

Dec. 2, 1969

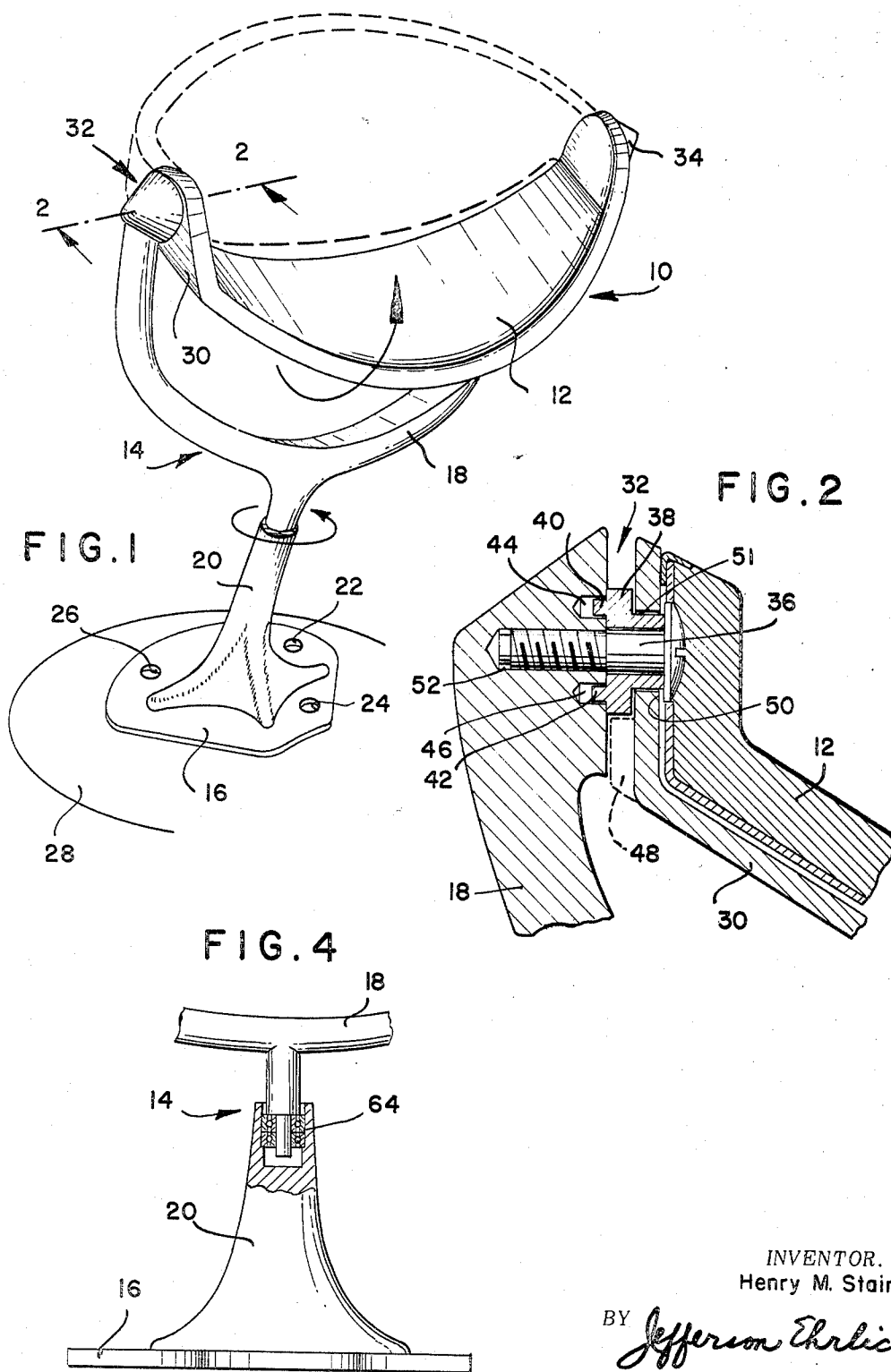
H. M. STAIRS

3,480,973

SHOWER SEAT

Filed Oct. 18, 1967

3 Sheets-Sheet 1



