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(72) Inventors:
• **Navarro Arcas, Abel Riquelme**
03114 Alicante (ES)
• **Perez Salas, Juan Jose**
03114 Alicante (ES)

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(74) Representative: **Astiz Suarez, José Enrique**
C/Fortuny, 7
28010 Madrid (ES)

(71) Applicant: **Jimten, S.A.**
03114 Alicante (ES)

(54) **Shower and soap holder support bar**

(57) A bar (1) assembled on supports (6), incorporating a sliding support (2) which includes a support bearing (3) and a soap holder (4) for telephone-style shower. The bar (1) can turn around its axis on a basis of two toothed crowns (8) and (9) established on the wall support (6) and on a rotational insert (5). The support (2) has a pressure and self-locking device determined by a button (10), a jacket (11), a brake (12), a spring (13) and a body (14) as the support of headboard of the shower. The support bearing (3) can turn around its longitudinal axis an angle restricted by the two projections (19). The soap holder (4) is also provided with an independent angular movement on the basis of the combination of a bearing (20) and of the actual soap holder (4)

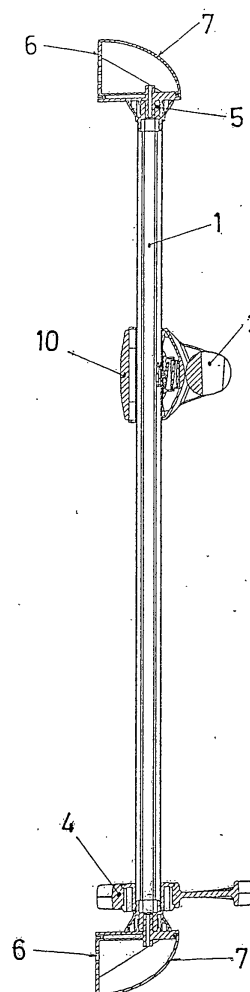


FIG. 4

Description

OBJECT OF THE INVENTION

[0001] The present invention refers to a device comprised of a bar with approximately an oval cross section, wall supports, slides with bearings and soap holder for telephone style showers, all the above with the possibility of adopting diverse angular positions due to the facility presented by their rotational movement, with safe stabilization mechanisms, and very comfortable for the user.

STATE OF THE ART

[0002] The generally used shower bars correspond to cylindrical profiles, which are a natural rotational axis of the generally used sliding support.

[0003] On the other hand, as regards the non cylindrical oval, rectangular, etc. cross sectional bars that exist in the Market, they involve handling problems because the bar is no longer a natural rotational axis of the sliding support, and in consequence, more complex mechanisms must be resorted to in order to obtain this effect. In any case this rotation does not include positional indicators that offer control and safety to the user.

[0004] The rotational part, around which the conical nut on the flexible hose is attached, and in turn the shower handle - the telephone rotates integrally with the same, generally lacks positional sound indicators and maximum rotation stops.

[0005] Likewise, the telephone style showers that are generally in existence and are known, with their corresponding bars and supports, present difficulties related to their placement in locations and places with reduced space and that present complications when overcoming obstacles such as taps and corners, which result in a restricted installation.

[0006] Also, the soap holders coupled to a shower bar that are in existence in the Market, are symmetrical as regards the vertical axis and non reversible as regards their top and bottom view, due to which, the user cannot place it where it is most convenient.

[0007] The packaging of this type of generally used products, are not exempt from hardware or machined metallic parts, due to which the manufacturing process is, in principle, complex.

DESCRIPTION OF THE INVENTION

[0008] The present invention solves the problems posed by the State of the Art devices and offers the following advantages:

- The combination of movements and turns of the totality of the bar components, as well as the reversibility of the soap holder, is ideal for being placed in locations where obstacles such as taps or corners

have to be overcome.

- It presents great mounting facility due to the lack of hardware, since all the attachments are performed by the use of clips between plastic parts, making use of their elasticity.
- It offers a great reduction of residues, because no machining of metallic parts is performed, as happens with many of the State of the Art parts since no scraps are produced during the manufacturing process.
- Its use is totally safe to the user, since it offers great control due to the position indicators.
- The product allows a personalization with different coloured finishes or metallic finishes.

