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(11) **EP 1 712 708 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
18.10.2006 Bulletin 2006/42

(51) Int Cl.:
E04H 12/32^(2006.01) G09F 17/00^(2006.01)

(21) Application number: **06075909.9**

(22) Date of filing: **10.04.2006**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**
Designated Extension States:
AL BA HR MK YU

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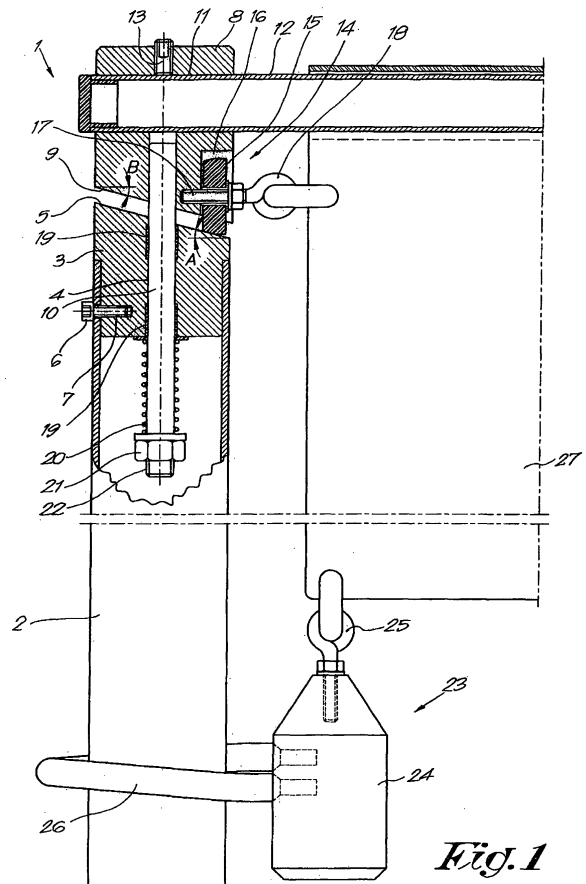
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(30) Priority: **12.04.2005 BE 200500192**

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(54) **Improved flagpole**

(57) Improved flagpole which mainly consists of an actual pole (10) and a jib (12) extending crosswise to the pole on which a flag (27), banner or the like can be hung, characterised in that the above-mentioned flagpole (1) is provided with readjusting means which will always pull back the jib (12) into the same direction when there is no wind, and which allow for a 360° rotation of the jib (12) round the pole (2).



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Description

[0001] The present invention concerns an improved flagpole.

[0002] In particular, the invention concerns a flagpole which mainly consists of an actual pole and what is called a jib in the form of a rod directed crosswise to the pole, to which a flag, banner or the like can be hung, as it is provided for example with loops or what is called a "tunnel" with which it is shifted over the jib, such that the flag or the like is always stretched, even when there is no or little wind, and thus is easily readable.

[0003] Flagpoles whose jib is provided freely hinging over 360° to the pole are already known, so as to allow the flag to turn in the wind and to thus prevent the flag or jib from being torn off or from breaking off when the wind is fierce.

[0004] On the bottom side of the flag or the like is often hung a ring-shaped weight which extends round the pole and which makes sure that the flag keeps hanging taut along the pole.

[0005] A disadvantage of the known flagpoles is that they turn depending on the direction of the wind, as a result of which a flag, banner or the like is not always well visible on such a pole from certain desired angles.

[0006] Thus, for example with flags erected on the street side, it is indicated that they are always well visible to passers-by, of course.

[0007] Flagpoles which are equipped with an actual pole and a jib provided crosswise to said pole at the top of it and which are constantly forced into a fixed point of departure by means of a spring are already known as well.

[0008] As a result, the flag, banner or the like provided on the pole is always visible from a certain angle.

[0009] A disadvantage of such flagpoles is that, due to the presence of the above-mentioned spring, the jib cannot freely rotate over 360° and thus cannot always freely position itself in the wind, such that when there are fierce gusts of wind or when the wind turns a lot, the flag can be ripped off the pole or even the spring system may break down.

[0010] The present invention aims to remedy one or several of the above-mentioned and other disadvantages.

[0011] To this end, the present invention concerns an improved flagpole which mainly consists of an actual pole and a jib which extends crosswise to the pole on which a flag, banner or the like can be hung and which is hinge-mounted to said pole, whereby the above-mentioned flagpole is provided with readjusting means which will always pull back the jib into the same direction when there is no wind, and which allow for a 360° rotation of the jib round the pole.