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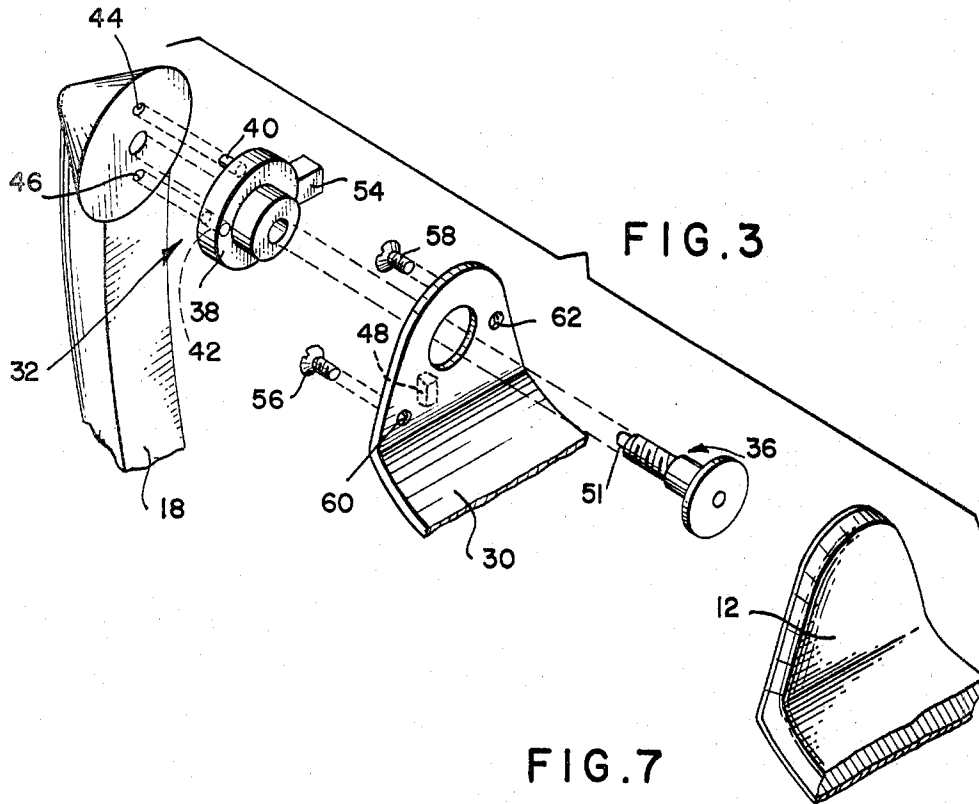


FIG. 7

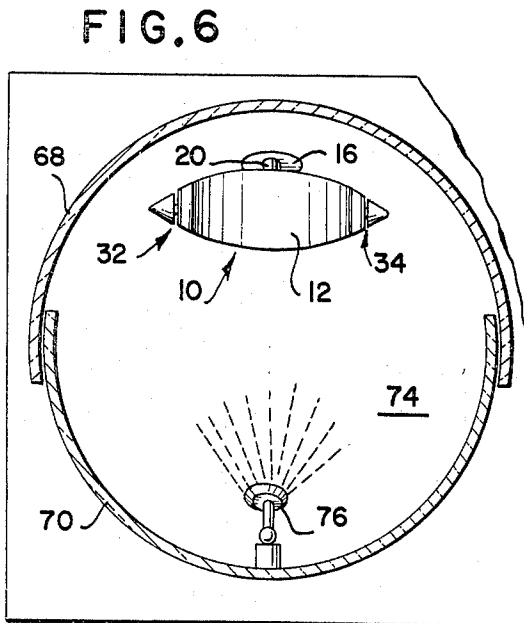
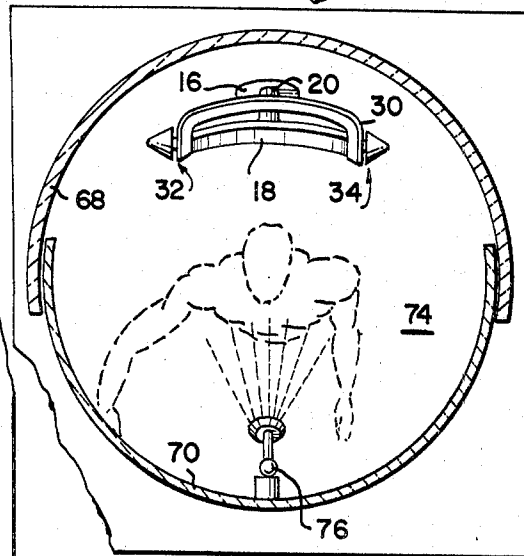


