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(54) **Door and window bolt**

(57) A door and window bolt comprising a lock seat (4) and two groups of bolt seats (5) is provided wherein a handle (41) and a lock fastener (42) control the movement of lock the seat (4), a connection piece (43) in proper length is respectively fixed at its upper/lower ends, a fixture (51) pivots a pin bolt (52) to make bolt seat (5) embedded into the end of the connection piece (43), an end board of the fixture (51) sets through a hole (53) to insert the end of the pin bolt (52), a side board is hinged with an active plate (54), the pin bolt (52) can pass through one end of the through hole (53), its other end is a tooth slot (55) of guide section (56). A door and window bolt applicable to a door or window is thereby made; lock seat (4) and bolt seat (5) can be installed separately by clamping guide section (56) and active plate (54), so that door and window bolt can improve the application and installation efficiency of a door or window.

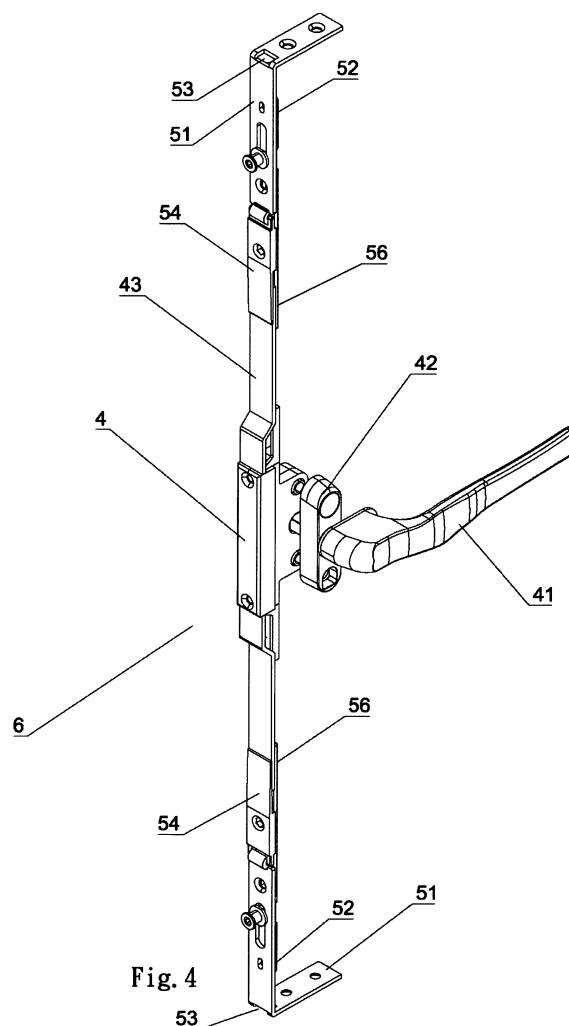


Fig. 4

Description

BACKGROUND OF THE INVENTION

1) FIELD OF THE INVENTION

[0001] This invention relates to a door and window bolt in which respective bolt seats fixed at upper/lower end of a door or window are provided to assemble and to position a connection piece of a lock seat with support of an active plate connected by hinge and guide section, so as to make a door and window bolt framework that is easy to install and to select specifications. The length of the connection piece can be cut off properly for all types of doors and windows as required.

2) DESCRIPTION OF THE PRIOR ART

[0002] Reference is made to Fig.1 and Fig.2 for an existing structure of a door and window bolt, which are taken from the specification to obtain European patent No. 671530, wherein seat 1 is connected with the extended connection piece 11 at two ends, which are respectively embedded into tooth guide section 21 of one group of bolt seat 2, so that connection piece 11 can drive another pin bolt of bolt seat 2 to extend out or inward for open and close; then, two ends of press lock 3 connect press piece 31 so that it can just press down guide section 21 to let bolt seat 2 move along a track; only such structure combination can match with the installing door or window.

