

# Europäisches Patentamt European Patent Office Office européen des brevets



(11) **EP 1 106 766 A3** 

(12)

## **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: **04.07.2001 Bulletin 2001/27** 

(51) Int CI.7: **E05D 15/30**, E05D 15/44

(43) Date of publication A2: 13.06.2001 Bulletin 2001/24

(21) Application number: 00309669.0

(22) Date of filing: 01.11.2000

(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

(30) Priority: 07.12.1999 GB 9928846

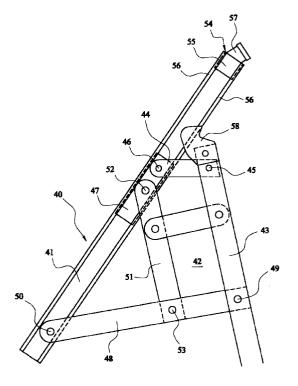
(71) Applicant: Avocet Hardware PLC
Brighouse, West Yorkshire HD6 2RW (GB)

(72) Inventors:

- Kent, David, c/o Avocet Hardware plc Brighouse HD6 2RW (GB)
- Rogers, John, c/o Avocet Hardware plc Brighouse HD6 2RW (GB)
- (74) Representative: Orr, William McLean Urquhart-Dykes & Lord, Tower House, Merrion Way Leeds LS2 8PA (GB)

#### (54) Friction hinge assembly

(57)A friction hinge assembly (40) for mounting an openable closure member (62), such as a top hung or side hung window, on a fixed frame (63), and which comprises a guide track (41) which is securable to a fixed frame member of the fixed frame and a linkage (42) which is connected to the guide track (41) so as to be moveable between open and closed positions relative to the guide track (41) and which has a mounting arm (43) which is securable to a frame element of the moveable closure member (62), and in which: the guide track (41) has a retainer (54) secured to one end of the guide track and having an upstanding retaining formation (57); the mounting arm (43) has a hook (58) secured to one end and which is moveable into engagement with the upstanding retaining formation (57) as the linkage (42) moves to the closed position; the engagement between the hook (58) and the retaining formation (57) provides a resisting force which is directly opposite to any separating force applied between the fixed frame (63) and the moveable frame (62) in the region of the hinge axis (65) provided by the friction hinge assembly (40); and, the greater the separating force which is applied, the more will the hook (58) move into captive engagement with the retaining formation (57) to provide an enhanced resisting force.



**FIG**. 1



# **EUROPEAN SEARCH REPORT**

Application Number EP 00 30 9669

ategory	Citation of document with indic		oriate,	Relevant	CLASSIFICAT		
alegury	of relevant passage	es		to claim	APPLICATION	(Int.Cl.7)	
<b>(</b>	GB 2 280 475 A (COTSV 1 February 1995 (1995 * page 5, line 19 - p figures *	5-02-01)		1-4	E05D15/30 E05D15/44		
(	GB 2 279 993 A (ANGLI 18 January 1995 (1995 * page 4, line 25 - p	5-01-18)	-	1-4			
					TECHNICAL SEARCHED E05D	FIELDS (Int.Cl.7)	
	The present search report has bee		aims		Examiner		
	THE HAGUE	11 May		\\/an	Kessel,	1	
X : part Y : part docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another iment of the same category inological background-written disclosure mediate document	T E D L	: theory or principle : earlier patent doc after the filing date : document cited in : document cited fo	underlying the ir ument, but publise the application r other reasons	nvention shed on, or		

EPO FORM 1503 03.82 (P04C01)

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

EP 00 30 9669

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.

11-05-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date	
GB	2280475	Α	01-02-1995	NONE	
GB	2279993	Α	18-01-1995	NONE	
				pean Patent Office, No. 12/82	