Therefore, the present invention presents as main characteristic, the provision of an important amount of independent angular movements in addition to a sliding movement of all the elements comprised in the assembly, where none of them are rigid, which on the one hand, facilitates the assembly and installation, and on the other, it offers the user a series of comforts and advantages in addition to great safety and control of the product.

[0009] An important contribution to be emphasized is that the bar profile is approximately oval and can, by means of the rotational insert, turn freely around its longitudinal axis as regards the wall support, for which, the positioning at angular intervals is carried out by means of toothed crowns, an internal one in the wall support and another external one in the rotational insert, which ensure the position of the profile and of the support versus water over-pressures or the force exerted by the weight of the flexible hose, the result being an easily controlled product of great safety to the user.

[0010] Likewise, the sliding support can slide along the length of the bar, which, by means of a pressure and self-locking mechanism, allows the fixing of its position along the bar; counting with a jacket that safeguards the oval profile of the bar from possible scratching during movement.

[0011] The shower handle is connected to a flexible hose by means of a conical end that fits perfectly into the conical shape of the support bearing. Thus, when the shower handle oscillates, the rotation is transmitted to the support bearing which can then turn a limited angle around its longitudinal axis due to the two protuberances in the shape of a spherical cap for safety, thus preventing the falling of the shower handle and the prevention of accidents on legs, feet or damage to the materials of the shower, bath tub, etc.

[0012] The angular run of the bearing shall be determined by a device with a rattling sound.

[0013] Also, the soap holder presents an independent angular movement by means of a soap holder bearing and the actual soap holder, due to which, the bearing remains fixed to the oval bar profile and it is the soap holder which turns, taking the cylindrical bearing surface

as turning axis.

[0014] Another characteristic of the soap holder is that due to the fact that it is symmetrical at its top and bottom view, it is capable of being installed either to the left or to the right hand side, at the user's choice or because of difficult installation requirements.

DESCRIPTION OF THE DRAWINGS

[0015]

Figure 1 is a front view of the support where the bearing can be observed.

Figure 2 is a side view.

Figure 3 is a front view where the push button can be observed.

Figure 4 is a section IV-IV of Figure 1

Figures 5 and 6 are exploded views of all the assembly, in which all the elements are shown in the coupling phase.

PREFERRED EMBODIMENT OF THE INVENTION

[0016] The bar, support and soap holder assembly, which is the object of the invention that is recommended, and that are shown in Figures 1 to 4, are formed by the following elements:

- Bar (1)
- Sliding support (2)
- Support bearing (3)
- Soap holder (4)

[0017] Bar (1) has an oval profile, which is a relevant characteristic, since the difficulty lies in the fact that being oval in shape, it has achieved angular movements.

[0018] The bar turns integrally with the rotational insert (5) which can turn freely around its longitudinal axis as regards the wall support (6) which is coated with its corresponding trim casing (7).

[0019] The angular positioning of bar (1) is carried out by means of two toothed crowns, an internal one (8) on the wall support (6) and another external one (9) on the rotational insert (5).

[0020] With this angular positioning, the location of the bar (1) is assured, and in turn, that of the sliding support (2) versus over pressures of the water or the force exerted by the telephone style shower, transmitting to the user, a sense of safety and control of the product.

[0021] Hence, the first movement of the assembly, that of bar (1) in its longitudinal axis, is already ensured.

[0022] The invention also presents another movement, that of the sliding support (2) along the bar (1) length.

[0023] This movement is achieved both with a pressure mechanism that permits the sliding and with self-locking, which fixes its position along the length of bar (1).

[0024] The sliding support (2) pressure and self-locking mechanism is achieved with the following elements: push button (10); jacket (11); brake (12); spring (13); body (14).