FIG. 6



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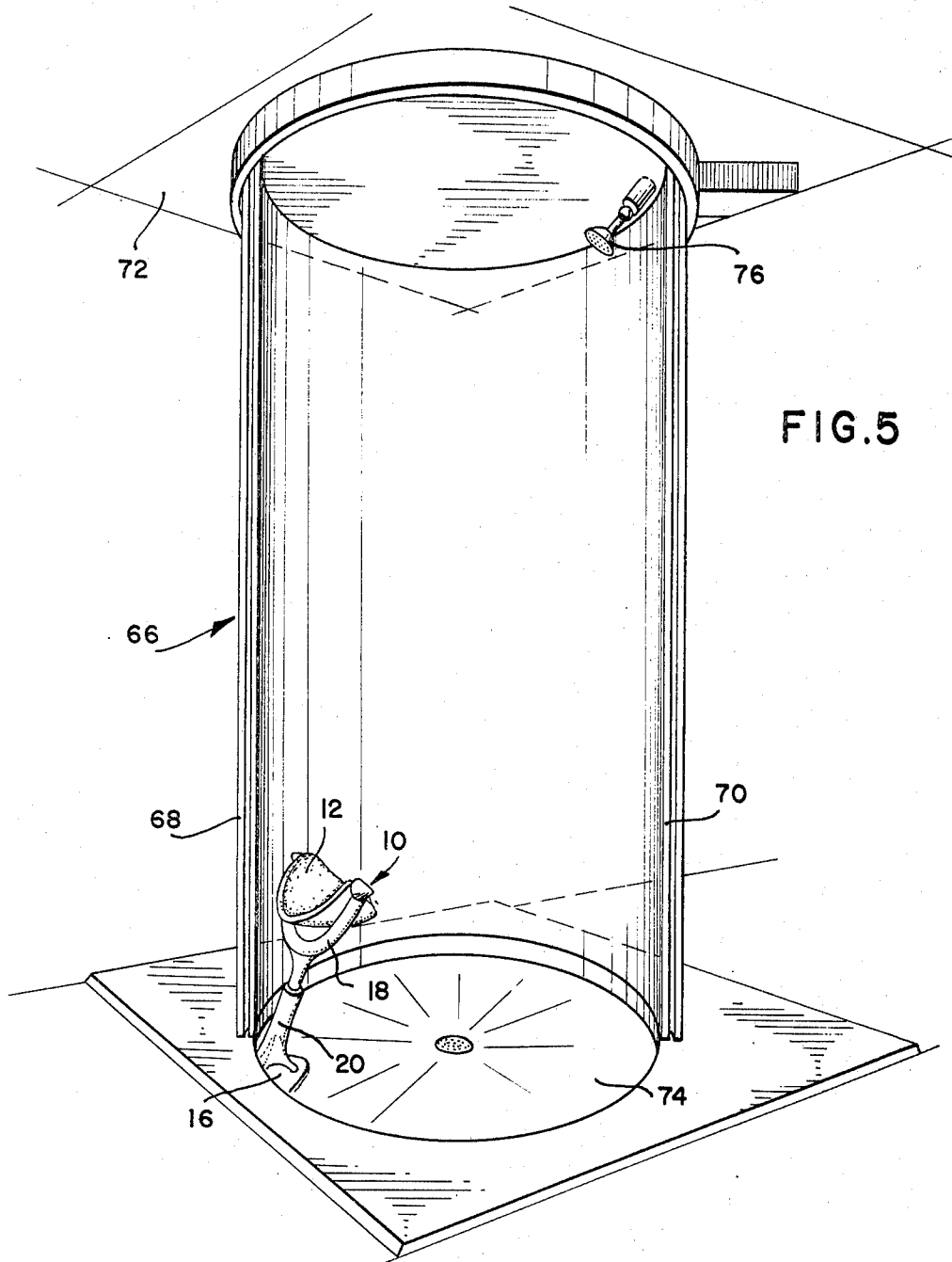


FIG. 5

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3,480,973

## SHOWER SEAT

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U.S. Cl. 4-145

10 Claims

### ABSTRACT OF THE DISCLOSURE

A sitting apparatus for a shower enclosure whereby a seat is operable to provide more useable floor space.

