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(54) Device to fix a tap to a household object and/or to a sanitary fixture
Vorrichtung zur Befestigung eines Wasserhahnes an einem Haushalts- und/oder Sanitärobjekt
Dispositif de fixation d’un robinet à un meuble et/ou un objet sanitaire

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Description

Field of the invention.

[0001] The present invention relates to a device (comprising at least an anchor body suitable to pass from a vertical to a horizontal position, a metal wire inserted in a sheath and tightening means suitable to make the metal wire slide relatively to the sheath) which allows to fix easily a tap or a group of taps (to which the metal wire is fastened) to a household object and/or a sanitary fixture (washbasin, sink, bidet etcetera), avoiding the drawbacks of the known fixing devices.

Prior art

[0002] A tap (or a group of taps) is usually fixed to the surface of a household object or sanitary fixture by mounting from the bottom, i.e. by inserting a threaded rod integral with the tap (which, preferably but not necessarily, is already connected to the pipes for the cold and warm water supply) in a hole made in the sanitary fixture, and by fixing in place the tap with a nut screwed on the "rod" or with other known fixing means, functionally equivalent. Usually such a fixing is a long and expensive operation as usually the features of the sanitary fixture (which for example can be almost totally closed in its back part, as in many washbasin supports) or the position of the tap rod (the tap can be quite close to the wall and/or in a sunken -or anyway accessible in a difficult way- position) don't allow to reach easily the lower surface of the fixture to tighten the tap fixing nut.

[0003] In order to avoid such a drawback many layout solutions cannot be used if the tap to be installed on the "rod" or with other known fixing means, functionally equivalent. Usually such a fixing is a long and expensive operation as usually the features of the sanitary fixture (which for example can be almost totally closed in its back part, as in many washbasin supports) or the position of the tap rod (the tap can be quite close to the wall and/or in a sunken -or anyway accessible in a difficult way- position) don't allow to reach easily the lower surface of the fixture to tighten the tap fixing nut.

[0004] The present invention relates to a universal fixing device which can be advantageously used for every kind of tap.

Summary of the invention

[0005] The scope of the present invention is providing a device to fix a tap to a household object and/or a sanitary fixture, comprising at least, combined together:

- an anchor body, suitable to reach a substantially vertical and a horizontal position;
- a metal wire, integral with the tap and inserted in a sheath relatively to which slides when tensioned;
- tightening means suitable to make the metal wire slide relatively to the sheath to tighten it;

where the metal wire tension causes on the sheath a thrust which, transferred on the anchor body, brings it in horizontal position and presses it against the lower edge of the household object and/or sanitary fixture, so blocking the tap.

[0006] Preferably but not necessarily, the anchor body is hinged to a hinge.

[0007] The thrust caused on the sheath can be transmitted to the anchor body in a direct way or by means of the hinge and/or a slide which on a guide integral to the tap.

List of Figures

[0008] The present invention will be better described hereinafter with reference to the non limiting embodiments shown in the attached figures, where:

- Figure 1 shows a first side view of a first embodiment of the device according to the present invention, combined with a tap;
- Figure 2 shows a second side view of the device of Figure 1, orthogonal to the one of Figure 1;
- Figure 3 shows schematically the assembly sequence of the device of Figure 1 and 2;
- Figure 4 shows schematically an example of tightening means;
- Figures 5-8 better show in bigger detail single parts of the device of Figure 1 and 2;
- Figure 9 shows a first cross-section view of a second embodiment of the device according to the present invention, combined with a tap;
- Figure 10 shows a second side view, partially cross sectioned, of the device of Figure 9, orthogonal to the view of Figure 9;
- Figure 11 shows two views of a hinge used in the device of Figure 9 and 10;
- Figure 12 shows a first side cross section view of a third embodiment of the device according to the present invention, combined with a tap;
- Figure 13 shows a second side view, partially cross sectioned, of the device of Figure 12, orthogonal to the one of Figure 12;
- Figures 14-16 better show in bigger detail parts of the device of Figures 12 and 13;
- Figure 17 shows a first side cross-section of a fourth embodiment of a device according to the present invention, combined with a tap;
- Figure 18 shows a second side view, with a partial cross section, of the device of Figure 17, orthogonal to the one of Figure 17;
- Figure 19 shows three views of the anchor body of Figures 17 and 18;
- Figure 20 shows a side cross-section view of a fifth
embodiment of a device according to the present invention, combined with a tap;
- Figure 21 shows a plan of the anchor body of Figure 20.

