



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 195 482 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
10.04.2002 Bulletin 2002/15

(51) Int Cl.7: **E05B 3/06**

(21) Application number: **01203668.7**

(22) Date of filing: **26.09.2001**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **van Parys, Remi Emiel**
B-8790 Waregem (BE)

(74) Representative: **Debrabandere, René et al**
Bureau De Rycker nv
Arenbergstraat 13
2000 Antwerpen (BE)

(30) Priority: **04.10.2000 BE 200000628**

(71) Applicant: **van Parys, Remi Emiel**
B-8790 Waregem (BE)

(54) Device for operating a closing mechanism of a window

(57) The invention concerns a device for operating a closing mechanism of a window, in particular of a side-hung window or a side-hung / tilting window, which device contains a handle (1) and a rosette (9), character-

ised in that means (13,14) are provided in the rosette (9) which, in conjunction with means (3-6) provided on the handle (1), make it possible to snap in the handle (1) in the rosette (9).

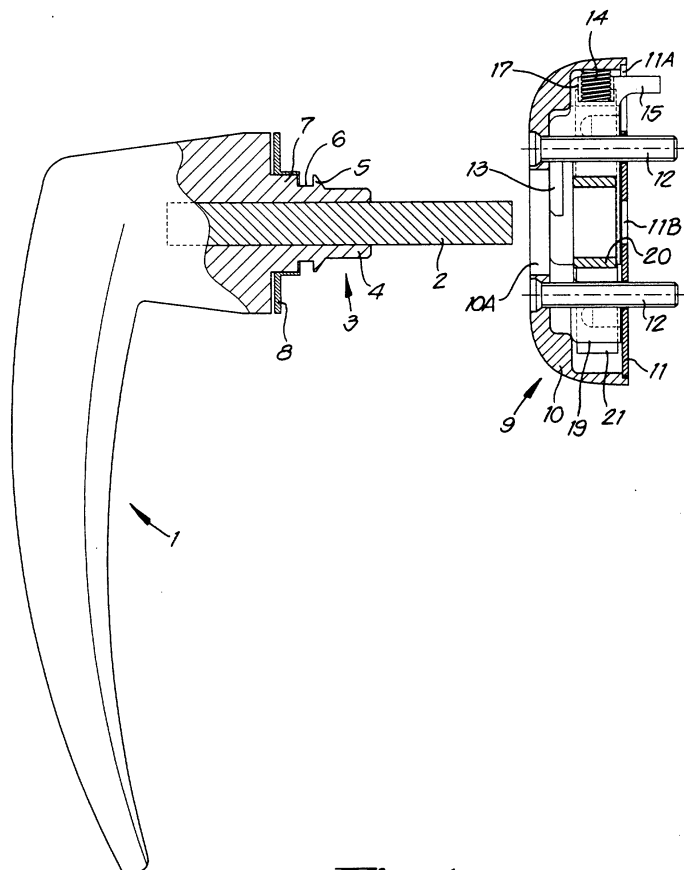


Fig. 1

EP 1 195 482 A1

Description

[0001] The present invention concerns a device for operating a closing mechanism of a window, in particular a side-hung window or a side-hung / tilting window, which device contains a handle and a rosette.

[0002] Door or window frames are generally equipped with a handle to simply open the window in a horizontal plane or to tilt the window in a vertical plane into a more or less restricted angular position.

[0003] When new buildings are erected or when new windows are placed, it would be interesting, in general, to be able to transport the windows and to provide them inside the building without the handles being present on these windows.

[0004] Thus, for example, during the conveyance of the windows without the hampering handles, the handles and/or the windows cannot be damaged, and a lot of space can be saved, so that it is possible to carry more windows per freight.

[0005] It is also advantageous to place the handles only on the windows after the windows or window doors have been fixed in the building, whereby the handle cannot be damaged while the window is being placed. Moreover, the handle can be designed such that it covers the fixing screws of the rosette, so that they are no longer visible as soon as the handle has been fixed on the window, which is esthetical.

[0006] Consequently, the invention aims a device for operating the closing mechanism of a window whereby the handle can be placed on the window in a simple and efficient manner after the window has been conveyed from the workshop to the building site and after the window has been placed in a building.

[0007] This aim is reached according to the invention in that means are provided in the rosette which, in conjunction with means provided on the handle, make it possible to snap in the handle in the rosette.