### BACKGROUND OF THE INVENTION

#### Field of the invention

The invention relates generally to a sitting apparatus and, more specifically, to a novel seat which may be installed preferably in a shower or bathtub enclosure.

#### Description of the prior art

Many occasions arise when a bather either requires or desires a seat in a shower or bathtub enclosure. For example, infirm, aged or handicapped individuals often need assistance or support while bathing and this support could be ably supplied if a seat were provided. Furthermore, a seat would be a welcome fixture to those who enjoy showering for extended periods of time. Then, too, all bathers must leave the bathing area in order to dry themselves. However, if a seat were provided, such a function could well be completed more conveniently within the confines of the bathing area with the attendant advantages of not being subjected while wet to the sudden change in temperature, and the threat of slippage, which are experienced upon exiting from the bath or shower area.

One of the major difficulties associated with providing a seat in a shower or bathtub enclosure is the fact that space for such a device is extremely limited. Therefore, if a bather does not desire to use such a device at all times, there must be provision for removing the seat from the bathing area.

To solve this problem, most previously proposed bathing seats are either collapsible or removable, but are also either unnecessarily complex or uncomfortable.

U.S. Patent 1,371,715 describes a bathtub seat which is secured to the bathtub by means of two hooks. While this seat is both collapsible and removable, it must necessarily be positioned in specific locations on the tub, that is, on a side wall, and is thus not satisfactory if a shower is preferred. In addition, this seat is generally useless in a shower enclosure which does not have a bathtub.

U.S. Patent 1,416,270 discloses a foldaway bathing seat secured to the underside of a wall member which covers a base receptacle when the bathing area is not being used. When in use, the wall member is raised and secured to an overhead fixture, thereby exposing the seat. This type of construction requires, therefore, the installation of an entire wall member to impart the desired flexibility to the bathing seat.

U.S. Patent 1,923,482 provides a hinged seat which rests on the side walls of the bathtub when in use and is folded into a wall recess positioned at one end of the tub when not in use. To be effective, such a configuration necessitates the construction of a wall recess having specific dimensions and an exact location, with the result that prohibitive expenses may be incurred.

U.S. Patent 2,142,263 illustrates a bathtub seat which is also affixed to a bathtub by means of two hooks fitted

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over the edge of a side wall. The seat itself is capable of being folded into several positions, but because of the manner in which it is secured to the tub, it is not properly positioned and thus lacks desired flexibility.

U.S. Patent 2,888,683 is directed to a shower seat which is characterized by a hydraulic system enabling it to be moved in a vertical direction or in forward and reverse directions. There is no provision included for removing the seat, so that the shower area cannot comfortably be used in a normal manner, that is, with the bather assuming a standing position.

U.S. Patent 3,193,848 describes a collapsible three piece stool which is secured to the walls of the bath enclosure by means of vacuum cups. The seat has the disadvantage of being able to be positioned only in a corner of the shower enclosure and would be incapable of use in a circular enclosure.

It is therefore obvious from the many prior attempts to provide a satisfactory bathing seat as above-described that there is still a great need for a simple, economical device. It is the primary object of this invention to provide such a device. It is another object of this invention to provide a seat which is capable of being permanently installed in a bathtub or shower enclosure and is so constructed that it requires only a minimum of space when not in use. It is still another object of this invention to provide a seat which is capable of being put into use or withdrawn from use by a simple manipulation of the bather.

### SUMMARY OF THE INVENTION

Broadly, the invention comprises a seat which is pivotally secured at its side edges to a frame, the frame being secured to the base or wall of the enclosure in which the seat is situated. When not in use, the seat may be rotated about its pivot points in an upward direction until a rotation arc of greater than 180° and preferably approximately 270° has been traversed. Means are provided to stop the seat after this position is reached, which is the normal position of a backrest on a chair. The seat may readily be rotated back into a position for sitting by simply reversing the direction of rotation. In this manner, the seat is quickly put into or brought out of its operative sitting position at the discretion of the user. When not in its useful position, the seat is virtually eliminated from the bathing area if it is used in a bathing apparatus.

