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(54) **Grab-rail**

Haltegriff

Barre de maintien

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(56) References cited:
AT-A- 351 199 **DE-A- 3 150 765**
GB-A- 1 469 368 **US-A- 4 895 332**

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EP 0 643 938 B1

Description

The present invention relates to a grab-rail which is, for example, positionable by a bath to assist a user of the bath to get into and out of the bath.

US-A-4,895,332 discloses a grab-rail having a rail member whose generally circular outer surface includes roughened longitudinal elastomeric inserts for improving grip. DE-A-3,150,765 discloses a grab-rail of the folding type and AT-A-351,199 discloses a grab-rail of the fixed type.

According to the present invention, there is provided a grab-rail comprising an elongate rail member having an outer surface with a plurality of longitudinally extending ribs positioned to provide a rough, first zone which is adjacent to a smoother, second zone; characterized in that the cross-section of the rail member is oval; and the first and second zones are disposed on respective sides of the major axis of the oval cross-section of the rail member. By means of the first and second zones, it is possible to provide enhanced grip where it is needed, by means of the first zone, and a cleaner visual appearance where grip is not needed, by means of the second zone.

The grab-rail may be a folding grab-rail, wherein a base portion is securable to a support surface and the rail member is pivotably connected to the base portion so as to be movable between a first, generally horizontal position and a second, generally vertical position. It is preferable that the rail member is arranged so that, when in its first position, the rough, first zone faces downwards and the smoother, second zone faces upwards. With this arrangement, when the user grabs hold of the rail member, e.g. in order to get out of a bath, the user's fingers achieve a good grip on the underside of the rail member whilst ensuring that the top side of the rail member does not cause any discomfort to the palms of the user's hands.

The grab-rail may be a fixed grab-rail wherein a bracket is fixed to each end of the rail member and is securable to a support surface. Preferably, the rail member is arranged so that the rough, first zone faces towards the support surface and the smoother, second zone faces away from the support surface.

Two non-limiting embodiments of the present invention will now be described with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a fixed grab-rail;
Figure 2 is a cross-section of the rail member of the fixed grab-rail of Figure 1; and
Figure 3 is a perspective view of a folding grab-rail.

Referring to Figures 1 and 2, the fixed grab-rail comprises a rail member 1 to the ends of which are fixed brackets 2 having screw holes 3 by means of which the fixed grab-rail may be fixed to a wall or the like.

The rail member 1 has an elliptical cross-section,

on one side of the major axis of which are disposed a plurality of parallel ribs 4 and on the other side of the major axis of which the outer surface of the rail member is smooth. The ribs 4 extend parallel to the longitudinal axis of the rail member 1 and form a rough, first zone of the outer surface of the rail member 1. The rest of the outer surface forms a smooth, second zone. The rail member 1 is arranged so that the ribs 4 face towards the wall on which the grab-rail is mounted. Thus, the ribs 4 are only just visible in Figure 1.

Because, as viewed in Figure 2, the right-hand side of the outer surface of the rail member 1 is rib-free, a user pressing his or her palms against the rail member 1 will feel no discomfort. However, the fingers wrapped around the rail member 1 will come into contact with the ribs 4 and thereby enable the user to obtain a good grip on the rail member. Having the ribs 4 cover only half of the outer surface of the rail member 1 has been found to be the most effective arrangement.

As may be seen from Figure 2, the rail member 1 is hollow. Each bracket 2 has a boss which is not visible in Figure 1 and which projects into the hollow interior of the rail member 1. The boss has an elliptical cross-section which conforms to the inner surface of the rail member 1. In this way, the rail member 1 is prevented from rotating. The rail member 1 and brackets 2 are made from polycarbonate material and are joined together by means of adhesive or, less preferably, ultrasonic welding. The rail member 1 is produced by extrusion, and the brackets 2 are produced by moulding.

The folding grab-rail shown in Figure 3 has a base portion 5 of conventional design which is securable to a wall. A generally U-shaped rail assembly 6 is pivotably mounted in the base portion 5 so as to be pivotable between the horizontal position shown in Figure 3 and a vertical position used for storage. The rail assembly 6 comprises a rail member 1 of identical design to that shown in Figures 1 and 2. The rail member 1 is supported by other rails 7 of circular cross-section. The rail member 1 is arranged so that its ribs 4, which are not visible in Figure 3, face downwards when the rail assembly 6 is in the horizontal position shown in Figure 3. Thus, the user's palms may be used to support the user's weight on the smooth zone of the rail member 1, whilst the user's fingers grip the ribs 4 on the underside of the rail member 1.