[0012] A major advantage of such an improved flagpole is that a flag, banner or the like which is hung on such an improved flagpole is always readable from certain desired angles, since the above-mentioned readjust-

ing means will always pull back the flag's jib into the same position.

[0013] Another advantage of such an improved flagpole is that the above-mentioned jib can rotate freely in relation to the pole at an angle of 360°, so that damage caused by possible wind gusts or the like is avoided.

[0014] The above-mentioned jib is preferably provided on the pole by means of a hinge with two hinge elements resting on each other and which are hinge-mounted to each other by means of a pin in the axial direction of the pole, and whereby the readjusting means are formed in that at least one of said hinge elements has a slanting surface forming a supporting surface for the other hinge element.

[0015] With such an embodiment of an improved flagpole according to the invention, the readjusting effect of the readjusting means is obtained thanks to the impact of the gravitational force which makes sure that the top-most hinge element will always aim at a bottommost position, such that a rotation of the hinge parts in relation to each other and thus of the jib in relation to the pole is obtained.

[0016] An advantage of such an improved flagpole according to the invention is that its construction is relatively simple and easy to maintain.

[0017] Another advantage of such an improved flagpole is that by adjusting the angle of inclination of the above-mentioned slanting surface, the rotation of the jib in relation to the pole can be adjusted to a specific wind force.

[0018] In a preferred embodiment of an improved flagpole according to the invention are provided elastic means exerting a force on one of the above-mentioned hinge parts, such that this hinge part is forced to the other hinge part.

[0019] This is advantageous in that the return effect of the above-mentioned hinge part under the influence of the gravitational force is supported by the action of the above-mentioned elastic means, such that a large resistance against the action of gusts and the like can be obtained.

[0020] In order to better explain the characteristics of the present invention, the following preferred embodiments of an improved flagpole according to the invention are given as an example only without being limitative in any way, with reference to the accompanying drawings, in which:

figure 1 schematically represents a section of an improved flagpole according to the invention provided with a flag;

figure 2 represents a variant according to figure 1.

[0021] Figure 1 represents an improved flagpole 1 according to the invention which is provided with an actual pole in the shape of a tube which is sealed at its top free end by means of a first hinge part 3 with a central con-

tinuous bore 4 which extends in the axial direction of the pole 2.

[0022] The above-mentioned first hinge part 3 is provided with readjusting means at the top which in this case are formed of a slanting surface 5 enclosing an angle A with a surface which is perpendicular to the axial shaft of the pole 2.

[0023] In this case, the first hinge part 3 is fixed to the above-mentioned pole 2 by means of a bolt 6 extending through the wall of the pole 2 and in the above-mentioned first hinge part 3, which is provided with a thread opening 7 to this end.

[0024] It is clear that the first hinge part 3 can also be fixed to the pole 2 by means of gluing, pressing, snapping-in or other fixing techniques.

[0025] An improved flagpole 1 according to the invention is additionally provided with a second hinge part 8 placed on top of the above-mentioned pole 2 and which is provided with a bottom wall 9 on which is centrally provided a downward directed pin 10 which can work in conjunction with the above-mentioned bore 4 in the first hinge part 3 so as to form a hinge.

[0026] Through the above-mentioned second hinge part 8, crosswise to the longitudinal direction of the pole, extends an opening 11 through which is provided a jib 12 which, in this case, is clamped in this second hinge part 8 by means of a bolt 13 with a countersunk head.

[0027] The jib 12 is in this case formed of a tube extending on one side up to a distance of the above-mentioned second hinge part 8.

[0028] The bottom wall 9 of the second hinge part 8 is inclined as well in this case, such that this bottom wall 9 encloses an angle B with a surface, perpendicular to the axial longitudinal direction of this second hinge part 8.

[0029] The above-mentioned second hinge part 8 is in this case provided with guiding means 14 on its bottom wall 9, which are made in the shape of a wheel 15 extending in a recess 16 in a side wall of the second hinge part 8 and which can rotate round a shaft 17 which extends in a direction perpendicular to the axial direction of this second hinge part 8.

[0030] The above-mentioned wheel 15 is in this case provided with two treads on its peripheral edge which can work in conjunction with the above-mentioned slanting surface on the above-mentioned first hinge part 3.

