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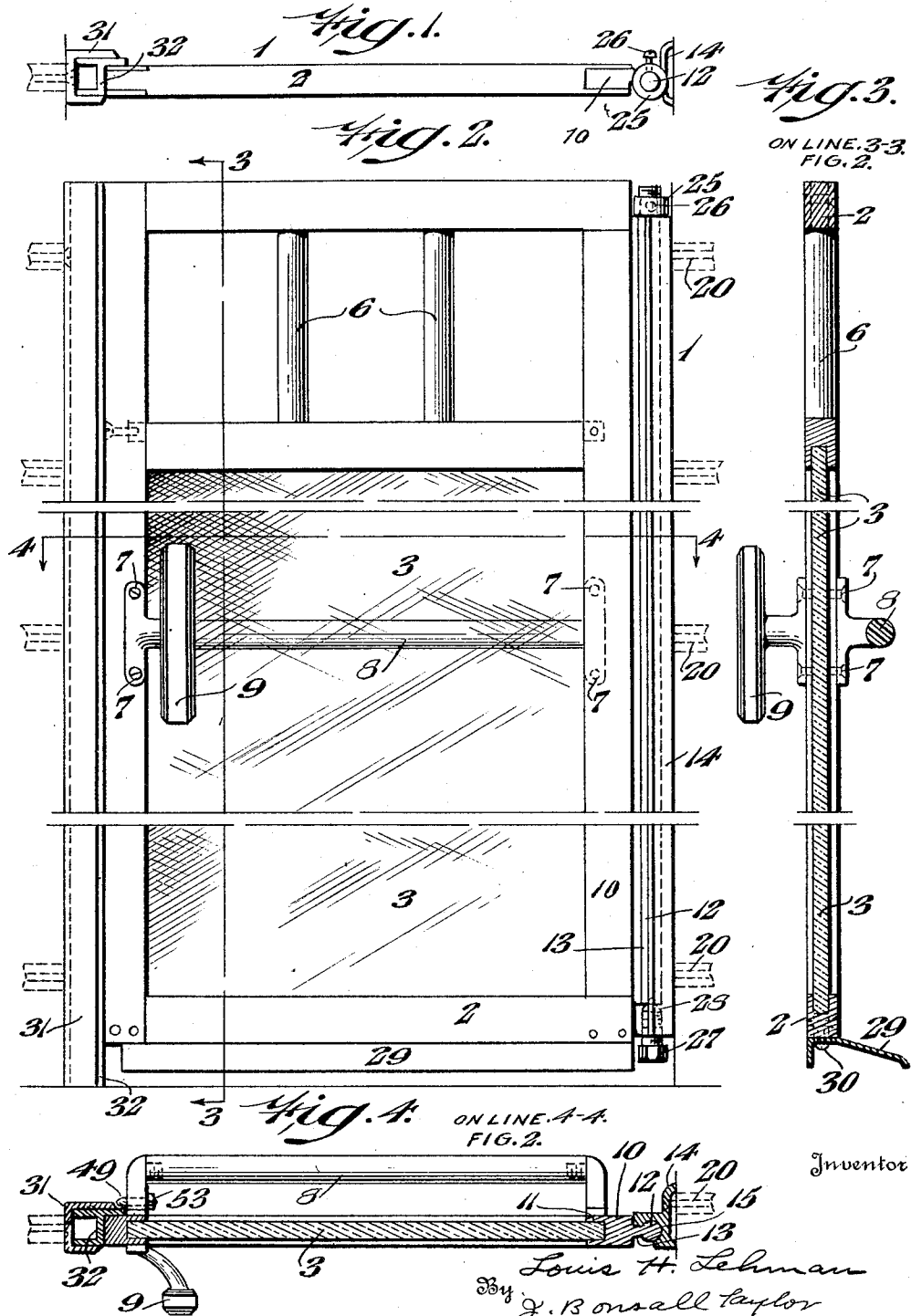
L. H. LEHMAN.