Instead of being U-shaped, the rail assembly may be straight and comprise the rail member 1.

Claims

1. A grab-rail comprising an elongate rail member (1) having an outer surface with a plurality of longitudinally extending ribs (4) positioned to provide a rough, first zone which is adjacent to a smoother, second zone;

characterized in that:

the cross-section of the rail member (1) is oval;

and

the first and second zones are disposed on respective sides of the major axis of the oval cross-section of the rail member (1).

2. A grab-rail according to claim 1, wherein the ribs (4) are parallel to the longitudinal axis of the rail member (1).

3. A grab-rail according to claim 1 or 2, wherein the second zone is rib-free.

4. A grab-rail according to any one of claims 1 to 3, wherein the cross-section of the rail member (1) is elliptical.

5. A grab-rail according to any one of claims 1 to 4, wherein each zone covers substantially half of the outer surface of the rail member (1).

6. A grab-rail according to any one of claims 1 to 5, further comprising a base portion (5) securable to a support surface, the rail member (1) being pivotably connected to the base portion so as to be movable between a first, generally horizontal position and a second, generally vertical position.

7. A grab-rail according to claim 6, wherein the rail member (1) is arranged so that, when in its first position, the rough, first zone faces downwards and the smoother, second zone faces upwards.

8. A grab-rail according to any one of claims 1 to 5, further comprising a bracket (2) fixed to each end of the rail member (1) and securable to a support surface.

9. A grab-rail according to claim 8, wherein the rail member is arranged so that the rough, first zone faces towards the support surface and the smoother, second zone faces away from the support surface.

10. A grab-rail according to claim 4, wherein the rail member (1) is hollow and the grab-rail includes bosses which are of elliptical cross-section and project into the hollow ends of the rail member to prevent rotation of the rail member.

Patentansprüche

1. Haltegriff mit einem länglichen Griffteil (1) mit einer Außenoberfläche mit mehreren sich längs erstreckenden Rippen (4), die vorgesehen sind, um eine rauhe erste Zone zu ergeben, die in Nachbarschaft zu einer glatteren zweiten Zone liegt, **dadurch gekennzeichnet**, daß der Querschnitt des Griffteils (1) oval ist und die erste und die zweite Zone auf jeweiligen Seiten der größeren Achse des ovalen

Querschnittes des Griffteils (1) angeordnet sind.

2. Haltegriff nach Anspruch 1, bei dem die Rippen (4) parallel zu der Längsachse des Griffteils (1) sind.

3. Haltegriff nach Anspruch 1 oder 2, bei dem die zweite Zone rippenfrei ist.

4. Haltegriff nach einem der Ansprüche 1 bis 3, bei dem der Querschnitt des Griffteils (1) elliptisch ist.

5. Haltegriff nach einem der Ansprüche 1 bis 4, bei dem jede Zone im wesentlichen die Hälfte der Außenoberfläche des Griffteils (1) bedeckt.

6. Haltegriff nach einem der Ansprüche 1 bis 5 weiterhin mit einem Basisabschnitt (5), der an einer Stützoberfläche befestigbar ist, wobei das Griffteil (1) mit dem Basisteil derart schwenkbar verbunden ist, daß es zwischen einer ersten, allgemein horizontalen und einer zweiten, allgemein vertikalen Position bewegbar ist.

7. Haltegriff nach Anspruch 6, bei dem das Griffteil (1) derart angeordnet ist, daß, wenn es sich in der ersten Position befindet, die rauhe erste Zone nach unten und die glattere zweite Zone nach oben blicken.

8. Haltegriff nach einem der Ansprüche 1 bis 5 weiterhin mit einer Stütze (2), die an jedem Ende des Griffteils (1) befestigt und an einer Stützfläche befestigbar ist.

9. Haltegriff nach Anspruch 8, bei dem das Griffteil derart angeordnet ist, daß die rauhe erste Zone zu der Stützfläche hin und die glattere zweite Zone von der Stützfläche weg blicken.

10. Haltegriff nach Anspruch 4, bei dem das Griffteil (1) hohl ist und der Haltegriff Vorsprünge einschließt, die elliptischen Querschnitt haben und in die hohlen Enden des Griffteils ragen, um eine Drehung des Griffteils zu verhindern.