[0025] When the push button (10) on the support body is pressed, the brake (12) moves integrally, and the spring (13) is compressed, in this way, by keeping the push button (10) pressed, the sliding support (2) can move freely along the oval profile of the bar (1). The moment the push button (10) stops being pressed, the position of the support will remain fixed by means of brake (12). The utility of the jacket (11) in the support body is to safeguard the oval aluminium profile of bar (1) from possible scratching, during the sliding to the support.

[0026] The third angular movement of the assembly corresponds to that of bearing (3) which, due to the specific configuration in its conical shape, permits the housing of the conical nut of the flexible shower hose and in turn that of the telephone style shower handle where it fits perfectly, due to which, on oscillation of the same, it transmits the rotation to the bearing (3).

[0027] The angular movement of the bearing is achieved by means of a position indicator at angular intervals, marked by means of a rattle sound device, formed by two circular splined parts (15), which are placed at the ends of the bearing (3) body, which in turn, are equipped with appropriate housings with splined internal circumferences (18) that mesh with the splines of the circular parts (15), which in turn are equipped with rectangular housings (16) around their diameters to mesh into their corresponding, also rectangular projections (17) of the support body (14).

[0028] The force exerted by the rattle is tared to support the shower handle weight and the possible over pressures that may be caused.

[0029] Bearing (3) can rotate around its longitudinal axis, an angle that is restricted by the two projections (19) in the shape of spherical caps. This rotational restriction is provided for safety's sake, to prevent exceeding an angle that might cause risks and accidents.

[0030] The fourth independent angular movement of the assembly is that of soap holder (4), which is obtained thanks to the combination of the soap holder bearing (20) and of the actual soap holder, and has as rotational stop, the wall on which the assembly is attached, in such a way, that the rotation corresponds to approximately 90° circumferences.

[0031] The soap holder bearing (20) remains fixed to the oval aluminium profile of bar (1) and it is the soap holder which can rotate, taking as rotational axis, the cylindrical surface of the soap holder bearing.

[0032] Soap holder bearing (20) is tied down to the soap holder by means of a clip (21) which is easily extracted and tied down to both symmetrical parts of the

soap holder.

[0033] Since the soap holder is symmetrical, both in its top and its bottom view, it is capable of being installed towards the left hand side and the right hand side, which greatly facilitates the assembly when locations are reduced in space.

Claims

1. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, that is **characterized in that** the bar, which is fixed to the wall has an oval profile with angular positioning, since it can rotate freely around its longitudinal axis with a support to the wall support, dragging all the other elements along with its movement. 5
2. Improvements in bar, support and reversible soap holder with independent angular positions for telephone style shower, which, according to Claim 1, is **characterised in that** the bar achieves an angular movement, by means of two toothed crowns, an internal one on the wall support and another external one on the rotational insert. 10 15 20 25
3. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which is **characterized in that** the telephone style shower support slides over the oval bar profile, by means of a pressure and self-locking mechanism, formed by a push button, a jacket, a brake, a spring, a body, a bearing and a rattle bearing. 30 35
4. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to Claim 3, is **characterized in that** it presses the push button on the body to move the support over the bar profile, said body integrally moving the brake, and compresses the spring, which, when the pressure stops, remains fixed in the support position, a jacket also being provided, that is shaped in such a way that it couples to the support housing, and thus safeguards the oval profile of the bar from scratches during the movement of the support. 40 45
5. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to the previous Claims is **characterized in that** over the support where the housings and coupling lugs have been provided, a bearing with a conical end has been adjusted, which serves as coupling to the conical end of the flexible shower hose connected in turn to the telephone style shower. 50 55
6. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which according to Claim 5, is **characterized in that**, when the shower handle oscillates, the rotation is transmitted to the bearing, which can perform the angular run and keep the angular intervals marked by means of a rattle sound device, formed by two circular elastic parts with splines around its exterior circumference and horizontal guides that couples to the ends of the bearing body, where circumferential housings with internal splines have been provided, The force exerted by the rattle is tared to support the shower handle and possible over pressures. 10
7. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to Claim 6 is **characterized in that** the angular run of the bearing is restricted by two projections in the form of spherical caps. 15
8. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower which, according to the previous Claims, is **characterized in that** the assembly is equipped with a symmetrical soap holder, that is provided with an independent angular movement, thanks to the combination of the soap holder bearing and to the actual soap holder, where the bearing remains fixed to the oval profile of the bar, and it is the soap holder that rotates taking the cylindrical bearing surface as rotational axis. The rotational movement of the soap holder has its rotational stop, which is generally the wall where the assembly is installed, so that the rotation corresponds to around 90° circumference. 20 25 30 35
9. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to Claim 8 is **characterized in that** the soap holder bearing is tied down to the soap holder by means of a clip that is easily extracted and tied down to both symmetrical parts of the soap holder. 40 45
10. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to Claim 9, is **characterized in that** due to the symmetry of the soap holder at its top and bottom views, it is capable of being installed towards the left hand side or the right hand side, according to the requirements or demands of the installation. 50 55
11. Improvements in bar, support and reversible soap holder with independent angular positions, for telephone style shower, which, according to the previ-