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SHOWER STALL DOOR

Filed April 29, 1925

3 Sheets-Sheet 1



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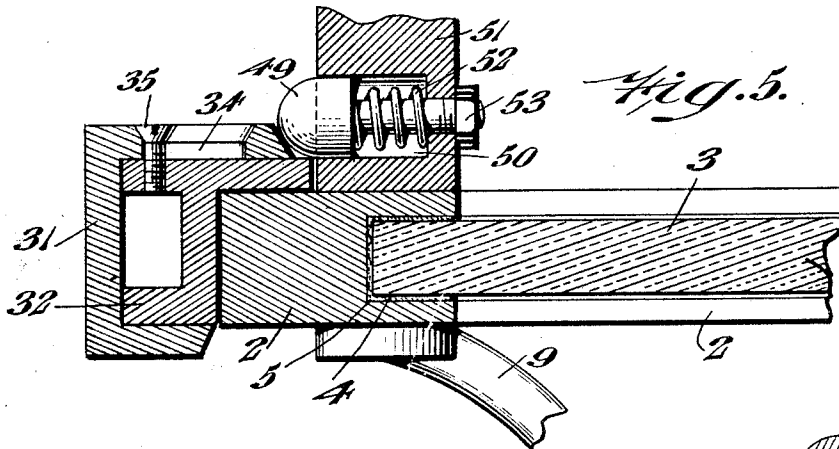
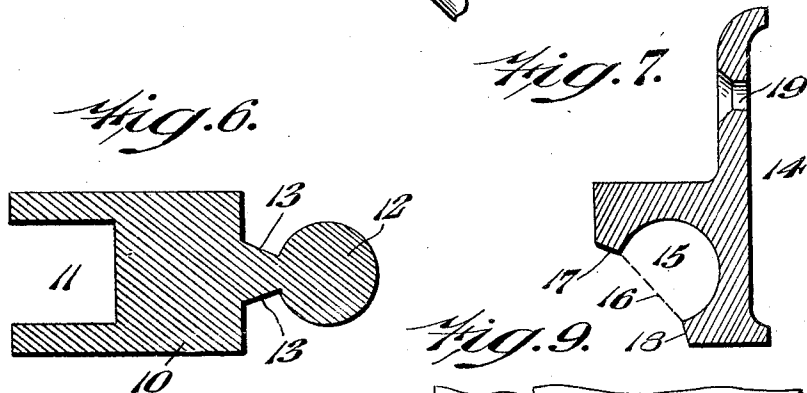
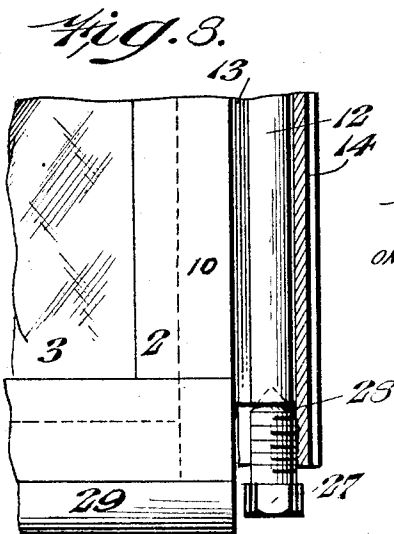
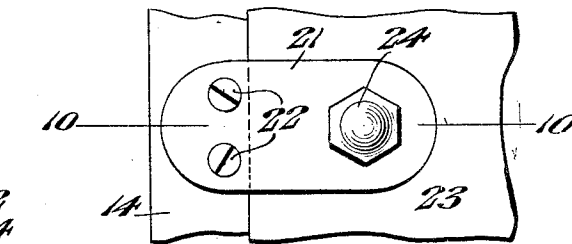
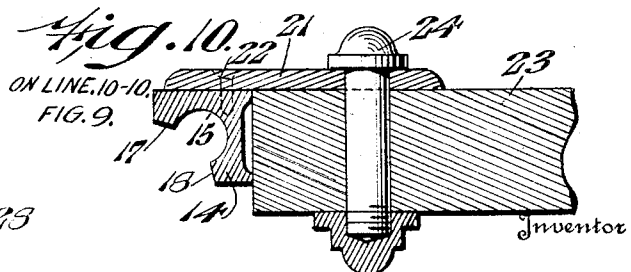
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SHOWER STALL DOOR