[0009] In the attached Figures, corresponding elements will be referred to with the same reference numerals;

Detailed description

[0010] The present invention relates to a device to fix a tap to a household object and/or to a sanitary fixture, and which comprises at least, combined together, an anchor body suitable to reach a substantially vertical position and a horizontal position; a metal wire integral with the tap and inserted in a sheath relatively to which it slides when tightened; tightening means suitable to tighten the metal wire by making it slide relatively to the sheath.

[0011] The tension of the metal wire origins a thrust on the anchor body, positions it horizontally and press it against the lower edge of the household object and/or sanitary fixture, so blocking the tap.

[0012] Preferably but not necessarily, the anchor body is hinged on a hinge.

[0013] Figure 1 shows a first side cross-section view of a first embodiment of a device according to the present invention, suitable to fix the tap 7 to the household object and/or sanitary fixture 8.

[0014] Figure 1 shows the anchor body 1 (better visible in Figure 7) hinged on the hinge 2 (better shown in Figure 8), the metal wire 4, the sheath 5, a guide 3 (better shown in Figure 6) connected to the tap 7 and a hollow guide 6 (better shown in Figure 5) suitable to slide on the guide 3.

[0015] The guide 3 is inserted in a relief 18 (Figure 7) made on the anchor body 1, and in a relief 20 (Figure 8) made in the hinge 2, the end of the sheath 5 fits in a socket 9 (Figure 5) made in an end of the hollow guide 6 and the metal wire 4 passing through the sheath 5 enters through the bore 10 (Figure 5) in the inner cavity of the guide 6, passes through a longitudinal clearance hole 11 (Figure 6) made in the guide 3 and is fastened to the tap base 7 by the fastening means 12, not described herein because according the common prior art.

[0016] The hollow guide 6 exerts the thrust on the sheath 5 by the tension of the metal wire 4 to the anchor body 1.

[0017] The other end of the metal wire 4 is fastened to tightening means (Figure 4) suitable to tighten the metal wire 4 making it slide relatively to the sheath 5.

[0018] Figure 2 shows a second side cross section view of the device of Figure 1, orthogonal to the section of Figure 1; Figure 2 shows the anchor body 1 hinged on the hinge 2 and the guide 3 fitted in the hollow guide 6; an end of the sheath 5 and the metal wire 4 are fitted in the socket 9 at the end of said hollow guide 6; the metal wire 4, protruding from the sheath 5, enters the inner cavity of the guide 6 through the bore 10 (Figure 5), passes in the longitudinal clearance hole 11 (Figure 6), made in the slide 3 and is fastened to the fastening means 12.

[0019] Figure 3 shows schematically the assembly sequence to set working the tap 7 fixed with the device shown in Figures 1 and 2.

[0020] The device according to the present invention and tightening means, if any (not shown in Figure 3) are made pass through the hole in the household object and/or in the sanitary fixture 8, with the guide 6 partially unthreaded from the guide 3 (fixed to the tap 7) so that the anchor body 1 can have a (substantially) vertical position; the metal wire 4 is tightened; the thrust of the tension of the metal wire on the sheath 5 makes the guide 6 to slide relatively to the guide 3, the guide 6 brings in a horizontal position the anchor 1, makes it slide along the guide 3 and blocks it against the lower edge of the household object and/or sanitary fixture 8 (Figure 3b).

[0021] To remove the tap 7 it's sufficient to decrease the tension of the metal wire 4 to let the anchor body 1 can have a position (substantially) vertical of Figure 3a so that the device according to the present invention can be easily unthreaded from the hole of the household object and/or of the sanitary fixture 8.