[0031] The above-mentioned shaft 17 is in this case formed of a screw bolt screwed in a side wall of the above-mentioned second hinge part 9 with one far edge, and which is provided with an eye 18 on its other free end which is provided under the above-mentioned jib 12, in particular on the side of the second hinge part 8 whose above-mentioned jib 12 is a protruding jib and where the perpendicular distance between the jib 12 and the bottom wall 9 is the largest.

[0032] When an improved flagpole 1 according to the invention is assembled, the above-mentioned pin 10 can be axially moved and can freely rotate over 360° through the bore 4, in this case by means of slide bearings 19

held in the first hinge part 3.

[0033] Over the above-mentioned pin 10 are provided elastic means which make sure that the second hinge part 8 is drawn towards the first hinge part 3 and which in this case are made in the form of a compression spring 20, which spring 20 is held between the above-mentioned first hinge part 3 and a collar near the free end of the above-mentioned pin 10, which collar is formed of a nut 21 provided over a threaded part 22 on the free end of the above-mentioned pin 10.

[0034] An improved flagpole 1 according to the invention is additionally provided with a counterweight 23 which is provided with a body 24 onto which is provided a suspension eye 25 at the top, and with a rubber cord 26 extending round the pole 2, both ends of which are connected to the body 24.

[0035] The fastenings of the respective far ends of the cord 26 to the above-mentioned body 24 are provided practically on top of one another according to the invention.

[0036] The use and working of an improved flagpole 1 according to the invention is very simple and as follows.

[0037] Preferably, but not necessarily, the above-mentioned pole 2 is provided with a tumble construction at the bottom, not represented in the figures, which makes it possible to tumble the pole 2, such that the top side of the flagpole 1 is easily accessible.

[0038] In order to attach a flag 27, banner or the like, this flag 27 is provided with loops or a so-called tunnel 28 on one side edge which are formed of a hemmed part of the flag 27 which is shifted over the above-mentioned jib 12.

[0039] In order to prevent the flag from flying off the flagpole 1 under the influence of wind or the like, it is attached with its respective cringles to the above-mentioned eyes 13 and 25.

[0040] When there is a lull, the second hinge part 8 will be situated in its lowest position in relation to the pole 2 under the influence of the gravitational force and as the above-mentioned spring 20 will then be situated in its rest position, whereby it exerts a minimal force on the above-mentioned second hinge part 8.

[0041] When the wind is getting up, it will rotate the above-mentioned second hinge part 8 round the pole 2 in the axial direction thereof, as it rolls the above-mentioned wheel 15 over the slanting surface 5 of the first hinge part 3.

[0042] As the angle of rotation increases in relation to the rest position, the resistance against rotation of the second hinge part 8 and the jib 12 attached thereto will increase, as the above-mentioned spring 20 is compressed on the one hand, and as a result of the increased height of the second hinge part 8 in relation to the pole 2 on the other hand.

[0043] When the wind-force diminishes again, the second hinge part 8 will go back into its rest position, i.e. its lowest position in relation to the pole 2, under the influence of the gravitational force and the above-mentioned

spring 20.

[0044] When the above-mentioned second hinge part 8 rotates over an angle of more than 180° in relation to the rest position, due to a gust or the like, the second hinge part 8 will rotate further to its rest position, under the influence of the gravitational force and the spring 20, such that the jib 12 can make a full rotation with an improved flagpole 1 according to the invention.

[0045] An advantage of the use of the above-mentioned spring 20 is that the recoil strength which is exerted on the jib 12 can be adjusted, in this case for example by screwing the nut 21 further on or off the threaded part 22 of the pin 10, as a result of which the spring is compressed further or less far.

[0046] The above-mentioned counterweight 23 makes sure that the flag 27 is always readable, also when it is windy, as the above-mentioned rubber cord 26 counteracts an upward movement of the weight 23 by knotting.

[0047] Since the far ends of the rubber cord 26 are attached to the body 24 practically on top of one another, the weight 23 is prevented from bumping against the pole 2 and thereby damaging the pole 2, such that any clanging of the weight 23 against the pole can be avoided.

[0048] Figure 2 represents a variant of an improved flagpole 1 according to the invention, whereby the above-mentioned second hinge part 8 is attached to a shell-shaped intermediate bush 28, which in this case is fixed in the top far end of the pole 2 by means of a bolt 5.