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3 Sheets-Sheet 2



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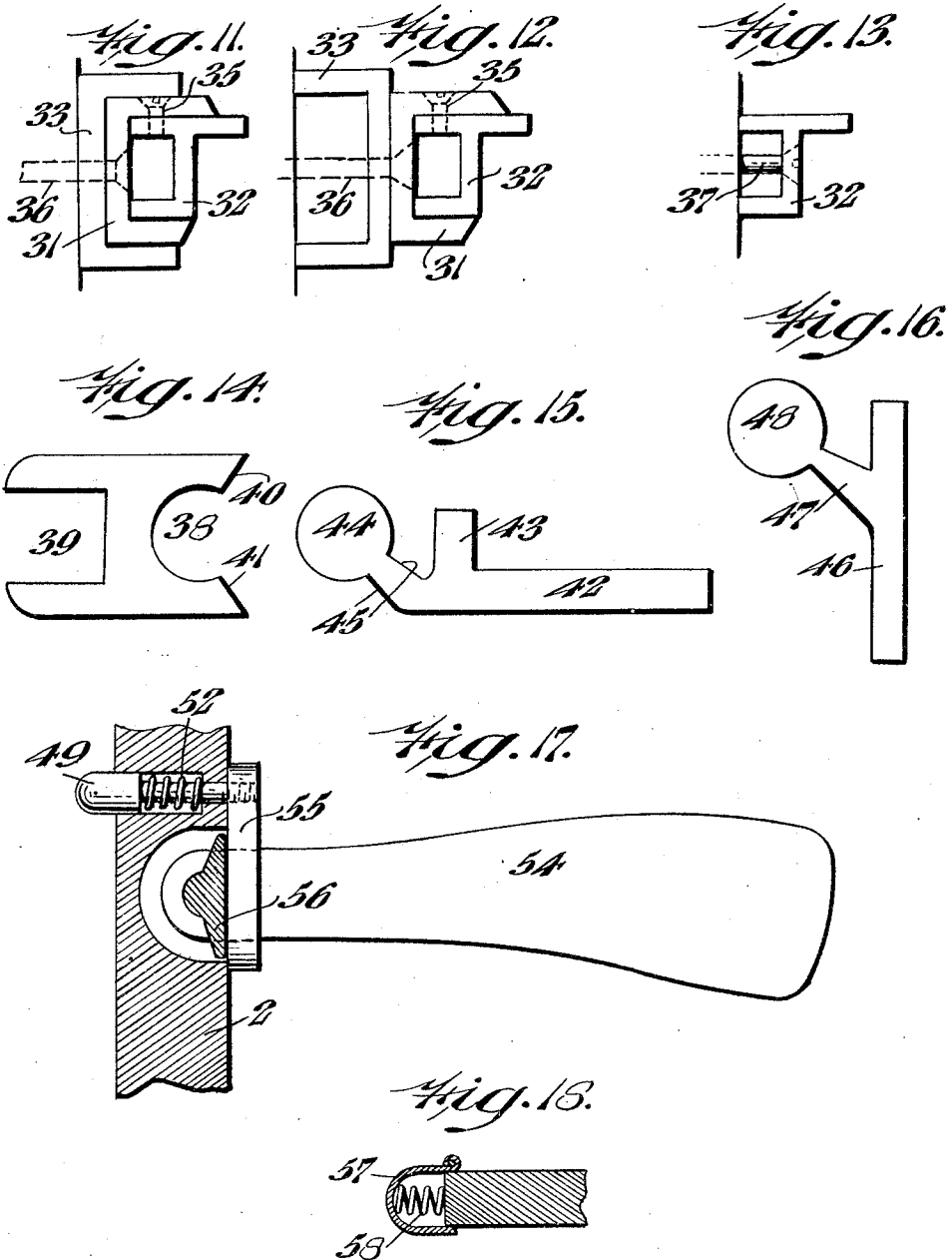
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SHOWER STALL DOOR

