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2,914,284

BRACKET FOR BATHROOM HANDRAILS

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Fig. 3

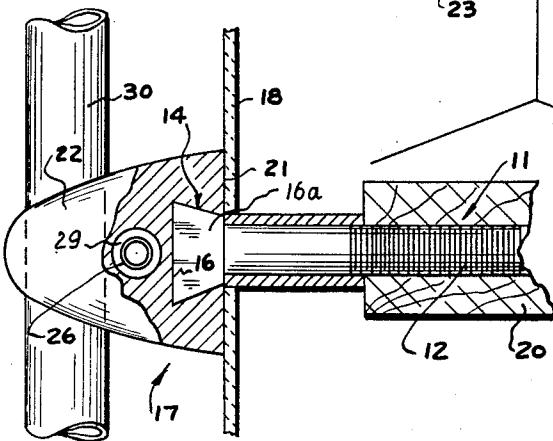


Fig. 1

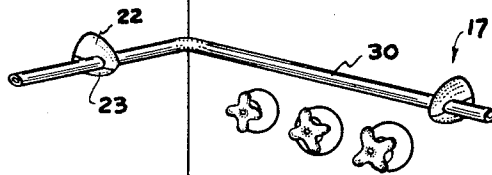


Fig. 5

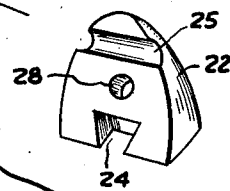


Fig. 2

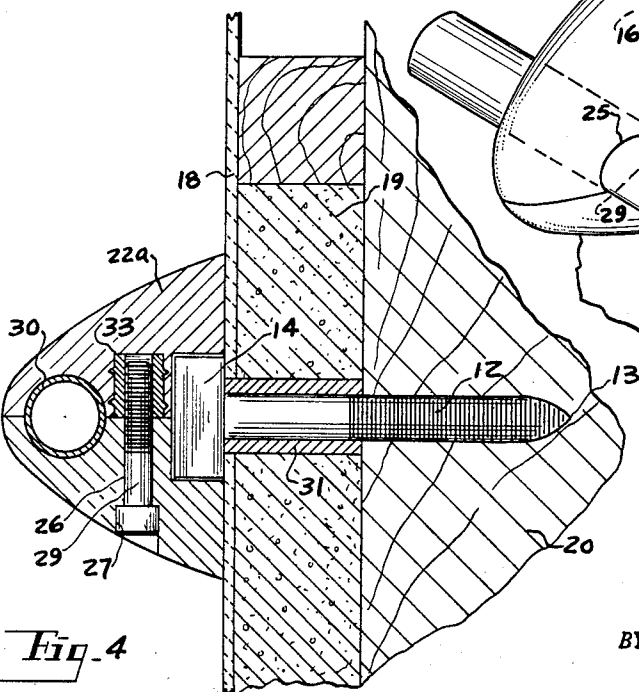


Fig. 4

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1

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BRACKET FOR BATHROOM HANDRAILS

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2 Claims. (Cl. 248—216)

My improvement pertains to brackets for support of hand rails which may be mounted on the wall of a bathroom adjoining a bathtub. Such rails are used as a safety measure, enabling a person to grasp the rail when the person is about to enter the bathtub or about to leave it.

While rails of this type are already known, my invention is directed to brackets serving to support such rails. The object of the invention is to provide a bracket of such structure that the connection between the brackets and the rail or rails to be supported thereby may be effected quickly, easily, and with no tools other than a screwdriver.

A further object of the invention is to provide a bracket of sufficient strength and rigidity and yet one which may be quickly disassembled when this should be desired.

I shall now describe my invention with reference to the accompanying drawings in which:

Fig. 1 is a fragmentary perspective view of two walls of a bathroom, the view including two rails mounted on the wall and supported by my brackets;

Fig. 2 is a perspective phantom view of the bracket as it is mounted upon a wall, the view including a length of a rail supported by said bracket;

Fig. 3 is a top elevational view, partly in section, of the bracket shown in Fig. 2;

Fig. 4 is a vertical sectional view of a modified bracket, the view disclosing a sectional view of the wall structure on which the bracket is mounted;

Fig. 5 is a perspective view of one component element of a rail embracing the head of the bracket.

Similar numerals refer to similar parts throughout the several views.

The bracket consists of two principal units, one of which is a bolt. The bolt, generally identified by numeral 11, has a threaded rear end portion marked 12, which portion tapers to a point 13. At the opposite end the bolt includes a head 14 made in the shape of a prism, defined, in part, by a rectangular face 15 disposed parallel to wall 10 on which the bracket is mounted and adjoining said wall, and a parallel rectangular front face 16 of an increased area, which face is remote from the wall, while the top face 16a and the parallel bottom face 16b have each the form of an isosceles trapezoid. In general, the head tapers from the front portion towards the rear portion.