SUMMARY OF THE INVENTION

1. Problem to be solved:

[0003]

(A) According to the known patent, all the components have to be assembled first before installing on door and window; so the length of tooth guide section 21 must be cut off precisely, otherwise it might not be applicable to the installation specification of assembly. So it is difficult in practical construction.

(B) If mistakes in installing this structure are made (either cut too long or too short), it may not fit the installation specification, so that the whole structure must be taken out completely and press lock 3 and press piece 31 have to be dismantled; length of tooth guide section 21 can be adjusted smoothly. So, it is inconvenient in application.

2. Solutions:

[0004]

(1) The Door and window bolt of this invention in which respective bolt seats fixed at the upper/lower

end of a door or window are provided to assemble and to position a connection piece of a lock seat with support of an active plate connected by hinge and guide section, so as to make a door and window bolt framework that is easy to install and to change specifications. The length of the connection piece can be cut off properly for all types of doors and windows as required.

(2) Owing to the flexible installation mode, the connection piece can be cut off precisely according to the fixed distance between the bolt seats, so that there is almost no error in application.

(3) According to this invention, the external rim of a door or window can directly use hinge of an active plate to let the connection piece of a lock seat drop off, so that the lock seat can be taken out easily and the applied length of connection piece can be changed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005]

Fig.1 is the exploded view of the door and window bolt of the prior patent.

Fig.2 is the combination sketch map of the door and window bolt of the prior patent.

Fig.3 is the exploded view of the door and window bolt of this invention.

Fig.4 is the exploded combination map of the door and window bolt of this invention.

Fig.5 is the assembly sketch map of the door and window bolt of this invention.

Fig.6 is another assembly sketch map of the door and window bolt of this invention.

DETAILED DESCRIPTION OF THE INVENTION

[0006] Reference is made to Fig.3, Fig.4 and Fig.5, Fig.6, where embodiments and examples of the door and window bolt of this invention are illustrated,

[0007] This invention is directed to a door and window bolt comprising a lock seat 4 and two groups of bolt seats wherein a handle 41 and a lock fastener 42 control movement of the lock seat 4, a connection piece 43 is respectively fixed at its upper/lower ends, which is folded by tooth and flat piece so that tensile force is promoted accordingly; a fixture 51 pivots a pin bolt 52 to make the bolt seat 5 embedded into the end of the connection piece 43, an end board of the fixture 51 sets through a hole 53 to insert the end of the pin bolt 52, and a side board is provided to connect an active plate 54 with hinge; one end of pin bolt 52 can pass through one end of through hole 53, its other end is a tooth slot 55 of the guide section 56, a door and window bolt applicable to a door or window is thereby made; lock seat 4 and bolt seat 5 can be installed separately by clamping guide section 56 and active plate 54; so, one can first install the bolt seat 5 at the

upper/lower end of the door or window, and then cut off the connection piece 43 precisely according to the practical spacing, so that the lock seat 4 is perfectly suitable for the bolt seat 5 (Fig.5 is applicable to longer spacing and Fig.6 is applicable to shorter spacing). Therefore, the said door and window bolt 6 can improve the application and installation efficiency of a door or window.

[0008] To sum up above descriptions, this invention improves the structure of a door and window bolt which can be installed or dismantled separately.

Claims

1. Door and window bolt comprising a lock seat (4) and two groups of bolt seats (5) wherein a handle (41) and a lock fastener (42) control the movement of the lock seat (4), a connection piece (43) in proper length is respectively fixed at the upper/lower end of the lock seat (4) a fixture (51) pivots a pin bolt (52) to make the bolt seat (5) embedded into the end of the connection piece (43), an end board of the fixture (51) sets through a hole (53) to insert the end of the pin bolt (52), a side board is hinged with an active plate (54), the pin bolt (52) can pass through one end of the through hole (53), its other end being a tooth slot (55) of a guide section (56) and lock seat (4) and bolt seat (5) are capable to be installed separately by clamping guide section (56) and active plate (54)
2. Door and window bolt as claimed in claim 1 wherein the connection piece (43) is foldable by tooth piece and flat piece.