ous Claims, is **characterized in that**, due to the shape, design and nature of the elements it is comprised of, it is capable of personalization in the totality of the assembly, by means of colouring or metallic finishes.

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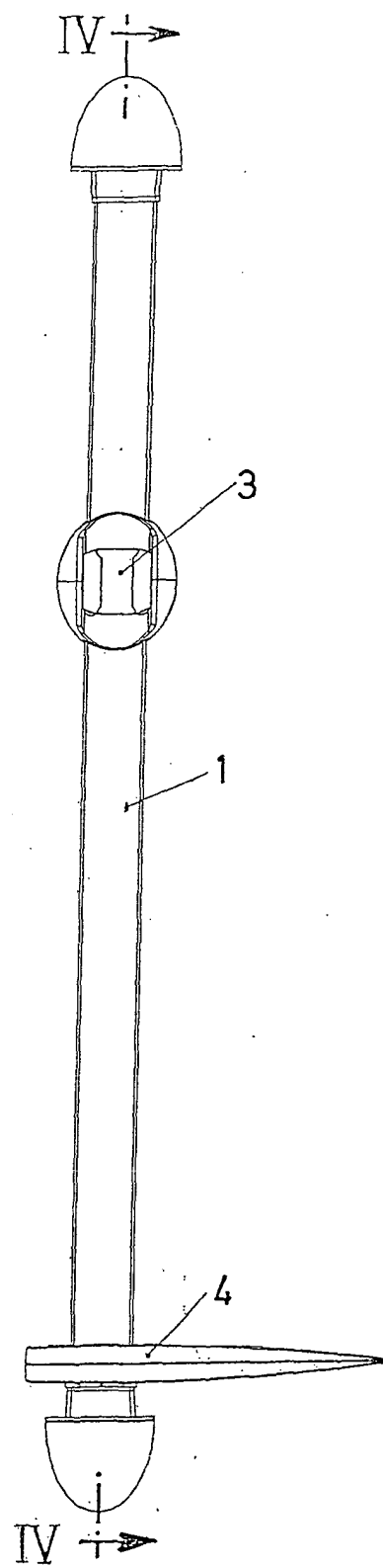


