaining rings while being enclosed between the lips or edges of the two retaining rings.

7. The rotatable shower expander rod assembly of claim 1 comprising a method for securing, positioning, maintaining, and rotating a curved shower expander rod assembly on the axis of a straight shower bar or tension rod so as to increase usable shower area, by contacting and moving a shower curtain outward from the shower or tub area, and alternately inward into the shower or tub area, when in use, for the hanging of wet items and to conserve bathroom space outside of the shower stall or tub area.

8. The rotatable shower expander rod assembly of claim 1 further comprising a means for selectively securing, positioning, maintaining, and rotating the rotatable shower expander rod and a shower curtain at a set distance outward through the access opening, when the rotatable shower expander rod assembly is in the first or operable position, so as to increase usable shower space, and alternately inward a set or fixed distance into the tub or shower area when in the second or nonuse position, for hanging wet items to drip dry in the shower or tub basin and to conserve bathroom space outside of the shower or tub basin, and to be more aesthetically pleasing.

9. The rotatable shower expander rod assembly of claim 8, further, wherein the selective means for positioning and maintaining the shower expander rod assembly in the first or operable position, outward, at a set distance from the access opening of a shower or tub area, consists of two spring-loaded ball-bearing detents, one each affixed into each of the two threaded holes in the ends of the rotatable shower expander rod and engaging matching concave indentations or cavities formed on the outer circumference of each of the two retaining rings, thus forming an outward set point or stop.

10. The rotatable shower expander rod assembly of claim 8, further, comprising a means for selectively positioning and maintaining the rotatable shower expander rod in a second or nonuse position, inward, by means of two spring-loaded ball-bearing detents, one each affixed into each of the two threaded holes in the ends of the rotatable shower expander rod and thereby engaging matching concave indentations or cavities formed on the outer circumference of each of the two retaining rings, thus forming an inward set point or stop, and from which wet items may be hung to drip dry into a shower stall or tub enclosure basin to drain.

11. The rotatable shower expander rod assembly of claim 1, alternately, wherein the shape or configuration of the bow or curve is straight, having two ends that are perpendicular to the straight longer portion of the rod and extend a set or fixed distance from the shower bar or tension rod.

12. The rotatable shower expander rod assembly of claim 1, comprising a method for converting a straight shower bar or tension rod into a multipurpose device, for both increasing usable shower space in the first or rotatable position and for the hanging of wet items to dry from when in the second or nonuse position.

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