Filed April 29, 1925

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

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SHOWER-STALL DOOR.

Application filed April 29, 1925. Serial No. 26,677.

The object of this invention is to devise a novel construction of a shower stall door which can be economically manufactured, which can be installed by unskilled labor, and which can be arranged to be opened either from the right or from the left.

With the above and other objects in view as will hereinafter appear, my invention consists of a novel shower stall door which is hinged in a novel manner and which is provided with novel means to effect its vertical adjustment.

It further comprehends a novel construction and arrangement of a bottom apron.

It further comprehends a novel bath stall door wherein novel means are provided to support the door, and novel means for varying the width of the opening to which the door is to be applied.

It further comprehends novel locking mechanism.

Other novel features of construction and advantage will hereinafter more clearly appear in the detailed description and the appended claims.

For the purpose of illustrating the invention, I have shown in the accompanying drawing a typical embodiment of it, which, in practice, will give reliable and satisfactory results. It is, however, to be understood that this embodiment is typical only, and that the various instrumentalities of which my invention consists can be variously arranged and organized, and that the invention is not, therefore, limited to the precise arrangement and organization of these instrumentalities as herein set forth.

Figure 1 is a top plan view of a shower stall door embodying my invention, in operating position.

Figure 2 is a front elevation of the door and certain of its adjuncts.

Figure 3 is a section on line 3—3 of Figure 2.

Figure 4 is a section on line 4—4 of Figure 2.

Figure 5 is a transverse section, on an enlarged scale, showing more particularly certain locking and adjusting details.

Figure 6 is a sectional plan view of a male hinge member.

Figure 7 is a sectional plan view of a female hinge member.

Figure 8 is a front elevation, partly in section to show the means at the bottom of

the door to effect the vertical adjustment of the door.

Figure 9 is a face view showing the manner in which a hinge member is secured with respect to the wall.

Figure 10 is a section on line 10—10 of Figure 9.

Figures 11 and 12 illustrate different ways of varying the width of a door opening.

Figure 13 shows a top plan view of a door jamb and its fastening means.

Figure 14 is a top plan view of a female hinge member adapted to be secured to the door.

Figures 15 and 16 are top plan views of other forms of male hinge members embodying the invention.

Figure 17 is a sectional view of the locking mechanism and its manually actuated handle.

Figure 18 is a sectional view of a sealing device and a portion of the door.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings:

My present invention, although not limited to such use, is particularly designed to be employed for the type of shower baths, known in the trade as stalls, wherein a combined entrance and exit opening is provided with a door, preferably of non-corrosive material.

The door opening often varies in width, and it is therefore desirable to have, at one side of the door, an adjustable jamb.

The door opening also often varies in height, and it is therefore desirable to provide means to effect the vertical adjustment of the door.

A jamb may be employed at the hinge receiving portions of the door, but I preferably dispense with the necessity of a jamb and secure one of the hinge members directly to the wall or frame of the door opening.

1 designates a shower bath stall door and its adjuncts embodying my invention. The door has a frame 2, preferably made of nickel silver, or metal plated to render it non-corrosive, and this frame has usually a rectangular contour and carries a sheet of plate glass 3. The glass 3 is received in grooves or channels 4 of the frame, see Figure 5, and is secured therein by a strip of spring or other metal 5, which is U shaped

in cross section. The upper portion of the door may be in the form of an open grid 6. The door has secured to one face by means of fastening devices 7, a laterally extending bar 8 and these fastening devices at one edge of the door also secure to the frame an external handle 9.