The bolt serves as a means for support of a rail-clamping member, generally marked 17, and for this purpose it has to be driven into wall 10. In practice this is done by first having a hole drilled in the wall structure, including, as a rule, a tiling 18, a layer of plaster 19, and a wood structure such as a stud 20. Thereupon, the bolt is threaded into the wall to such depth that the head 14 of the bolt will be in abutment with the outer surface of the wall. This is shown in Fig. 3 in which the head is disclosed in contact with the tiling 18.

The rail-clamping head 17, briefly called a clamp, is preferably made of metal in the shape of a cone having

2

a flat base 21, but is composed of two symmetrical members in abutment with each other in a plane passing through the axis of the cone.

In a case where a rail, such as rail 30, has to be disposed in a horizontal position, one of said component parts of the clamp will be the upper part, marked 22, and the other, marked 23, will be the bottom part. For the purpose of a clearer description of the member, the cone will be treated as a unit. As such a unit the cone-shaped clamp has in its base a cavity, defined by flat walls, in an arrangement to correspond to the surface of the prism-shaped head 14 of the bolt. The nature of the cavity is best disclosed in Fig. 5 which shows one component part of the cone. A cavity in said part is marked 24. The other component has a similar cavity, both cavities being in register with each other. Each of the component parts of the clamp is formed with a transverse, trough-shaped recess 25 so that as a result said clamp as a whole is provided, at its constricted end, with an oblong aperture of a sufficient diameter for reception within said aperture lengthwise of the rail 30.

Finally, in order that the two component members of the clamp may be connected to each other, its bottom member is provided with a vertical bore 26 which is radially expanded at its lower portion, as shown at 27 in Fig. 4, while said upper member 22 has a threaded vertical bore 28 in alinement with said bore 26. A bolt 29 threaded into the bore 26 in the upper member through the bore in the lower member serves to draw the two members towards each other, and, thus, to clamp therebetween both the rail 30 and the prism-shaped head 14 of the bolt.

To complete the description of the improvement, I wish to add that numeral 31 identifies a metal sleeve upon the bolt, the sleeve extending through the tiling 18 and the plaster portion 19 of the wall 10.

The clamp shown in Fig. 4 is modified to the extent that instead of being made of metal it is made of a ceramic material. Because of that fact, the upper member 22a contains an internally-threaded bushing 33 imbedded therein for engagement with the threaded upper end of the bolt 29.

The manner of application of the clamp 17 to the bolt 11 is quite obvious. In practice, the bolt has to be first threaded into the wall 10, as shown in Figs. 3 and 4, till the back surface 15 of the head 14 is in contact with the outer surface of the wall 10, and till one of the trapezoid surfaces 16a or 16b is the top surface of the head 14. While the head is in this position, the upper component member 22 may be seated upon the head from the top, the lower member 23 may be first loosely secured thereto by means of the bolt 29. Thereupon, the rail may be thrust through the horizontal opening between the recesses 25, and the component members 22 and 23 may be drawn firmly towards each other by means of the same bolt 29.

After having described my improvement, what I wish to claim is as follows:

1. A wall bracket for a hand rail, the bracket including a bolt having a threaded rear portion to be secured in a wall on which the rail is to be mounted and a head projecting outwardly from the wall, the head having an expanded front portion remote from the wall and a constricted rear portion adjoining the wall, a solid rail-supporting clamp composed of two parts, each having a flat face in contact with the corresponding face of the other part in a plane passing through the axis of the bolt, each of the parts having a front portion and a rear portion, said rear portion being defined by a flat face at right angle to the axis of the bolt and in contact with the wall, and each having in said rear portion a cavity corresponding to the shape of the head on one side of said plane, the

3

front portion of each part having in its flat surface a transverse recess in alinement with the recess of the opposed part for reception therebetween of a rail, and bolt means to draw the two parts together to clamp the rail and the head therebetween.

2. A wall bracket for a bathroom hand rail, the bracket including a bolt to be driven into the wall on which the rail is to be mounted, the bolt having a prism-shaped head including an expanded front portion and constricted rear portion, a rail-supporting member adapted to be mounted on said head, the rail-supporting member being composed of two component parts, each of which is defined, in part, by a flat face for contact with a similar flat face of the other member in a plane passing through the axis of the bolt, each of the members having a rear

4

portion provided with a cavity corresponding to the shape of the head and a front portion having a trough-like recess in said flat face at right angle to the axis of the bolt for engagement with a rail to fit between said two members, one of the members being provided with a hole at right angle to said flat surface, the other member being provided with a threaded hole in alinement with the first-named hole, and a screw adapted to be disposed in said holes and serving to draw the two component parts to each other to clamp therebetween the head of the bolt and said rail.

References Cited in the file of this patent

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