[0049] Such an embodiment is advantageous in that the second hinge part 8 with the jib 12 can be made according to standard dimensions and a standard shape, whereas it can be used in combination with poles having various dimensions or shapes.

[0050] It is clear that the bottom wall 9 of the second hinge part 8 according to the invention must not be inclined in relation to a plane which is perpendicular to the axial direction of the pole 2, but that this bottom wall can be situated in such a plane as well.

[0051] Naturally, the angle A of the slanting surface of the first hinge part 3 and the angle B of the bottom wall 9 of the second hinge part 8 may differ from one another.

[0052] According to an embodiment which is not represented in the figures, it is possible that the bottom wall 9 of the second hinge part 8 is inclined, whereas the top wall of the first hinge part 3 is straight.

[0053] In such an embodiment are preferably provided guiding means 14 on the top wall 5 of the first hinge part 3, and the second hinge part 8 is bearing-mounted round the above-mentioned pin 10, whereas this pin 10 is connected to the first hinge part 3 in an immovable manner.

[0054] Naturally, the above-mentioned guiding means 14 can be made in many ways, such as for example in the form of a pin which can slide over the slanting surface 5, a thrust bearing or the like.

[0055] The guiding means 14 can also be formed in that the hinge parts 3 and 8 can be made for example with copper slide faces 5, 9 respectively, sliding over each other.

[0056] It also goes without saying that the above-mentioned elastic means can be made in many different ways, such as for example in the form of a draw spring which draws the above-mentioned pin to a bottommost rest position.

[0057] The present invention is by no means limited to the embodiments given as an example and represented in the accompanying drawings; on the contrary, such an improved flagpole 1 according to the invention can be made in all sorts of shapes and dimensions while still remaining within the scope of the invention.

Claims

1. Improved flagpole which mainly consists of an actual pole (10) and a jib (12) extending crosswise to the pole on which a flag (27), banner or the like can be hung, **characterised in that** the above-mentioned flagpole (1) is provided with readjusting means which will always pull back the jib (12) into the same direction when there is no wind, and which allow for a 360° rotation of the jib (12) round the pole (2).
2. Improved flagpole according to claim 1, **characterised in that** the above-mentioned jib (12) is provided on the pole (2) by means of a hinge with a first hinge element (3) and a second hinge element (8) resting on the above-mentioned first hinge element (3), whereby these hinge elements (3 and 8) are hinged-mounted to each other in the axial direction of the pole (2) by means of a pin (10) and whereby the readjusting means are formed **in that** at least one of these hinge elements (3 or 8) is provided with a slanting surface (5 or 9) which forms a supporting surface for the other hinge element.
3. Improved flagpole according to claim 1 or 2, **characterised in that** guiding means (14) are provided on one hinge element (3 or 8) which work in conjunction with the above-mentioned slanting surface (9 or 5) of the other hinge element (8 or 3).
4. Improved flagpole according to claim 3, **characterised in that** the above-mentioned slanting surface (5) is provided on the above-mentioned first hinge element (3) and **in that** the above-mentioned guiding means (14) are provided on the second hinge element (8).
5. Improved flagpole according to claim 3, **characterised in that** the above-mentioned slanting surface (9) is provided on the above-mentioned second hinge element (8) and **in that** the above-mentioned guiding means (14) are provided on the above-mentioned first hinge element (3).
6. Improved flagpole according to one or several of

claims 3 to 5, **characterised in that** the above-mentioned guiding means (14) are formed of a wheel (15) which is provided on an above-mentioned hinge element (3 or 8) in a notable manner.

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7. Improved flagpole according to one or several of claims 2 to 6, **characterised in that** elastic means are provided which exert a force on at least one of the above-mentioned hinge parts (3 and/or 8), such that this hinge part (3 and/or 8) is forced to the other hinge part. 10
8. Improved flagpole according to claim 7, **characterised in that** the above-mentioned elastic means consist of a spring (20) provided round the above-mentioned pin (10) and which is held between the above-mentioned first hinge part (3) on the one hand and a collar near the free end of the above-mentioned pin (10) on the other hand. 15
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9. Improved flagpole according to claim 2, **characterised in that** the above-mentioned first hinge part (3) is held in an intermediate bush (28) fixed to the top end of the above-mentioned pole (2). 25
10. Improved flagpole according to one or several of the preceding claims, **characterised in that** it is provided with a counterweight (23) which mainly consists of a body (24) and a rubber cord (26) whose free ends are fixed to the above-mentioned body (24). 30
11. Improved flagpole according to claim 9, **characterised in that** far ends of the above-mentioned cord (26) are fixed to the above-mentioned body (24) practically on top of each other. 35