The door is provided with a novel hinge construction, and either the male or female portion of the hinge can be carried by the door. In Figures 1, 2 and 3, the male portion of the hinge is connected with the door. 10 designates the male hinge member, which consists of a strip forming the rear vertical member of the frame, and has a slot 11 to receive the glass, and with a rod or rounded hinge portion 12 connected with the body of such member by a neck or stem having opposite walls converging towards the hinge portion as at 13. The rounded portion 12 is in the form of a rod preferably continuous from one end to the other, and it does not necessarily have a true circular contour.

14 designates the female section of the hinge, see more particularly Figures 4 and 7, which has a rounded recess 15 formed by the arc of a circle greater than a semi-circle, so that the chord 16 of the enclosed arc is less than the inside diameter of the rounded portion 12 of the male hinge member. The walls 17 and 18, see Figure 7, preferably converge. The rear wall of the female hinge member is recessed and provided with openings 19 to receive fastening devices 20, such as for example expansion bolts, which clamp in the juxtaposed wall of the stall.

If the female hinge member is to be fastened to a jamb or other support, it can be secured thereto by plates 21, see Figures 9 and 10, secured to the hinge member by screws 22 and to the jamb or wall 23 by suitable fastening devices, such as the bolts and nuts 24.

The male member is longitudinally adjustable in the female member, having a sliding fit therein, and, at the same time, the two members are firmly connected and a water tight seal is formed throughout their length.

In order to maintain the door at its proper adjusted position, a top or a bottom stop or both can be employed. The top stop preferably consists of a nut 25 threaded to the upper end of the rod or rounded portion 12, the stem of which is cut away to provide a clearance, and a screw 26 fixes the nut in the position to which it has been adjusted. The bottom stop may consist of a bolt 27 threaded to the female hinge member and having a cone shaped end 28 engaging the walls of a correspondingly shaped recess in the rod, the neck of which is cut away to provide for the proper clearance, see Figure 8.

It will be seen that a door hinged in this manner can be adjusted longitudinally, or,

in other words, can be moved upwardly or downwardly without dismounting it, which is desirable in cleaning.

29 designates a bottom apron to deflect the water over the edge of the door sill to the inside of the shower stall. The apron is secured to the bottom of the door by screws 30, and the same screw holes can be employed for a right or a left hand door opening, so that the apron can be readily reversed.

The door cooperates with an adjustable jamb formed by channels 31 and 32 and a channel 33. One of the flanges of the channel 31 is provided with slots 34 through which pass fastening devices 35. The slots at their outer ends are of increased width, so that the outer ends of the fastening devices will be flush with the outer face of the flange which carries them.

If the channel 33 is used, as seen in Figure 11 or as in Figure 12, the channel and jamb member 31 are secured to the wall by fastening devices 36.

The jamb member 32 may be used alone and secured to the wall by fastening devices 37.

It is within the scope of this invention to have the female hinge member carried by the door, in which case it would be constructed as shown in Figure 14 with the curved recess 38, the glass receiving channel 39 and the bevelled faces 40 and 41. The male hinge member would then be as shown in Figures 15 or 16, and would be adapted to be attached to the wall.

In Figure 15, the male hinge member consists of a bar 42 having an offset stop 43, and terminates in the rounded hinge portion 44, and is provided with converging walls 45.

In Figure 16, a bar 46 has extending from it at an angle, intermediate its ends, the stem 47 which terminates in the rounded rod 48.

In order to lock the door 2, I provide a spring catch 49 slidable in a recess 50 in a bracket 51 secured to the door frame, and a spring 52 is provided which tends to move the catch outwardly, extends exteriorly of the bracket and is threaded to receive a nut 53, so that the throw of the catch can be varied. The free end of one of the flanges of the jamb member 31 is tapered so that the catch bears against both such flange and also a flange of the jamb member 32.