FIG. 1

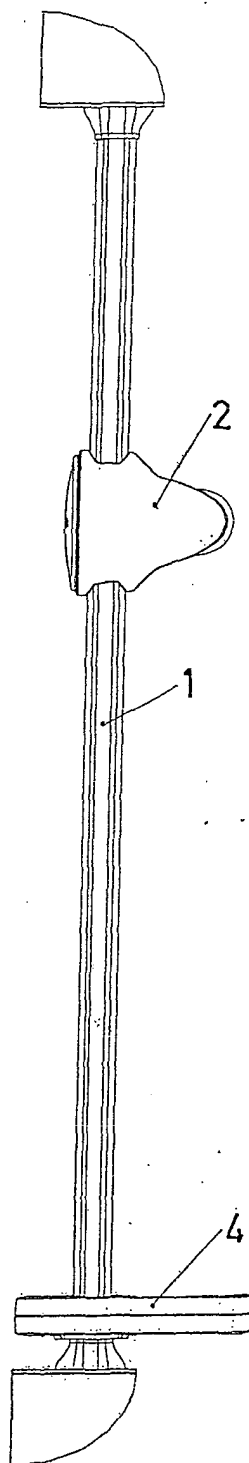


FIG. 2

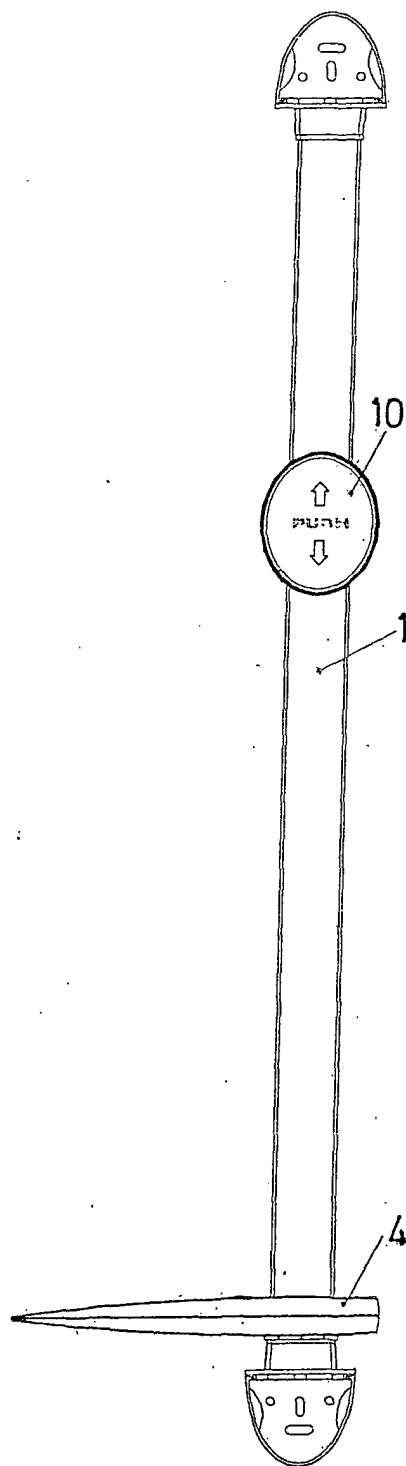