Revendications

1. Poignée d'appui comprenant une barre allongée (1) comportant une surface externe avec une pluralité de nervures s'étendant longitudinalement (4) positionnées pour constituer une première zone, rugueuse, qui est adjacente à une seconde zone, plus lisse ;
caractérisée en ce que :

la section transversale de la barre (1) est ovale ;
et
les première et seconde zones sont disposées sur les côtés respectifs de l'axe principal de la

section transversale ovale de la barre (1).

2. Poignée d'appui selon la revendication 1, dans laquelle les nervures (4) sont parallèles à l'axe longitudinal de la barre (1). 5
3. Poignée d'appui selon la revendication 1 ou 2, dans laquelle la seconde zone est exempte de nervures.
4. Poignée d'appui selon l'une quelconque des revendications 1 à 3, dans laquelle la section transversale de la barre (1) est elliptique. 10
5. Poignée d'appui selon l'une quelconque des revendications 1 à 4, dans laquelle chaque zone couvre à peu près la moitié de la surface externe de la barre (1). 15
6. Poignée d'appui selon l'une quelconque des revendications 1 à 5, comprenant en outre une portion de base (5) pouvant être fixée à une surface de support, la barre (1) étant reliée de manière à pivoter à la portion de base afin d'être mobile entre une première position, généralement horizontale, et une seconde position, généralement verticale. 20
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7. Poignée d'appui selon la revendication 6, dans laquelle la barre (1) est agencée de manière que, lorsqu'elle se trouve dans sa première position, la première zone, rugueuse, donne vers le bas et la seconde zone, plus lisse, donne vers le haut. 30
8. Poignée d'appui selon l'une quelconque des revendications 1 à 5, comprenant en outre une oreille (2) fixée à chaque extrémité de la barre (1) et pouvant être fixée à une surface de support. 35
9. Poignée d'appui selon la revendication 8, dans laquelle la barre est agencée de manière que la première zone, rugueuse, donne vers la surface de support et la seconde zone, lisse, donne loin de la surface de support. 40
10. Poignée d'appui selon la revendication 4, dans laquelle la barre (1) est creuse et la poignée d'appui comprend des bossages qui ont une section transversale elliptique et se projettent dans les extrémités creuses de la barre pour empêcher la rotation de la barre. 45
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FIG.1.

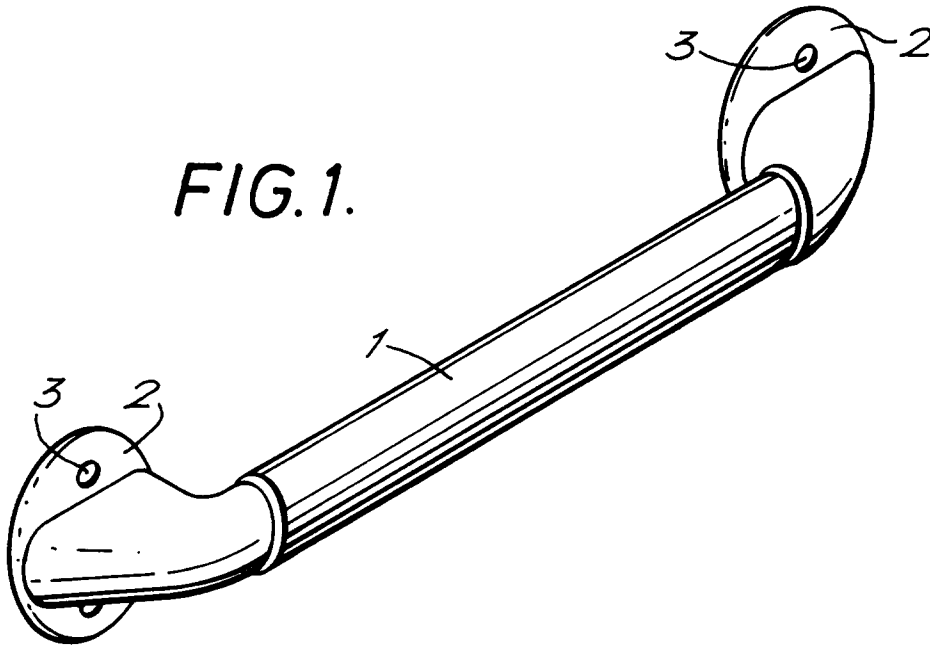


FIG.2.

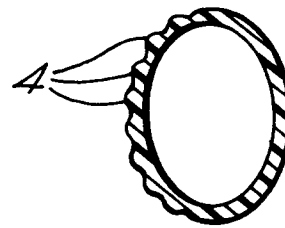


FIG.3.