[0022] Figure 4 shows schematically a possible embodiment of the tightening means, which consist of a first hollow body 13 and of a second body 14, coaxial to and coupled with the first body 13 by means for example of a screw-internal thread coupling: the first body 13 has in one end a socket 9' (similar to the one with the reference numeral 9 in Figure 5) in which the end of the sheath fits, while the metal wire passes (through the bore 10') in the cavity of the first body 13, is fastened to the second body 14 and is tightened pulling the second body 14 out of the first body 13 by means of the coupling screw-internal thread so that the metal wire slides relatively to the sheath.

[0023] In the embodiment of Figure 4 the tightening means further comprise a handle 15 which makes the handling easier; obviously the handle 15 can be omitted without departing from the scope of the present invention.

[0024] Further without departing from the scope of the present invention, it's possible to substitute the tightening means, described as a non limiting embodiment with reference to Figure 4, with other reversible functionally equivalent means, suitable to tighten and to keep tight the metal wire, respectively to loosen the metal wire) not described hereinafter because trivial for a skilled technician and anyway departing from the present invention.

[0025] Figures 5-8 better show parts of the device of Figures 1 and 2.

[0026] Figure 5 shows a cross-section of the hollow guide 6, the socket 9 made at an end of the hollow guide 6 in which the end of the sheath 5 fits, and the bore 10...
which connects the socket 9 with the inner cavity of the hollow guide 6.

[0027] Figure 6 shows a side- and a top-view of the guide 3, inside which the longitudinal clearance hole 11 is shown with dotted line.

[0028] Figure 7 shows three side views of the anchor body 1, shaped like an overturned "C": a front cross section showing one of the holes 17 in which the hinge 2 is inserted, a side cross section of the anchor body 1 sectioned by the holes 17 and a top view, showing the relief 18 (shown also in the other two views) in which the guide 3 is inserted: the relief 18 has such a length that the anchor 1 can be both in the (substantially) vertical position shown in Figure 3a, and in the horizontal position shown in Figure 3b.

[0029] Moreover the anchor body 1 has a chamfered edge 19 to facilitate its insertion in the hole of the household object and/or sanitary fixture 8 (Figure 3a).

[0030] Figure 8 shows a front cross section and a top view of the hinge 2, which has the relief 20 in which the guide 3 is inserted.

[0031] Figure 9 shows a first side view of a second embodiment of a device according the present invention suitable to fix the tap 7 to the household object and/or to the sanitary fixture 8.

[0032] Figure 9 shows the anchor body 1 (similar to the one shown in Figure 7) hinged on the hinge 2 (better shown in Figure 11), the sheath 5 fitted in the hinge 2' and the metal wire 4, fastened to the tap 7 by means of the fastening means 12.

[0033] When the metal wire is tightened making it slide in the sheath 5, the thrust of the tension of the metal wire 4 on the sheath 5 is exerted to the anchor 1 by the hinge 2', bringing the anchor 1 in an horizontal position and blocking it against the lower edge of the household object and/or of the sanitary fixture 8.

[0034] Figure 10 shows a second side view of the device of Figure 9, orthogonal to the view of Figure 9: in Figure 10 the anchor body 1 (sectioned) hinged on the hinge 2', the sheath 5 and the metal wire 4 fastened to the fastening means 12 can be seen.

[0035] Figure 11 shows a front cross section view and a top view of the hinge 2': in Figure 11 the socket 9 -in which the end of the sheath 5 fits- and the bore 21 in which the metal wire 4 passes -in order to be fastened to the tap 7 by means of the fastening means 12- can be seen.

[0036] Figure 12 shows a first side cross section of a third embodiment of a device according to the present invention suitable to fix a tap 7 to the household object and/or to the sanitary fixture 8.

[0037] Figure 12 shows the anchor body 1 (similar to the one shown in Figure 7) hinged to the solid hinge 2" (Figure 16), the metal wire 4, the sheath 5, a guide 3' connected to the tap 7 and a hollow guide 6' suitable to slide along the guide 3'.

[0038] The end of the sheath 5 fits in a socket 9, similar to the one shown in Figure 5, made at an end of the hollow guide 6' (Figure 14); the hinge 2" is connected with the hollow guide 6' and slides in a slotted hole 24 (Figure 15) made in the guide 3'.