The invention will be more readily understood by referring to the drawings, wherein:

FIGURE 1 is a perspective view of the sitting apparatus of the invention;

FIGURE 2 is a partial view in cross section taken along lines 2-2 of FIGURE 1 of a pivot joint employed in the sitting apparatus of the invention;

FIGURE 3 is a perspective view of the components employed in the pivot joint of FIGURE 2 prior to assembly;

FIGURE 4 is a partial front elevation view, partly in cross section, of the frame of the sitting apparatus illustrated in FIGURE 1;

FIGURE 5 is a perspective view of a shower enclosure employing the sitting apparatus of the invention;

FIGURE 6 is a top view of the bathing area in the shower enclosure of FIGURE 5 with the sitting apparatus in the operative position; and

FIGURE 7 is a similar top view of the shower enclosure of FIGURE 5 with the sitting apparatus rotated out of useful position.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

In FIGURE 1, there is illustrated a sitting apparatus designated generally by the numeral 10 which comprises a seat 12, a frame 14 and a base member 16. The frame

14 is illustrated as having an upper segment 18 and a lower segment 20. The upper segment 18, which is preferably U-shaped, is joined to, and may be made so as to be capable of rotation about (as shown by the arrow) the fixed segment 20 thereby to include a swivel motion in the sitting apparatus. The rotation capability may be employed, if desired, especially if the vertical axis of the upper segment 18 and the vertical axis of the lower segment 20 are perpendicular to the horizontal floor plane. Base member 16 is provided with a plurality of openings 22, 24, 26 through which bolts or other securing devices may be inserted to fix the apparatus to the floor or bathing receptacle 28. The seat 12 is connected to a seat support 30 which is secured to the upper segment 18 at pivot joints 32, 34.

The sitting apparatus 10 is shown in its operative position in FIGURE 1. If the user desires more standing room, the seat 12 and seat support 30 may easily be rotated (in the direction of the arrow) to the position shown by the dotted lines. It is evident that, if a substantial improvement in available space is to be obtained when the seat is rotated out of position, the frame 14 and the base member 16 must be positioned as much as possible out of the useable floor area. For this reason, in the preferred embodiment, the axis of the frame 14 is projected upward at an angle of between 85° and 30° with respect to the plane of the floor area 28 instead of the angle of 90°. Thus, when the seat is in the dotted position shown in FIGURE 1, only a small quantity of the entire sitting apparatus will be projected into the useable floor area as is more clearly illustrated in FIGURE 7.

In FIGURE 2 there is shown a detailed view of the pivot joint 32. As there illustrated, the seat support 30 is rotatably secured to the upper frame segment 18 by means of mounting bolt 36. The bearing 38 is properly positioned and secured to the frame segment 18 by means of studs 40, 42 which fit into locator holes 44, 46 respectively. A boss 48 is rigidly affixed to the seat support 30 and is used to engage a protrusion (see 54 in FIGURE 3) to definitely stop the motion of the seat 12 as it is being rotated into the inoperative position. Clearances 50 and 51 are provided between the seat support 30 and bearing 38 to permit freedom of rotation of the seat sub-assembly 10 within minimum frictional restriction.

In FIGURE 3, the various component parts of joint 32 are shown perspective, in exploded view, just prior to assembly. Protrusion 54 is an integral part of bearing 38 and is properly located by means of the studs 40 and 42. Seat mounting screws 56, 58 are aligned with openings 60, 62 in the seat support 30 and are used to secure the seat 12 to the seat support 30.

FIGURE 4 shows a modified mechanism which may be employed to impart swivel motion to the sitting apparatus. A bearing 64, or an equivalent structure, may be interposed between the upper segment 18 and the lower segment 20 and permits the rotation of one segment with respect to the other. Thus, a bather sitting in the seat may obtain the full benefit of a shower by turning from side to side during the bathing session. Such a mechanism, especially if it is sufficiently spaced from the wall of the enclosure, may facilitate easier entry and exit of the user to and from such enclosure.

FIGURE 5 illustrates the sitting apparatus of the invention installed in a shower enclosure which is designated generally by the numeral 66. The enclosure is depicted as being circular in shape and as having two semicircular co-axial doors 68, 70 with different diameters. The doors may be secured to the ceiling unit 72 by means of tracks or grooves in which they are able to rotate upon the exertion of manual or automatic force. The enclosure 66 further includes a floor area 74 to which the sitting apparatus 10 is secured at its base member 16. A shower spray nozzle 76 is located near the ceiling unit 72 and on the opposite side of the enclosure 66 relative to the position of the apparatus 10.