[0008] The means provided on the handle can have a short shank provided with a recess, in particular a ring-shaped groove, and preferably also provided with a collar which is bevelled on the side of the far end of the short shank.

[0009] The means provided in the rosette may contain a sliding piece which can be moved inside the rosette, and which in particular can penetrate in the recess with one part.

[0010] By displacing said sliding piece, the handle can be detached again from the rosette if required, and thus it can be removed.

[0011] The means provided in the rosette preferably also contain elastic means, for example a spring, which pushes the sliding piece into the position in which it sticks in the recess with one part.

[0012] In the rosette can also be provided means, in particular a snap-in ring with a perimeter which is not round but for example square, co-operating with two leaf springs, which automatically put the handle, during nor-

mal use, in the horizontal or vertical position.

[0013] All these means which are part of the invention will be further described in the accompanying claims.

[0014] In order to better explain the characteristics of the invention, the following preferred embodiment of a device for operating a closing mechanism of a window according to the invention is described as an example only without being limitative in any way, with reference to the accompanying drawings, in which:

figure 1 represents a side view of a device according to the invention whereby the handle and the rosette are separated and are partially represented as a cross-section;

figure 2 represents a composed side view analogous to that in figure 1, but with the handle mounted on the rosette;

figure 3 represents a view of the rear side of the rosette with the handle placed in it, without the cover plate;

figure 4 represents a view in perspective of a part which is situated in the rosette and which co-operates with means of the handle.

[0015] Figure 1 represents a handle 1 in which is provided, as usual, a pin 2 with a square section which co-operates with the closing mechanism (not represented) for closing or opening, namely turning or tilting the window.

[0016] The handle 1 contains a short shank 3 which partially supports the far end of the pin 2. This short shank 3 has a far end 4, a collar 5 which is bevelled towards the far end and a ring-shaped groove 6 between this collar 5 and a round base part 7 upon which is placed an intermediate ring 8.

[0017] The fixed finishing plate or rosette 9 consists of a longitudinal casing 10 which is sealed at the back by a cover plate 11 and which is provided with a centrally situated opening 10A.

[0018] The rosette 9 is fixed on the window post by means of fixing screws 12.

[0019] According to the invention, a sliding piece 13 is situated in the cavity inside the casing 10 which can be moved in the longitudinal direction of the casing 10, namely vertically when the rosette 9 is fixed on the window, and which is pushed down by means of a spiral spring 14, into the position in which one part thereof is situated in front of the opening 10A.

[0020] The sliding piece 13 is preferably provided with a lip 15 at the top which extends backward through an opening 11A in the cover plate 11 outside the rosette 9.

[0021] Said sliding piece 13 according to the invention is represented in detail in figure 4 and consists of a longitudinal element which is provided with the lip 15 at the top and which has a cavity 17 for the spiral spring 14 and a central opening 16.

[0022] In order to guide the sliding piece 13, it has parts 18 on both sides of said opening 16, protruding

towards the back, whereas it contains supporting blocks 19 at the top and at the bottom in which are provided recesses for the fixing screws 12.

[0023] In the central part of the rosette 9, between the parts 18, is also situated a snap-in ring 20 which has a square perimeter so to say and which works in conjunction with two laterally situated leaf springs 21.

[0024] The short shank 3 and the sliding piece 13 with the spiral spring 14 form co-operating means which make it possible to snap-in the handle 1 on the rosette 9.

[0025] In order to mount the handle 1 on the window, it is connected to the rosette 9 in the following manner.

[0026] The square pin 2 of the handle 1 is stuck through the central opening 10A of the rosette 9 and through a square opening 11B in the cover plate 11 into the closing mechanism.

[0027] The edge of the central opening 16 of the sliding piece 13 is hereby pushed up, against the action of the spiral spring 14, due to the bevelled edge of the collar 5.

[0028] The lip 15 of the sliding piece 13 will, just as the square pin 2, penetrate in the cavity of the sleeve of the window post. A part of the window latch is situated outside said sleeve on a narrow side edge of the window post. Thus, an opening must be provided in the side edge of the sleeve for this window latch.

[0029] When the handle 1 is in place, the edge of the central opening 16 of the sliding piece 13 snaps behind the collar 5 into the ring-shaped groove 6 of the short shank 3, so that the handle 1 is fixed to the window rosette 9 and consequently to the window post.