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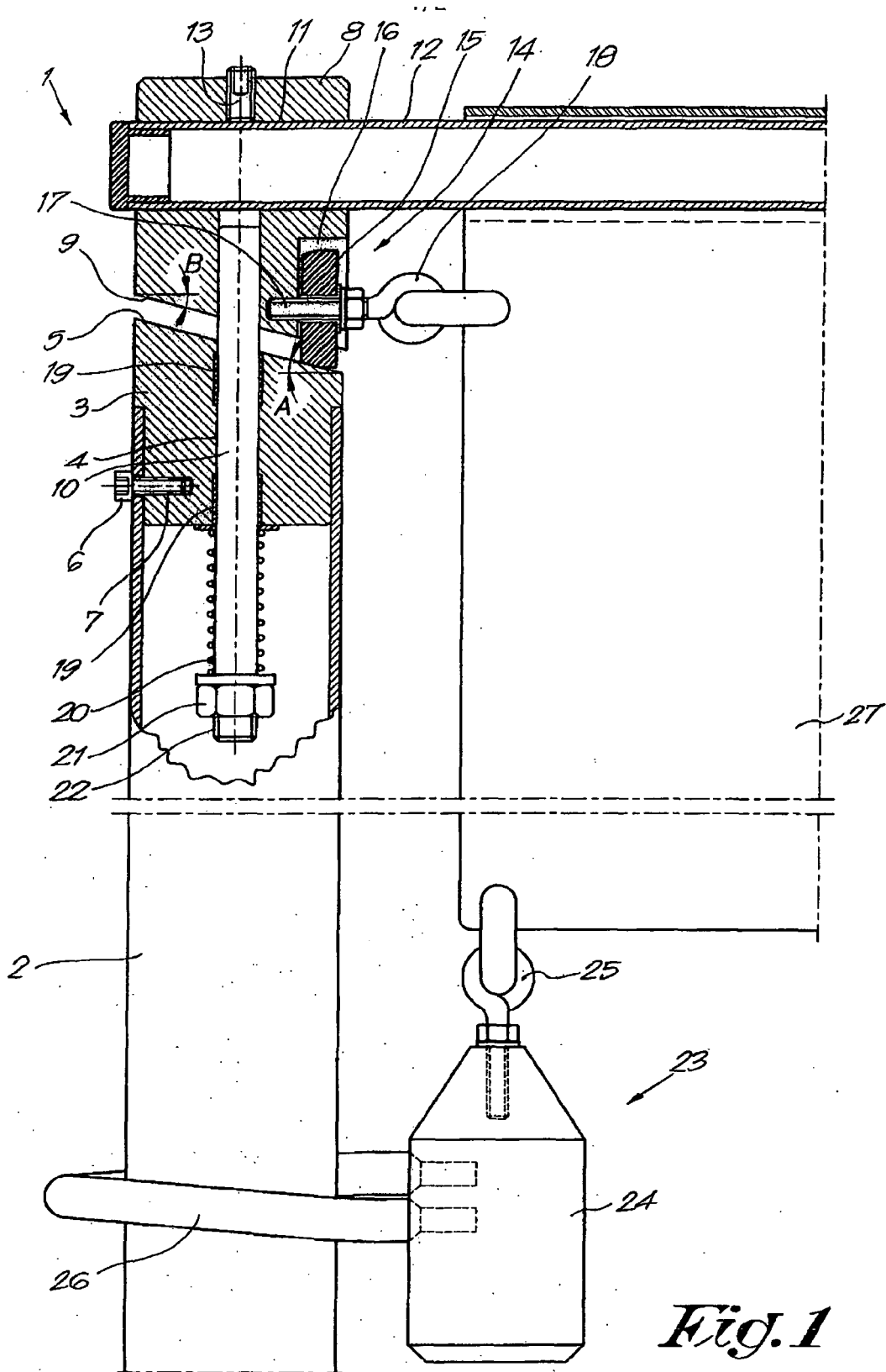