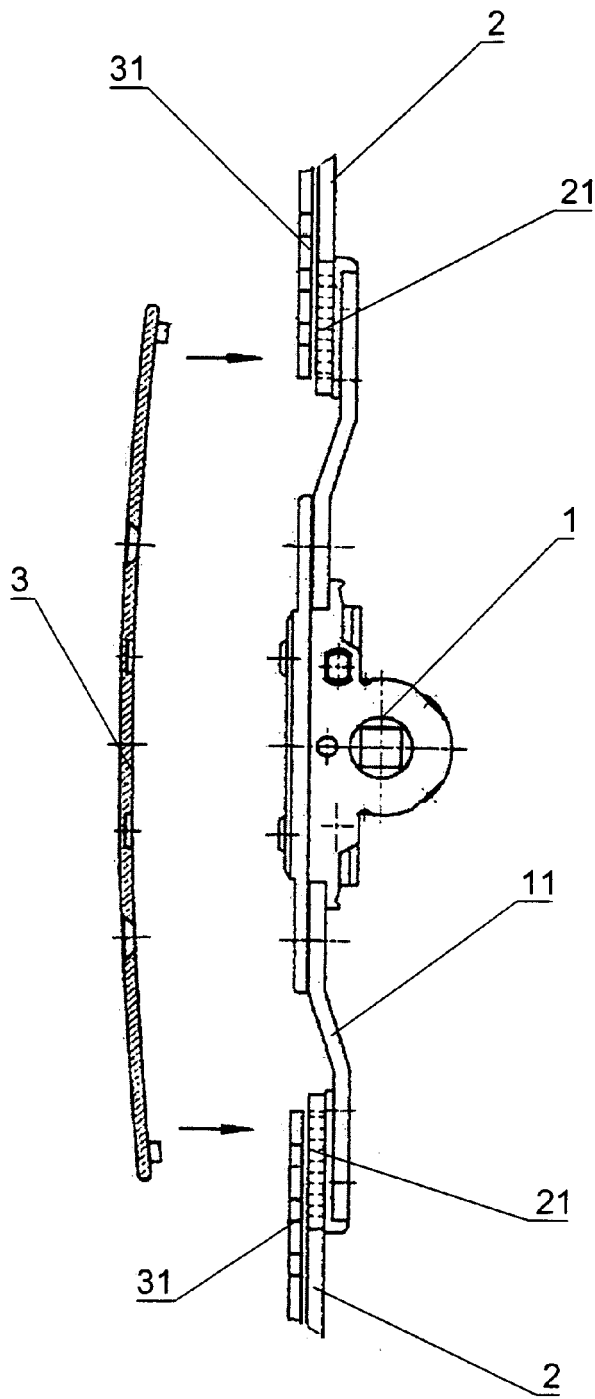


Fig. 1
(PRIOR ART)