FIGURE 5 amply demonstrates that the sitting appa-

rus of the invention is an excellent addition to a shower enclosure. No auxiliary equipment, such as a wall recess or floor cover, is required. The apparatus can be permanently or removably installed in any location within the enclosure and at all times occupies a minimal amount of floor space. As illustrated, it is preferably placed at or very near the outer edge of the bathing area and is inclined at an angle with respect to the base member 16 or floor area 74, thus providing an optimum positioning thereof.

FIGURE 6 shows, from a top view, how little space the sitting apparatus of the invention requires even when it is in the operative position, and FIGURE 7 clearly illustrates that when the seat 12 is not being used, the sitting apparatus requires only a minimum of usable floor space. In the FIGURE 6 disclosure, the seat 12 and the related hardware may be moved as close to the enclosure wall 68 as may be desired.

It will be appreciated that a great many modifications and variations may be made in the preferred embodiment above described without departing from the scope of the invention. For example, the shape of the seat may be varied almost to any form or configuration e.g., circular, elliptical, etc., either to render it compatible with the shape of the enclosure in which it is used or to provide greater comfort. In addition, means may be incorporated in the lower segment 20 in the frame 14 to permit the seat to move forward and down so as to enable it to be submerged beneath the water level in a bathtub if desired. Height adjustment may readily be provided for in the sitting apparatus of the invention and it is considered within the skill of the artisan to incorporate the required mechanism. Other locking, securing and support means are also considered to be within the purview of this invention.

While the sitting apparatus of the invention has been primarily described herein in conjunction with a bathtub or, better still a shower enclosure, it is also capable of use in any situation wherein it is important to employ all available floor space. For example, if the device of the invention were installed in a telephone booth, one would be equally comfortable in a sitting or standing position since the seat would virtually fold out of the way when not in use and present no hazard to the user. In addition, it could be used by an elevator operator and when not in use. It would permit several additional people to enter the elevator.

From the foregoing, it will be recognized that the sitting apparatus of the invention is simple, economical, efficient and flexible and, when employed in a bathing apparatus of one sort or another, it requires a minimum of space thereby enhancing its overall value to the bather.

What is claimed is:

1. The combination of a substantially circular wall, a curved seat having a curvature which is substantially equal to that of said wall and which will have a width for receiving the user in his sitting posture, a support for said seat, a floor-mounted post adjacent said circular wall for holding said support, said support having a pair of pivotal members for rotatably supporting said seat, whereby, said seat may be swung into a position such that said seat will be substantially concentric with said wall when said seat is not to be used.

2. The combination of claim 1 in which the post for said support is mounted obliquely spacing said seat away from said circular wall.

3. The combination of claim 2, including retaining means to hold the seat in its non-sitting position when it has been swung so as to be concentric with the wall.

4. The combination of claim 3 in which the wall is a circular enclosure for housing said seat.

5. In a shower enclosure comprising a ceiling unit, a floor area and a circular wall therebetween, a shower spray nozzle positioned near said ceiling unit and a sitting apparatus within said enclosure, said sitting apparatus including a frame and a curved seat pivotally secured thereto, the improvement which comprises said frame

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having a post secured to said floor area adjacent said circular wall, said post being inclined away from said wall at an angle other than 90° with said floor area, and pivoting means for rotating said seat upward from said frame in a circular arc to a stationary position concentric with said circular wall more than 180° from its original position, whereby said seat is able to be rotated into or out of position of use and whereby the useable floor area in said enclosure is increased when said seat is rotated to said stationary position.

6. The combination of claim 5 wherein the axis of said frame forms an angle of between 30° and 85° with the floor of the enclosure.

7. The combination of claim 6 wherein means for supporting said seat in said stationary position are provided only on the sitting apparatus.

8. The combination of claim 7 wherein said circular wall includes two circular concentric doors of different diameters.

9. The combination of claim 5 wherein means for imparting a swivel motion to said sitting apparatus are provided therein.

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10. The combination of claim 5 wherein said frame is generally U-shaped and said seat depends therefrom.

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