Fig. 1

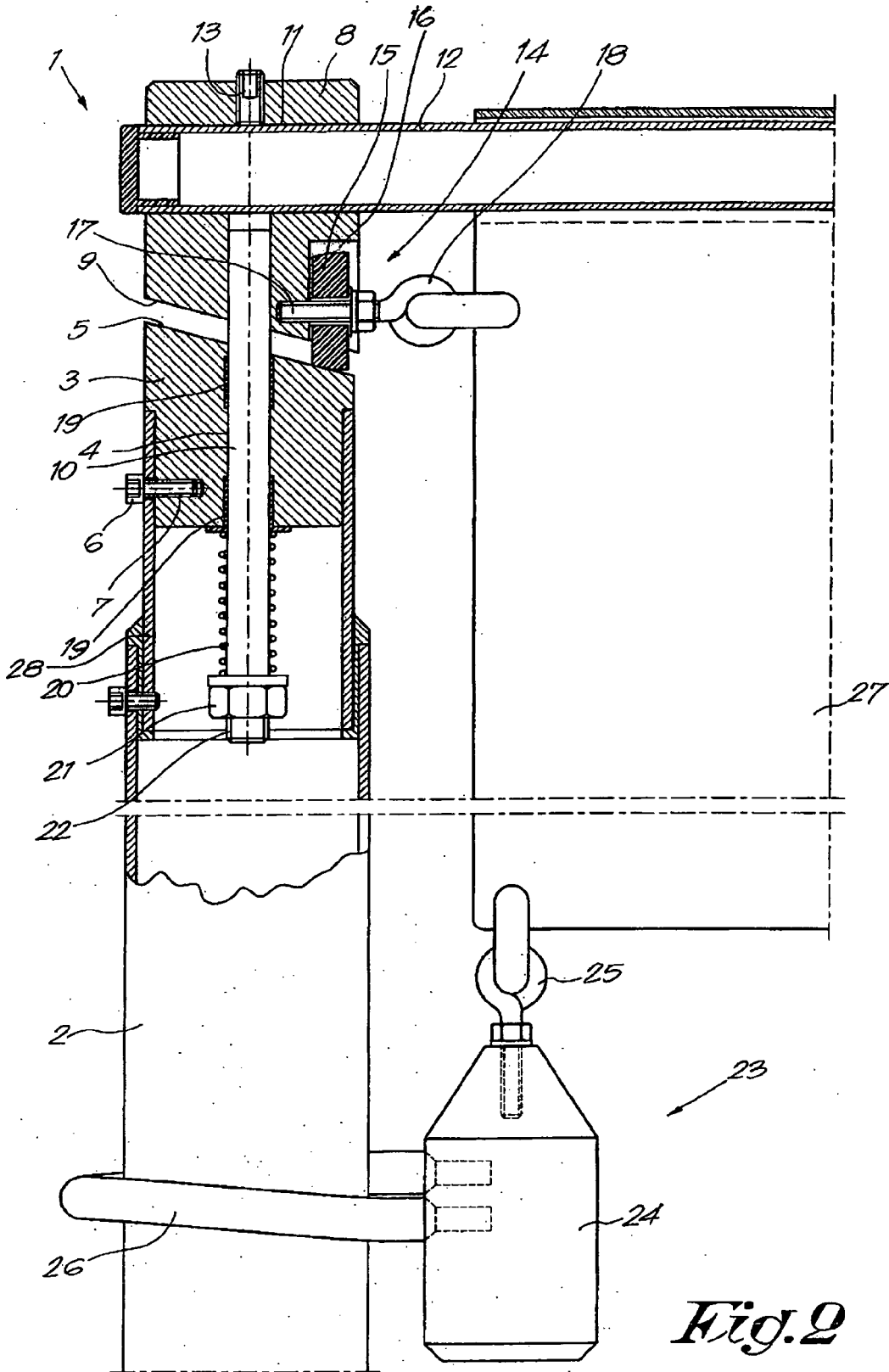


Fig. 2



DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	----- DE 203 03 861 U1 (SENSEWERK SONNLEITHNER GES.M.B.H. & CO. KG, LOSENSTEIN) 8 May 2003 (2003-05-08) * the whole document *	1	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			E04H G09F
Place of search		Date of completion of the search	Examiner
The Hague		20 June 2006	Fordham, A
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	

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EPO FORM 1503.03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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20-06-2006

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82