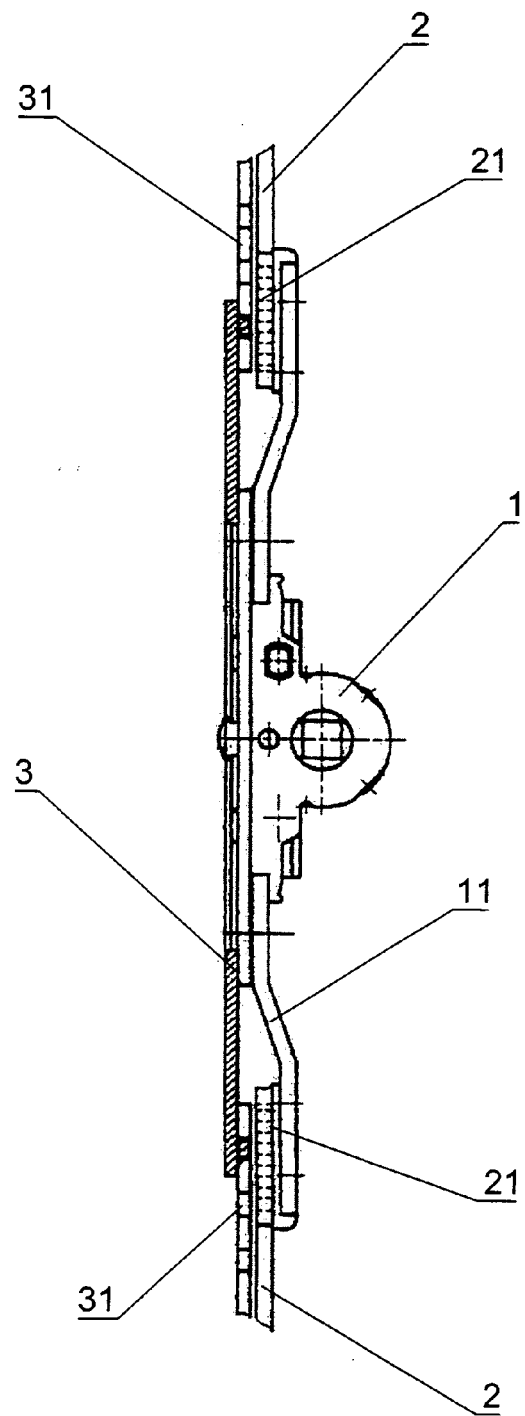


Fig. 2
(PRIOR ART)