FIG. 3

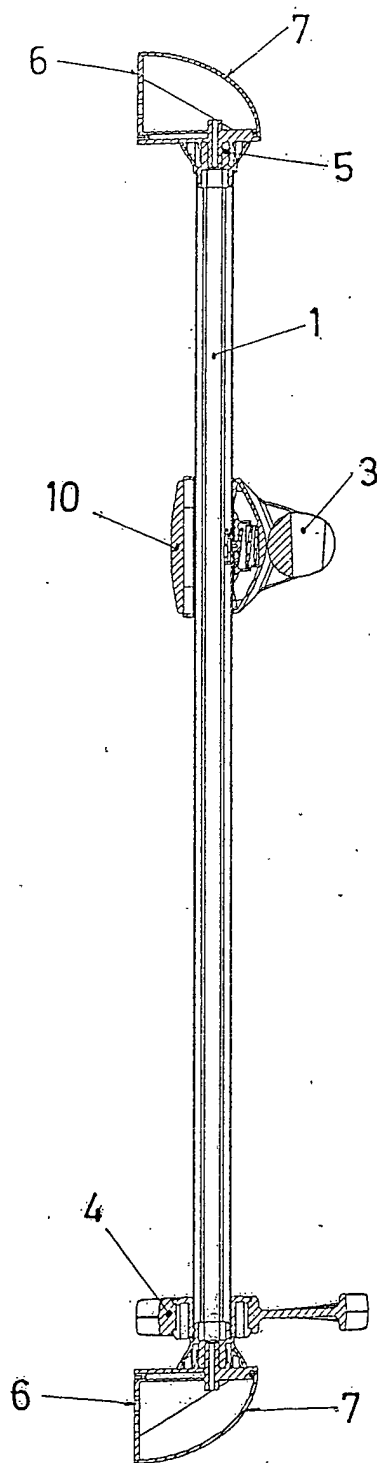


FIG. 4