In some cases, it is desirable to have the catch controlled by a handle 54 mounted in the frame 2 of the door, in which case an arm 55 is connected with the stem of the catch, and the handle has a lug 56 fixed to it to actuate the arm 55 and thereby the catch 49.

In some cases with single or double doors,

a water seal is formed by movably connecting, for example by a hinge, a curved strip 57 to the edge of the door and providing springs 58 which tend to move the strip outwardly and at the same time permit the inward movement of the strip when it contacts with the jamb or the juxtaposed curved strip of another door.

Special attention is directed to the novel construction and arrangement of the hinge which provides for a water tight seal and for the vertical adjustment of the door in the door opening.

The adjustable jamb enables one to employ a standard size of a door for door openings of different width.

The bottom apron is reversible for use with either a right hand or a left hand opening door.

The spring catch can have the tension of its spring or springs adjusted without the removal of the catch from the door.

The hinge is so constructed that by reversing one member it can be adapted for either a right hand or a left hand opening door.

The jamb member 32 which telescopes into the jamb member 31 is fixed in its adjusted position by superimposed screws 35 so that if desirable or necessary the member 32 may be fixed in an angular relation with respect to the member 31.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. An adjustable door jamb comprising an inner channel having a web with an inner and an outer flange extending outwardly from its sides and with an inner flange extending inwardly, an intermediate channel having inner and outer flanges to receive said inner channel and having one of its flanges provided with a laterally extending slot, a fastening device passing through said slot and engaging a flange of the inner channel to secure said channels in the position to which they have been adjusted, a third channel having its flanges adapted to be disposed towards or away from said intermediate channel, and means to secure said third channel and intermediate channel in position.

2. In an adjustable door jamb, in combination, a substantially vertically extending channel member arranged to be secured to a fixed abutment with the open side thereof presented toward or away from said abutment, a second channel member arranged to be nested within said first channel member when the latter presents its open side away from said abutment or secured to the base of said first channel when the latter presents its open side toward said abutment, a third channel member arranged to be nested with-

in said second channel member to form a substantially box-like section, means for securing said first and second channel members together and against said abutment, and means for adjustably securing said second and third channel members together whereby the bases of said latter members may be spaced a greater or less distance apart.

3. In an adjustable door jamb, in combination, a relatively fixed abutment, a pair of substantially vertically extending channel members secured together in nested relation to form a substantially closed section, said members being adjustable toward or away from each other such that the base walls thereof may be spaced a greater or less distance apart, means for securing said members together in said adjusted relation, and a member arranged intermediate said fixed abutment and said nested channel members, said intermediate member being capable of spacing said nested members as a unit a greater or less distance away from said abutment.

4. In an adjustable door jamb, in combination, a relatively fixed abutment, a pair of substantially vertically extending channel members secured together in nested relation to form a substantially closed section, and an auxiliary channel member arranged intermediate said fixed abutment and said nested members with the latter embraced between the walls of said auxiliary channel member, said auxiliary member being arranged to be shifted in position such that the walls thereof serve as spacers extending between said fixed abutment and said nested members.

5. In an adjustable door jamb, in combination, a substantially vertically extending outer channel member arranged to be secured to a fixed abutment with the open side presented away from said abutment, one of the side walls of said channel being of greater depth than the opposite wall and provided therein with one or more horizontally disposed elongated slots, an inner channel member arranged to be nested within said outer channel member to form a substantially box-like section, said inner channel member being provided with a rearwardly extending flange in continuation of that side wall thereof which lies against the deeper wall of said outer channel member, said flange constituting the abutment for the free edge of a hinged door, and securing elements projecting through said slots and into the adjoining side wall of said inner channel member and operative to permit the bases of said nested channel members to be spaced a greater or less distance apart.

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