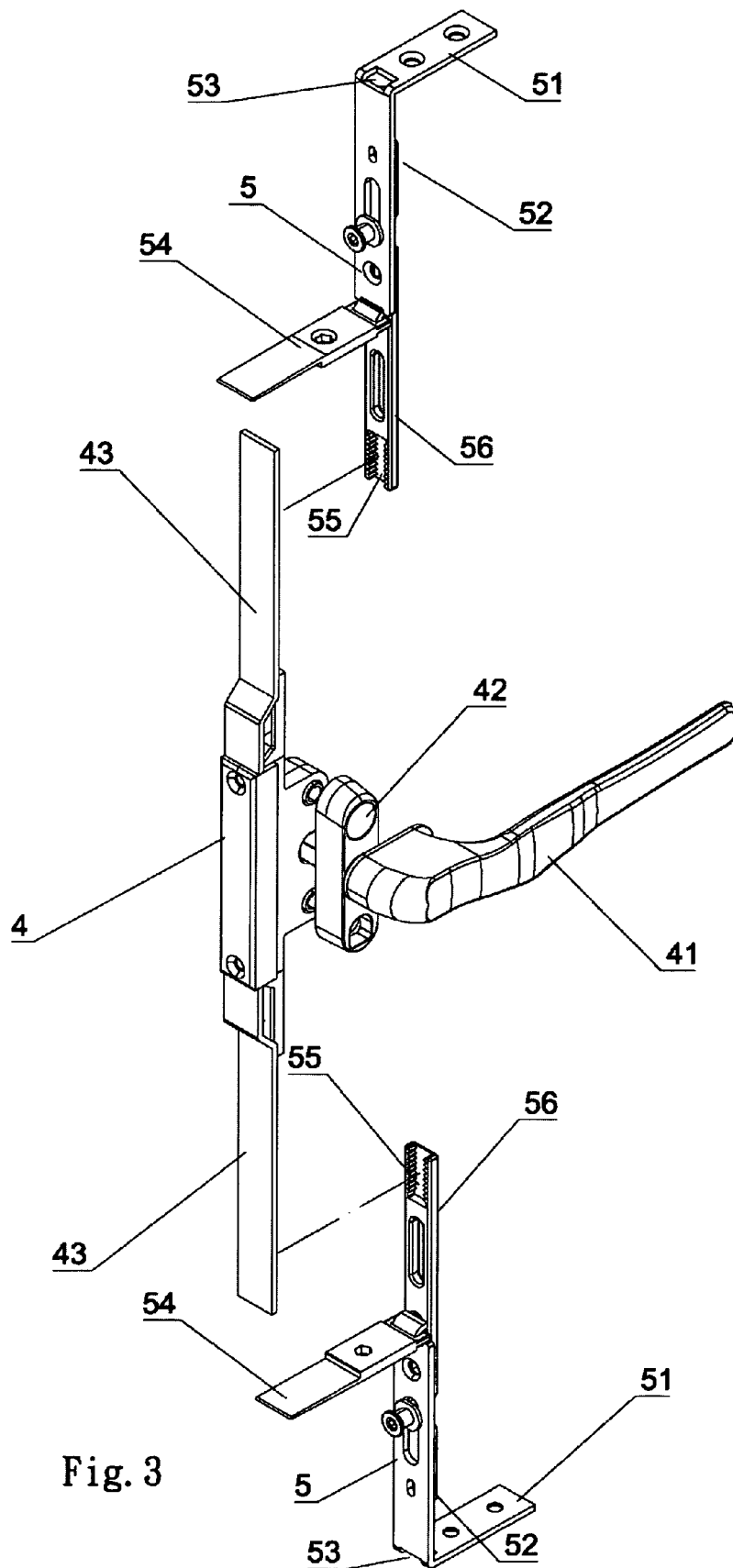