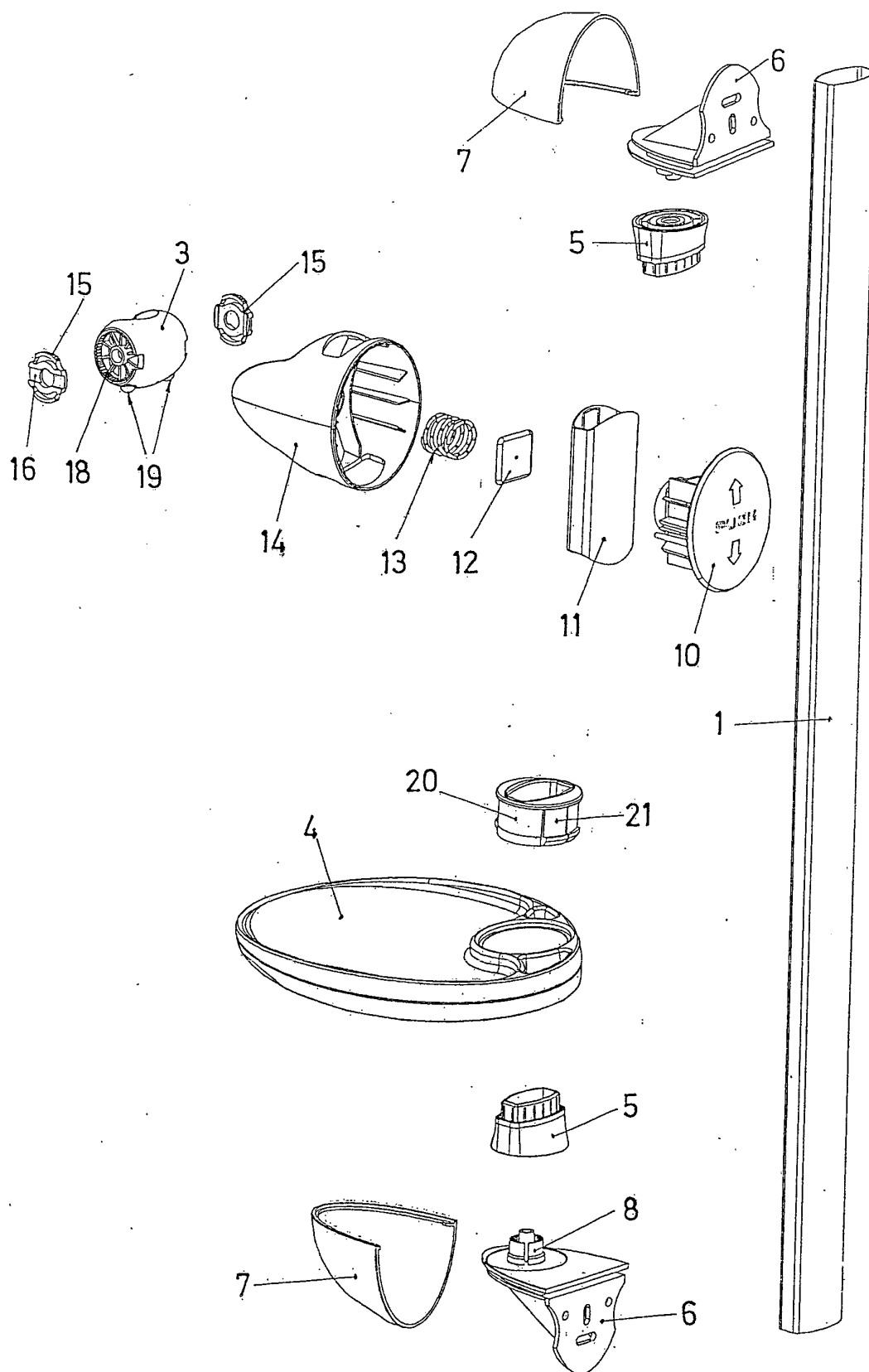


FIG. 5

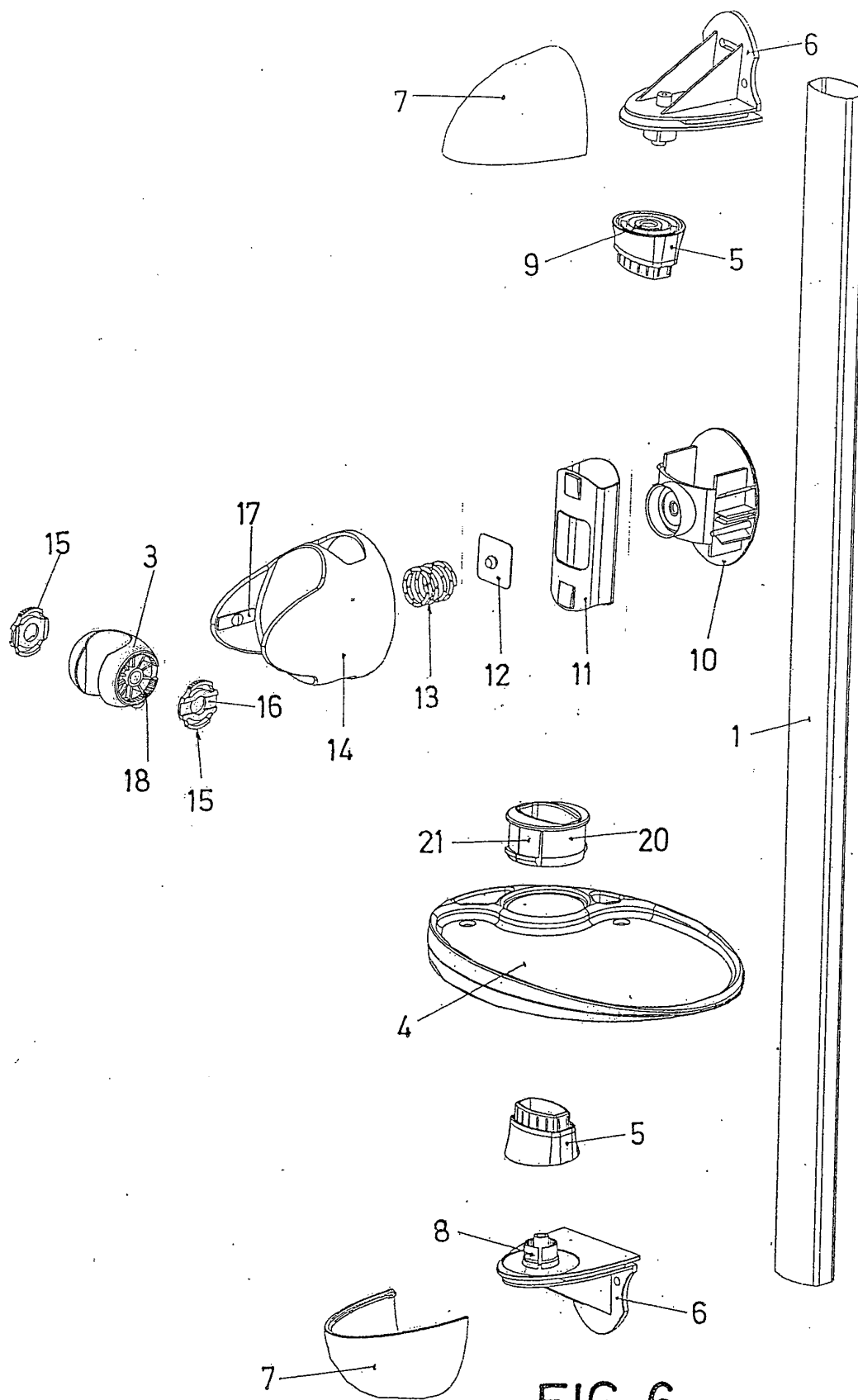


FIG. 6