[0030] The basic part 7 is situated with the part of the intermediate ring 8 lying around it in the opening 10A of the casing 10.

[0031] The far end 4 of the short shank 3 is situated in the snap-in ring 20.

[0032] When the handle 1 is turned, the snap-in ring 20 will be taken along and push the laterally erected leaf springs 21 outward.

[0033] Thanks to the action of the leaf springs 21, the handle 1 will be forced either in the horizontal or in the vertical position.

[0034] The sliding piece 13 is designed such that said leaf springs 21 fit between the parts 18 protruding backward and the supporting blocks 19 of the sliding piece 13 without hindering the outward movement of said leaf springs 21.

[0035] If one wants to detach the handle 1 from the window post, one can move the sliding piece 13 up by means of the lip 15, against the action of the spiral spring 14, so that the edge of the central opening 16 of the sliding piece 13 is drawn out of the groove 6, as a result of which the handle 1 can be freely moved backward, away from the rosette 9 of the window.

[0036] The lip 15, which is situated inside the sleeve of the window post, can be operated via the opening in the side of the sleeve of the window post, which is required for the closing mechanism and which is made

sufficiently large so as to also reach the lip 15. Of course, this is only possible when the window is turned open or tilted open.

[0037] Normally, the handle 1 is placed on the window for the first time after the window has been provided in the building, and the handle 1 is not detached anymore afterwards. In case of a defect or an incorrect mounting, it is always possible, however, to detach the handle 1 in a simple manner and to possibly replace it as described above.

[0038] Apart from the major advantage that the handle 1 no longer forms a hindrance during transport, the simple and quick mounting as well as the possibility to easily replace the handle 1 also offers a major advantage which is obtained thanks to the present invention.

[0039] When the handle 1 is mounted according to the invention or when the handle 1 is replaced, the risk of damaging this handle is excluded, which is not always the case with handles according to the present state of the art, which, in most cases, are fixed with fixing means in the sleeve of the window post in relation to the window latch.

[0040] The invention is by no means limited to the above-described embodiments represented in the accompanying drawings; on the contrary, such a device for operating the closing mechanism of a window can be made in all sorts of variants while still remaining within the scope of the invention, as described in the accompanying claims.

Claims

1. Device for operating a closing mechanism of a window, in particular of a side-hung window or a side-hung / tilting window, which device contains a handle (1) and a rosette (9), **characterised in that** means (13, 14) are provided in the rosette (9) which, in conjunction with means (3-6) provided on the handle (1), make it possible to snap in the handle (1) in the rosette (9).
2. Device according to claim 1, **characterised in that** the means (3-6) provided on the handle (1) have a short shank (3) which is provided with a recess (6).
3. Device according to claim 2, **characterised in that** the recess is a ring-shaped groove (6).
4. Device according to claim 2 or 3, **characterised in that** the short shank (3) is provided with a collar (5) which is bevelled on the side of the far end of the short shank (3).
5. Device according to any of the preceding claims, **characterised in that** the means (13-14) provided in the rosette (9) comprise a sliding piece (13) which can be moved inside the rosette (9).

6. Device according to claims 2 and 5, **characterised in that** the sliding piece (13) can penetrate inside the recess (6) with one part.
7. Device according to claim 6, **characterised in that** the means (13-14) provided in the rosette (9) comprise elastic means (14) which push the sliding piece (13) into the position in which it sticks in the recess (6) with one part.
8. Device according to any of claims 5 to 7, **characterised in that** the sliding piece (13) is provided with a lip (15) which extends outside through an opening (11A) in the cover plate (11).
9. Device according to any of claims 5 to 8, **characterised in that** the sliding piece (13) is provided with a central opening (16) which is surrounded by backward protruding parts (18) on both sides, whereas supporting blocks (19) are provided at the top and at the bottom.
10. Device according to any of the preceding claims, **characterised in that** the rosette (9) consists of a casing (10) which is sealed at the back by a cover plate (11).
11. Device according to any of the preceding claims, **characterised in that** a snap-in ring (20) with a non-circular perimeter is provided in the rosette (9), between two laterally situated leaf springs (21) cooperating with the latter, in which snap-in ring (20) fits a part of the handle (1).
12. Device according to claims 2 and 11, **characterised in that** the snap-in ring (20) fits on a far end (4) of the short shank (3).
13. Device according to claims 9 and 11, **characterised in that** the snap-in ring (20) is situated on the back side of the sliding piece (13), opposite to the central opening (16) in the sliding piece (13), between the two leaf springs (21) situated laterally in relation to the central opening (16) and which extend between the supporting blocks (19) and the backward protruding parts (18) of the sliding piece (13).