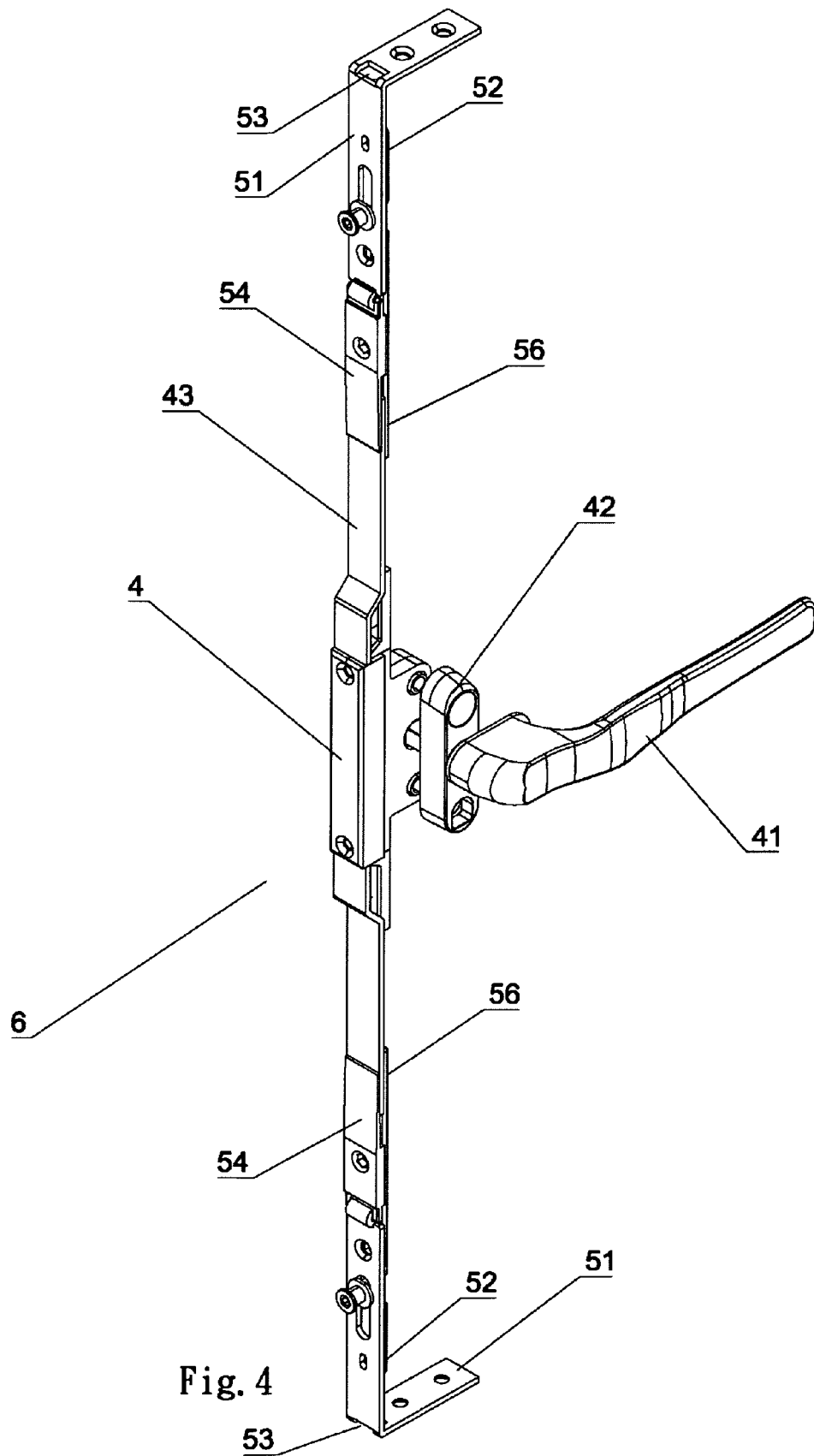


