Title: UPRIGHT POST WITH CAVITY

Fig.1

Abstract: An upright post with a cavity is disclosed, which comprises a section bar body (1) and an installation groove (2) for installing a glass section bar (8) being arranged within an interior of the section bar body (1). Two raised section bars (3) protruding from a side wall of the installation groove (2) are arranged on one side of the installation groove (2). A hollow cavity (4) for installing a combined fixation member is formed between the two raised section bars (3). A positioning projection (7) is arranged on the other side of the installation groove (2) opposite to the hollow cavity (4), and a side surface of the positioning projection (7) toward the hollow cavity (4) is configured for fixing a rubber strip. The upright post can be installed quickly and reduce the use of aluminum alloy at the same time.
Upright Post with Cavity

Field of the Invention

This invention relates to an upright post with a cavity, and more particularly to a quick-installation upright post used in shower rooms.

Background of the Invention

In a traditional shower room, generally an H-shaped aluminum alloy section bar is inserted into a U-shaped aluminum alloy section bar, and then fixed with a glass section bar by a rubber strip or a plastic strip.

The existing installation upright posts are somewhat advantageous for convenient and quick installation. However, because two upright posts are employed and fixed to each other by screws, and then fixed to the wall, the installation process of the upright posts is not sufficiently convenient, and the aluminum alloy material is consumed much.

Summary of the Invention

It is an object of the present invention to provide an upright post with a cavity in order to overcome the defects of the prior art, achieve convenient and quick installation of section bars and save aluminum alloy material.

According to a technical solution of the invention, the upright post with the cavity is provided, including a section bar body, an installation groove for installing a glass section bar being arranged within an interior of the section bar body, where two raised section bars protruding from a side wall of the installation groove are arranged on one side of the installation groove, a hollow cavity for installing a combined fixation member is formed between the two raised section bars, a positioning projection is arranged on the other side of the installation groove opposite to the hollow cavity, and a side surface of the positioning projection toward the hollow cavity is configured for fixing a rubber strip.

The combined fixation member includes a layer of double sided adhesive tape and a fixation mechanism, one side of the fixation mechanism that is in contact with the double sided adhesive tape is a flat surface and the other side of the fixation mechanism is a serrated surface or other shaped surface.

One side of the double sided adhesive tape of the combined fixation member contacts the side wall of the installation groove, or one side of the fixation member contacts
the side wall of the installation groove.

The side surface configured for fixing a rubber strip is serrated.

On one hand, the invention achieves the convenient and quick installation of the upright post and the section bar (e.g. the glass section bar) to be fixed, and on the other hand, compared with the traditional structure, the structure of the inventive upright post simplifies the complexity of the structure and saves the aluminum alloy material. Therefore, the invention has a great promotion value.

**Brief Description of the Drawings**

Fig. 1 is a schematic diagram showing the structure of an upright post of the invention.

Fig. 2 is a diagram of an upright post in a usage state according to the invention.

Fig. 3 is a schematic diagram showing the structure of a combined fixation member of the invention.

Fig. 4 is a schematic diagram showing the fitting between an upright post of the invention and a glass.

**Detailed Description of the Embodiments**

The invention will be further described below with reference to the accompanying drawings.

As shown in Figures 1 to 4, an upright post with a cavity includes a section bar body 1, an installation groove 2, raised section bars 3, a hollow cavity 4, a double sided adhesive tape 5, a fixation member 6, a positioning projection 7, etc.

As shown in Figure 1, the upright post of the invention includes the section bar body 1 which is substantially U-shaped. The installation groove 2 for installing a glass section bar is arranged within the interior of the section bar body 1, two raised section bars 3 protruding from a side wall of the installation groove are arranged on one side of the installation groove 2, and a hollow cavity 4 for installing a combined fixation member is formed between the two raised section bars 3.

As shown in Figures 1 and 2, the positioning projection 7 is arranged on the other side of the installation groove 2 opposite to the hollow cavity 4, a side of the positioning projection 7 toward the hollow cavity 4 is a serrated surface which cooperates with a rubber strip 9, in order to fix a glass section bar 8 quickly and conveniently (as shown in Figure 2).
As shown in Figure 3, the combined fixation member includes a layer of double
sided adhesive tape 5 and a fixation mechanism 6, one side of the fixation mechanism 6 that
is in contact with the double sided adhesive tape 5 is a flat surface and the other side of the
fixation mechanism 6 is a serrated surface or other shaped surface. In use, one side of the
double sided adhesive tape 5 of the combined fixation member contacts the side wall of the
installation groove 2, or one side of the fixation mechanism 6 contacts the side wall of the
installation groove 2, depending on actual situations (as shown in Figure 4). In use, the
combined fixation member can be disassembled into the fixation mechanism and the double
sided adhesive tape, either of which is then used for assembling.

The upright post with the cavity of the invention can combine or engage with
another upright post of any structure (including the structure described as above) at an
arbitrary angle.

In this invention, because the hollow cavity is formed in the installation groove in
the section bar and the combined fixation member is mounted in the hollow cavity, the
installation of the upright post and the glass section bar can be achieved. Further, compared
with the traditional structure, the structure of the upright post of the invention is simple,
thereby simplifying the complexity of the structure and saving the aluminum alloy material
for forming the upright post of the invention.
1. An upright post with a cavity, comprising a section bar body (1), an installation groove (2) for installing a glass section bar (8) being arranged within an interior of the section bar body (1), characterized in that, two raised section bars (3) protruding from a side wall of the installation groove (2) are arranged on one side of the installation groove (2), a hollow cavity (4) for installing a combined fixation member is formed between the two raised section bars (3), a positioning projection (7) is arranged on the other side of the installation groove (2) opposite to the hollow cavity (4), and a side surface of the positioning projection (7) toward the hollow cavity (4) is configured for fixing a rubber strip.

2. The upright post with a cavity of claim 1, characterized in that, the combined fixation member comprises a layer of double sided adhesive tape (5) and a fixation mechanism (6), one side of the fixation mechanism (6) that is in contact with the double sided adhesive tape (5) is a flat surface and the other side of the fixation mechanism (6) is a serrated surface.

3. The upright post with a cavity of claim 2, characterized in that, one side of the double sided adhesive tape (5) of the combined fixation member contacts the side wall of the installation groove (2), or one side of the fixation member (6) contacts the side wall of the installation groove (2).

4. The upright post with a cavity of claim 1, characterized in that, the side surface configured for fixing a rubber strip is serrated.
Fig. 4
INTERNATIONAL SEARCH REPORT

International application No. PCT/CN2014/084837

A. CLASSIFICATION OF SUBJECT MATTER

E04C 3/32 (2006.01) i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

E04C 3, E04B 1, E04B 1, E04H 1, A47K 3, A61H 33

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base searched during the international search (name of data base and, where practicable, search terms used)

CNKI, CNPAT, EPODOC, WPI: upright, post, column, stud, crutch, glass??, pane?, section, profile, cavity, groove, door?, window?, bath+, shower+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search: 30 October 2014

Date of mailing of the international search report: 02 December 2014

Name and mailing address of the ISA/CN

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**INTERNATIONAL SEARCH REPORT**

*Information on patent family members*

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