[0039] Coming out from the sheath 5, the metal wire 4 enters (through the bore 10; Figure 14) the inner cavity of the guide 6' and is fastened to the guide 3'; particularly the metal wire 4 passes through a clearance hole 25 made in the guide 3' and is fastened inside the slotted hole 24 by means of the fastening means 12.

[0040] When the metal wire is tightened, making it slide in the sheath 5, the thrust caused by the tension of the metal wire 4 on the sheath 5 is transferred to the anchor body 1 by the hollow guide 6 and by the hinge 2" (fixed to the guide 6) which slides in the slotted hole 24 of the guide 3', bringing the anchor body 1 in horizontal position and blocking it against the lower edge of the household object and/or of the sanitary fixture 8.

[0041] Figure 13 shows a second side view of the device of Figure 12, orthogonal to the view of Figure 12; Figure 13 shows the anchor 1 (sectioned) hinged on the hinge 2'', the hollow guide 6' at the end of which an end of the sheath 5 and the guide 3' are fastened.


[0043] Figure 14 shows a section of the hollow guide 6', which differs from the guide 6 described in Figure 5 essentially because at the end opposite to the one of the socket 9, there is a couple of bores 23 in which the hinge 2" is inserted.

[0044] Figure 15 shows two side views, orthogonal each to the other, of the guide 3'; in Figure 15 the slotted hole 24 -made in the body of the guide 3'- in which the hinge 2" slides, and the clearance hole 25 -which allows the metal wire 4 to enter the slotted hole 24, where is fastened to the fastening means 12 (not represented in Figure 15 to simplify the drawing) are shown.

[0045] Figure 17 shows a first side cross section view of a fourth embodiment of a device according to the present invention suitable to fix a tap to a household object and/or to a sanitary fixture 8; Figure 17 shows the anchor 1' shaped as an overturned "C" (Figure 19), the metal wire 4 and the sheath 5, the end of which fits with the external surface of the anchor body 1'.

[0046] At the exit of the sheath 5, the metal wire 4 passes through the anchor body 1" (by means of the hole 26 in the anchor 1'; Figure 19) and is fastened to the tap 7 with the fastening means 12.

[0047] Figure 18 shows a second side view of the device of Figure 17, orthogonal to the view of Figure 17: Figure 18 shows the anchor body 1' (sectioned), the metal wire 4, the sheath 5 and the fastening means 12.

[0048] Figure 19 shows three views of the anchor body 1', which differs from the one shown in Figure 7 essentially in the fact that there is only the hole 26 in which the metal wire 4 is inserted.

[0049] In order to install the tap 7 by means of the device shown in Figures 17 and 18, the tightening means (not shown in the Figures) and the above mentioned de-
vice are inserted into the hole of the household with the metal wire partially unthreaded from the sheath 5 to allow the wire to bend so that the anchor body 1' can reach a (substantially) vertical position and tight the metal wire 4; the thrust the tension of the metal wire 4 produces on the sheath 5 brings in horizontal position the anchor body 1', makes it sliding along the wire 4 and blocks it against the lower edge of the household object and/or to the sanitary fixture 8.

[0050] Figure 20 shows a side cross section of a fifth embodiment of a device according to the present invention suitable to fix a tap 7 to the household object and/or of the sanitary fixture 8; Figure 20 shows the anchor body 1" obtained from an element of a "C"-shaped flat metal sheet (Figure 21), the metal wire 4 and the sheath 5, the end of which fits with the external surface of the anchor body 1".

[0051] At the exit of the sheath 5, the metal wire 4 passes through the hole 26 made in the anchor 1" (Figure 21) and is fastened to the tap 7 with the fastening means 12.

[0052] The anchor body 1" will not be further described because it's possible to use a part that is commonly purchased for taps and fittings.

[0053] The "C"-shape of the anchor body 1" allows to make it pass through the hole 27 of the household object and/or sanitary fixture 8, even if that hole 27 has a smaller diameter than the circumference arc 28 which forms the outer edge of the anchor body 1"; for example, the arc 28 can have a diameter of about 50 mm and the hole a diameter of about 33 mm.

[0054] Preferably between the end of the sheath 5 and the anchor body 1" a wire terminal 29 is inserted, which has a hole, in which the metal wire 4 passes, and a cavity 30 in which the end of the sheath 5 fits.