50

55

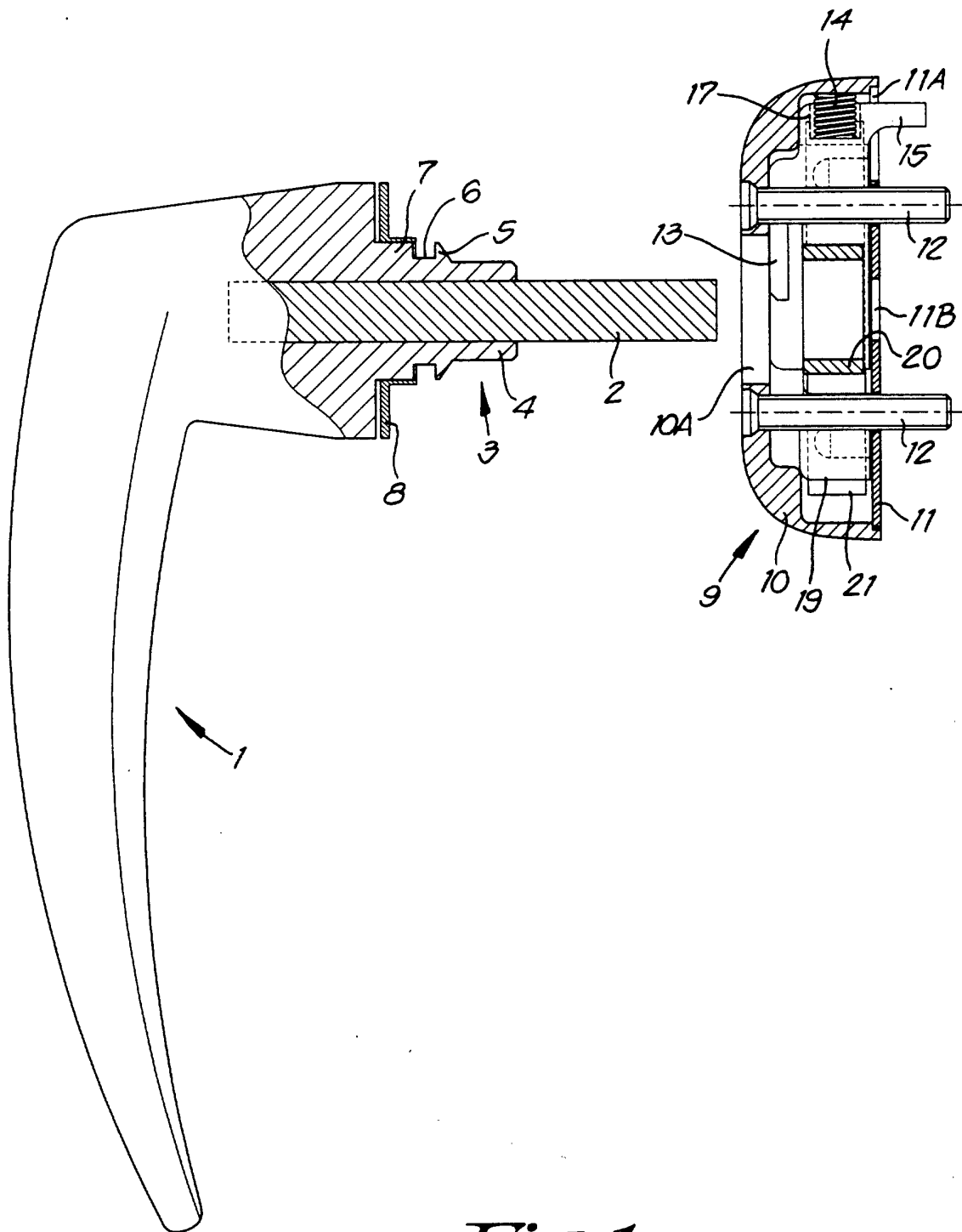


Fig. 1

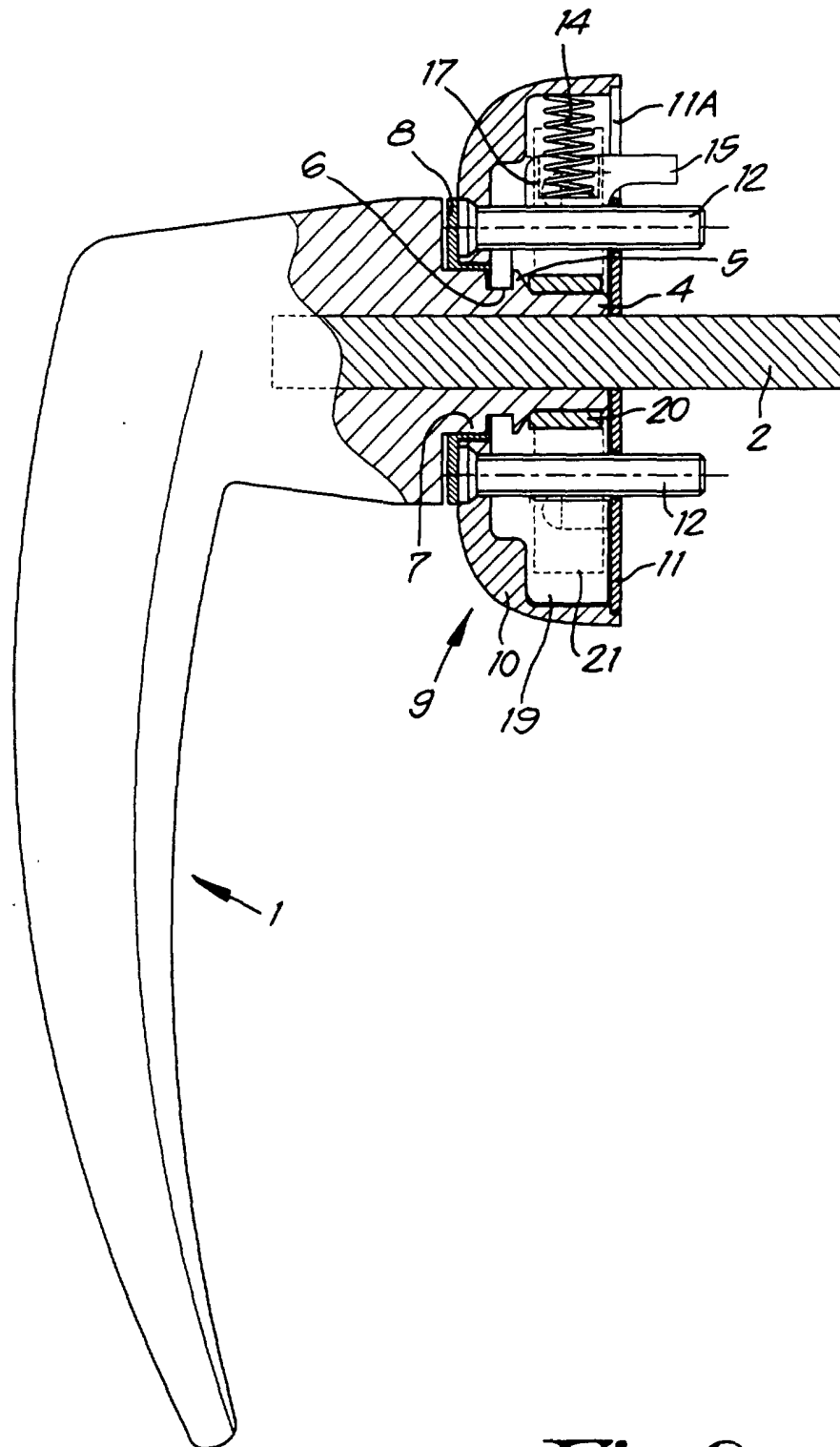


Fig. 2

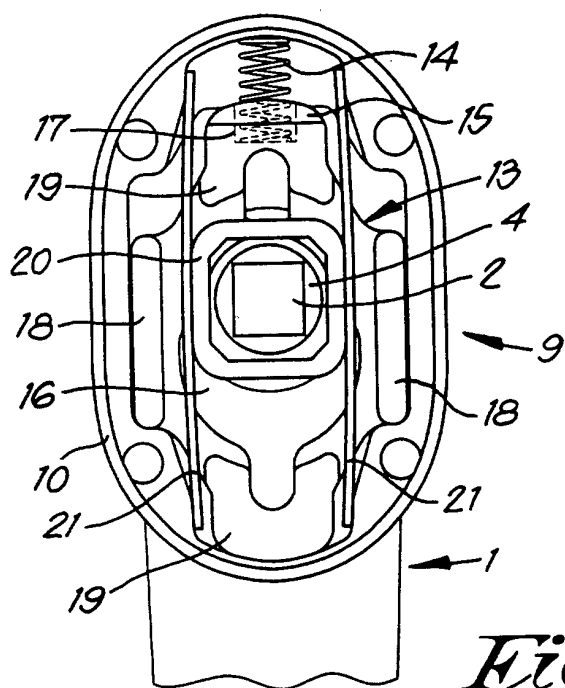


Fig. 3

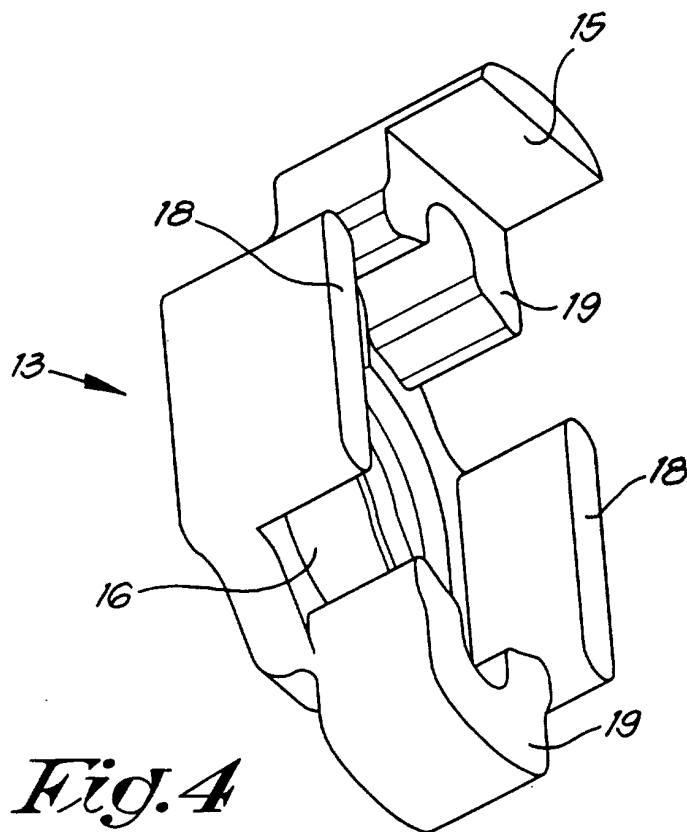


Fig. 4



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 20 3668

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 193 081 A (WILKE) 3 September 1986 (1986-09-03) * the whole document *	1-13	E05B3/06
X	EP 0 754 826 A (HEWI HEINRICH WILKE GMBH) 22 January 1997 (1997-01-22) * the whole document *	1-13	
X	FR 2 317 451 A (FERCO INTERNATIONAL USINE DE FERRURES DE BATIMENT) 4 February 1977 (1977-02-04) * the whole document *	1-7	
A		8-13	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E05B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 17 January 2002	Examiner Van Beurden, J
CATEGORY OF CITED DOCUMENTS 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		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 & : member of the same patent family, corresponding document	

EPO FORM 1503 03 82 (P04C01)

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

EP 01 20 3668

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-01-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0193081	A	03-09-1986	DE	3604115 A1	04-09-1986
			AT	78892 T	15-08-1992
			DE	3686179 D1	03-09-1992
			EP	0193081 A2	03-09-1986
EP 0754826	A	22-01-1997	DE	29511544 U1	21-11-1996
			EP	0754826 A2	22-01-1997
FR 2317451	A	04-02-1977	FR	2317451 A1	04-02-1977
			DE	2629219 A1	02-06-1977
			DE	7620591 U1	21-06-1979