Fig. 3



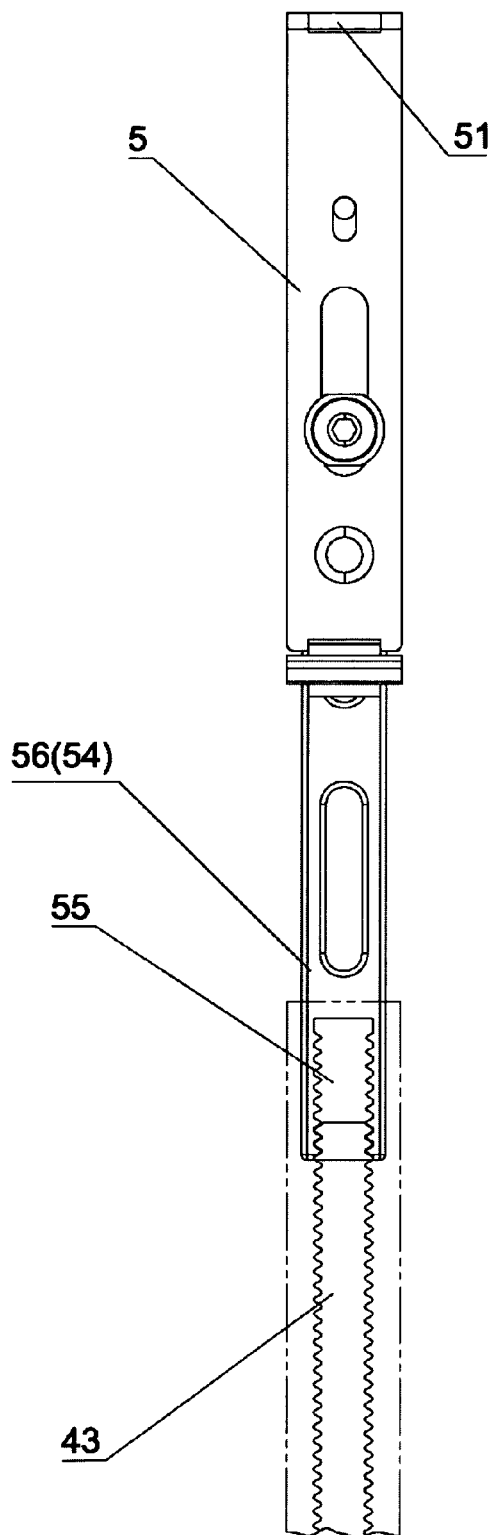


Fig. 5

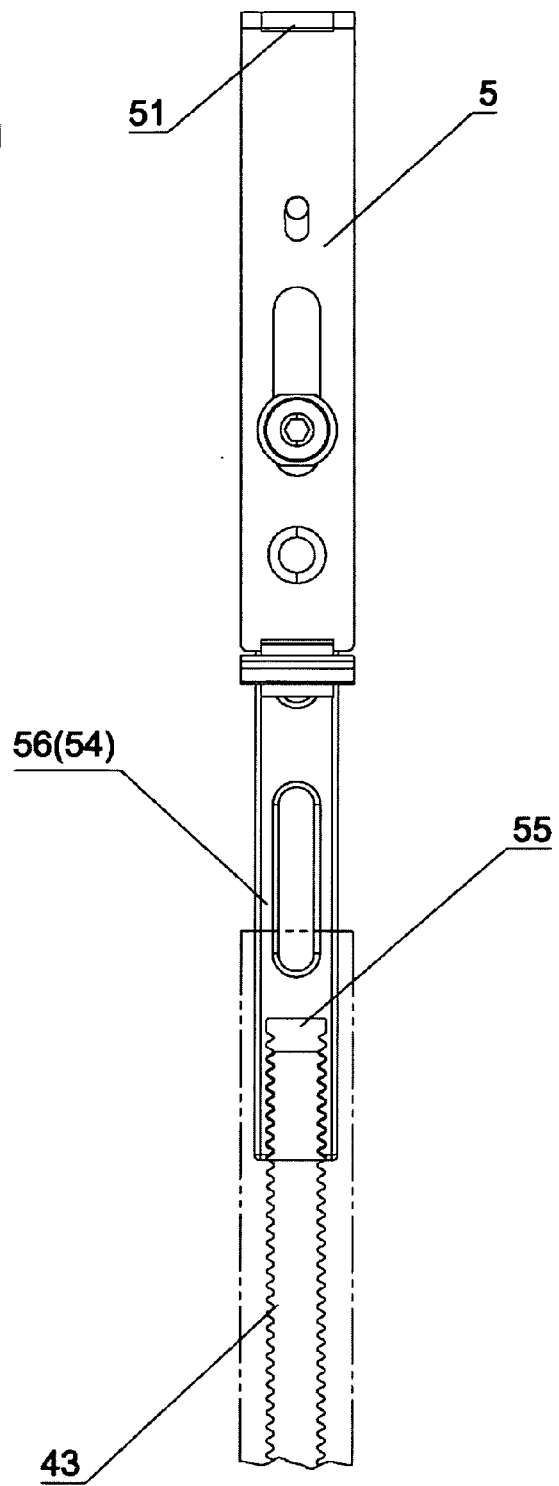


Fig. 6



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 01 5002

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 195 06 106 A1 (ROTO FRANK AG [DE]) 28 September 1995 (1995-09-28) * column 3, line 59 - column 5, line 32; figure 1 *	1,2	INV. E05C9/00 E05C9/04
A	DE 197 09 492 A1 (HAUTAU GMBH W [DE]) 24 September 1998 (1998-09-24) * abstract; figures 1,2 *	1,2	
A	EP 0 338 621 A1 (RUFFONI & ZOPPI SRL [IT]) 25 October 1989 (1989-10-25) * the whole document *	1	
A,D	EP 0 671 530 A1 (MAYER & CO [AT]) 13 September 1995 (1995-09-13) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			E05C
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 April 2007	Examiner Friedrich, Albert
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			

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EPO FORM 1503 03/82 (P04C01)

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

EP 06 01 5002

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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24-04-2007

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 19506106	A1	28-09-1995	DE FR	9404966 U1 2717850 A1	19-05-1994 29-09-1995

DE 19709492	A1	24-09-1998	NONE		

EP 0338621	A1	25-10-1989	DE IT	68911015 D1 1216597 B	13-01-1994 08-03-1990

EP 0671530	A1	13-09-1995	DE	9403801 U1	06-04-1995

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 671530 A [0002]