[0055] In order to install the tap 7 with the device shown in Figures 20 and 21, the tightening means (not shown in the Figures) and the aforesaid are inserted in the hole 27 of the household object and/or of the sanitary fixture 7, being the wire 4 partially unthreaded from the sheath 5 so that the wire can bend and the anchor body 1" can reach a (substantially) vertical position, the anchor body 1" is vertically turned to introduce it in the hole 27 and the metal wire 4 is tightened; the thrust of the tension of the metal wire 4 against the sheath 5 makes the anchor body 1" reach a horizontal position, makes it slide along the metal wire 4 and blocks against the lower edge of the household object and/or of the sanitary fixture 8.

[0056] Without departing from the scope of the present invention, a skilled technician can make all the modifications and improvements, which the usual technique and natural evolution of the field suggest, to the fastening device to which the present description refers.

Claims

1. Device to fix a tap (7) to a household object and/or to a sanitary fixture (8), comprising
   - an anchor body (1, 1', 1'"), suitable to reach a substantially vertical and a horizontal position; characterised in that the device further comprises:
     - a metal wire (4), inserted in a sheath (5) relatively to which the metal wire (14) slides when tightened; and
     - tightening means suitable to tight the metal wire (4) making it slide relatively to the sheath (5);
   - the tension of the metal wire (4) generating on the sheath (5) a thrust which, transferred to the anchor body (1, 1', 1'"), brings said anchor body (1, 1', 1"") to a horizontal position and presses it against the lower edge of the household object and/or of the sanitary fixture (8), so blocking the tap (7).

2. Fixing device according to claim 1, characterised in that the anchor body (1) is hinged on a hinge (2, 2', 2") to a sanitary fixture (8), comprising

3. Fixing device according to claim 2, characterised in that the anchor body (1) is shaped as an overturned "C", and has at least a couple of holes (17) in which the hinge (2, 2', 2") is inserted, and a relief (18) of such a length that it allows the anchor body (1) to reach both the substantially vertical and the horizontal position.

4. Fixing device according to claim 1, characterised in that the anchor body (1) has a chamfered edge (19).

5. Fixing device according to claim 2, characterised in that it also comprises a guide (3) integral with the tap (7) and a hollow guide (6) suitable to slide along the guide (3); and in that:
   - the guide (3) is inserted in a relief (18) belonging to the anchor body (1) and in a relief (20) belonging to the hinge (2);
   - the end of the sheath (5) fits in a socket (9) made in an end of the hollow guide (6);
   - the metal wire (4) coming out of the sheath (5) enters the internal cavity of the hollow guide (6), passes through a longitudinal clearance hole (11) made in the guide (3) and is fastened to the tap (7);
   - the thrust that the tension of the metal wire (4) exerts on the sheath (5) is transmitted to the anchor body (1) by the hollow guide (6).

6. Fixing device according to claim 2, characterised
in that the sheath (5) fits in the hinge (2') and in that the thrust generated on the sheath (5) by the tension of the metal wire (4), integral with the tap (7), is transmitted to the anchor body (1) by means of the hinge (2').

7. Fixing device according to claim 6, characterised in that the hinge (2') has a socket (9) in which an end of the sheath (5) fits, and a bore (21) in which the metal wire (4) passes before being fastened to the tap (7).

8. Fixing device according to claim 2, characterised in that also comprises a guide (3') integral with the tap (7) and a hollow guide (6') suitable to slide along the guide (3'); and in that:

- the end of the sheath (5) fits in a socket (9) made at an end of the hollow guide (6');
- the hinge (2'') is integral to the hollow guide (6') and slides in a slotted hole (24) made in the guide (3');
- the metal wire coming out of the sheath (5) enters the inner cavity of the guide (6') and is fastened to the guide (3');
- the thrust generated by the tension of the metal wire (4) on the sheath (5) is transmitted to the anchor body (1) by the hollow guide (6) and by the hinge (2').

9. Fixing device according to claim 8, characterised in that the metal wire passes through a clearance hole (25) made in the guide (3') and is fastened inside the slotted hole (24).

10. Fixing device according to claim 8, characterised in that the hollow guide (6') has, at the end opposite to the end where the socket (9) is made, a couple of bores (23) in which the hinge (2'') is inserted.

11. Fixing device according to claim 1, characterised in that an end of the sheath (5) fits with the external surface of the anchor body (1', 1''), in that, coming out of the sheath (5), the metal wire (4) passes in a clearance hole (26, 26') made in the anchor body (1', 1'') and is fastened to the tap (7) and in that the thrust generated on the sheath (5) by the tension of the metal wire (4) brings the anchor body (1', 1'') in a horizontal position, makes it sliding along the metal wire (4) and blocks it against the lower edge of the household object and/or of the sanitary fixture (8).

12. Fixing device according to claim 11, characterised in that the anchor body (1') has an overturned "C"-shape and comprises the clearance hole (26) in which the metal wire (4) passes.

13. Fixing device according to claim 11, characterised in that the anchor body (1") consists of a flat metal plate element with a "C" shape and comprises the clearance hole (26') in which the metal wire (4) passes.

14. Fixing device according to claim 11, characterised in that also comprises a wire terminal (29) positioned between the end of the sheath (5) and the anchor (1'") - which comprises a hole in which the metal wire passes (4) and a cavity (30), in which the end of the sheath (5) is positioned, which fits with the external surface of the anchor body (1'") by means of the wire terminal (29).

**Patentansprüche**

1. Vorrichtung, um einen Hahn (7) an einem Haushaltsgegenstand und/oder an einem sanitären Einrichtungsgegenstand (8) zu befestigen, die einen Ankerkörper (1, 1', 1'') umfasst, der eine im Wesentlichen vertikale und in eine horizontale Lage einnehmen kann; gekennzeichnet dadurch, dass die Vorrichtung weiter Folgendes umfasst:

- einen Metalldraht (4), der durch eine Hülse (5) verläuft, relativ zu der der Metalldraht (4) gleitet, wenn er gespannt wird; und
- eine Spannvorrichtung, mittels derer der Metalldraht (4) gespannt werden kann, wobei er relativ zu der Hülse (5) gleitet; wobei die Spannung des Metalldrahts (4) eine auf die Hülse (5) wirkende Schubkraft erzeugt, die, indem sie auf den Ankerkörper (1, 1', 1'') übertragen wird, den genannten Ankerkörper (1, 1', 1'') in eine horizontale Lage bringt und ihn gegen die Unterseite des Haushaltsgegenstands und/oder des sanitären Einrichtungsgegenstands (8) drückt und so den Hahn (7) fixiert.

2. Befestigungsvorrichtung entsprechend Anspruch 1 gekennzeichnet dadurch, dass der Ankerkörper (1) mittels eines Gelenks (2, 2', 2'') gelenkig gelagert ist.

3. Befestigungsvorrichtung entsprechend Anspruch 2 gekennzeichnet dadurch, dass der Ankerkörper (1) die Form eines umgedrehten "C" besitzt und wenigstens mit einem Paar von Löchern (17), in die das Gelenk (2, 2', 2'') eingesetzt wird, versehen ist sowie mit einer Aussparung (18) von solcher Länge, dass es dem Ankerkörper (1) durch sie möglich ist, sowohl die im Wesentlichen vertikale als auch die horizontale Lage einzunehmen.

4. Befestigungsvorrichtung entsprechend Anspruch 1
gekennzeichnet dadurch, dass der Ankerkörper (1) eine abgeschrägte Kante (19) besitzt.

5. Befestigungsvorrichtung entsprechend Anspruch 2 gekennzeichnet dadurch, dass sie auch eine fest mit dem Hahn (7) verbundene Führung (3) umfasst sowie eine hohle Führung (6), die entlang der Führung (3) gleiten kann; und dadurch dass:

- die Führung (3) in eine Aussparung (18) am Ankerkörper (1) und in eine Aussparung (20) am Gelenk (2) eingesetzt ist;
- das Ende der Hülse (5) in ein Steckloch (9) passt, das sich an einem Ende der hohen Führung (6) befindet;
- der aus der Hülse (5) austretende Metalldraht (4) in den inneren Hohlraum der hohen Führung (6) eintritt, durch eine Durchgangsbohrung (11) verläuft, die sich in Längsrichtung in der Führung (3) befindet, und an dem Hahn (7) befestigt ist;
- die Schubkraft, die die Spannung des Metalldrahts (4) auf die Hülse (5) ausübt, durch die hohle Führung (6) auf den Ankerkörper (1) übertragen wird.

6. Befestigungsvorrichtung entsprechend Anspruch 2 gekennzeichnet dadurch, dass die Hülse (5) in das Gelenk (2') passt und dass die auf die Hülse (5) durch die Spannung des fest mit dem Hahn (7) verbundenen Metalldrahts (4) ausgeübte Schubkraft mittels des Gelenks (2') auf den Ankerkörper (1) übertragen wird.

7. Befestigungsvorrichtung entsprechend Anspruch 6 gekennzeichnet dadurch, dass sich in dem Gelenk (2') ein Steckloch (9) befindet, in das ein Ende der Hülse (5) passt, und eine Bohrung (21), durch die der Metalldraht (4) verläuft, bevor er an dem Hahn (7) befestigt ist.

8. Befestigungsvorrichtung entsprechend Anspruch 2 gekennzeichnet dadurch, dass sie auch eine fest mit dem Hahn (7) verbundene Führung (3') und eine hohle Führung (6') umfasst, die entlang der Führung (3') gleiten kann; und dadurch dass:

- das Ende der Hülse (5) in ein Steckloch (9) passt, das sich an einem Ende der hohen Führung (6') befindet;
- das Gelenk (2') fest mit der hohen Führung (6') verbunden ist und in einem der in der Führung (3') beidseitigen Schlitzloch (24) gleitet;
- der aus der Hülse (5) austretende Metalldraht in den inneren Hohlraum der Führung (6') eintritt und an der Führung (3') befestigt ist;
- die durch die Spannung des Metalldrahts (4) auf die Hülse (5) ausgeübte Schubkraft durch die hohle Führung (6) und durch das Gelenk (2') auf den Ankerkörper (1) übertragen wird.

9. Befestigungsvorrichtung entsprechend Anspruch 8 gekennzeichnet dadurch, dass der Metalldraht durch eine Durchgangsbohrung (25) verläuft, die sich in der Führung (3') befindet, und innerhalb des Schlitzlochs (24) befestigt ist.

10. Befestigungsvorrichtung entsprechend Anspruch 8 gekennzeichnet dadurch, dass die hohle Führung (6') am Ende gegenüber dem Ende, wo sich das Steckloch (9) befindet, ein Paar Bohrungen (23) besitzt, in die das Gelenk (2') eingesetzt ist.

11. Befestigungsvorrichtung entsprechend Anspruch 1 gekennzeichnet dadurch, dass ein Ende der Hülse (5) derart an die äußere Oberfläche des Ankerkörpers (1', 1") angepasst ist, dass der aus der Hülse (5) austretende Metalldraht (4) in einer Durchgangsbohrung (26, 26') im Ankerkörper (1', 1") verläuft und am Hahn (7) befestigt ist, und dadurch, dass die durch die Spannung des Metalldrahts (4) auf die Hülse (5) ausgeübte Schubkraft den Ankerkörper (1', 1") in eine horizontale Lage bringt, ihn entlang des Metalldrahts (4) gleiten lässt und ihn so gegen die Unterseite des Haushaltsgegenstands und/oder des sanitären Einrichtungsgegenstands (8) drückt, dass er fixiert ist.

12. Befestigungsvorrichtung entsprechend Anspruch 11 gekennzeichnet dadurch, dass der Ankerkörper (1') die Form eines umgedrehten „C“ besitzt und eine Durchgangsbohrung (26) umfasst, in der der Metalldraht (4) verläuft.

13. Befestigungsvorrichtung entsprechend Anspruch 11 gekennzeichnet dadurch, dass der Ankerkörper (1") aus einem flachen Metallplattenelement in der Form eines umgedrehten „C“ besteht und eine Durchgangsbohrung (26') umfasst, in der der Metalldraht (4) verläuft.

14. Befestigungsvorrichtung entsprechend Anspruch 11 gekennzeichnet dadurch, dass sie auch ein zwischen dem Ende der Hülse (5) und dem Anker (1") gelegenes Drahtführungselement (29) umfasst, in dem sich ein Loch befindet, durch das der Metalldraht (4) verläuft und ein Hohlraum (30) in dem das Ende der Hülse (5) positioniert ist, die mittels des Drahtführungselementes (29) an die äußere Oberfläche des Ankerkörpers (1") angepasst ist.

Revendications

1. Dispositif de fixation d’un robinet (7) sur un objet domestique et/ou un accessoire sanitaire (8), com-
6. Dispositif de fixation selon la revendication 2, caractérisé en ce que la gaine (5) est agencée dans l'articulation (2') et en ce que la poussée produite sur la gaine (5) par la traction du câble métallique (4), en un seul bloc avec le robinet (7), est transmise au corps formant ancre (1) par l'intermédiaire de l'articulation (2').

7. Dispositif de fixation selon la revendication 6, caractérisé en ce que l'articulation (2') a une douille (9) dans laquelle s'agence une extrémité de la gaine (5), et un alésage (21) dans lequel le câble métallique (4) passe avant d'être fixé sur le robinet (7).

8. Dispositif de fixation selon la revendication 2, caractérisé en ce qu'il comporte aussi un guide (3') en un seul bloc avec le robinet (7) un guide creux (6') adapté pour coulisser le long du guide (3'), et en ce que :
   - l'extrémité de la gaine (5) est agencée dans une douille (9) réalisée à une extrémité du guide creux (6'),
   - l'articulation (2') est en un seul bloc avec le guide creux (6') et coulisse dans un trou oblong (24) réalisé dans le guide (3'),
   - le câble métallique sortant de la gaine (5) pénètre dans la cavité intérieure du guide (6') et est fixé sur le guide (3'),
   - la poussée produite par la traction du câble métallique (4) sur la gaine (5) est transmise au corps formant ancre (1) par le guide creux (6) et par l'articulation (2').

9. Dispositif de fixation selon la revendication 8, caractérisé en ce que le câble métallique passe à travers un trou de dégagement (25) réalisé dans le guide (3') et est fixé à l'intérieur du trou oblong (24)

10. Dispositif de fixation selon la revendication 8, caractérisé en ce que le guide creux (6') a, au niveau de l'extrémité opposée à l'extrémité où est réalisée la douille (9), deux alésages (23) dans lesquels est insérée l'articulation (2').

11. Dispositif de fixation selon la revendication 1, caractérisé en ce qu'une extrémité de la gaine (5) est agencée avec la surface extérieure du corps formant ancre (1', 1''), en ce que, en sortant de la gaine (5), le câble métallique (4) passe dans un trou de dégagement (26, 26') réalisé dans le corps formant ancre (1', 1'') et est fixé sur le robinet (7) et en ce que la poussée produite sur la gaine (5) par la traction du câble métallique (4) amène le corps formant ancre (1', 1'') dans une position horizontale, l'amenant à coulisser le long du câble métallique (4) et le bloque contre le bord inférieur de l'objet domestique et/ou de l'accessoire sanitaire (8).
12. Dispositif de fixation selon la revendication 11, caractérisé en ce que le corps formant ancre (1') a une forme de "C" retourné et comporte le trou de dégagement (26) dans lequel passe le câble métallique (4).

13. Dispositif de fixation selon la revendication 11, caractérisé en ce que le corps formant ancre (1") est constitué d'un élément formant plaque métallique plate ayant une forme de "C" et comporte le trou de dégagement (26") dans lequel passe le câble métallique (4).

14. Dispositif de fixation selon la revendication 11, caractérisé en ce qu'il comporte aussi un embout de câble (29), positionné entre l'extrémité de la gaine (5) et l'ancre (1"), qui comporte un trou dans lequel passe le câble métallique (4) et une cavité (30), dans laquelle l'extrémité de la gaine (5) est positionnée, qui est agencée avec la surface extérieure du corps formant ancre (1") par l'intermédiaire de l'embout de câble (29).